Evaluation of the Appalachian Regional Commission's Education and Workforce Development Projects: 2000–2008

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Executive Summary

Between 2000 and 2008, the Appalachian Regional Commission (ARC) invested a total of $65 million in 386 education and workforce development projects.[1] This report documents the characteristics and outcomes of a subset of these projects and provides recommendations for enhancing the Commission's collection and utilization of performance measurement data. It is based on data from an online questionnaire administered to all 386 education and workforce development projects funded by the ARC between 2000 and 2008, as well as telephone interviews with 23 of the projects that completed the questionnaire. The data presented in this report are intended to document the activities and accomplishments of projects that responded to these data requests only; findings should not be generalized to the ARC education and workforce development program as a whole.

Characteristics and Outcomes of the ARC's Education and Workforce Development Projects

The online questionnaire opened on June 28, 2011, and closed on October 28, 2011. Throughout the four-month data collection period, Westat and the ARC took a series of steps to increase the overall response rate. A total of 222 projects (57.5 percent) ultimately completed the questionnaire. Of the 222 projects, 145 (65.3 percent) were education and 77 (34.7 percent) were workforce development grants. Almost half (49 percent) of projects that responded to the questionnaire provided at least some of their services to adults (not including postsecondary students or teachers), while 44 percent served K–12 students and 36 percent served postsecondary students. One-fourth (24 percent) provided services to teachers, while a smaller proportion targeted services to preschool children (14 percent) or out-of-school youth (10 percent).

Types of education and workforce development services provided. Projects were designed to provide a wide range of educational and workforce development services. The majority (56 percent) were providing educational attainment or achievement services that were specifically targeted to students pursuing a high school diploma or postsecondary degree, while 43 percent were providing career and technical education services and 41 percent were providing workforce training skills. Over half of the projects provided at least one of the following services: skills/training that enhanced employability

[1] When including matching funds from other sources (e.g., other Federal agencies, state or local agencies, private entities), the aggregate funding levels for these 386 projects was $142 million.

(59 percent), special use classroom equipment such as computers or science labs (58 percent), and/or occupational/job skills training or instruction (53 percent). One-third (34 percent) provided computer skills instruction, while 23 percent provided or improved a physical structure.

Number of students and workers/trainees served and benefited. At the time the questionnaire was administered (summer 2011), the 222 ARC education and workforce development projects funded between 2000 and 2008 reported that they had served a total of 414,296 students and workers/trainees—including 334,803 students and 79,493 workers/trainees. Of the total served, 99,809 individuals were reported to have benefited from their participation—including 81,974 students and 17,835 workers/trainees. Thus, approximately 25 percent of the students and 22 percent of the workers/trainees served were reported to have ultimately benefited from their participation in an ARC education and workforce development activity. However, the use of a single generic category (i.e., students and workers/trainees improved) to document the range of potential improvements for education and workforce development participants makes it difficult to interpret these findings in a meaningful manner. It also potentially fails to capture information about tangible benefits (e.g., attainment of a new skill) that went undocumented in projects that were solely focused on reporting data for a specific improvement (e.g., receiving a career credential). Therefore, we also compared the number of individuals that projects *expected* to serve and improve (as reported in ARC.net at the time projects applied for ARC funding) with the number that were reported as being served and improved on the Westat questionnaire. This comparison reveals that projects served more students and workers/trainees than initially anticipated (141,037, compared with a projected total of 77,606). In addition, they reported improving substantially more students and workers/trainees combined (41,481) than originally projected (27,502).

Among students, the most common benefits that projects reported were primarily focused on teenagers and young adults—e.g., obtaining vocational and technical skills (36 percent), enrolling in a college or postsecondary program (31 percent), obtaining basic or academic skills in a specific subject (30 percent), or obtaining a postsecondary degree, credential, or certification (28 percent). Among workers/trainees, the most common benefit that projects reported was learning skills in a new area—including vocational and technical skills (37 percent), employability skills (36 percent), and basic or academic skills (25 percent). A smaller proportion of projects indicated that their efforts resulted in improved work status—with 27 percent indicating that workers/trainees obtained new full-time employment and 21 percent reporting that workers increased their job status and/or earned increased wages.

Other outcomes reported by ARC education and workforce development projects. A total of 44 projects reported creating 2,625 new jobs, of which more than half (1,484) were accounted for by 24

education projects. Thirty-five projects reported retaining 57,014 jobs—most of which (52,684) were reported by 17 workforce development projects. In addition:

- Nine projects created a total of 75 businesses and 13 projects retained 133 businesses.
- Five workforce development projects created 69 of the businesses, while eight education projects accounted for 53 of the businesses that were retained.
- Twenty-one projects leveraged a total of $120 million in private investments, of which $45 million was reported by 10 education projects and $75 million was reported by 11 workforce projects. Two workforce and one education projects increased their nonexport revenues by $545,000, while one workforce project increased its export revenues by $10,000. Three workforce and one education projects reduced their costs by $2.2 million.
- There was an 18 percentage point decline in the proportion of participants who were unemployed before and after participating in an ARC education and/or workforce development initiative. In addition, the proportion of participants who were employed on a part-time or full-time basis increased by 13 percentage points (from 21.4 percent to 34.4 percent).
- Just over 27 percent of all former participants were making less than $40,000 per year after exiting their programs—while 5 percent were making between $40,000 and $69,999 per year. Projects were not able to provide wage information for 63 percent of all former participants.

Recommendations for Enhancing the ARC's Collection and Utilization of Performance Measurement Data

Beyond the ARC.net requirements, almost 40 percent of projects tracked participants after program completion, with 18 percent tracking participants for one year and 19 percent tracking participants for two or more years. This finding suggests that a significant number of projects are making at least some effort to obtain longer-term data for a number of outcomes that are typically associated with education and workforce development projects.

Given the narrow focus of this study, we have limited our recommendations to four broad steps that would enhance the ARC's capacity to document the full range of outcomes associated with its education and workforce development projects. These recommendations are designed to help the ARC maximize its use of the data that are already submitted into ARC.net, as well as to extend the reach of the ARC.net database to include ARC-supported outcomes that occur after a project's grant has ended.

- **Recommendation 1:** ***Develop a coding scheme in ARC.net to more precisely report on the accomplishments of education and workforce development projects.*** The ARC.net database currently requires that education and workforce development projects provide data on the number of students and/or workers/trainees served and improved by their efforts. In recent years, projects have also been asked to provide a narrative that describes *how* students and/or workers/trainees improved. While this information is useful, the ARC does not currently have procedures in place to codify and analyze the descriptions that are provided by projects. Such a process would enhance the Commission's capacity to use this information to shed light on the range of outcomes associated with its portfolio of education and workforce development initiatives. It would also increase the likelihood that ARC personnel are able to make use of the narrative information supplied by projects as part of the existing ARC.net requirement. One option would be for the ARC to supplement ARC.net by providing a close-ended coding scheme that projects would use to classify their narrative response. Such a coding scheme could build upon the response options that were used in the online questionnaire.

- **Recommendation 2:** ***Expand the definition of what constitutes project success for the ARC's education and workforce development projects.*** In addition to students and workers/trainees improved, the ARC.net database contains other performance measures that could be used to demonstrate the impact of the Commission's education and workforce development activities—including participants improved, jobs created, jobs retained, businesses created, and businesses retained. In addition, other federal workforce development programs collect data on such outcomes as employment status and wages. Measuring these additional outcomes would enable the ARC to demonstrate a fuller range of outcomes associated with its education and workforce development projects.

  In addition, the collection of data on employment status and wages would potentially allow the ARC to measure the economic impact of its education and workforce development projects on participating counties. An exploratory economic analysis conducted as part of this study found that the ARC's education and workforce development projects provide benefits across the Appalachian region by substantially increasing participants' income and employment opportunities. This analysis is an example of the type of analyses that could be conducted if more complete economic data were routinely obtained from ARC grant recipients. A more rigorous data reporting system would enable a more in-depth analysis, thereby allowing the ARC to differentiate among ARC states, local development districts, and specific program strategies (see Recommendation 3 below).

- **Recommendation 3:** ***Provide tools that education and workforce development projects can use to efficiently document an expanded set of outcomes.*** The data collection tools could be used to obtain basic information about participants' current employment status, number of hours currently worked in an average week, current salary, and type of industry in which participants are currently employed. Collecting this information as part of their intake process would enable projects to assemble baseline characteristics of their participants. By continuing to collect this information over time (e.g., annually), projects would be able to document the number of participants that are enhancing their employment status and increasing their incomes.

- ***Develop procedures that encourage projects to report outcomes to the ARC after their grant awards have expired.*** Aside from validation visits conducted with a small sample of projects, the Commission currently has no way to systematically document any education and workforce development outcomes that occur after the ARC grant has expired. In order

to document these long-term outcomes, we recommend that the ARC continue to administer an annual data collection tool for up to five years after a project's grant expires. Obtaining these data over time will enable the Commission to document the outcomes that are being leveraged through the long-term continuation of strategies that were created with the ARC's seed money.

Introduction 1

This report presents findings from an evaluation of the Appalachian Regional Commission's (ARC's) education and workforce development projects and provides recommendations for enhancing the Commission's performance measurement process. It is based on an online questionnaire administered to 386 education and workforce development projects funded between 2000 and 2008, as well as follow-up telephone interviews conducted with 23 of the projects that completed a questionnaire.

1.1 Overview of the Appalachian Regional Commission's Education and Workforce Development Projects

The ARC was established in 1965 as a regional economic development agency. The agency's purpose is to improve social and economic conditions in the states and counties that make up the Appalachian region. The ARC strives to accomplish these improvements through federal-state-local partnerships that emphasize funding of grassroots initiatives, often providing initial project funding that would otherwise be unavailable. Despite the ARC's efforts and substantial progress over the last four decades, Appalachia continues to battle economic distress, high poverty, unemployment, and educational disparity. The fiscal year (FY) 2013 Performance Budget Justification for the Appalachian Regional Commission (February 2012) outlines the myriad of challenges facing students and workers in Appalachia:

> *In order to compete in the twenty-first century economy, the people of Appalachia must have skills and knowledge required to develop, staff, and manage globally competitive businesses. In addition, the Region's communities must provide adequate healthcare in order to keep existing businesses and develop new ones.*
>
> *During the last decade, one-third of the region's 420 counties lost population—mostly in the northern and central counties, as well as in parts of Alabama and Mississippi. Additionally, the proportion of adults in Appalachia with a college degree is about two-thirds that of the nation, and the gap is widening. This phenomenon is partly due to college-educated young adults not returning to or settling in the region, and partly due to lower college-going rate among high school graduates. Roughly 12 percent of Central Appalachian residents ages 25 and over have a completed a bachelor's degree or more, compared to 27.5 percent for the entire United States.*

To address these challenges, the ARC has long funded education and workforce development projects that are designed to enhance residents' educational attainment and workforce skills. These projects support a wide range of activities and services—including providing GED preparation training, providing computer training, purchasing equipment (e.g., computers), renovating structures, developing teacher training materials, providing job skills training, providing literacy training, providing job search assistance and career counseling, and providing social support services. The goals of these projects are to prepare workers and trainees to compete in the global economy, raise educational achievement and attainment levels for students, increase college-going rates, improve access to early childhood education programs, and prevent students from dropping out of school.

Previous evaluations conducted in 1999 and 2001 provided considerable evidence that ARC-funded education and workforce development projects succeeded in bringing about a series of educational and employment gains throughout Appalachia. For example, a sample of 84 education projects funded during the 1990s enhanced learning opportunities, increased educational outcomes, and reached segments of Appalachia that were most in need—including persons in extreme poverty, persons who were geographically isolated, those who were unemployed or underemployed, youth at risk of dropping out of school, and persons with disabilities.[2] Additionally, a sample of 67 vocational education and workforce training projects funded between 1995 and 1999 provided anecdotal and quantitative confirmation that participants went on to improve their aptitudes and advance their employment status.[3]

1.2 Overview of the Study

In 2010, the ARC commissioned an evaluation of all education and workforce development projects funded between 2000 and 2008. The purposes of the study were to (1) obtain information about the characteristics of the Commission's education and workforce development projects; (2) update performance measurement fields in the ARC.net database for the number of students and workers/trainees served and improved; (3) document the range of outcomes associated with these projects; (4) assess the feasibility of encouraging education and workforce development projects to report additional performance measures not currently recorded in the ARC.net database; and (5) develop recommendations for

[2] Silverstein, G., Plishker, L., Frechtling, J., Bartfai, N., and Snow, K. (2001). *Evaluation of the Appalachian Regional Commission's Education Projects* (Prepared under contract to the Appalachian Regional Commission). Rockville, MD: Westat.

[3] Silverstein, G., Plishker, L., and Frechtling, J. (2002). *Evaluation of the Appalachian Regional Commission's Vocational Education and Workforce Training Projects* (Prepared under contract to the Appalachian Regional Commission). Rockville, MD: Westat.

enhancing the ARC's collection and utilization of data from its education and workforce development projects.

This report presents findings from this evaluation and provides recommendations for enhancing the ARC's performance measurement procedures. It is based on an online questionnaire administered to 386 education and workforce development projects funded between 2000 and 2008, as well as follow-up telephone interviews conducted with 23 of the projects that completed a questionnaire. As part of the study, we also reviewed the procedures of comparable federal programs to learn more about the data collection and utilization practices of other education and workforce development initiatives. Information about each of these study methods is presented below.

1.2.1 Document Review

At the outset of the study, we conducted a comprehensive review of the outputs and outcomes that have been used by the ARC and other agencies to measure the impact of education and vocational education initiatives. This review was primarily used to identify the range of outputs and outcomes that *might* be included on the online questionnaire that was to be administered with the ARC education and workforce development projects funded between 2000 and 2008. A secondary purpose was to identify potential outcomes that the ARC might use to define and track the progress of future program participants.

As part of this review, we also examined the data collection practices of eight federal programs and one foundation program that are designed to provide education and workforce development services to similar populations. The primary purpose was to provide the ARC with information about the practices that other programs are using to collect data from former participants, as well as the level of effort required to collect and validate these data.

Finally, we conducted a series of analyses of the data that ARC projects submitted into ARC.net, a grant management database that is used to obtain performance results from grantees at different stages throughout the project life cycle.[4] The primary purpose of this review was to assess the extent to which education and workforce development projects were able to provide information for a range of ARC

[4] Specifically, grantees provide estimates of projected outputs and outcomes during the grant approval process. At the end of the grant, actual project outputs and outcomes are submitted in final reports to the ARC.

performance measures. A secondary purpose was to allow for a comparison of the outputs and outcomes reported by projects in ARC.net and the online questionnaire.

1.2.2 Online Questionnaire

Information from previous evaluations of ARC's education and workforce development projects, as well as the review of other agencies, was used to develop an online questionnaire that could be administered with the study population. This questionnaire was designed to obtain descriptive statistics about projects' characteristics and accomplishments. Data from the questionnaire were also used to conduct an exploratory economic analysis that focused on whether the ARC's education and workforce development projects increased participants' income and employment opportunities. Descriptive statistics are provided in Chapters 2 and 3, while the economic analysis is summarized in Appendix B.

In preparation for the administration of the questionnaire, we conducted a comprehensive review of the 540 ARC projects in ARC.net that were categorized as education or workforce development between 2000 and 2008. Following consultation with ARC staff, we identified grant recipients that received extensions to continue work initiated during their initial grant so the projects would only receive a single survey. By consolidating these grants, the number of education and workforce development projects that were identified as needing to be included in the questionnaire sample was reduced by 123 (from 540 to 417). In addition, ARC staff identified 31 projects that should not complete the questionnaire (e.g., because they were cancelled or provided services that were not directly aligned with the outcomes of education and workforce development projects). As a result, a total of 386 education and workforce development projects were identified as needing to be included in the questionnaire sample. Of this number:

- 26 (7 percent) were still open, while 360 (93 percent) were closed at the time the questionnaire was administered.
- 141 (37 percent) had actual data in ARC.net for students improved, 79 (21 percent) had actual data for workers/trainees improved, and 14 (4 percent) had actual data for participants improved. Very few projects had actual data for the remaining outcome fields in ARC.net.
- 68 education and workforce development projects did not have either projected or actual data in ARC.net for any of the following fields: students improved, workers/trainees improved, and participants improved. An additional 120 projects did not have actual data in ARC.net for any of the following fields: students improved, workers/trainees improved, and participants improved.

- 37 individuals were responsible for two or more ARC education and workforce development awards between FY 2000 and FY 2008. These respondents were asked to complete between two and nine questionnaires.

The online questionnaire opened on June 28, 2011, and closed on October 28, 2011. Throughout the four-month data collection period, Westat and the ARC took a series of steps to increase the overall response rate. For example, in early July, the ARC contacted the 12 individuals that had three or more questionnaires to complete. In addition, Westat field staff began contacting nonrespondents by phone in late July to urge their cooperation in the data collection effort.[5] A total of 222 projects (57.5 percent) ultimately completed the questionnaire. Not surprisingly, the response rate was lowest for projects that received their initial funding in 2000 or 2001 and highest for projects funded in 2005 or later (Table 1-1).

Table 1-1. Questionnaire response rate, by year in which ARC education and workforce development projects were first funded

Year	Number of projects that received a questionnaire	Number of projects that completed a questionnaire	Response rate
2000	55	22	40.0
2001	45	18	40.0
2002	39	25	64.1
2003	46	23	50.0
2004	42	23	54.8
2005	39	27	69.2
2006	35	24	68.6
2007	41	30	73.2
2008	44	30	68.2
Total	**386**	**222**	**57.5**

1.2.3 Telephone Interviews With a Sample of Questionnaire Respondents

Following the administration of the online questionnaire, a series of follow-up interviews was conducted with a purposeful sample of 23 ARC education and workforce development projects. These interviews were used to obtain more detailed information about the accomplishments associated with these 23 projects, as well as to learn more about their efforts to collect outcome data from and about former participants. A summary of findings from the interviews is available in Appendix A.

[5] Overall, Westat was unable to reach a total of 40 respondents representing 45 projects.

Thirteen of the projects included in the follow-up interviews were selected because they reported on the online questionnaire that they had collected at least some outcome data from former participants. The interviews with these projects included questions about the type of data that were collected, the methods used to obtain and validate these data, and the ways in which projects made use of these data. The remaining 10 projects were selected because they indicated on the online questionnaire that they had not collected any follow-up data with former participants. The interviews with these projects included questions about the types of data that they would have liked to have collected from former participants, as well as the factors that prevented the collections of such data.

1.3 Structure of the Report

The remainder of this report presents substantive findings from the evaluation. Chapter 2 provides background information on the characteristics of the ARC's education and workforce development projects, as well as data on the number of students and workers/trainees served and improved. Chapter 3 examines the feasibility and value of looking beyond students and workers/trainees as measures of project success for the ARC's education and workforce development projects. Chapter 4 provides a series of recommendations on how the ARC might enhance its capacity to document the range of outcomes associated with its education and workforce development projects.

Appendix A provides information about the practices of a sample of projects, their efforts to collect and utilize program participation/outcome data, and lessons learned that may be of interest to future ARC education and workforce development projects. Appendix B uses data from the online questionnaire to provide an example of the type of economic impact analyses that could be conducted should the ARC choose to collect additional outcome data from its education and workforce development projects. Appendices C and D provide our recommended format for new forms that could be used to collect baseline and annual data from ARC education and workforce development projects. Appendix E provides the online questionnaire that was administered to the 386 education and workforce development projects that received ARC funding between 2000 and 2008. Appendices F and G provide the telephone protocols that were used to collect supplemental information from those education and workforce development projects that indicated on the questionnaire that they did or did not collect data from former participants, respectively.

Characteristics and Outcomes of the ARC's Education and Workforce Development Projects

2

Between 2000 and 2008, the ARC invested a total of $65 million in education and workforce development projects. In an effort to obtain information about the characteristics and outcomes of these projects, we administered an online questionnaire with the 386 projects that received ARC funding during the time period. A total of 222 projects (57.5 percent) completed the questionnaire.[6] Based on project type designations in ARC.net, 145 were education grants and 77 were workforce development grants.[7] This chapter provides information about these 222 ARC education and workforce development projects, with a special emphasis on the number of students and worker/trainees that were served and improved as a result of ARC-supported activities. Unless otherwise noted, the source for all figures and tables in this chapter is the Westat questionnaire of education and workforce development projects.

2.1 Characteristics of ARC Education and Workforce Development Projects

The ARC funded a total of 386 education and workforce development projects between FY 2000 and FY 2008. As shown in Table 2-1, ARC invested a total of $65 million in these 386 projects during this time period—with projects raising an additional $77.4 million in matching funds ($3.7 million from other federal agencies and $73.7 million from state and local agencies) for a total of $142 million.[8] The average project received a total of $368,730—with $168,212 coming from the ARC, $9,529 from another federal agency, and $190,989 from state and local agencies.

The 222 projects that completed a questionnaire represented approximately half of the total ARC expenditures for education and workforce development projects between FY 2000 and FY 2008. Specifically, the projects that completed a questionnaire received a total of $32.6 million (or an average of $146,819) from the ARC during this time period. These projects raised an average of $181,881 from other sources—including $7,091 from another federal agency and $174,790 from other state, local, and

[6] The online questionnaire opened on June 28, 2011, and closed on October 28, 2011.

[7] Education projects are generally designed to assist participants' efforts to attain a diploma, degree, or certificate, while workforce development projects are generally designed to help participants attain employment or improve their job status.

[8] The figures presented in this section only pertain to expenditures that occurred between FY 2000 and FY 2008, even though some of these projects received ARC funding prior to 2000 and/or after 2008.

private agencies—for a total of $328,700. As such, the average total amount received by projects that completed the online questionnaire was $40,030 less than the amount received by all ARC education and workforce development projects for the same time period.

Table 2-1. Total and average funds allocated for ARC education and workforce development projects between FY 2000 and FY 2008, for all projects and projects that completed a questionnaire

Project characteristic	Number of ARC projects	ARC funds	Matching funds		Total funds
			Federal	State/local/private	
Total expenditures					
All ARC education and workforce development projects	386	$64,929,749	$3,678,001	$73,721,931	$142,329,681
Education and workforce development projects that completed a questionnaire	222	$32,593,802	$1,574,203	$38,803,366	$72,971,371
Mean expenditures					
All ARC education and workforce development projects	386	$168,212	$9,529	$190,989	$368,730
Education and workforce development projects that completed a questionnaire	222	$146,819	$7,091	$174,790	$328,700
Difference between all projects and those that completed a questionnaire	NA	$21,393	$2,438	$16,199	$40,030

NA = not applicable.

SOURCE: ARC.net database.

2.1.1 Populations Targeted by ARC Education and Workforce Development Projects

Of the 222 projects that completed a questionnaire, 65.3 percent were classified in the ARC.net database as being education, while 34.7 percent were classified as being workforce development. However, as shown in Table 2-2, 35 percent of all projects, 36 percent of education projects, and 31 percent of education projects were providing services to two or more target populations. For example, 12 percent of all projects were serving both youth and adults, while 9 percent were serving youth, adults, and teachers. Not surprisingly, education projects were more likely than workforce development projects to only serve youth (37 percent and 8 percent, respectively)—while workforce development projects were more likely than education projects to only serve adults (60 percent and 25 percent, respectively). Only a small proportion (2 percent) of all education and workforce development projects were designed to only provide services to teachers.

Table 2-2. Population served by ARC education and workforce development projects

Population served	Overall (n=217)	Education (n=143)	Workforce development (n=74)
Youth only	27.2%	37.1%	8.1%
Adults only	36.4	24.5	59.5
Teachers only	1.8	2.1	1.4
Adults and teachers	4.6	4.2	5.4
Youth and teachers	8.8	12.6	1.4
Youth and adults	12.4	9.1	18.9
Youth, adults, and teachers	8.8	10.5	5.4

NOTE: Totals may not sum to 100 due to rounding.

Overall, just under half (49 percent) of all the projects that responded to the questionnaire provided at least some of their services to adults (not including postsecondary students or teachers), while 44 percent served K–12 students and 36 percent served postsecondary students (Table 2-3). Approximately one-fourth (24 percent) provided services to teachers, while a smaller proportion targeted services to preschool children (14 percent) or out-of-school youth (10 percent). In addition:

- As would be expected, education projects were more likely than workforce development projects to be serving K–12 students and teachers. For example, over half (56 percent) of education projects were serving K–12 students, compared with 20 percent of workforce development projects.
- Conversely, workforce development projects were more likely than education projects to be serving out-of-school youth, postsecondary students, and adults. However, it should be noted that

a substantial proportion of education projects were serving postsecondary students (29 percent) and adults (37 percent).

- Education projects were more likely than workforce development projects to be serving teachers (29 percent and 14 percent, respectively).

Table 2-3. Types of populations targeted by ARC education and workforce development projects

Population type	Overall (n=217)	Education (n=143)	Workforce development (n=74)
Preschool children	14.3%	18.9%	5.4%
K–12 students	43.8	55.9	20.3
Out-of-school youth	10.1	4.9	20.3
Postsecondary students	36.4	28.7	51.4
Adults (not including postsecondary students or teachers)	48.8	37.1	71.6
Teachers	24.0	29.4	13.5

Although education and workforce projects tended to serve specific populations types, no population, or combination of populations, was served exclusively by one project type or another. As such, one recommendation would be to revise ARC.net so that education and workforce development projects can be coded as having multiple target audiences (e.g., youth *and* adults, education *and* workforce development).

2.1.2 Types of Services Provided by ARC Education and Workforce Development Projects

The ARC projects included in the study were designed to provide a wide range of educational and workforce development services. Over half (56 percent) of all projects were providing educational attainment or achievement services that were specifically targeted to students pursuing a high school diploma or postsecondary degree, while 43 percent were providing career and technical education services and 41 percent were providing workforce training skills (Table 2-4). Once again, data from the questionnaire suggests that some of the activities spanned the two project type designations. For example, over two-fifths (44 percent) of workforce development projects conducted educational attainment or achievement activities, while approximately one-third of education projects conducted career and technical education (40 percent) or workforce training (29 percent) activities.

Table 2-4. General activities supported by ARC education and workforce development projects

Activity	Overall (n=208)	Education (n=136)	Workforce development (n=72)
Educational attainment or achievement (e.g., for students pursuing a high school diploma or postsecondary degree)	56.3%	62.5%	44.4%
Career and technical education (e.g., skills and job training that lead to a career credential or certification)	43.3	39.7	50.0
Workforce training (e.g., skills and job training that do not lead to a diploma or degree)	41.3	29.4	63.9
Teacher training (e.g., skills enhancement for inservice and/or preservice teachers)	29.8	36.0	18.1
Adult education (e.g., literacy/numeracy, GED, basic work skills, etc.)	19.7	16.9	25.0
Child development (e.g., child care, early childhood education)	14.9	19.9	5.6

In addition, as shown in Table 2-5, over half of all projects provided at least one of the following services: skills/training that enhanced employability (59 percent), special use classroom equipment such as computers or science labs (58 percent), and/or occupational/job skills training or instruction (53 percent). One-third (34 percent) provided computer skills instruction, while 23 percent provided or improved a physical structure. Only a few projects provided GED instruction (10 percent), provided referrals to other agencies for job assistance/career counseling (10 percent), or provided courses in parenting skills (4 percent). At the project type level, there was considerable overlap in supported activities. For example, a significant proportion of education projects provided skills/training designed to enhance employability (51 percent) or provided specific occupational/job skills training/instruction (42 percent), while 51 percent of workforce development projects provided special use classroom equipment.

Table 2-5. Specific activities supported by ARC education and workforce development projects

Activity	Overall (n=210)	Education (n=138)	Workforce development (n=72)
Provided skills/training that enhanced employability	58.6%	51.4%	72.2%
Provided special use classroom equipment (e.g., computers, networks, tools, equipment, science lab, etc.)	57.6	60.9	51.4
Provided specific occupational/job skills training or instruction	53.3	42.0	75.0
Developed or purchased educational materials (e.g., manuals, books, software, etc.)	43.3	47.8	34.7
Established community or business partnerships	36.7	34.1	41.7
Conducted community outreach activities	36.2	39.1	30.6
Developed or purchased curriculum or instructional program	34.3	33.3	36.1
Provided computer skills training/instruction	33.8	31.9	37.5
Provided or improved physical structures (e.g., buildings, renovation, equipment, furniture, etc.)	22.9	21.0	26.4
Provided distance learning infrastructure (e.g., software, equipment, technology)	20.5	20.3	20.8
Provided pedagogy or teaching skills training for teachers	19.5	24.6	9.7
Provided career counseling (e.g., discussions, diagnostic/aptitude testing)	17.1	18.8	13.9
Provided apprenticeship opportunities	14.8	10.1	23.6
Provided social support services	12.4	13.8	9.7
Provided college counseling	11.0	13.0	6.9
Provided instruction in business management	10.5	8.0	15.3
Provided job search/placement assistance (e.g., job bank, employer outreach)	10.5	5.1	20.8
Distributed funds/mini-grants/stipends	10.0	12.3	5.6
Conducted GED preparation	9.5	6.5	15.3
Provided referrals to other agencies for job assistance/ career counseling	9.5	5.8	16.7
Conducted course in parenting skills	4.3	5.1	2.8

Overall, most (92 percent) projects were providing at least two of the service types presented in Table 2-5—with the majority (79 percent) providing three or more services (Table 2-6). Only 8 percent of all projects reported that they only provided one service as part of their ARC education and workforce development grant. These patterns remained consistent across project types. This finding, compounded by the overlap in general and specific activities conducted by education and workforce development projects (Tables 2-4 and 2-5), reinforces the multifaceted focus of ARC education and workforce development projects that was noted in findings corresponding to Tables 2-2 and 2-3.

Table 2-6. Proportion of ARC education and workforce development projects providing multiple services

Activity	Overall (n=210)	Education (n=138)	Workforce development (n=72)
Provided one service	8.0%	9.4%	5.6%
Provided two services	13.0	13.0	15.3
Provided three or more services	79.0	77.5	79.2

NOTE: Totals may not sum to 100 due to rounding.

2.2 Information About Students and Workers/Trainees Served and Improved

As part of the ARC application process, education and workforce development projects are expected to provide an estimate of the number of students and/or workers/trainees that will ultimately be served and improved by their efforts. In an effort to update the information in ARC.net, project grantees were asked to provide the cumulative number of students and workers/trainees served and improved since the inception of their ARC grant. These terms were defined as follows:

- **Students served**—the cumulative total number of students who participated in your ARC project, from project inception until now. For the purposes of this questionnaire, students include children and youth in prekindergarten programs through 12th grade, as well as adults in postsecondary educational programs.

- **Students improved**—the cumulative total number of student participants who (1) enhanced their knowledge or skills; (2) passed or graduated to the next grade or level necessary to continue their education; (3) received a career credential; (4) made progress toward a degree, diploma, or certification; and/or (5) obtained a job in the field for which they were specifically trained.

- **Workers/trainees served**—the cumulative total number of individuals that received training or participated in an activity designed to enhance their employability, but not necessarily leading to a certification, diploma, or degree.

- **Workers/trainees improved**—the cumulative total number of participants (1) with new/improved knowledge or skills; (2) that received an educational credential; (3) that received a career credential; and/or (4) that obtained/enhanced their employment status (e.g., received higher pay or better positions).

Not surprisingly, projects were more likely to be able to provide information about the number served (i.e., participated in an activity) than the number improved (i.e., benefited from participating in an activity). This difference likely reflects the ease of counting the number served compared with the added burden associated with tracking participants' progress after they completed an activity to determine the number improved. Specifically, as shown in Table 2-7:

- Almost two-thirds (64 percent) of all projects provided information about the number of students that participated in an ARC-supported activity. Only 8 percent indicated that they served students but did not track this output. However, fewer than half (49 percent) provided information on the number of students improved and 32 percent skipped this item (suggesting they were not able to provide information about the number of students that benefited as a result of their ARC project).

- Approximately one-third (32 percent) of all projects provided information about the number of workers/trainees served, while 12 percent did not track this output and 16 percent indicated that their projects were not designed to serve workers/trainees. Only 22 percent provided information on the number of workers/trainees improved as a result of their ARC project, while 46 percent skipped this item.

- Education projects were more likely than workforce development projects to provide questionnaire data for the number of students served and improved. Conversely, workforce development projects were more likely than education projects to provide questionnaire data for the number of workers/trainees served and improved.

Table 2-7. Proportion of ARC education and workforce development projects that provided information about students and workers/trainees served and improved

Output or outcome		Provided a number	Output or outcome not applicable	Did not track information	Skipped item
Overall (n=222)	Students served	63.5%	7.2%	7.7%	21.6%
	Students improved	48.6	9.0	10.4	32.0
	Workers/trainees served.....	32.0	16.2	12.2	39.6
	Workers/trainees improved.....	22.1	17.1	15.3	45.5
Education (n=145)	Students served	71.7	6.2	8.3	13.1
	Students improved	51.0	9.7	12.4	26.2
	Workers/trainees served.....	29.0	18.6	11.7	40.7
	Workers/trainees improved.....	16.6	20.0	16.6	46.2
Workforce development (n=77)	Students served	48.1	9.1	6.5	36.4
	Students improved	44.2	7.8	6.5	41.6
	Workers/trainees served.....	37.7	11.7	13.0	37.7
	Workers/trainees improved.....	32.5	11.7	13.0	42.9

NOTE: Total for each output or outcome may not sum to 100 due to rounding.

2.2.1 Number of Individuals Served and Improved

At the time the questionnaire was administered (summer 2011), the 222 ARC education and workforce development projects funded between 2000 and 2008 reported that they had served a total of 414,296 students and workers/trainees—including 334,803 students and 79,493 workers/trainees (Table 2-8).[9] Education projects served the vast majority of students. Of the 334,803 total students served, 322,204 (96 percent) were from education projects and 12,599 (4 percent) were from workforce development projects. In addition, education projects served almost half (47 percent) of the 79,493 workers/trainees reported on the questionnaire—with workforce development projects serving 53 percent.

Of the total served, 99,809 individuals were reported to have "improved' from their participation—including 81,974 students and 17,835 workers/trainees. Thus, approximately 25 percent of the students and 22 percent of the workers/trainees served were reported by projects to have benefited from their participation in an ARC education and workforce development activity. Notably, 40 percent of individuals served by workforce development projects were reported to have improved; compared to 22 percent of individuals reported by education projects. However, the use of a single generic category (i.e., students and workers/trainees improved) to document the range of potential improvements for education and workforce development participants makes it difficult to interpret these findings in a meaningful manner. This is because some projects may have used a singular or rigorous definition as to what constituted an improvement (e.g., completion of a degree or new employment status), while others may have used multiple measures—or relied on a more imprecise standard (e.g., made progress toward a degree, gained a new skill). Combining these diverse improvements into a single statistic (e.g., students improved) makes it difficult to portray the nature of these improvements or make meaningful cross-project comparisons of the proportion of participants that were ultimately improved. It also potentially fails to capture information about tangible benefits (e.g., attainment of a new skill) that went undocumented in projects that were solely focused on reporting data for a specific improvement (e.g., receiving a career credential).

In an effort to benchmark these findings, we compared the number of individuals that projects *expected* to serve and improve (as reported in ARC.net at the time projects applied for ARC funding) with the number

[9] For the purposes of the questionnaire, students included children and youth in prekindergarten programs through 12th grade, as well as adults in postsecondary educational programs. Workers/trainees included individuals who received training or participated in an activity designed to enhance their employability.

that were reported as being served and improved on the Westat questionnaire.[10] As shown in Table 2.9, the ARC projects served more students and workers/trainees than initially anticipated (141,037, compared with a projected total of 77,606). In addition, projects reported improving substantially more students and workers/trainees combined (41,481) than originally projected (27,502). These overall statistics mask several noteworthy trends:

- Education projects exceeded their anticipated targets for the number of students and workers/ trainees served. They also reported improving substantially more students (33,105) than originally anticipated (17,298).
- Workforce development projects served and improved fewer students than projected—serving 7,105 (80 percent) of their expected target of 8,897 students, and improving 3,871 (55 percent) of their expected target of 7,007 students. However, they served and improved more workers/ trainees than was originally anticipated—serving three times as many workers/trainees and improving 1,310 more workers/trainees than expected.

While these findings suggest that education and workforce development projects differed in their ability to anticipate the number of students and workers/trainees they would serve and improve, these trends may also reflect the small number of projects for which some of these comparisons could be made. For example, only three education projects and thirteen workforce development projects provided both projected and actual data for workers/trainees improved. As such, the small number of workforce development projects for which projected and actual data are available makes it difficult to interpret the comparisons of numbers served and improved. As is discussed in Chapter 4, collecting data on discrete categories (e.g., anticipated and actual number of students that attain a degree) would increase the capacity of the ARC to compare baseline projections with actual data in a valid and reliable manner.

[10] Two important caveats regarding this comparison are worth noting. First, this comparison excludes the 32 ARC education and workforce development projects with multiple entries in ARC.net (e.g., due to a contract extension or revision), as well as those projects that did not provide data in *both* ARC.net and the Westat questionnaire for a given output or outcome. Second, any differences between projected and actual data may reflect the differing timeframes for which information was requested. Specifically, the ARC.net baseline projections cover the life of the ARC grant, while the questionnaire data also include those served and improved since the expiration of the ARC grant.

Table 2-8. Number of students and workers/trainees that received services and benefited as a result of ARC education and workforce development projects

Target population		Number served	Improved	
			Number	Percent of those served that were documented as having improved
Overall (n=222)	Students	334,803	81,974	24.5
	Workers/trainees	79,493	17,835	22.4
	Total	414,296	99,809	24.1
Education (n=145)	Students	322,204	75,085	23.3
	Workers/trainees	37,608	3,040	8.1
	Total	359,812	78,125	21.7
Workforce development (n=77)	Students	12,599	6,889	54.7
	Workers/trainees	41,885	14,795	35.3
	Total	54,484	21,684	39.8

Table 2-9. Projects with corresponding output and outcome records in *both* the questionnaire and ARC.net

Output or outcome		Projected ARC.net total	Actual questionnaire total	Total ratio
Overall	Students served (n=96)	66,097	110,020	1.66
	Students improved (n=67)	24,305	36,976	1.52
	Workers/trainees served (n=20)	11,509	31,017	2.70
	Workers/trainees improved (n=16)	3,197	4,505	1.41
Education	Students served (n=77)	57,200	102,915	1.80
	Students improved (n=50)	17,298	33,105	1.91
	Workers/trainees served (n=6)	1,925	2,157	1.12
	Workers/trainees improved (n=3)	935	933	1.00
Workforce development	Students served (n=19)	8,897	7,105	0.80
	Students improved (n=17)	7,007	3,871	0.55
	Workers/trainees served (n=14)	9,584	28,860	3.01
	Workers/trainees improved (n=13)	2,262	3,572	1.58

NOTE: This table excludes the 32 ARC education and workforce development projects with multiple entries in ARC.net (e.g., due to a contract extension or revision), as well as those projects that did not provide data in both ARC.net and the Westat questionnaire for a given output or outcome.

SOURCE: ARC.net database and Westat questionnaire of ARC education and workforce development projects.

2.2.2 How Individuals Were Served and Improved

In light of the diverse ways in which students and workers/trainees could be counted as having "improved," the questionnaire was also designed to obtain information about *how* students and workers/trainees were benefited by their ARC project.[11] Among students, the most common benefits that all projects reported were primarily focused on teenagers and young adults—e.g., obtaining vocational and technical skills (36 percent); enrolling in a college or postsecondary program (31 percent); obtaining basic or academic skills in a specific subject (30 percent); or obtaining a postsecondary degree, credential, or certification (28 percent) (Table 2-10). Only a few projects reported that their efforts led to students obtaining a high school diploma, GED, or equivalent (14 percent); increasing scores on a statewide assessment (14 percent); decreasing suspensions or other behavioral problems (12 percent); or returning to school after dropping out (7 percent). In addition:

- Student outcomes most commonly reported by education projects were improved school readiness (34 percent), obtaining basic or academic skills in a specific subject (33 percent), enrolling in a more challenging class (31 percent), and enrolling in college or a post-secondary program (30 percent).
- Student outcomes most commonly reported by workforce projects were obtaining vocational and technical skills (50 percent), obtaining a postsecondary degree, credential, or certification (39 percent), and enrolling in college or a postsecondary program (33 percent).
- Thirty percent of workforce projects and 14 percent of education projects reported that they had no student outcomes.

As shown in Table 2-11, at least one-fourth of all projects reported that their workers/trainees learned new skills in a new area—including vocational and technical skills (37 percent), employability skills (36 percent), and basic or academic skills (25 percent). A smaller proportion indicated that their efforts resulted in improved work status—with 27 percent indicating that workers/trainees obtained new full-time employment and 21 percent reporting that workers increased their job status and/or earned increased wages. A minority of projects indicated that the workers/trainees they served reduced their dependence on public assistance (14 percent) or obtained/maintained employer-provided benefits (6 percent). In addition:

[11] Because projects could report multiple ways in which their students and workers/trainees were improved, it is not possible to reliably apportion the number of students and workers/trainees that were improved across the categories in Tables 2-10 and 2-11.

- Over half of workforce projects reported that workers/trainees obtained vocational and technical skills (55 percent) and other employability skills (55 percent). Approximately one-quarter of education projects reported the same impacts.

- Forty-one percent of education projects and 22 percent of workforce projects reported that they had no student outcomes.

Table 2-10. How students were improved by their participation in ARC education and workforce development projects

Student improvement	Overall (n=194)	Education (n=130)	Workforce development (n=64)
Obtained vocational and technical skills	36.1%	29.2%	50.0%
Enrolled in college or postsecondary program	30.9	30.0	32.8
Obtained basic or academic skills in a specific subject	29.9	33.1	23.4
Obtained a postsecondary degree, credential, or certification	28.4	23.1	39.1
Improved school readiness	27.3	33.8	14.1
Enrolled in more challenging classes	26.3	30.8	17.2
Remained in school when at risk of dropping out	22.7	26.2	15.6
Improved attendance on a daily/regular basis	22.2	26.2	14.1
Obtained a high school diploma, GED, or equivalent	14.4	16.2	10.9
Increased scores on statewide assessments	14.4	17.7	7.8
Advanced to next grade level	12.9	14.6	9.4
Decreased suspensions and other problem behaviors	12.4	16.2	4.7
Tested at or above grade level	8.8	11.5	3.1
Re-entered an educational program after dropping out	7.2	6.9	7.8
None—project did not have any student outcomes	19.1	13.8	29.7

Table 2-11. How workers/trainees were improved by their participation in ARC education and workforce development projects

Worker/trainee improvement	Overall (n=192)	Education (n=123)	Workforce development (n=69)
Obtained vocational and technical skills	36.5%	26.0%	55.1%
Obtained other employability skills (e.g., work attitudes/habits)	35.9	25.2	55.1
Obtained new full-time employment	27.1	17.1	44.9
Obtained basic or academic skills	25.0	18.7	36.2
Maintained current employment	20.3	12.2	34.8
Obtained new part-time employment	19.8	13.0	31.9
Increased job status and/or earned increased wages	21.4	16.3	30.4
Reduced dependence on public assistance	14.1	8.1	24.6
Teachers or instructors enhanced their classroom practices	29.7	34.1	21.7
Retrained in another field and obtained new employment	10.9	5.7	20.3
Obtained/maintained employer-provided health benefits	5.7	2.4	11.6
None—project did not have any worker/trainee outcomes	33.9	40.7	21.7

Examination of Other Potential Project Accomplishments for the ARC's Education and Workforce Development Projects

3

The impact of the ARC's education and workforce development projects is primarily documented through two aggregate measures: students improved and workers/trainees improved. The numbers obtained through these two measures contribute to the Commission's long-term 12-year performance goal that 240,000 citizens of the Region will benefit from enhanced education and job-related skills (Moving Appalachia Forward, the Commission's strategic plan for 2011–16). Although ARC.net includes a narrative field that captures information on how students and workers were improved, this information was only available for a small number of the education and workforce development projects that were funded between 2000 and 2008. As discussed in Chapter 2, findings from the online questionnaire suggest that the improvements experienced by students and workers/trainees included such tangible outcomes as obtaining a high school diploma or postsecondary degree, increasing scores on statewide assessments, decreasing suspensions or other behavioral problems, learning new skills, improving work status and/or wages, reducing dependence on public assistance, and obtaining/maintaining employer-provided benefits.

Additional information on the accomplishments of education and workforce development projects was obtained through a series of follow-up interviews with a purposeful sample of 23 projects that completed the questionnaire (see Appendix A for a more detailed discussion of the findings from these follow-up interviews). The most commonly cited project accomplishment was improved access to educational services for participating students (13 projects) through which distressed and previously unserved rural communities received services that would otherwise have been unavailable.[12] Additional accomplishments involved improving the relationship between industry and academia (five projects), workers being trained and hired in industry (five projects), securing additional funding to continue efforts begun with ARC seed money (four projects), and effective grant management (two projects). Notably, four of the 23 projects indicated that their efforts resulted in workers being trained and hired for industry.

[12] Three of these 13 projects established a link between secondary schools and higher education institutions, resulting in increased standards for participating students. Specifically, one project focused on reducing the high school dropout rate by rewarding attendance, exposing students to postsecondary education opportunities, providing rewards for good grades, and helping students stay on track to graduate. The second project raised standards by implementing dual-credit courses that allowed students to earn college credit in the medical assisting health field while completing their high school diplomas. The third project increased the number of Advanced Placement (AP) courses offered, the number of students enrolled in AP courses, and the number of students earning quality scores on AP exams. According to the project director, this raised standards because "the inclusion of AP courses …added more rigor into the typical course offerings and … increased the quality of teachers in those schools."

Two projects reported job placement data for all of their program completers across all curricula offerings, including Adult Basic Education. A third project placed workers in construction trades, HVAC, welding, and building construction. The fourth project placed students in the health care sector.

The range of improvements reported by these projects matches the types of performance measures that are collected by other federal and foundation programs that support similar education and workforce development initiatives. However, as shown in Exhibit 3-1, other federal programs have adopted specific performance measures for their grant recipients that focus on specific and unambiguous outcomes—e.g., number of high school graduates that enroll in college, number of postsecondary students who advance from remedial to credit-bearing courses, number of adults who attain a GED, and number of adults/families with increased wages. These programs are typically larger and address a more narrow set of outcomes than the ARC's education and workforce development projects. Nonetheless, the data collected by these programs suggest some additional performance measures that the ARC might want to use to demonstrate the impact of its portfolio on a range of educational and economic outcomes.

This chapter examines the feasibility and potential value of expanding the number of outcome measures for the ARC's education and workforce development projects. The purpose is to provide the Commission with guidance on whether there are more precise indicators that could be used to document the benefits associated with the strategies used by education and workforce development projects, as well as to explore ways in which these specific indicators could be used to calculate the impact of these projects on the economies of participating communities.

Exhibit 3-1. Examples of outcomes for other education and workforce development projects

Category	Output/outcome	Source
Secondary school students	Number of secondary school dropouts who re-enter a secondary education program	TS
	Number of secondary school students who exhibit a decrease in suspensions and other problem behaviors	GEAR-UP (interim)
	Number of high school students enrolled in at least one Advanced Placement and/or International Baccalaureate course	Lumina
	Number of secondary school students who graduate from high school	DoL ETA, TS, Perkins, Lumina
	Number of high school students who intend to enroll in college	TS, Lumina
	Number of high school graduates that enroll in college	TS, GEAR-UP (long-term), Perkins, Lumina
	Number of low income and first generation high school students who intend to enroll in college	Lumina
	Number of low income and first generation high school students who enroll in college	Lumina
	Number of high school graduates that apply for financial aid for postsecondary education (e.g., submission of FAFSA)	TS, Lumina
	Number of high school graduates that receive financial aid for postsecondary education (e.g., receipt of FAFSA)	Lumina
Postsecondary students	Number of postsecondary "stopouts" who re-enter a postsecondary education program	TS
	Number of postsecondary students who advance from remedial to credit-bearing courses	Lumina
	Number of postsecondary students who successfully complete gatekeeper courses	Lumina
	Number of postsecondary students who earn an associate's, bachelor's, or higher degree or certificate	SSS, Perkins, Lumina
	Number of postsecondary students who attain career and technical skill proficiencies	Perkins
	Number of postsecondary students who complete a postsecondary skills training program	Perkins
	Number of first-generation and/or low-income adults who apply to a postsecondary education program	EOC
	Number of postsecondary students who transfer from 2- to 4-year institutions	SSS, Perkins
	Number of postsecondary students who enroll in graduate school	McNair

Exhibit 3-1. Examples of outcomes for other education and workforce development projects—Continued

Category	Output/outcome	Source
Adults	Number of adults in career and technical education programs that obtain employment in nontraditional fields	Perkins
	Number of adults who attain a GED	DoL ETA, HC & HG
	Number of adults who attain a vocational degree/credential/certificate	DoL ETA, HC & HG
	Number of adults who obtain employment	DoL ETA, HC & HG
	Number of adults who retain employment	DoL ETA, HC & HG
	Number of adults/families with increased wages	DoL ETA

SOURCES:

DoL ETA: Common Measures Policy for the Employment and Training Administration's (ETA) Performance Accountability System and Related Performance Issues (2006, TEGL 17-05).

GEAR-UP: Early Outcomes of the GEAR UP Program (2008, Westat).

HC & HG: American Recovery and Reinvestment Act of 2009: Healthcare and Other High Growth Emerging Industries Grants (no bib info).

McNair: Ronald E. McNair Postbaccalaureate Achievement Program: 2002-05 Facts and Figures at a Glance (2007).

Perkins: The Carl D. Perkins Career and Technical Education Act of 2006: Report to Congress on State Performance Program Year 2007-08 (2010).

SSS: National Evaluation of Student Support Services: Examination of Student Outcomes After Six Years (2010, Westat).

TS: An Interim Report on the Talent Search Program: 2001-03 and 2003-04, with Select Data from 2000-02 (2006, American Institute for Research).

Lumina: Indicators and Internal Data Sources for Lumina's Key Strategic Areas (2010, Lumina Foundation for Education).

EOC: A Report on the Educational Opportunity Centers Program: 2007-2008, With Select Comparative Data, 2002-07.

3.1 Extent to Which ARC Education and Workforce Development Projects Are Tracking Long-Term Participant Outcomes

An important purpose of the study was to determine whether education and workforce development projects were obtaining longer-term outcome data about their participants and, if so, the procedures they were using to obtain and validate these data. As shown in Table 3-1, almost two-fifths of all projects tracked participants after program completion, with 18 percent tracking participants for one year and 19 percent tracking participants for two or more years. The remaining projects either did not track program participants (29 percent) or indicated that such tracking was not applicable to the types of

services they provided (33 percent). Workforce development projects were more likely than education projects to have tracked participants after program completion—with 47 percent of workforce development projects tracking participants for at least one year (compared with 32 percent for education projects).

Table 3-1. Length of time that ARC education and workforce development projects tracked participants after program completion

Length of time	Overall (n=204)	Education (n=136)	Workforce development (n=68)
Did not track the progress of program participants after completing the program	29.4%	31.6%	25.0%
For up to 1 year after completing the program	18.1	14.0	26.5
For up to 2 years after completing the program	7.8	7.4	8.8
For more than 2 years after completing the program	11.3	11.0	11.8
Not applicable	33.3	36.0	27.9

NOTE: Totals may not sum to 100 due to rounding.

This finding suggests that a significant number of projects are making at least some effort to obtain longer-term data for a number of outcomes that are typically associated with education and workforce development projects. This is noteworthy, given that the ARC does not require collection of longer-term outcome data from former participants or from projects that are no longer funded. To understand the conditions under which these data were collected, we conducted follow-up interviews with a small sample of questionnaire respondents to determine why projects chose to collect outcome data from former participants when they were not required to do so. Almost all (12 of 13 projects) indicated that they collected data from former participants because of a requirement of an agency other than the ARC. Several projects indicated that they collected outcome data to document the project's effectiveness and efficiency for local stakeholders.[13] While some projects used participant surveys to obtain their outcome data, others relied on reviews of extant databases:

- As shown in Exhibit A-1 (at the end of Appendix A), four projects were collecting information about former participants' employment and wage status. Two of these projects were using surveys to obtain these data directly from students. A third used faculty members' unofficial knowledge about the employment status of their former students to prepare an annual report for the state department of education, while a fourth project used a database maintained by a state agency (established to align universities, government, and industry resources) to mine existing data related to individual taxes, unemployment, and education enrollment.

[13] For example, two projects kept data to document the effectiveness (or lack thereof) of interventions (one to increase the college-going rate of students and the other to measure the impact of technology on instruction). A third project was of particular interest to the governor's office, and staff wanted to document the initiative's impact on adult literacy levels. A fourth project kept data on spending to document fiscal responsibility to stakeholders and political watchdogs.

- Three projects tracked the numbers of high school graduates who attended a postsecondary institution. Two of these projects conducted surveys of former participants to obtain this information—with both projects reporting that low response rates and the lack of validation methods minimized the value of the data for project monitoring and program planning. A third project used the National Student Clearinghouse (NSC) to examine students' enrollment in postsecondary education.

- Finally, three projects used existing databases to obtain information about the number of former participants that had taken a high school AP course/exam, passed a licensing or certification exam, or passed their GED exam.

Regardless of the method used, projects generally acknowledged that their efforts were often hindered by low response rates, lack of staff time to conduct follow-up with nonrespondents, and a reliance on self-reported data on employment status that were difficult to validate. In addition, projects generally indicated that while they would have liked to collect wage data from (or about) their former participants, most respondents were likely unwilling to provide such information about themselves. Three projects indicated they saw a privacy issue, reflected by students' "none of your business" answers on surveys. Another project indicated they could not ask for any personal data from students because of privacy laws. Projects also discussed the difficulty of using third-party systems to obtain information about former participants. For example, two projects indicated that they were unable to obtain data about participants that had moved to another state—with one project indicating that it was only able to track students' enrollment at in-state universities and colleges.

Projects made multiple uses of data about former participants, including marketing, operations, documentation for accreditation, and as a basis for generating additional funding. For example, four of the 13 projects were using data for program improvement initiatives, with two projects using the data to evaluate the efficacy of training programs (e.g., by demonstrating the skills that students had learned). One project used participant feedback to improve campus services and another used student achievement data to research the effectiveness of traditional classroom instruction as compared to distance learning.

Appendix A provides additional information about the conditions under which projects collected and utilized outcome data.

3.2 Other Items in ARC.net that Might be Reported for Education and Workforce Development Projects

In addition to students improved and workers/trainees improved, the ARC has developed other performance measures that are used to document the Commission's progress toward its long-term goals. Some of these performance measures potentially pertain to education and workforce development activities. Nonetheless, a review of ARC.net reveals that very few education and workforce development projects provided data for any of these measures. For example, 11 percent of education and workforce development projects had data in ARC.net for participants served, while 4 percent had data for participants improved and 4 percent had data for jobs created (Table 3-2). This finding that few projects had any entries in ARC.net for these performance measures is not surprising, given that the ARC does not formally track these outcomes as part of their performance goal pertaining to citizens benefiting from enhanced education and job-related skills.

Table 3-2. Whether ARC education and workforce development projects provided information about other performance measures in ARC.net: 2000–2008

		Provided a number in ARC.net	
	Output or outcome	Number	Percent
Overall (n=190)	Participants served	20	10.5
	Participants improved	7	3.7
	Jobs created	7	3.7
	Jobs retained	4	2.1
	Businesses created	3	1.6
	Businesses retained	0	0.0
	Leveraged private investments	0	0.0
	Revenues increased (nonexport)	0	0.0
	Revenues increased (export)	0	0.0
	Costs reduced	0	0.0
Education (n=121)	Participants served	12	9.9
	Participants improved	6	5.0
	Jobs created	5	4.1
	Jobs retained	3	2.5
	Businesses created	2	1.7
	Businesses retained	0	0.0
	Leveraged private investments	0	0.0
	Revenues increased (nonexport)	0	0.0
	Revenues increased (export)	0	0.0
	Costs reduced	0	0.0

Table 3-2. Whether ARC education and workforce development projects provided information about other performance measures in ARC.net: 2000–2008—Continued

Output or outcome		Provided a number in ARC.net	
		Number	Percent
Workforce development (n=69)	Participants served	8	11.6
	Participants improved	1	1.4
	Jobs created	2	2.9
	Jobs retained	1	1.4
	Businesses created	1	1.4
	Businesses retained	0	0.0
	Leveraged private investments	0	0.0
	Revenues increased (nonexport)	0	0.0
	Revenues increased (export)	0	0.0
	Costs reduced	0	0.0

NOTE: This table excludes the 32 ARC education and workforce development projects with multiple entries in ARC.net (e.g., due to a contract extension or revision).

In an effort to assess whether projects were, in fact, able to provide data for these additional ARC.net measures, we included items in the online questionnaire designed to document the number of projects that had data for each of these outcomes. As shown in Table 3-3, at least 5 percent of all projects provided numbers for each of these measures—with 42 percent providing data for participants served, 25 percent for participants improved, 23 percent for jobs created, and 19 percent for jobs retained. This finding that some projects were able to provide data for these other categories in ARC.net suggests that the ARC should consider collecting these data and documenting these outcomes from future education and workforce development projects. Specific numbers reported for these measures are summarized below:

- The total number of participants served by all projects was 295,277, of which 40,209 (14 percent) were reported to have improved (Table 3-4). However, this finding reflecting the small proportion of participants that were improved may reflect that projects were unable to fully account for the diverse ways in which participants benefited as a result of their involvement in an ARC-supported activity.

- Education projects accounted for the majority of participants served (281,382) and improved (28,488). Although workforce development projects reported serving significantly fewer participants (13,895), they reported that a far greater proportion of those served were improved (11,721)—that is, 84 percent of workforce development participants were reported to have improved compared with only 10 percent of education participants. This difference between the two project types may reflect the relative ease with which workforce development projects were able to obtain follow-up data on their participants.

- A total of 44 projects reported creating 2,625 new jobs, of which more than half (1,484) were reported by 24 education projects (Table 3-5).

- A total of 35 projects reported retaining 57,014 jobs—most of which (52,684) were reported by 17 workforce development projects.
- Nine projects created a total of 75 businesses and 13 projects retained 133 businesses. Five workforce development projects created 69 of the businesses, while eight education projects accounted for two-fifths (53) of the businesses that were retained.
- Twenty-one projects leveraged a total of $120 million in private investments, of which $46 million was reported by 10 education projects and $75 million was reported by 11 workforce projects.
- Two workforce and one education projects together increased their nonexport revenues by $545,000, while one workforce project increased its export revenues by $10,000.
- Three workforce and one education projects reduced their costs by $2.2 million.

Table 3-3. Whether ARC education and workforce development projects provided information about other ARC.net performance measures on the Westat questionnaire

Output or outcome		Provided a number	Output or outcome not applicable	Did not track information	Skipped item
Overall (n=222)	Participants served	41.9%	14.9%	9.5%	33.8%
	Participants improved	25.2	16.7	14.9	43.2
	Jobs created	23.0	27.9	21.2	27.9
	Jobs retained	18.5	24.3	18.5	38.7
	Businesses created	9.5	28.8	17.6	44.1
	Businesses retained	10.8	27.9	17.6	43.7
	Leveraged private investments	12.2	31.1	14.4	42.3
	Revenues increased (nonexport)	5.0	33.8	16.7	44.6
	Revenues increased (export)	4.5	33.8	16.7	45.0
	Costs reduced	5.9	32.4	17.6	44.1
Education (n=145)	Participants served	42.8	15.2	8.3	33.8
	Participants improved	23.4	17.2	15.9	43.4
	Jobs created	20.0	31.7	21.4	26.9
	Jobs retained	15.2	26.9	18.6	39.3
	Businesses created	9.0	31.7	16.6	42.8
	Businesses retained	11.0	30.3	16.6	42.1
	Leveraged private investments	10.3	33.8	15.9	40.0
	Revenues increased (nonexport)	4.8	34.5	17.9	42.8
	Revenues increased (export)	4.1	34.5	17.9	43.4
	Costs reduced	4.1	33.1	19.3	43.4

Table 3-3. Whether ARC education and workforce development projects provided information about other ARC.net performance measures on the Westat questionnaire—Continued

Output or outcome		Provided a number	Output or outcome not applicable	Did not track information	Skipped item
Workforce development (n=77)	Participants served	40.3	14.3	11.7	33.8
	Participants improved	28.6	15.6	13.0	42.9
	Jobs created	28.6	20.8	20.8	29.9
	Jobs retained	24.7	19.5	18.2	37.7
	Businesses created	10.4	23.4	19.5	46.8
	Businesses retained	10.4	23.4	19.5	46.8
	Leveraged private investments	15.6	26.0	11.7	46.8
	Revenues increased (nonexport)	5.2	32.5	14.3	48.1
	Revenues increased (export)	5.2	32.5	14.3	48.1
	Costs reduced	9.1	31.2	14.3	45.5

NOTE: Total for each output or outcome may not sum to 100 due to rounding.

Table 3-4. Number of participants who received services and benefited as a result of ARC education and workforce development projects

Level	Number of participants served	Participants improved	
		Number	Percent of those served that improved
Overall	295,277	40,209	13.6
Education	281,382	28,488	10.1
Workforce development	13,895	11,721	84.4

NOTE: The number for participants served excludes one outlier project that reported serving a total of 597,221 participants; no data were provided for number of participants improved.

Table 3-5. Economic benefits that occurred as a result of ARC education and workforce development projects

	Economic benefit	Number or dollar amount
Overall	Jobs created (n=44)	2,625
	Jobs retained (n=35)	57,014
	Businesses created (n=9)	75
	Businesses retained (n=13)	133
	Leveraged private investments (n=21)	$120,472,112
	Revenues increased (nonexport) (n=3)	$545,000
	Revenues increased (export) (n=1)	$10,000
	Costs reduced (n=4)	$2,230,500
Education	Jobs created (n=24)	1,484
	Jobs retained (n=18)	4,330
	Businesses created (n=4)	6
	Businesses retained (n=8)	53
	Leveraged private investments (n=10)	$45,674,775
	Revenues increased (nonexport) (n=1)	$10,000
	Revenues increased (export) (n=0)	$0
	Costs reduced (n=1)	$85,000
Workforce development	Jobs created (n=20)	1,141
	Jobs retained (n=17)	52,684
	Businesses created (n=5)	69
	Businesses retained (n=5)	80
	Leveraged private investments (n=11)	$74,797,337
	Revenues increased (nonexport) (n=2)	$535,000
	Revenues increased (export) (n=1)	$10,000
	Costs reduced (n=3)	$2,145,500

3.3 Other Potential Employment and Private Sector Impacts (Not Currently in ARC.net)

In an effort to examine other potential outcomes not currently collected in ARC.net, the online questionnaire examined whether projects were collecting data for such measures as pre/post program employment status, the sector in which participants were employed, and residential status and wage rates after program participation. The purpose was to examine whether it would be feasible to obtain these data and, if so, how they might be used to examine community impacts.

As shown in Table 3-6, at least 34 percent of all projects provided data for each of these measures—with 45 percent providing numbers for employment status before program participation, 42 percent providing numbers for employment status after program participation, 43 percent providing numbers on the sector

in which participants were employed after program participation, 36 percent providing numbers on participants' wage rates after program participation, and 34 percent providing numbers on participants' residential status after program participation. On all of these items, a greater proportion of workforce than education projects was able to provide numbers. Among the projects that provided data for these measures:

- There was an 18 percentage point decline in the proportion of all participants who were unemployed before and after participating in an ARC education and/or workforce development initiative (Table 3-7). In addition, the proportion of participants who were employed on a part-time or full-time basis increased by 13 percentage points (from 21.4 percent to 34.4 percent). This pattern was similar for education and workforce development projects. Specifically, the proportion of participants that were unemployed after participation decreased 17 percentage points for education projects and 19 percentage points for workforce development projects; part-time or full-time employment increased by 14 percentage points for education projects and 12 percentage points for workforce development projects.

- Projects were also asked to provide information about the residential status of individuals after they exited the program. The purpose was to determine whether program participants had to relocate to find employment. As shown in Table 3-8, 29 percent of all program participants remained in the county in which they originally resided after completing the program, while 3 percent were known to have relocated to another county. The percentage of participants that were known to remain in their county was higher for workforce development projects (39 percent) than for education projects (22 percent), although both project types reported that 3 percent of participants relocated. Across project types, respondents were not able to provide any information about the remaining 68 percent of participants.

- As shown in Table 3-9, the percentage of all participants employed in the manufacturing sector after they exited their program was 12 percent, while 9 percent found employment in the services sector. Education projects were most likely to employ participants in other sectors (9 percent) or services (8 percent), and workforce projects were most likely to employ participants in manufacturing (24 percent) or services (10 percent). Overall, projects were unable to provide any employment information for 63 percent of former participants.

- Just over one-fourth (27 percent) of all former participants were making less than $40,000 per year after exiting their programs—while 5 percent were making between $40,000 to $69,999 per year (Table 3-10). Projects were not able to provide wage information for 68 percent of all former participants.

Table 3-6. Whether ARC education and workforce development projects provided information about other potential employment-related outcomes

	Outcome	Percent that provided a number in the questionnaire	Percent that did not provide a number in the questionnaire (i.e., reported 100% for "Don't know")
Overall	Employment status before program participation (n=120)	45.0	55.0
	Employment status after program participation (n=119)	42.0	58.0
	Residential status after program participation (n=119)	33.6	66.4
	Sector in which individuals were employed after program participation (n=121)	43.0	57.0
	Wage rates after program participation (n=117)	35.9	64.1
Education	Employment status before program participation (n=71)	32.4	67.6
	Employment status after program participation (n=71)	29.6	70.4
	Residential status after program participation (n=71)	26.8	73.2
	Sector in which individuals were employed after program participation (n=72)	30.6	69.4
	Wage rates after program participation (n=70)	22.9	77.1
Workforce development	Employment status before program participation (n=49)	63.3	36.7
	Employment status after program participation (n=48)	60.4	39.6
	Residential status after program participation (n=48)	43.8	56.3
	Sector in which individuals were employed after program participation (n=49)	61.2	38.8
	Wage rates after program participation (n=47)	55.3	44.7

NOTE: Excludes 65 projects that reported on Question 22 that they had no worker/trainee outcomes, as well as the 30 projects that skipped Question 22. Total for each output or outcome may not sum to 100 due to rounding.

Table 3-7. Employment status of individuals before and after participation in an ARC education and workforce development project

Employment status		Before program participation	After program participation
Overall		(n=120)	(n=119)
	Unemployed	22.3%	4.4%
	Employed on a part-time basis	8.1	8.9
	Employed on a full-time basis	13.3	25.5
	Don't know	56.4	61.1
Education		(n=71)	(n=71)
	Unemployed	20.1	2.8
	Employed on a part-time basis	5.6	7.6
	Employed on a full-time basis	6.0	18.1
	Don't know	68.2	71.5
Workforce development		(n=49)	(n=48)
	Unemployed	25.4	6.8
	Employed on a part-time basis	11.7	10.9
	Employed on a full-time basis	23.7	36.6
	Don't know	39.2	45.7

NOTE: Excludes 65 projects that reported on Question 22 that they had no worker/trainee outcomes, as well as the 30 projects that skipped Question 22. Overall unemployed before program participation includes 11.8 percent that had no prior work experience when they entered the program and 10.5 percent that had some previous work experience but were unemployed when they entered the program. Education unemployed before program participation includes 12.5 percent that had no prior work experience when they entered the program and 7.6 percent that had some previous work experience but were unemployed when they entered the program. Workforce development unemployed before program participation includes 10.7 percent that had no prior work experience when they entered the program and 14.7 percent that had some previous work experience but were unemployed when they entered the program. Totals may not sum to 100 due to rounding.

Table 3-8. Residential status of individuals after they exited an ARC education and workforce development project

Residential status		Average percent
Overall (n=119)	Remained in the county in which they resided after completing the program	29.0
	Relocated to another county after completing the program	3.3
	Don't know	67.7
Education (n=71)	Remained in the county in which they resided after completing the program	22.4
	Relocated to another county after completing the program	3.3
	Don't know	74.4
Workforce development (n=48)	Remained in the county in which they resided after completing the program	38.9
	Relocated to another county after completing the program	3.2
	Don't know	57.8

NOTE: Excludes 65 projects that reported on Question 22 that they had no worker/trainee outcomes, as well as the 30 projects that skipped Question 22. Totals may not sum to 100 due to rounding.

Table 3-9. Sector in which individuals were employed after they exited an ARC education and workforce development project

	Sector	Average percent
Overall (n=121)	Manufacturing	11.8
	Services	8.7
	Government	4.3
	Retail	1.8
	Agriculture	1.2
	Mining	0.2
	Other	9.0
	Don't know	63.0
Education (n=72)	Manufacturing	3.9
	Services	7.8
	Government	2.8
	Retail	0.9
	Agriculture	1.5
	Mining	0.1
	Other	9.0
	Don't know	74.1
Workforce development (n=49)	Manufacturing	23.6
	Services	10.3
	Government	6.5
	Retail	3.0
	Agriculture	0.7
	Mining	0.4
	Other	8.9
	Don't know	46.7

NOTE: Excludes 65 projects that reported on Question 22 that they had no worker/trainee outcomes, as well as the 30 projects that skipped Question 22. Totals may not sum to 100 due to rounding.

Table 3-10. Wage rates for individuals who found work after they exited an ARC education and workforce development project

	Wage rate	Average percent
Overall (n=117)	Less than $20,000 per year	7.3
	$20,001–$39,999	20.0
	$40,000–$69,999	4.7
	$70,000–$99,999	0.2
	$100,000 or more	0.1
	Don't know	67.7
Education (n=70)	Less than $20,000 per year	6.8
	$20,001–$39,999	11.7
	$40,000–$69,999	2.9
	$70,000–$99,999	0.2
	$100,000 or more	0.1
	Don't know	78.3
Workforce development (n=47)	Less than $20,000 per year	8.0
	$20,001–$39,999	32.3
	$40,000–$69,999	7.3
	$70,000–$99,999	0.3
	$100,000 or more	0.1
	Don't know	52.0

NOTE: Excludes 65 projects that reported on Question 22 that they had no worker/trainee outcomes, as well as the 30 projects that skipped Question 22. Totals may not sum to 100 due to rounding.

Recommendations for Enhancing the ARC's Collection and Utilization of Data About Education and Workforce Development Projects

4

4.1 Summary

Between 2000 and 2008, the ARC invested a total of $65 million across 386 education and workforce development projects. This study was designed to document the range of activities that these projects conducted and examine the outcomes that resulted from their efforts. Special emphasis was placed on updating the outputs and outcomes that projects provided into ARC.net, the Commission's performance measurement database.

The primary data collection activity conducted as part of this study was an online questionnaire that was administered to these 386 projects. The 222 projects that completed a questionnaire represented approximately half of the total ARC expenditures for education and workforce development projects between FY 2000 and FY 2008. Among these 222 projects, 65.3 percent were classified in the ARC.net database as being education, while 34.7 percent were classified as being workforce development. A summary of findings from the questionnaire is provided in Exhibit 4-1 at the end of this chapter.

As part of the evaluation, we also documented the extent to which projects were able to provide data for the performance measures in ARC.net that pertain to education and workforce development initiatives. Not surprisingly, projects were more likely to be able to provide information about the number of students or workers/trainees served (i.e., participated in an activity) than the number improved (i.e., benefited from participating in an activity).

Beyond the ARC.net requirements, almost two-fifths of projects tracked participants after program completion, with 18 percent tracking participants for one year and 19 percent tracking participants for two or more years. The remaining projects either did not track program participants (29 percent) or indicated that such tracking was not applicable to the types of services they provided (33 percent). This finding suggests that a significant number of projects are making at least some effort to obtain longer-term data for a number of outcomes that are typically associated with education and workforce development projects. This is noteworthy, given that the ARC does not require collection of longer-term outcome data from former participants or from projects that are no longer funded. However, during follow-up

telephone interviews, a small sample of questionnaire respondents generally acknowledged that their efforts to collect follow-up data were often hindered by low response rates, lack of staff time to conduct follow-up with nonrespondents, and a reliance on self-reported data on employment status that were difficult to validate.

4.2 Recommendations

In previous studies, we have offered recommendations for enhancing the ARC's procedures for measuring, tracking, and reporting the outcomes associated with specific program areas (e.g., education, vocational education, telecommunications, and community capacity-building). Specifically, we have advised that the Commission develop separate guidelines (or supplemental materials) that provide customized application and reporting instructions, as well as examples of outcomes for a particular issue area. We have also suggested that the Commission facilitate projects' access to information about how to collect and analyze data.

Given the narrow focus of this study, we have limited our recommendations to four broad steps that would enhance the ARC's capacity to document the full range of outcomes associated with its education and workforce development projects. These recommendations are designed to help the ARC maximize its use of the data that are already submitted into ARC.net, as well as to extend the reach of the ARC.net database to include ARC-supported outcomes that occur after a project's grant has ended.

Recommendation 1: ***Develop a coding scheme in ARC.net to more precisely report on the accomplishments of education and workforce development projects.***

The ARC.net database currently requires that education and workforce development projects provide data on the number of students and/or workers/trainees served and improved by their efforts. However, as described in Chapter 2, the diverse ways in which students and worker/trainees could be categorized as having been served and improved makes it difficult to meaningfully aggregate this information across projects. In recent years, projects have also been asked to provide a narrative that describes *how* students and/or workers/trainees improved. While this information is useful, the ARC does not currently have procedures in place to codify and analyze the descriptions that are provided by projects. Such a process would enhance the Commission's capacity to use this information to shed light on the range of outcomes associated with its portfolio of education and workforce development initiatives. It would also increase

the likelihood that ARC personnel are able to make use of the narrative information supplied by projects as part of the existing ARC.net requirement.

One option would be for the ARC to supplement ARC.net by providing a close-ended coding scheme that projects would use to classify their narrative response. As shown in Exhibits 4-2a and 4-2b at the end of this chapter, this coding scheme could build upon the response options that were used in the online questionnaire. Projects could be asked to select the response option that best describes how students and/or workers/trainees were improved, as well as any secondary options that can be used to capture the full extent of the improvements. ARC staff could then use these codes to classify projects' narratives about how their students and workers/trainers improved, as well as quickly identify projects that are associated with a given type of outcome.

A second option would be to allow projects to select multiple categories and provide a number for each of the benefit types that are selected. Thus, for example, instead of providing data on the number of students and workers/trainees with improvements, projects could report anticipated and actual data for each of the applicable categories in Exhibits 4-2a and 4-2b, respectively. While this would potentially require that projects invest more resources into tracking services and outcomes, the resulting data would enhance the ARC's capacity to compare projected and actual outcomes. It would also allow the ARC to more accurately report across projects on the number of individuals that attained a specific type of improvement, thereby allowing for more valid and reliable comparisons of baseline projections and actual results. These data could also be aggregated to provide stakeholders with annual data on the number of students and workers/trainees served and improved.

Recommendation 2: ***Expand the definition of what constitutes project success for the ARC's education and workforce development projects.***

The Commission's performance goal for education and workforce development projects is that 240,000 citizens of the Appalachian region will benefit from enhanced education and job-related skills by 2022.[14] Progress toward this goal is only measured through two ARC.net data fields: number of students and workers/trainees improved. However, the ARC.net database contains other performance measures that could be used to demonstrate the impact of the Commission's education and workforce development activities—including participants improved, jobs created, jobs retained, businesses created, and businesses retained. In fact, evidence from the online questionnaire suggests that a significant number of

[14] Appalachian Regional Commission. (2010). *Moving Appalachia Forward. Appalachian Regional Commission Strategic Plan* 2011–2016.

education and workforce development projects are able to report data for these measures. Specifically, 42 percent provided data for participants served, 25 percent for participants improved, 23 percent for jobs created, and 19 percent for jobs retained. This finding suggests that the Commission could encourage future education and workforce development projects to collect and report information about these additional data elements in ARC.net. The purpose would be to document and report the full range of outcomes for education and workforce development projects that are currently covered by ARC.net.

In addition to the performance measures that are currently included in ARC.net, there are additional outcomes that education and workforce development project might be expected to attain. For example, as discussed in Chapter 3, other federal workforce development programs collect data on such outcomes as employment status and wages. In an effort to examine other potential outcomes not currently collected in ARC.net, the online questionnaire examined whether ARC projects were able to report data for such measures as pre/post-program employment status, the sector in which participants were employed, and residential status and wage rates after program participation. Once again, evidence from the questionnaire suggests that a significant number of projects are able to report these data—with 45 percent providing numbers for employment status before program participation, 42 providing numbers for employment status after program participation, 43 percent providing numbers on the sector in which participants were employed after program participation, 36 percent providing numbers on participants' wage rates after program participation, and 34 percent providing numbers on participants' residential status after program participation. Not surprisingly, it was easier to collect these data for workforce projects than education projects.

Measuring how workforce and education projects change the work status of participants would enable the ARC to demonstrate a fuller range of outcomes associated with its education and workforce development projects. In addition, the collection of data on employment status and wages would potentially allow the ARC to measure the economic impact of its education and workforce development projects on participating counties. An exploratory economic analysis conducted as part of this study found that the ARC's education and workforce development projects provide benefits across the Appalachian region by substantially increasing participants' income and employment opportunities. This analysis, summarized in Appendix B, is an example of the type of analyses that could be conducted if more complete economic data were routinely obtained from ARC grant recipients.

As discussed in Appendix B, the findings obtained through the supplemental items in the online questionnaire were sufficient to show systematic patterns of program impacts on both jobs and income. These impacts vary depending on the employment status of participants and the economic and

density patterns of the counties in which these projects occur. The limited number of complete responses to economic impact Questions 30 to 35 of the questionnaire prevented us from differentiating results among portions of the region in terms of location and economic distress levels. As such, the analysis was conducted for the entire Appalachian region. Moreover, the effects of different types of ARC education and workforce training programs could not be characterized. A higher response rate for these items in the questionnaire would have allowed for an examination of the impact of individual education and workforce development strategies for such specific variables as population density (i.e., urban versus rural counties) and county designation (e.g., distressed, at-risk, transitional, competitive, and attainment).

For this study, respondents were asked to provide data about long-term outcomes that they were never specifically asked to collect when their programs were initiated. In this respect, it is impressive that nearly 20 percent of respondents tracked sufficient information that made an initial ARC-wide analysis possible. It is a tribute to program managers that 39 grantees were in a position to provide enough data to allow for an employment analysis and 25 were able to provide data for an income analysis. A more rigorous data reporting system would enable for a more in-depth analysis, thereby allowing the ARC to differentiate among ARC states, local development districts, and specific program strategies (see Recommendation 3 below).

Recommendation 3: ***Provide tools that education and workforce development projects can use to efficiently document an expanded set of outcomes.***

The ARC does not currently require applicants or projects to use a standard reporting format to submit their baseline and annual data. In addition, because the same forms are used to obtain data from all non-construction projects, there is no opportunity for the ARC to collect more comprehensive information about the characteristics and accomplishments of projects in a specific program area. This lack of in-depth information ultimately hinders the Commission's capacity to fully document its outcomes or examine the relationship between projects' characteristics, strategies, and accomplishments.

The questionnaire administered as part of this study was designed to address this limitation by developing a standardized protocol that could be used to obtain information about the full range of activities, outputs, outcomes, and impacts that are typically associated with education and workforce development projects. By developing a questionnaire that was purposely tailored to a particular program area, we were able to focus on specific attributes and accomplishments that would not have been possible with a more generic survey designed to collect follow-up data across all program areas. Now that this questionnaire has been

tested, we recommend that the ARC use a modified version of this instrument to obtain baseline and annual data from its education and workforce development applicants and projects. Specifically:

- **Collect baseline data through an addendum to the standard application.** As part of the application, we are suggesting that the ARC obtain baseline information about project characteristics and anticipated outcomes. Appendix C provides an example of the types of data that might be collected from education and workforce development projects through an addendum to the standard application for nonconstruction projects—including (1) counties, age groups, and populations to be targeted; (2) education and workforce development activities to be conducted with these populations; and (3) the educational, employment, and economic outcomes that are expected to occur as a result of the project. By collecting this information as part of the application process, the ARC will ensure that it obtains a response from all funded projects without having to conduct extensive follow-up. Prior to a grant being approved, we would further recommend that staff in the Program Operations Division (POD) review applicants' estimates for project outcomes to assure that all required data fields are adequately addressed and that estimates are in line with the ARC's expectations (e.g., in terms of the number expected to be served and improved).

- **Collect annual data through a supplement to the standard annual and closeout reports.** We also recommend that the ARC use a similar supplement to the annual and closeout reports to obtain valid and reliable output and outcome data from education and workforce development projects. The purpose would be to obtain cumulative data on the outputs, outcomes, and impacts that have occurred over the life of their grant. A prototype of this form, presented in Appendix D, provides an example of the types of annual information that might be collected from education and workforce development projects—including (1) whether or not the ARC project provided any services in the past 12 months; (2) the counties, age groups, and populations targeted by the project; (3) the education and workforce development activities conducted over the life of the project; (4) the educational, employment, and economic outcomes that occurred over the life of the project; (5) how students and workers/trainees have been improved by the project; and (6) the employment status of former participants. For each annual report, we recommend that the time frame for which annual data are provided be cumulative—that is, projects would provide updated information on the number of individuals served and improved since the beginning of their grant. This approach would ensure that projects do not double count participants and beneficiaries. It would also allow the ARC to systematically and accurately determine the proportion of individuals receiving services that are ultimately improved (since the numerators and denominators would be aligned over time). Finally, this approach would enable the ARC to more accurately document progress toward the annual goals outlined in the Commission's strategic plan.

Information obtained through the use of the addendums to the application, annual, and closeout reports could be entered into ARC.net and used to help the ARC develop a comprehensive inventory of the educational and workforce development strategies that projects are using (as well as the populations with which those strategies are being applied). By using protocols that specifically pertain to education and workforce development projects, the ARC would have an opportunity to test a data collection and utilization strategy that might ultimately be used with other program areas. In addition, the information

on actual outputs and outcomes could be compared with data obtained during the application process to determine whether education and workforce development projects (both individually and in the aggregate) are meeting or exceeding their expectations.

As shown in Appendices B and C, we are proposing that these forms include detailed definitions for key terms, thereby ensuring that applicants will use common assumptions and criteria when providing their information. For example, the forms (and the coding scheme in ARC.net) should allow for such common conditions as "don't know," and "not applicable." We would also recommend that the items include instructions about the time frame for which estimates about anticipated outputs and outcomes are to be provided (e.g., for up to three years after project closeout in the application addendum, since the beginning of the grant award for the annual supplement).

It should be noted that several projects used the telephone interviews to request that the ARC provide them with tools that could be used to collect participant data. We therefore recommend that the ARC provide education and workforce development projects with a standard form that can be used to obtain valid and reliable participant intake and follow-up data. The example in Exhibit 4-3 (at the end of this chapter) demonstrates how such a form could be used to obtain basic information about participants' current employment status, number of hours currently worked in an average week, current salary, and type of industry in which participants are currently employed (a separate form could be developed for education projects that primarily serve students). Collecting this information as part of the intake process would enable projects to assemble data on the baseline characteristics of their participants. By continuing to collect this information over time (e.g., annually), projects would be able to document the number of participants that are enhancing their educational and employment status, increasing their incomes, and improving their quality of life due to their participation in ARC projects. This information could then be reported to the ARC in the aggregate in the annual and follow-up forms in Appendix D.

Recommendation 4: ***Develop procedures that encourage projects to report outcomes to the ARC after their grant awards have expired.***

ARC projects are strongly encouraged to secure other sources of support so that they can sustain their activities beyond the life of their ARC grant. However, aside from the validation visits that are conducted with a small sample of projects, the Commission currently has no way to systematically document any education and workforce development outcomes that occur after the ARC grant has expired. As such, a purpose of this study was to collect long-term data from former projects so as to update the educational and employment performance measures in the ARC.net database.

Since projects were not expected to report these data, many respondents were not able to provide any information about the educational and employment status of their former participants. For those projects that were able to report these data, the outputs and outcomes reported on the questionnaire were substantially higher than those reported in the closeout fields in ARC.net.[15] For example, as shown in Table 4-1a, the 55 projects that provided a number for students served in the questionnaire reported serving a total of 87,693 students; only 32 of the same 55 projects had a record for students served recorded in ARC.net (at closeout), the total of which equaled 22,715—a difference of 64,978. In Table 4-1b, numbers for specific output or outcome types were only compared for projects with a corresponding record in *both* the questionnaire and ARC.net (at closeout). In the majority of these cases, numbers reported in the questionnaire remained higher than those reported in the ARC.net closeout fields, although the differences were significantly less than in Table 4-1a. As such, when comparing the 32 projects that had records in both the questionnaire and ARC.net (closeout) for students served, the total reported in the questionnaire was 32,576 and the ARC.net total was 22,715—a difference of only 9,861.

One interpretation of these findings is that the ARC's education and workforce development projects significantly exceeded their initial estimates of the number of individuals at closeout that would be served and improved by their efforts. Additionally, a significant portion of projects that did not have data recorded in ARC.net either are not being asked to provide long-term information on their outputs and outcomes or are unable to provide the information in their closeout reports. However, it is also possible that at least some of these differences were the result of other factors—most notably the longer time period covered by the questionnaire. In order to better understand the differences between numbers reported in the questionnaire and closeout numbers recorded in ARC.net, we contacted the 28 projects whose numbers of students and workers improved differed by 30 percent or more between the two sources to ask why the number reported in the questionnaire for students or workers served was greater than or lesser than the number recorded by the ARC at each project's close. Most (22 of the 28) of the projects responded, with the follow-up revealing four distinct explanations for the discrepancies:

- The program continued after the grant period ended, which led to an increase in the numbers reported in the questionnaire when compared with those recorded in ARC.net (10 projects).

[15] In an effort to assess the accuracy of the data contained in the ARC.net database for education and workforce development projects, we compared the projected and closeout data in ARC.net with the output and outcome data obtained through the questionnaire. This assessment was complicated by multiple entries in ARC.net for 32 of the 222 projects that were included in the questionnaire sample (these 32 multiple entries represent a total of 94 entries in ARC.net, from which 62 duplicates were removed). We are therefore only providing a comparison of questionnaire and projected/closeout ARC.net data for the 190 projects that did not have multiple entries in ARC.net (which allows for a more accurate assessment of the ARC.net data for projected and closeout outputs and outcomes). In addition, we did not compare ARC.net and questionnaire data for the 266 projects that were funded prior to 2006, since those projects were less likely to have been encouraged by the ARC to maintain these data beyond the life of this grant.

- Different individuals entered data into ARC.net and the Westat questionnaire—with each individual potentially using different assumptions regarding project scope or timeframe (four projects).
- Human error in entering data into ARC.net (three projects).
- More individuals were served or improved than originally anticipated (two projects).

The number of projects that tracked outcomes after their project ended reveals an opportunity for the ARC to conduct a more comprehensive closeout questionnaire with projects that obtains follow-up information about the post-program status of project participants. Specifically, in an effort to count longer-term outcomes toward the Commission's goal regarding enhanced education and job-related skills, the ARC could continue to administer the annual supplement described in Recommendation 3 for up to five years after a project's grant expires. Using the same form that was administered during the grant award would ensure that projects are familiar with the procedures required to obtain and tally the requested data. Obtaining these data over time will enable the Commission to document the outcomes that are being leveraged through the long-term continuation of strategies that were created with the ARC's seed money. This, in turn, would enable the ARC to document its ongoing progress in meeting the annual goals outlined in its strategic plan.

Table 4-1a. Output and outcome comparison between questionnaire and ARC.net data from 2006–2008: Data for projects that provided outputs or outcomes in the questionnaire

Output or outcome		Questionnaire		ARC.net closeout (Includes projects that provided no data in ARC.net)			Total output or outcome ratio
		Number of projects with a record	Total output or outcome	Number or projects with a record	Number of projects without a record	Total output or outcome	
Overall	Students served.....	55	87,693	32	23	22,715	3.86
	Students improved.	43	36,172	19	24	10,282	3.52
	Workers/trainees served.....	24	7,638	6	18	2,087	3.66
	Workers/trainees improved.....	17	4,295	4	13	703	6.11
Education	Students served.....	39	81,378	27	12	22,090	3.68
	Students improved.	28	33,080	17	11	10,101	3.27
	Workers/trainees served.....	16	2,669	1	15	23	116.04
	Workers/trainees improved.....	10	1,696	1	9	23	73.74
Workforce development	Students served.....	16	6,315	5	11	625	10.1
	Students improved.	15	3,092	2	13	181	17.08
	Workers/trainees served.....	8	4,969	5	3	2,064	2.41
	Workers/trainees improved.....	7	2,599	3	4	680	3.82

NOTE: This table excludes 32 ARC education and workforce development projects with multiple entries in ARC.net (e.g., due to a contract extension or revision) that were funded between 2006 and 2008.

SOURCE: ARC.net database and Westat questionnaire of ARC education and workforce development projects.

Table 4-1b. Output and outcome comparison between questionnaire and ARC.net data from 2006–2008: Projects with corresponding output and outcome records in *both* the questionnaire and ARC.net

	Output or outcome	Questionnaire total (Excludes projects without a corresponding output or outcome record in ARC.net)	ARC.net closeout total (Excludes projects without a corresponding output or outcome record in the questionnaire)	Total ratio
Overall	Students served (n=32)	32,576	22,715	1.43
	Students improved (n=19)	19,301	10,282	1.88
	Workers/trainees served (n=6).....	4,656	2,087	2.23
	Workers/trainees improved (n=4)....	2,338	703	3.33
Education	Students served (n=27)	31,382	22,090	1.42
	Students improved (n=17)	19,159	10,101	1.90
	Workers/trainees served (n=1).....	23	23	1.00
	Workers/trainees improved (n=1)....	23	23	1.00
Workforce development	Students served (n=5)	1,194	625	1.91
	Students improved (n=2)	142	181	0.78
	Workers/trainees served (n=5).....	4,633	2,064	2.24
	Workers/trainees improved (n=3)....	2,315	680	3.40

NOTE: This table excludes the 32 ARC education and workforce development projects with multiple entries in ARC.net (e.g., due to a contract extension or revision).

SOURCE: ARC.net database and Westat questionnaire of ARC education and workforce development projects.

Exhibit 4-1.—Summary of findings from the online questionnaire

Who received ARC education and workforce development services? Almost half (49 percent) of projects that responded to the questionnaire provided at least some of their services to adults (not including postsecondary students or teachers), while 44 percent served K–12 students and 36 percent served postsecondary students. One-fourth (24 percent) provided services to teachers, while a smaller proportion targeted services to preschool children (14 percent) or out-of-school youth (10 percent).

What types of education and workforce development services did ARC projects provide? Projects were designed to provide a wide range of educational and workforce development services. The majority (56 percent) were providing educational attainment or achievement services that were specifically targeted to students pursuing a high school diploma or postsecondary degree, while 43 percent were providing career and technical education services and 41 percent were providing workforce training skills. Over half of the projects provided at least one of the following services: skills/training that enhanced employability (59 percent), special use classroom equipment such as computers or science labs (58 percent), and/or occupational/job skills training or instruction (53 percent). One-third (34 percent) provided computer skills instruction, while 23 percent provided or improved a physical structure.

How many students and workers/trainees were served and improved by ARC education and workforce development projects? At the time the questionnaire was administered (summer 2011), the 222 ARC education and workforce development projects funded between 2000 and 2008 reported that they had served a total of 414,296 students and workers/trainees—including 334,803 students and 79,493 workers/trainees. Of the total served, 99,809 individuals were reported to have benefited from their participation—including 81,974 students and 17,835 workers/trainees. We also compared the baseline estimates of the number of individuals that projects *expected* to serve and improve with the number that were reported as being served and improved on the Westat questionnaire. Projects served more students and workers/trainees than initially anticipated (141,037, compared with a projected total of 77,606). They also reported improving substantially more students and workers/trainees combined (41,481) than originally projected (27,502).

What types of benefits did ARC projects report for students that were improved? Among students, the most common benefits that projects reported were primarily focused on teenagers and young adults—e.g., obtaining vocational and technical skills (36 percent), enrolling in a college or postsecondary program (31 percent), obtaining basic or academic skills in a specific subject (30 percent), or obtaining a postsecondary degree, credential, or certification (28 percent).

What types of benefits did ARC projects report for workers/trainees that were improved? The most common benefit that projects reported for workers/trainees were learning skills in a new area—including vocational and technical skills (37 percent), employability skills (36 percent), and basic or academic skills (25 percent). A smaller proportion of projects indicated that their efforts resulted in improved work status—with 27 percent indicating that workers/trainees obtained new full-time employment and 21 percent reporting that workers increased their job status and/or earned increased wages.

What other outcomes did ARC education and workforce development projects report? A total of 44 projects reported creating 2,625 new jobs, of which more than half (1,484) were accounted for by 24 education projects. Thirty-five projects reported retaining 57,014 jobs—most of which (52,684) were reported by 17 workforce development projects. In addition, nine projects created a total of 75 businesses and 13 projects retained 133 businesses. Five workforce development projects created 69 of the businesses, while eight education projects accounted for 53 of the businesses that were retained.

Twenty-one projects leveraged a total of $120 million in private investments, of which $45 million was reported by 10 education projects and $75 million was reported by 11 workforce projects. Two workforce and one education projects increased their nonexport revenues by $545,000, while one workforce project increased its export revenues by $10,000. Three workforce and one education projects reduced their costs by $2.2 million.

There was an 18 percentage point decline in the proportion of participants who were unemployed before and after participating in an ARC education and/or workforce development initiative. In addition, the proportion of participants who were employed on a part-time or full-time basis increased by 13 percentage points (from 21.4 percent to 34.4 percent).

Just over 27 percent of all former participants were making less than $40,000 per year after exiting their programs—while 5 percent were making between $40,000 and $69,999 per year. Projects were not able to provide wage information for 63 percent of all former participants.

SOURCE: Westat questionnaire of ARC education and workforce development projects funded between FY 2000 and FY 2008.

Exhibit 4-2a. Potential response options for coding ARC.net narratives on how students were improved

Please use the following list to indicate how students were improved by your ARC project		
	Primary *(select one)*	**Secondary** *(select all that apply)*
Obtained vocational and technical skills	❑	❑
Enrolled in college or postsecondary program	❑	❑
Obtained basic or academic skills in a specific subject	❑	❑
Obtained a postsecondary degree, credential, or certification	❑	❑
Improved school readiness	❑	❑
Enrolled in more challenging classes	❑	❑
Remained in school when at risk of dropping out	❑	❑
Improved attendance on a daily/regular basis	❑	❑
Obtained a high school diploma, GED, or equivalent	❑	❑
Increased scores on statewide assessments	❑	❑
Advanced to next grade level	❑	❑
Decreased suspensions and other problem behaviors	❑	❑
Tested at or above grade level	❑	❑
Re-entered an educational program after dropping out	❑	❑

Exhibit 4-2b. Potential response options for coding ARC.net narratives on how workers/trainees were improved

Please use the following list to indicate how workers/trainees were improved by your ARC project		
	Primary *(select one)*	**Secondary** *(select all that apply)*
Obtained vocational and technical skills	❑	❑
Obtained other employability skills (e.g., work attitudes/habits)	❑	❑
Obtained new full-time employment	❑	❑
Obtained basic or academic skills	❑	❑
Maintained current employments	❑	❑
Obtained new part-time employment	❑	❑
Increased job status and/or earned increased wages	❑	❑
Reduced dependence on public assistance	❑	❑
Teachers or instructors enhanced their classroom practices	❑	❑
Retrained in another field and obtained new employment	❑	❑
Obtained/maintained employer-provided health benefits	❑	❑

Exhibit 4-3. Example of items for an intake form for workforce development projects

The following information will only be used to report on the overall success of this employment and training program. None of this information will be used or reported at the individual level.

1. Name (for tracking purposes): _____
2. Home zip code: _____
3. In what year were you born: _____
4. Employment status *(check one)*:

   - ❑ Never employed *(end survey)*
   - ❑ Currently unemployed—but previously employed *(end survey)*
   - ❑ Currently employed *(answer questions 5-8)*

5. How many hours do you currently work in an average week: _____ hours per week
6. What is your current salary *(provide information for one of the following)*:

   $ _____ per hour

   $ _____ per week

   $ _____ per year

7. Which of the following benefits does your current employer provide *(check all that apply)*:

   - ❑ Health
   - ❑ Disability
   - ❑ Life insurance
   - ❑ Education/professional development
   - ❑ Matching 401(k)/retirement
   - ❑ Other *(specify):* _____

8. In what type of industry are you currently employed *(check one)*:

   - ❑ Agriculture
   - ❑ Government
   - ❑ Manufacturing
   - ❑ Mining
   - ❑ Retail
   - ❑ Services
   - ❑ Other *(specify):* _____

Appendix A:

Case Study Findings

Case Study Findings A

A.1 Introduction

Following the administration of the online questionnaire, a series of follow-up interviews were conducted with a purposeful sample of 23 ARC education and workforce development projects. These interviews were used to obtain more detailed information about the accomplishments associated with these 23 projects, as well as to learn more about their efforts to collect outcome data from and about former participants.

Thirteen of the projects included in the follow-up interviews were selected because they reported on the online questionnaire that they had collected at least some outcome data from former participants. The remaining 10 projects were selected because they indicated on the online questionnaire that they had not collected any follow-up data with former participants. The 23 projects represented all but three (New York, North Carolina, and South Carolina) of the 13 states that are covered by the ARC. Just over half (12) of the projects had targeted a single population (e.g., K–12 students only), while 11 had served multiple populations (e.g., both K–12 students and adults). Specifically, as shown in Figure A-1, 11 of the 23 projects had served K–12 students, 10 had served postsecondary students, and 10 had served adults. The most prominent strategies being used by these 23 projects were educational attainment (17 projects), workforce training (14 projects), and career and technical education (12 projects) (Figure A-2).

Figure A-1. Target populations of projects included in the follow-up telephone interviews

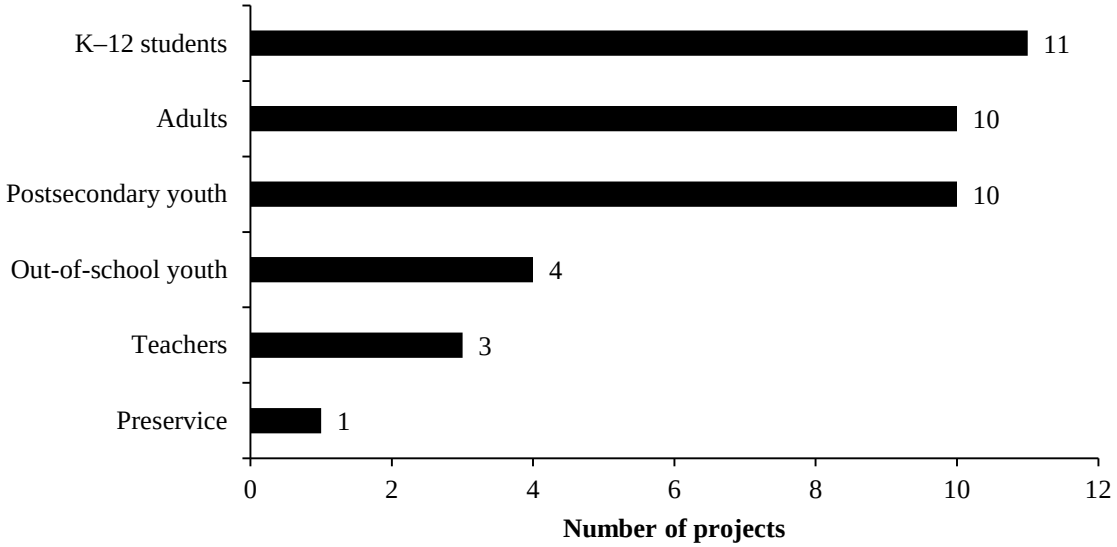
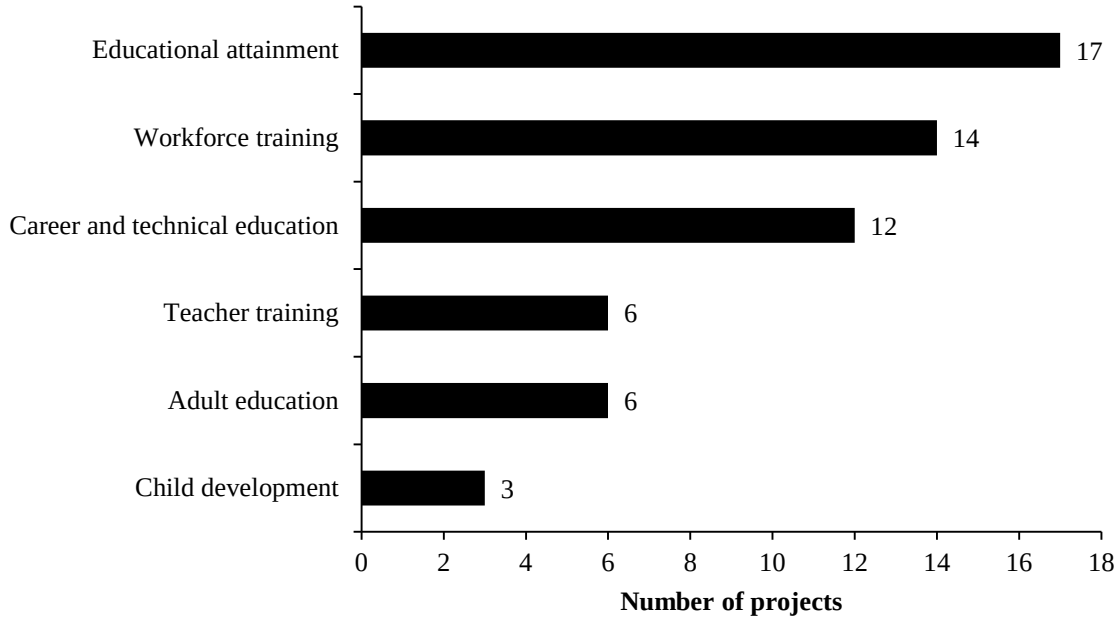


Figure A-2. General activities conducted or supported by the projects included in the follow-up telephone interviews



A.2 Implementation and Accomplishments of Case Study Projects

This section summarizes the information that projects provided in the telephone interviews about the implementation and outcomes associated with their ARC education and workforce development grants. Specifically, it addresses projects' assessment of their most significant accomplishments, identifies factors that facilitated or hindered their capacity to successfully implement the range of services covered by their ARC grant, and describes lessons learned in implementing their projects that they thought would be of interest to future ARC education and workforce development projects.

A.2.1 Projects' Assessment of Their Most Significant Accomplishment

During the interviews, respondents were asked to describe what they thought was their project's most significant accomplishment. All of the participants named at least one significant accomplishment, with most identifying two or three achievements that they considered noteworthy. These accomplishments can be categorized into the following broad categories: improved access to educational services, enhanced educational or job placement accomplishments, improved relationship between academia and industry, and improved project management and sustainability. Each of these is discussed below.

A.2.1.1 Improved Access to Educational Services

The most frequently cited accomplishment (described by 13 of 23 projects) was improved educational access for participating students. These projects indicated that absent the ARC's support, funding would not have been available for a wide range of services in their distressed and previously unserved rural communities. Most notably, the establishment of an ARC-supported facility or program resulted in reduced driving times for accessing services or resources. For example:

- One project indicated that prior to an ARC-funded renovation, the city had no training facilities that were in close proximity to the corporate business district. As a result of the project, local businesses and industries were able to take advantage of training programs offered, reducing lost time from travel. The central location of the training facility also resulted in a growth in demand for college credit courses.

- Another projected, situated in a rural region with high unemployment, established a distance learning facility. Because the region was not served by a higher education facility, the project director concluded, "If we were not here, the students would not be taking courses anywhere. Drive time and access to personal transportation and the perceived geographical boundary prevent students from accessing education in other areas."

Other tangible outcomes cited by projects included increased program availability, increased number of parents taking advantage of early childhood education opportunities for their children, and enhanced capability of students to use telecommunications to connect with other students or their professors.

A.2.1.2 Enhanced Educational or Job Placement Accomplishments

Nineteen of the 23 projects specified education-related accomplishments such as numbers served, raised standards, or increased college-going rates. For example, 11 of the 13 projects that reported improved access to educational services indicated that these expanded services resulted in an increase in the number of individuals served. In fact, five of these projects indicated that they exceeded their goal for the numbers they expected to serve in a given time frame. For example, one project director stated**,** "We anticipated serving 300, we served 1,000." For two of these projects, this increase in numbers served resulted in more investment by higher education agencies for project-related activities. For example, one state agency committed to expanding the project site into a full-service facility that will provide the types of basic student services that can be found on most college campuses (including a library and cafeteria). Within five years, the project also expects to have additional personnel for financial aid, admissions, and counseling. A second project reported that their welding program's increased application, enrollment, and completion rates justified the establishment of a new welding associate's degree (above and beyond the existing welding certificate).

Three projects cited "raising standards" as a significant outcome of their programs. These programs established a link between secondary schools and higher education institutions. One project focused on reducing the high school dropout rate by rewarding attendance, exposing students to postsecondary education opportunities, providing rewards for good grades, and helping students stay on track to graduate. The second project raised standards by implementing dual-credit courses that allowed students to earn college credit in the medical assisting health field while completing their high school diplomas. The third project increased the number of Advanced Placement (AP) courses offered, the number of students enrolled in AP courses, and the number of students earning quality scores on AP exams.

According to the project director, this raised standards because "the inclusion of AP courses …added more rigor into the typical course offerings and … increased the quality of teachers in those schools."

Three projects reported that their most significant accomplishment was an increase in youth's interest in attending college. One director indicated that the college-going rate in counties served by the program increased, while another reported an increase in the numbers of students taking dual-credit courses—i.e., as a result of the project, over 100 students earned between 12 and 16 hours of college credit before they graduated from high school. Although the third project could not quantify their increased college-going rate, the project director explained that "the notion of 'our most significant accomplishment' has been to change the culture regarding postsecondary education…. we are succeeding in moving the finish line from a high school diploma to the completion of a postsecondary education."

Finally, four projects indicated that their efforts resulted in workers being trained and hired for industry. Two projects reported job placement data for all of their program completers across all curricula offerings, including Adult Basic Education. A third project placed workers in construction trades, HVAC, welding, and building construction. The fourth project placed students in the health care sector.

A.2.1.3 Improved Relationship Between Industry and Academia

Five projects described their most significant accomplishment as improving their relationship with industry. This improved relationship resulted in reciprocal, positive outcomes. For example, three projects reported an increase of industry service on their program advisory committees. Typical industry involvement included providing oversight on curriculum content, guidance on the types of equipment that should be used by the program, and the identification of credentials that would be recognized and/or required by industry. In return, participating industries gained access to applicants trained in the content and skills that they desired.

Two projects reported that their improved relationships with industry led to an increase in private sector support for field trips. For example, one dropout prevention project reported that a local company provided funding to transport students from ARC programs to industrial sites. At these sites, students were exposed to work processes, equipment, and career opportunities. The project representative stated, "It was great for the kids to see how interested the company is in seeing them graduate and stay in the area."

A.2.1.4 Improved Project Management and Sustainability

Six projects described accomplishments regarding project and grant management. For example, one construction project felt it was significant that they finished "on time and on budget." Another project that focused on education indicated that their effective fund management allowed them to extend their program and offer additional services to students. In addition, four education and training projects identified significant accomplishments related to sustainability, reporting that they used ARC funds as seed money and subsequently secured other funding to continue their efforts.

A.2.2 Projects' Assessment of Factors That Facilitated and Hindered Their Success

Projects were asked to describe factors that facilitated or hindered the scope and impact of their project efforts. Projects reported one or more facilitators of success related to stakeholder involvement, the use of personnel, and previous experience with the ARC. Hindrances were related to ARC requirements, institutional barriers, the lack of stakeholder involvement, the unintended consequences of successful training, and technology literacy. While many of the facilitating factors were within the control of project staff, some of the hindrances were beyond their control.

A.2.2.1 Facilitating Factors

Stakeholder buy-in. Twelve projects discussed the importance of stakeholder buy-in as a crucial factor that facilitated their project's success. The identity of the stakeholders, the role that they played, and their level of involvement varied from project to project, but their buy-in was crucial for project success. The stakeholders were described as representatives from either community-based organizations (e.g., economic development agencies in the area, local elected officials and other government agencies which could or would be affected by the project), or business and industry.

The buy-in of community-based organizations was cultivated by purposefully communicating program goals, costs, and expected outcomes. This communication began early in the planning and budget phase and helped encourage support throughout all phases of the project. Projects indicated that if issues and obstacles surfaced, stakeholders were more likely to support, rather than block, project director decisions if those stakeholders had been actively involved in the project. For example, one project manager

indicated that efforts to increase stakeholders' understanding of the program (e.g., goals, costs, and expected outcomes) resulted in enhanced support that, in turn, has allowed for greater opportunities for sustained funding beyond the ARC grant.

Representatives from workforce development projects said that local business and industry buy-in was a crucial factor. Three projects indicated that they were more successful when they engaged stakeholders from different industry sectors with similar needs. For example, one project was responsible for the education and placement of welders. The stakeholders they engaged included representatives from local mining, manufacturing, and construction companies who became involved in the project because they all needed welders. They each cooperated during the development of the program and later competed for program graduates. This multisector stakeholder group was advantageous for the training provider for two reasons. First, having multiple stakeholders contributed to the long-term viability of the program; if one industry had a downturn and needed to discontinue hiring new workers, the training program was still able to place graduates in other job sectors. Second, because the companies were competing for graduates, they were more likely to become involved in the program's advisory committee and provide the program with more equipment, consumable supplies, and monetary scholarships and awards, and eventually hire the program's graduates.

Strategic use of personnel and resources. Several projects attributed their success to the voluntary and flexible nature of their initiatives. For example, one project indicated that its success was enhanced by a decision to provide grants only to teachers who volunteered, with the respondent indicating that the project would not have been as successful if participation been mandatory. A second project indicated that its success was tied to a decision that allowed teachers the flexibility to shape the project to fit the unique needs of their school—i.e., their success was linked to a decision to take a "one size does not fit all" approach.

Other projects described how their use of technological resources excited staff and enhanced communications and access. For example, one project indicated that its faculty's eagerness to obtain and use the ARC-provided technology was contagious, which helped the "technology avoidant" faculty to embrace and use the technology within their own courses. Another project that used distance learning reported that the use of technology enabled face-to-face contact between professors and their students, thereby increasing the student retention rate.

Previous experience with the ARC. Three projects identified previous experience with the ARC as a factor that facilitated their success. These projects stressed the benefits of having attended ARC-

sponsored conferences and meetings and developing relationships with ARC staff (in both Washington, DC, and their own states)—indicating that these contacts enhanced their ability to be successful in their reporting and financial accountability and in obtaining additional ARC grants.

A.2.2.2 Hindrances

ARC requirements. Three of the education projects indicated that the timing of the ARC's grant cycle represented an immediate obstacle. Specifically, when a one-year grant award is made in October, the project only has a few months to sign agency agreements, obtain equipment, and recruit staff. Even then, the project must implement its strategy and accomplish its goals in a single school semester (i.e., between January and June). Under this scenario, projects indicated that they require more time to recruit and engage teachers.

Another education project indicated that it tried to expand into another county to serve economically disadvantaged students but could not due to differences between the ARC's definition of a distressed county and the definition used by the state. As a result, the project's ability to make use of its ARC funds was restricted to students living in a distressed county (the project ultimately obtained funding from another source to serve students in other parts of the state).

Institutional barriers. Several education agencies indicated that they found it difficult to recruit skilled instructors because they were unable to offer salaries comparable to those in private industry. One project reported that the potential scope of its impact was limited because the lead organization had a policy against providing assistance with transportation and child care costs, thereby limiting the number of students that were able to participate in project-related activities.

Lack of stakeholder involvement. While some projects identified stakeholder support as a facilitating factor, three projects indicated that lack of stakeholder involvement was a major hindrance. Specifically:

- In one state, ARC funds were awarded to build and design a facility under the direction of a county system. The staff who were assigned to move in and manage the facility were unaware the project existed and they were not consulted for input into the design of the facility. Because of this, the building lacked features (e.g., storage space) that could have enhanced everyday operations and functions. In addition, staff members have not been trained on how to use the video-conferencing equipment, so it is not used as intended. The director believes that if staff had been consulted during the planning phase, the building would be more functional and funding would have been allocated for staff training on how to use the equipment.

- One project described the difficulty of getting political officials to support education projects—with the respondent noting that public officials were more supportive of projects that were visible to the public (e.g., water and infrastructure) than they were for education projects.

- A third project was closed after one year because they did not completely analyze and identify a critical stakeholder. Even though their first-year goals were met and they were successful, the second-year funding was blocked by a person with the authority and position to make decisions over project priorities. Project staff believed that had this person been recognized as a critical stakeholder in the beginning of the project and fully engaged in the first year, that decision might have been avoided.

As a result of these experiences, respondents suggested that future education and workforce development projects take steps to publically offer their support for ARC-supported activities as often as possible. Examples of recognition opportunities include newsletter features and photos, certificates at graduation and award ceremonies, and opportunities for program participants to meet and speak with public officials. One respondent pointed out that in addition to benefiting staff and participants, the inclusion of project and community leaders can increase the likelihood that elected officials will view education as a component of economic development (and therefore offer continued support for the project).

Unintended consequences of successful training. One project indicated that it was not as successful as it might have been because students dropped out of its program as soon as they had obtained the skills needed by a local company. The respondent noted that if a project provides exceptional job training, it is common for students to drop out of the academic program to enter the workforce. Education providers are then charged with a negative outcome because they must record those individuals as "non-completers." The project director indicated that he learned to communicate to industry that early exits were seen as a "negative" by his funding source, and he began encouraging industry representatives to agree not to hire participants on a full-time basis before they finish the entire program. If a business does hire students before they complete the program, they are asked that the students not be assigned overtime so that they can complete the program on a part-time basis. As a result of this experience, the project suggested that future projects take steps to ensure that industry stakeholders understand the operating parameters of education and training programs.

Lack of technology literacy. Project managers in three sites were hindered by their own lack of knowledge of the technology they were attempting to integrate within their programs. They indicated that this lack of access to a technology specialist meant that they were at the mercy of single product vendors, were unable to easily navigate complex Federal Communication Commission rules and regulations, and were not able to provide technology training to their staff.

A.3 Projects' Effort to Collect and Utilize Outcome Data

As discussed in Chapter 3, almost 40 percent of the 222 projects that completed an education and workforce development questionnaire tracked participants after program completion, with 18 percent tracking participants for one year and 19 percent tracking participants for two or more years. The remaining projects either did not track program participants (29 percent) or indicated that such tracking was not applicable to the types of services they provided (33 percent).

A.3.1 Factors That Prompted Projects to Collect Outcome Data

The ARC currently has no requirements that education and workforce development projects collect longer-term outcome data from former participants. Nor are there any systematic requirements that projects provide the ARC with outcome data after their grants have ended. As such, a purpose of the telephone interviews was to determine why projects chose to collect outcome data from former participants when they were not required to do so.

Almost all (12 of 13 projects) indicated that they collected data from former participants because of a requirement of an agency other than the ARC. Other agencies requesting data from or about former participants included state departments of education or workforce development, state higher education commissions, a county education department, the U.S. Economic Development Administration (EDA), an accrediting agency (e.g., a nursing licensing board), another federal government agency (e.g., the National Institute of Standards and Technology), or the National Mathematics and Science Initiative. It should be noted that even though these data elements were collected, the ARC projects frequently did not have immediate access to the data (although they could access the data if necessary). In addition, because there is no effort to utilize standardized definitions or collection procedures, it would be difficult to compare or aggregate these outcome data across ARC projects.

Several projects indicated that they collected outcome data to document the project's effectiveness and efficiency for local stakeholders. Two projects kept data to document the effectiveness (or lack thereof) of interventions (one to increase the college-going rate of students and the other to measure the impact of technology on instruction). The third project was of particular interest to the governor's office, and staff wanted to document the initiative's impact on adult literacy levels. A fourth project kept data on spending to document fiscal responsibility to stakeholders and political watchdogs.

A.3.2 Types of Data Collected From and About Former Participants

During the telephone interviews, the 13 projects were asked to describe the types of data that they were collecting from former participants. Although the intent of the question was to learn about methods used to collect data directly from participants, many of the respondents provided information about steps being taken to obtain data from existing sources about former participants.

As shown in Exhibit A-1 (at the end of the appendix), four projects were collecting information about former participants' employment and wage status. Specifically:

- Two of these projects were using surveys to obtain these data directly from students. For example, one project had schools mail surveys to a student's last known address, with some faculty conducting follow-up with nonresponders (the survey is issued annually for up to five years after students complete the program). Both projects were challenged by low response rates, lack of staff time to conduct follow-up with nonrespondents, and a reliance on self-reported data on employment status that are difficult to validate.

- A third project used faculty members' unofficial knowledge about the employment status of their former students to prepare an annual report for the state department of education. However, this method relied on anecdotal information that was not subsequently verified, and no effort was made to obtain information about those students for whom such information was not easily obtainable.

- A fourth project used a database maintained by a state agency (established to align universities, government, and industry resources) to mine existing data related to individual taxes, unemployment, and education enrollment. Using these existing data, the project was able to determine if a particular student was in school, was earning a paycheck, was drawing unemployment, or a combination thereof. While the data were unobtrusive and reliable, they were not collected directly from former participants. As such, the information was only made available in the aggregate and could not be linked to the characteristics and experiences of individual students.

Three projects tracked the numbers of high school graduates who attended a postsecondary institution. Two of these projects conducted surveys of former participants to obtain this information—with both projects reporting that low response rates and the lack of validation methods minimized the value of the data for project monitoring and program planning. As such, they did not believe that the data they had collected could be used to reliably help the ARC staff assess emerging trends or consider steps that might

be taken to improve their programs A third project used the National Student Clearinghouse (NSC) to examine students' enrollment in postsecondary education.[1]

Finally, three projects used existing databases to obtain information about the number of former participants that had taken a high school AP course/exam, passed a licensing or certification exam, or passed their GED exam. However, one project indicated that it was only able to obtain program data for those program graduates that actually attempted the licensing exam, making it difficult to calculate a valid and reliable "success rate."

A.3.3 Steps Taken to Enhance Response Rates and Validate Data

The collection of valid and reliable outcome data requires that steps be taken to minimize the potential for nonresponse bias and respondent errors. As such, organizations responsible for collecting and using outcome data are often required to implement steps designed to conduct follow-up with nonrespondents, as well as with respondents that appear to have provided erroneous information (e.g., inconsistent information across survey items). This section provides information on the extent to which the 13 projects that collected data took steps to enhance their response rates and validate outcome data.

Steps taken to enhance response rates. During the follow-up interviews, projects were asked to discuss response rates to their attempts to collect follow-up data. The 13 projects interviewed had no standardized or operational definition of the term "response rate." Participants used words such as "low," "very high," or "I am not sure, another department keeps that information." Others had specific numbers, although they indicated those numbers were estimates. It is important to note that only seven of the 13 projects actually attempted to collect data from and about participants.

The only two projects that attempted to collect follow-up data directly from former participants reported a low response rate. In addition, they made little effort to follow up with participants to gain missing information. One program indicated that although their staff tries to follow up with phone calls, project personnel have no idea how much additional data are actually collected as a result of these efforts. None of the projects knew exactly how many individuals were tracked over time—with lack of time and resources being cited as the reason for not trying to reach nonrespondents.

[1] The NSC is a subscription service for degree and enrollment verification. The NSC tracks the student's college attendance status for six years. Schools and colleges upload information to the database annually and the project is able to document the education status (enrollment, course work) for the student for up to six years.

Steps taken by projects to validate data about former respondents. None of the projects that collected data directly from former participants reported any action to validate the data they received. Two projects accepted information on student submitted surveys, while a third accepted data submitted by staff. (The remaining projects used third-party systems to collect data, and two accepted reports by a testing center and licensing board.) The two projects that obtained data from student surveys indicated that their projects struggled to find staff and time to simply collect the data. As such, they lacked the resources to subsequently validate the data.

A.3.4 Types of Data Projects Were Unable to Collect From Former Participants

Projects indicated that while they would have liked to collect wage data from (or about) their former participants, most respondents were likely unwilling to provide such information about themselves. Three projects indicated they saw a privacy issue, reflected by students' "none of your business" answers on surveys. Another project indicated they could not ask for any personal data from students because of privacy laws.

Projects also discussed the difficulty of using third-party systems to obtain information about former participants. For example, two projects indicated that they were unable to obtain data about participants that had moved to another state—with one project indicating that it was only able to track students' enrollment in in-state universities and colleges.

A.3.5 How Projects Made Use of Data About Former Participants

Projects made multiple uses of data about former participants—including marketing, operations, documentation for accreditation, and as a basis for generating additional funding. For example:

- Four projects discussed using data for program improvement initiatives, with two projects using the data to evaluate the efficacy of training programs (e.g., by demonstrating the skills that students had learned). One project used participant feedback to improve campus services and another used student achievement data to research the effectiveness of traditional classroom instruction as compared to distance learning.

- Three projects used data to support their marketing efforts in newsletters, brochures, and websites. The ultimate goal of the marketing efforts was to increase future enrollments and

secure additional funding. One project used its data on enrollment and job placement to justify additional staff for student services.

- Three projects used data to provide documentation for accreditation and licensing boards to obtain or maintain necessary credentials. The most common data elements included completion rates, employment status, testing results, and enrollment figures.

A.3.6 Information About Projects That Did Not Collect Follow-up Data From Former Participants

In an effort to understand factors that prevented projects from collecting follow-up data, we also conducted telephone interviews with 10 projects that reported on the educational and vocational education questionnaire that they did not collect any follow-up data from participants. The purpose was to ascertain (1) the types of outcome data they would have liked to collect from program participants, (2) the factors that prevented them from collecting these data, (3) how their project would have been able to make use of these data, and (4) any technical assistance that the ARC could have provided that would have made it possible to collect these data.

As shown in Exhibit A-2 (at the end of the appendix), the most prominent data that projects would have liked to collect were college-going rates (three projects) and the number of students employed in the field for which they were trained (three projects). Most of the other data elements suggested by projects would have required sophisticated techniques to accurately measure economic impact, employer satisfaction, new business start-ups, and productivity improvement.

The potential uses for these data primarily focused on marketing and recruitment, documentation that could have been used to raise additional funding, validation of industry needs, stakeholder communication, and a demonstration of their return on investment. Projects provided a common set of reasons for not collecting the data—including lack of staff and resources, lack of access to an existing database, lack of assistance by a school or college, and an inability to track students who leave the community. In addition, five of the 10 projects indicated they did not have to collect data because they were technology or construction projects and the collection of outcome data was not required by the ARC. For example, one respondent did not see the need to document the outcomes of all the participants going through his school to justify construction of a computer lab. He said he did not see the connection between an agency that funded bricks and mortar for a training center and the effectiveness of the program housed inside the new building.

A.3.7 Lessons Learned and Opportunities for Technical Assistance From ARC

During the interviews, projects were asked if they had any suggestions that they would share with future ARC education and workforce development projects regarding the collection of outcome data. The most prominent recommendations involved the development of common data collection instruments and practices (e.g., frequency of data collection, methods for reporting data) that could be shared across projects. Other projects offered suggestions for dealing with specific data collection challenges issues. For example, one respondent advised projects to use emails and cell phone numbers (instead of land lines and street addresses) to contact former participants, since individuals are more likely to maintain their email addresses and cell phone numbers when they move. Another respondent suggested that graduating students be informed about any upcoming surveys (including how the resulting data will benefit the school and the program) so that they are more likely to provide any requested information in future years. A third project suggested that data be maintained in a single repository so that they are easily accessible and can be accessed by multiple individuals.

Projects also offered suggestions for how the ARC could assist projects that want to collect data from former participants. Since the ARC does not currently require projects to collect such follow-up data, the recommendations generally came with the following caveat: "if they start requiring projects to collect data it would be helpful if…" Given this caveat, the most common request was that the ARC provide projects with (1) operational definitions for such key terms as college-going rate, full-time student, and full-time equivalency; (2) guidelines about how to address specific challenges (e.g., whether or not to collect data from participants that leave a program before they graduate); (3) templates and other specific guidelines as to how they wanted data to be presented; (4) suggestions for third-party data collection services that could be used to obtain valid and reliable data; and (5) access to experts that could provide project-specific guidance on how to collect and report outcome data. In addition, one project suggested that the ARC develop a portal on its website that could be used to obtain data from individual projects—indicating that such a portal would compel projects to utilize standardized definitions and provide projects with a means of comparing their results with those of other similar initiatives.

Exhibit A-1. Information about data that projects collected from or about former participants

Data element	Number of projects	Data collection method	Frequency of data collection	Issues
Post-program employment and wage status	4	Teachers use a telephone or email survey to collect data directly from former students.	At a minimum, teachers report students' status at graduation and three years after graduation. Some programs track students for a longer period (based on program accreditation requirements).	Low response rate. Self-reported data with no validation. No time and staff to follow up with all nonrespondents. Students cautious about reporting income data.
		Data collection initiated by a survey administered with students prior to graduation. After program completion, the state agency sends a survey "alert card" to the students followed by a survey. Schools are responsible for follow-up, although only a few actually make phone calls.	Students complete a survey before graduation, three months after graduation (usually September), and annually for five years.	Low response rate (20 percent). Self-reported data with no validation. No time and staff to follow up with all nonrespondents. Students cautious about reporting income data.
		Instructors are provided a list of students who had completed the program. Teachers are asked to report the current status of those students based on anecdotal information from the community grapevine.	Data are compiled on an annual basis and submitted to the state department of education.	Anecdotal information not always valid. Data only collected from students for a single year. No effort made to determine status of students not known by teachers.
		Data collected by a third party (not directly from former participants). The state established an office charged to collect data on workforce programs. Students are issued a state ID number that is used to track their participation in training programs, employment status, and wages on a shared database.	Training programs generate reports on a quarterly basis and submit data at the end of the year to the state office. The state office reports outcomes in an annual report. Students are tracked for two years after completing training. Students that do not show up in the database for two quarters are classified as unemployed.	The system is unobtrusive, tracks a high volume of former students, and obtains reliable data as long as students are still living in the state. Projects do not receive data about individual students (only aggregate data about previous participants).

Exhibit A-1. Information about data that projects collected from or about former participants—continued

Data element	Number of projects	Data collection method	Frequency of data collection	Issues
Number of high school graduates that transition to postsecondary education	3	Data collected directly from students. Teachers use a standard survey to administer a telephone or email survey with their former students.	At a minimum, teachers report students' status at graduation and three years after graduation. Some programs track students for a longer period (based on program accreditation requirements).	Low response rate. Self-reported data with no validation. No time and staff to follow up with nonrespondents.
		Data collected directly from students using a survey prior to graduation. After program completion, the state agency sends a survey "alert card" to the students followed by a survey. Schools are responsible for follow-up, although only a few made phone calls.	Students complete a survey before graduation, three months after graduation (usually September), and annually for five years.	Low response rate (20 percent). Self-reported data with no validation. No time and staff to follow up with nonrespondents.
		The state subscribes to the National Student Clearinghouse (NSC) to track the students' status after graduation. Schools upload the information to the database on an annual basis.	The NSC collects and reports data on students for six years after graduation and reports data on an annual basis.	NSC depends on schools submitting information on students. Subscription to the NSC is expensive. There is no incentive for schools that drop out of the project to continue uploading the student data.
Number of AP courses and exams taken	1	Data collected from a third party. The College Board issues a report to the school, which is included in the National Math and Science Initiative report.	Annually	The public school has the ability to track students' college attendance status if they attend college in their home state, but the project does not keep this information.
Status of people passing licensing/ certification exams	1	Data collected from a third party. State Licensing Nursing Board reports the names of those passing the exam and those who have not passed.	Students have the opportunity to sit for an exam multiple times of the year. The board only reports the status of the student after they have passed the exam. Those students that are retested are tracked until they pass the exam.	Program only has data for students who sit for the test; there is no accounting for students who do not graduate, who move, or who choose not to sit for the exam.

Exhibit A-1. Information about data that projects collected from or about former participants—continued

Data element	Number of projects	Data collection method	Frequency of data collection	Issues
Status of people who passed the GED	1	Data collected by a third party. Test scores are released by the GED test centers. Teachers in the centers report any known information about the students the year following passage. Information is compiled into a report and submitted to the state department of education.	Results are reported after each test and compiled into an annual report each year.	Student placement is based on program staff knowledge of the students. As such, the report may not contain information about the same students over time.

NOTE: Information only collected from projects that obtained at least some data from or about former participants.

Exhibit A-2. Information about data elements that projects would have liked to collect from former participants

Data elements	Number of projects	How data would have been used by projects	Reasons data were not collected by project
College-going rate	3	Recruitment of more students in the program and to recruit more teachers to teach dual credit courses.	No existing mechanism to track students, nor any knowledge about how to initiate such a process. Lack of assistance from colleges. No way to track student who leave the community.
		Document merit of the grant.	Do not know how to track to get accurate data. Lack of an existing database.
		Document program's success as a basis to apply and receive future grants.	No way to track student who leave the community. Cannot supervise guidance counselors to standardize the definition of "college-going rate," so you aggregate across schools.
Number of students employed in the field for which they were trained	3	Basis for program improvement. Document program's success as a basis to apply and receive future grants.	It was a construction project, and data collection was not required. Grant ended after one year; did not report after the project ended.
Economic impact	1	Recruitment of more students in the programs offered in the facility.	Technology upgrades, no follow-up data required.
Employer satisfaction	1	Update and recruit advisory committee members. Make a case for sustainability. Identify what employers need to modify programs.	Lack of staff and resources.
Number of students starting new businesses	1	Justification to continue the program. Document project's success as a basis to apply and receive future grants.	Lack of staff and resources.
Number of students that gained a desired skill	1	Document number completing the training for use by economic developers. Attract new industries to the region.	Not required because it was a technology grant. Lack of staff and resources. No access to monitor teachers' classrooms.
Productivity improvement	1	Document project's success as a basis to recruit more local businesses to use the facility to upgrade training of their employees.	Technology upgrades, no follow-up data required

NOTE: Information only collected from projects that did not attempt to obtain any data from or about former participants.

Appendix B:

Opportunities and Challenges Regarding the Collection and Analysis of Economic Outcomes for the ARC's Education and Workforce Development Projects

Opportunities and Challenges Regarding the Collection and Analysis of Economic Outcomes for the ARC's Education and Workforce Development Projects

This appendix describes results of an analysis of the economic impact of participation in ARC education and workforce development programs. Specifically, the analyses reported in this appendix utilize findings the questionnaire that Westat administered with the 386 education and workforce development projects that were funded between 2000 and 2008. The purpose was to extract available information on the effect of participation on worker/trainees' employment status and income level.

The use of the questionnaire to collect enhanced outcome data is central to this analysis of economic impacts. Taken together, the questionnaire and the resulting analysis was part of an effort to examine the feasibility and value of expanding the unified ARC.net database of outcomes associated with grant programs. The purpose was to assess whether the collection of enhanced outcomes data would allow for the measurement of the benefits of ARC programs on its constituent counties. Due to low response rates on the questionnaire items pertinent to the economic status, the analyses presented here can only provide examples of the types of economic impacts that the ARC's education and workforce development programs generate.[1]

In interpreting the findings in this appendix, it is important to keep in mind that the collection of outcome data was not originally required at the time that these grants were awarded, and post-project monitoring and record-keeping are not currently required (outside of the validation visits conducted with a sample of projects). Therefore, only a portion of projects kept records of participants' post-program outcomes and were able to provide this information. The analysis results reported in this appendix are thus useful in highlighting both potential benefits and current limitations pertaining to the ways that ARC education and workforce development grantees are asked to maintain data and track project outcomes.

Methodological Approach

This analysis utilizes projects' responses from the following sections in the questionnaire: Background Information, Project-Related Activities, and Economic Impacts. The analysis discussed in this appendix is centered on questions in the sections Project-Related Activities (Questions 14–16) and Economic Impacts (Questions 31–35).

To maximize the number of projects that could be included in the analysis, we first considered the larger of the two (improved or served categories) summations of workers/trainees and students, filtering for ages 19 and over for each questionnaire. If the number was zero but the participants' served or improved fields were positive, then the smaller of the two participant fields (participants improved or participants served) was used to fill in the blank. As shown in Table B-1, this approach resulted in a total of 134

[1] As reported in Chapter 2, the questionnaire received responses from 222 of the 386 education and workforce development projects that received funding between 2000 and 2008. However, as is discussed throughout this appendix, only a small portion of grantees formally tracked how clients fared after completing the programs supported by ARC grants.

observations as a baseline (as opposed to the 78 that resulted from removing projects that only served youth ages 18 and under). These 134 projects were matched to the percentage fields of pre- and post-employment status. The lower percentage of pre- or post-status participation was used in cases where the observations had some percentage of unknown employment and pre- and post-reporting did not match. As discussed below, this multistage process resulted in a total of 39 observations:

- First, projects that did not provide a number greater than zero for *any* of the categories on Question 14 were removed from the analysis. These categories include students served, students improved, workers/trainees served, workers/trainees improved, participants served, and participants improved. As shown in Table B-1, this resulted in the removal of 43 projects—with 179 projects providing a number greater than zero for at least one of these categories.

- Second, projects that only served youth (i.e., persons age 18 and below) were removed from the analysis since they were not expected to have any employment outcomes. As shown in Table B-1, 78 of the 166 projects that served at least one person age 19 and over provided a number greater than zero for at least one of the categories in Question 14 (without reporting "don't know") *and* provided at least some of their education and workforce development services to individuals age 19 and older. When allowing for the reporting of "don't know" for one or more categories in Question 14, 134 of the 166 projects provided a number greater than zero for at least one of the categories *and* provided at least some of the their education and workforce development services to individuals age 19 and over. For the purposes of this analysis, we added 56 projects that indicated "don't know" in their response to Question 14.

- Third, projects that did not provide data on employment outcomes were removed from the analysis. As shown in Table B-1, 55 of the 179 projects that reported a number for Question 14 provided data on the pre-employment status of their participants—and 35 of these 55 projects also reported on post-employment status. A smaller number (13) also provided information on both the industry type and pay levels for program participants' jobs. It is important to note that even though only a fraction of respondents were able to provide complete information, they still covered training for a large number of participants. The 35 projects that had pre- and post-project employment data represent roughly 441,800 participants; the 13 projects that also had information on job characteristics served more than 7,800 participants.

- Finally, by using a strict interpretation of the questionnaire responses regarding ages served, the number of projects with trainees 19 or older that reported data on post-employment and salary were 22 and 11, respectively. To maximize the number of surveys that could be used for this economic analysis, we allowed for the inclusion of (1) "don't know;" (2) either pre-employment or post-employment data (increasing the number of usable projects from 22 to 39 for the analysis of pre- and post-employment); and (3) either industry or salary data (increasing the number of usable projects from 11 to 25 for the analysis of industry and salary).

Table B-1. Number of questionnaire responses used in the analysis of economic and income outcomes

Nesting criterion	Responses based on nesting criteria	Nesting criteria screened for age (19+)	Adjustments to maximize usable questionnaires for economic analysis
Total number of questionnaires that met the initial screening criteria	222	166	166
Projects that reported a number greater than 0 for one or more participant categories on Question 14[1]	179	78[2]	134[3]
Projects that provided data on participants' pre-employment status	55	28	39[4]
Projects that provided data on participants' post-employment status	35	22	
Projects that provided data on industries in which former participants were employed	15	13	25[5]
Projects that provided data on former participants' salaries	13	11	

[1]Observations for which the sum of Question 14 categories was greater than 0: students served, students improved, workers/trainees served, workers/trainees improved, participants served and participants improved. Blanks or nonnumerical notations (such as question marks) were treated as 0. Following this tabulation, in subsequent parts of this analysis the category of "participants" was redefined to maximize usable questionnaires and responses for the analysis of economic impact (see numbers under Adjustments to maximize usable questionnaires for economic analysis).

[2]Does not include records where "don't know" was reported for any of the Question 14 categories.

[3]Allows for "don't know" in one or more of the Question 14 categories.

[4]Pre-employment and post-employment was greater than 0, and the smaller of the two answers was used if the answers did not agree.

[5]Either salary or industry was answered. If salary did not account for 100 percent of participants, industry-level data from the Bureau of Labor Statistics were used to fit to industry responses.

NOTE: One ARC project was not included because the data contained made it an extreme exception, although using this project would bring the total usable employment questionnaires to 40 and salary questionnaires to 26.

Several caveats are worth noting. First, the decision rules described above were adopted to maximize the number of questionnaires that could be used to estimate job and income impacts. This decision allowed for the largest sampling possible, given the data set, for each metric. As a result, more projects were available for the employment analysis than the income analysis. In both cases, though, the number of valid questionnaires allowed for normal distributions for each metric.

Second, the numbers presented in this discussion do not match the data provided in Chapter 3. Even though both sets of analyses are based on the same questionnaires, different assumptions regarding item nonresponse and the handling of don't know were used in the frequencies presented in Chapter 3 and the economic impacts derived in this appendix. In addition, unlike the procedures used to calculate frequencies in Chapter 3, many of the calculations in this discussion were dependent on prior calculations (as illustrated by the nesting criteria in Table B-1, which are used to show the inter-relationships of multiple responses).

Findings for the Projects That Completed a Questionnaire

Jobs. As shown on Table B-2, the 39 job training projects that tracked both pre-program and post-program employment status led to the following:

- Full-time or part-time jobs for 3,339 previously unemployed people (accounting for 72 percent of participants who entered the programs while unemployed); and

- 4,351 workers securing full-time jobs who were previously unemployed or underemployed (working part time), accounting for 47 percent of program entrants who were unemployed or working part time.

Since these 39 projects represent approximately one-sixth of the total projects, it might be inferred that total program impacts on employment status are likely to be roughly four times the values shown in Table B-2 (when limited to clients 19 years or older who are legitimate workforce candidates).

Table B-2. Summary of participants' employment status changes for the 39 projects that had pre/ post-employment status data

Employment status	When entering program	When exiting program	Difference
Not employed	4,646	1,307	-3,339
Employed part time	4,544	3,532	-1,012
Employed full time	13,031	17,382	4,351
Total	22,221	22,221	0

It should be noted that it is not possible to confirm the extent to which individual participants moved among the employment status categories shown in Table B-2 because the questionnaire obtained data on aggregate program totals (i.e., there were no participant-level data that allowed for the matching of pre- and post-project employment status). Nonetheless, the aggregate results clearly show an aggregate reduction in part-time workers and an even larger reduction in unemployed persons, with a net gain in full-time workers. In addition, by applying a set of generally reasonable calculation rules[2] to the results of the 39 projects with pre- and post-project employment data, it is possible to develop a rough characterization of the ways in which workers are likely to have moved among employment categories as a result of ARC-funded workforce development projects. Thus, as shown in Table B-3, 282 individuals transitioned from being unemployed to part-time employment, while 3,057 transitioned from unemployment to full-time employment. Using these assumptions, we calculate that 4,633 out of 22,221 participants aged 19 and older improved their job employment status (at least in part) due to the 39 ARC education and workforce training projects that provided pre- and post-project employment status.

Table B-3. Estimated patterns of change in employment status following ARC workforce training programs for 39 projects that had pre/post employment status data

Pre-participation status	Number of participants	Post-participation status			
		Unemployed	Part time	Full time	Total
Unemployed	4,646	1,307	282	3,057	4,646
Part time	4,544		3,250	1,294	4,544
Full time	13,031			13,031	13,031
Totals	22,221	1,307	3,532	17,382	22,221

NOTE: These patterns of employment change were estimated based on assumptions that participants did not move backwards in job status after completing their programs.

Income. Of the 39 projects that provided pre- and post-project employment status, approximately one-third could not be used to calculate improved income because incomplete data (missing income or employment industry data) or errors of addition (either data fields did not sum to 100 percent or included some percentage of participants as unknown income brackets). For a record that was missing relevant income information but contained complete industry information, the average industry specific income bracket data from the Bureau of Labor Statistics were used to plug the missing observation's values. As a result of this hybridization, 25 of the 39 records (64 percent) were able to be preserved so that we could generate income effects, whereas a more absolute methodology would have done well to preserve less than half as many.[3]

[2] The rules that were adopted are summarized at the end of this appendix.

[3] There were 26 validated responses, but one project was not counted because it was considered an extreme outlier.

Altogether, 25 of the projects had at least partial information on the post-project industries and salary levels of 10,759 participants (Table B-4).[4] The results indicated the following outcomes:

- 6,368 participants maintained their job status and increased their income (i.e., remained part time or remained full time);
- 3,559 participants improved their job status and increased their income (i.e., moved from unemployed to part time, unemployed to full time, or part time to full time); and
- 832 participants remained unemployed.

The total income change for the participants in these 25 projects is estimated at roughly $104 million in annual personal income, or an annual increase of $9,700 per participant. Over an assumed 20-year work history, this increase would total $194,000 in undiscounted value per participant and $121,000 when discounted over time at 5 percent per year.[5] For participants who improved their employment status (moved from unemployed to full- or part-time employment, or moved from part-time to full-time employment), annual personal income increases averaged more than $19,700. ARC investments in these 25 projects totaled $5.4 million, indicating a return on investment per participant exceeding $19 in annual income per dollar of one-time ARC investment. Total program costs, including ARC and other funding sources, were $12.9 million, which indicates an $8 return of annual income for one-time total project costs. Changes in annual personal income are shown in Table B-4.

Table B-4. Changes in annual personal income for the 25 ARC project with complete economic impact responses

Change in status	Incremental income	Incremental income per participant	Number of participants
Unemployed to full time	$55,236,000	$24,700	2,234
Unemployed to part time	3,908,000	15,200	257
Part time to full time	11,118,000	10,400	1,068
Remained full time	21,623,000	6,300	3,410
Remained part time	12,124,000	4,100	2,958
Remained unemployed	0	0	832
Totals	104,009,000	9,700	10,759

NOTE: Dollars are rounded to the nearest hundred.

[4] This information was analyzed, and supplemented when needed with data on the distribution of full-time and part-time industry salary levels drawn from the U.S. Bureau of Economic Analysis based in part on answers to Question 33 on industries in which participants were employed.

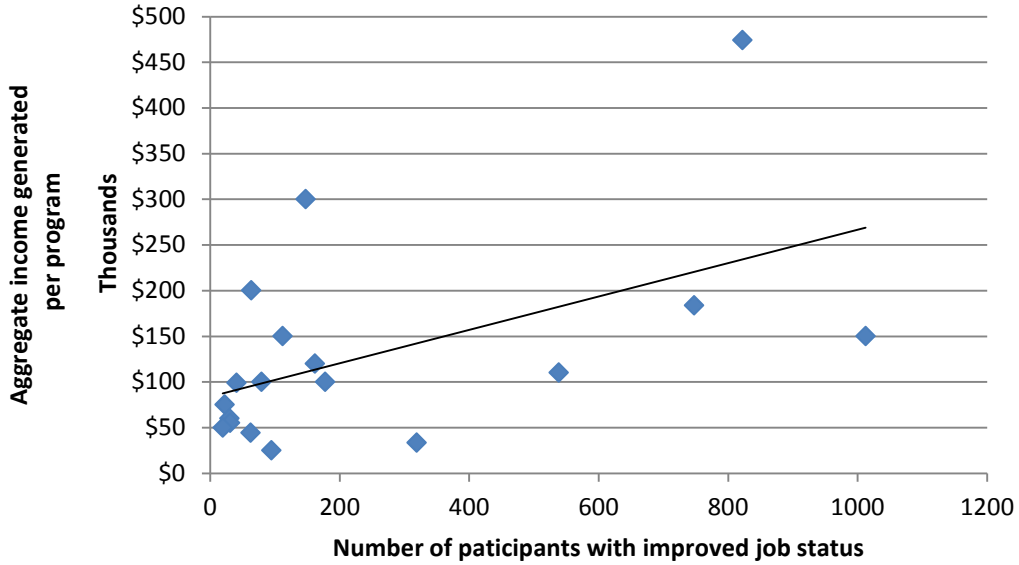
[5] A 5 percent discount rate was assumed in the *Economic Impact Study of Completing the Appalachian Development Highway System Final Report.* June, 2008: Appalachian Regional Commission. Prepared by Cambridge Systematics, EDR Group, and HDR Decision Economics.

Expected Program Outcomes

One purpose of this analysis was to examine the feasibility of building a model that tempers project performance (number of clients who improve job status by program investment and increased wages by program investment) by program context (urban/rural counties, counties that are economically distressed or not distressed). This exploratory analysis should be viewed as an example of the types of modeling that could have been performed with rigor had there been a higher response rate for the economic items on the questionnaire. Necessarily, the analyses below were narrowed from 39 responses (for employment changes) and 25 responses (personal income improved) to 18 and 21, respectively, to account for statistical outliers and nonqualifiers (e.g., counties that are equivalent to national unemployment rates and therefore cannot be considered distressed or nondistressed).

Income gains due to improved job status. As a more narrowly focused investigation, we focused on just those participants who improve their employment status in terms of investment by ARC in job training programs. For the purpose of this analysis, improved status includes moving from part-time to full-time status or from unemployed to either part-time or full-time employment. Figure B-1 uses a simple linear relationship to illustrate the number of people who can be expected to improve their job status based on ARC program investments—i.e., the post-project relationship of total income of workers with improved employment status and the number of participants per project who have improved their status.

Figure B-1. Aggregate income per program by workers with improved employment status



Effects of project location characteristics. We also examined the effects of participants' geographic location on their income level. Specifically, we examined the effect on income level of participants' location in economically distressed versus nondistressed counties and in counties that are urban versus rural. For the income level, unemployment rates of counties were compared to the national average. For urbanicity, a measure of population density was used.

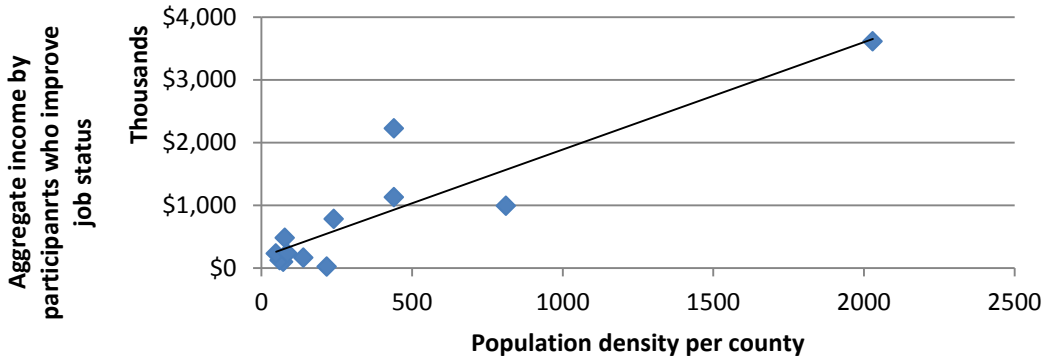
Counties with unemployment rates higher than 105 percent of the national rate were considered distressed, while counties with unemployment rates less than 95 percent of the national average were not considered distressed. Counties with unemployment rates falling between 95 percent and 105 percent are considered consistent with the national average.[6] Per participant, mean income ranged from $33,000 per participant in nondistressed counties to $21,000 in distressed counties (Table B-5).

Table B-5. Income per participant with improved job status based on local distress

Distress factor	Mean income
Distressed counties	$20,938
Nondistressed counties	$33,082

Income per population density also shows a strong linear trend, indicating a greater likelihood that a program will successfully raise participants' income level in urbanized areas that provide multifaceted economies and, therefore, greater job opportunities (Figure B-2). On average, we found that an additional person per square mile in program counties resulted in an expected increase of total income generated of $2,700 by participants who improve their job status.[7]

Figure B-2. Program income as a function of population density



[6] Source of unemployment data is the ARC-LEAP database.

[7] Source of population density data is the ARC-LEAP database.

Calculation Rules to Characterize How Participants Are Likely to Move Among Employment Categories as a Result of ARC-Funded Workforce Development Projects (Based on Pre- and Post-Employment Status Responses)

Still Unemployed: This value was calculated by taking the minimum value of the pre- and post-project unemployed responses[8] under the assumption that the unemployment count could not increase during the duration of the program (i.e., someone employed becomes unemployed).

Unemployed to Part Time: This value was calculated by taking the post-project employment response for employed part time and subtracting the calculated number of workers who remained part time.

Still Full Time: This value was calculated by taking the minimum value of the pre- and post-project participation full-time worker responses, under the assumption that workers would not willingly go to part-time status and could obviously not advance to a status beyond full time.

Still Part Time: This value was calculated by taking the minimum value of the pre- and post-project participant part-time worker responses, under the assumption that workers would not decrease their level of employment, so logically the smaller of the two values must represent the population of workers who remained in their employment bracket.

Part Time to Full Time: This value was calculated by summing the pre-project participant part-time worker and full-time worker fields, and subtracting from the resulting value the calculations of those workers who remained in either their full time or part time positions.

Unemployed to Full Time: This value was calculated by subtracting from the number of post-project full-time workers the sum of workers who advanced from part-time to full-time positions or remained in their full-time position.

[8] For pre-program, unemployment was the summation of "never previously employed" and "previously employed, but not when entered."

Appendix C:

Proposed Addendum to the Application Form for ARC Education and Workforce Development Projects

Section A: Background Information

1. In what counties will your ARC project be implemented—e.g., where will the training be provided and/or where will participants primarily be reached?

	County	State
County #1		
County #2		
County #3		
County #4		
County #5		
County #6		
County #7		
County #8		
County #9		
County #10		

2. Which of the following age groups will your project be targeting *(check all that apply):*

- ❑ 0–18
- ❑ 19–24
- ❑ 25–29
- ❑ 30–39
- ❑ 40–49
- ❑ 50+

3. Which of the following populations will be targeted by your ARC project: *(check all that apply):*

- ❑ Pre-school children
- ❑ K–12 students
- ❑ Out-of-school youth
- ❑ Postsecondary students
- ❑ Adults (not including postsecondary students or teachers)
- ❑ Teachers
- ❑ Other (specify): _____

4. Which of the following general activities will be conducted or supported by your ARC project *(check all that apply):*

- ❑ Educational attainment or achievement (e.g., for students pursuing a high school diploma or post-secondary degree)
- ❑ Adult education (e.g., literacy/numeracy, GED, basic work skills, etc.)
- ❑ Career and technical education (e.g., skills and job training that leads to a career credential or certification)
- ❑ Workforce training (e.g., skills and job training that does not lead to a diploma or degree)
- ❑ Child development (e.g., child care, early childhood education)
- ❑ Teacher training (e.g., skills enhancement for in-service and/or pre-service teachers)

5. Which of the following specific activities will be conducted or supported by your ARC project *(check all that apply):*

- ❑ Skills/training that enhanced employability
- ❑ Specific occupational/job skills training or instruction
- ❑ GED preparation
- ❑ Computer skills training/instruction
- ❑ Apprenticeship or other job exposure opportunities
- ❑ Instruction in business management
- ❑ Instruction in knowledge/skills for a specific academic subject

- ❑ Develop or purchased educational materials (e.g., manuals, books, software, etc.
- ❑ Develop or purchased curriculum, instructional program, or course
- ❑ Provide special use classroom equipment (e.g., computers, networks, tools, science lab, etc.)
- ❑ Provide distance learning infrastructure (e.g., software, equipment, technology)
- ❑ Provide or improved physical structures (e.g., buildings, renovation, equipment, furniture, etc.)
- ❑ Provide course in parenting skills
- ❑ Pedagogy or teaching skills training for teachers or instructors

- ❑ Conduct community outreach activities
- ❑ Establish community or business partnerships
- ❑ Provide social support services
- ❑ Distribute funds/mini-grants/stipend
- ❑ Provide or arranged for child care services

- ❑ Provide college counseling
- ❑ Provide career counseling (e.g., discussions, diagnostic/aptitude testing)
- ❑ Provide/develop job search/placement assistance (e.g., job bank, employer outreach)
- ❑ Provide referrals to other agencies for job assistance /career counseling

- ❑ Other (specify): _____

Section B: Anticipated Outputs, Outcomes, and Impacts

6. What specific outputs and outcomes do you expect to achieve as a result of your ARC project?

- Depending on your ARC project timeframe, include cumulative outputs and outcomes for up to 3 years after project closeout.
- Please provide a numerical answer where appropriate.
- Enter "DK" if you do not have information for a relevant measure (e.g., you are unable to anticipate the number of trainees/participants that will be served by your ARC project).
- Enter "NA" if a measure is not applicable (e.g., your ARC project will not provide any services to students).

Participant type	Anticipated number served or improved
Students served—the number of children and youth that will enroll in prekindergarten programs through 12th grade, as well as the number of adults that will enroll in postsecondary educational programs	
Students improved—the number of student participants that will (1) enhance their knowledge or skills; (2) pass or graduate to the next grade or level necessary to continue their education; (3) receive an educational credential; (4) receive a career credential; (5) make progress toward a degree, diploma, or certification; and/or (6) obtain a job in the field for which they were specifically trained	
Workers/trainees served—the number of individuals that will receive training or participate in an activity designed to enhance their employability, but not necessarily leading to a certification, diploma, or degree	
Workers/trainees improved—the number of participants that will (1) obtain new/ improved knowledge or skills; (2) receive an educational credential; (3) receive a career credential; and/or (4) obtain/enhance their employment status (e.g., received higher pay or better positions)	
Participants served—the number of individuals that will attend an educational presentation or program (e.g., a community-wide computer skills training course)	
Participants improved—the number of individuals that will benefit from their participation in an educational presentation or program (e.g., the number of individuals that will enhance their computer skills and/or increase their Internet usage as a result of their participation in an educational presentation or program)	

7. If applicable, list any additional outputs or outcomes that you expect to occur as a result of your ARC project:

8. What specific economic benefits do you expect to achieve as a result of your ARC project?

- Depending on your ARC project timeframe, include economic benefits for up to 3 years after project closeout.
- Please provide a numerical answer where appropriate.
- Enter "DK" if you do not have information for a relevant measure (e.g., you are unable to anticipate the number of trainees/participants that will be served by your ARC project).
- Enter "NA" if a measure is not applicable (e.g., your ARC project will not create any jobs).

Economic benefit	Anticipated impact
Jobs created—the total number of (1) direct hires you expect to make as a result of the project's operation (e.g. teachers, public safety, information services, etc.); and (2) private sector jobs you expect to create in the three years following the delivery of ARC-funded services or project completion. Does ***not*** include construction jobs for buildings funded by this ARC grant. In the case of part-time jobs, please convert these to full-time equivalent and round up to report whole numbers.	
Jobs retained—the total number of jobs that will be retained because of an ARC investment needed to keep the business and jobs in continued operations in the area (e.g., training workers to use new machinery).	
Business created—the total number of businesses that will locate in the region as a direct/indirect result of ARC-supported workforce training.	
Businesses retained—the total number of existing regional businesses that will improve their competitiveness because they gained access to a more skilled labor force and/or because their existing workforce was upgraded.	
Leveraged private investments—the total dollar amount for private sector financial commitments that will not be part of the project funding, but will follow as a result of the completion of your ARC project (such as an infrastructure project) or the delivery of services (e.g., worker training, marketing campaign, export promotion program).	
Revenues increased (nonexport)—the total dollar amount for any increase in nonexport sales that will occur among participating businesses as a result of your ARC project.	
Revenues increased (export)—the total dollar amount for any increase in export sales that will occur among participating businesses as a result of your ARC project.	
Costs reduced—the total dollar amount for any cost reductions among participating organizations and businesses that will occur as a result of your ARC project.	

9. If applicable, list any additional economic impacts that you expect to occur as a result of your ARC project:

Appendix D:

Proposed Supplement to the Annual Report for ARC Education and Workforce Development Projects

Section A: Background Information

1. Did your ARC project provide any services in the past 12 months?

- ❑ Yes (answer questions 2-6)
- ❑ No (skip to Section B)

2. In what counties has your ARC project been implemented—e.g., where was training provided and/or where were participants primarily reached?

	County	State
County #1		
County #2		
County #3		
County #4		
County #5		
County #6		
County #7		
County #8		
County #9		
County #10		

3. Which of the following age groups has your project targeted *(check all that apply):*

- ❑ 0–18
- ❑ 19–24
- ❑ 25–29
- ❑ 30–39
- ❑ 40–49
- ❑ 50+

4. Which of the following populations have been targeted by your ARC project *(check all that apply):*

- ❑ Pre-school children
- ❑ K–12 students
- ❑ Out-of-school youth
- ❑ Postsecondary students
- ❑ Adults (not including postsecondary students or teachers)
- ❑ Teachers
- ❑ Other (specify): _____

5. Which of the following general activities has your ARC project conducted or supported *(check all that apply):*

- ❑ Educational attainment or achievement (e.g., for students pursuing a high school diploma or post-secondary degree)
- ❑ Adult education (e.g., literacy/numeracy, GED, basic work skills, etc.)
- ❑ Career and technical education (e.g., skills and job training that leads to a career credential or certification)
- ❑ Workforce training (e.g., skills and job training that does not lead to a diploma or degree)
- ❑ Child development (e.g., child care, early childhood education)
- ❑ Teacher training (e.g., skills enhancement for in-service and/or pre-service teachers)

6. Which of the following specific activities has your ARC project conducted or supported *(check all that apply):*

- ❑ Skills/training that enhanced employability
- ❑ Specific occupational/job skills training or instruction
- ❑ GED preparation
- ❑ Computer skills training/instruction
- ❑ Apprenticeship or other job exposure opportunities
- ❑ Instruction in business management
- ❑ Instruction in knowledge/skills for a specific academic subject

- ❑ Develop or purchased educational materials (e.g., manuals, books, software, etc.
- ❑ Develop or purchased curriculum, instructional program, or course
- ❑ Provide special use classroom equipment (e.g., computers, networks, tools, science lab, etc.)
- ❑ Provide distance learning infrastructure (e.g., software, equipment, technology)
- ❑ Provide or improved physical structures (e.g., buildings, renovation, equipment, furniture, etc.)
- ❑ Provide course in parenting skills
- ❑ Pedagogy or teaching skills training for teachers or instructors

- ❑ Conduct community outreach activities
- ❑ Establish community or business partnerships
- ❑ Provide social support services
- ❑ Distribute funds/mini-grants/stipend
- ❑ Provide or arranged for child care services

- ❑ Provide college counseling
- ❑ Provide career counseling (e.g., discussions, diagnostic/aptitude testing)
- ❑ Provide/develop job search/placement assistance (e.g., job bank, employer outreach)
- ❑ Provide referrals to other agencies for job assistance /career counseling

- ❑ Other (specify): _____

Section B: Outputs and Outcomes for the Past Year

7. What specific outputs and outcomes have been achieved since the beginning of your ARC project?

- Provide cumulative data since the beginning of your project.
- Please provide a numerical answer where appropriate.
- Enter "DK" if you do not have information for a relevant measure (e.g., you are unable to anticipate the number of trainees/participants that will be served by your ARC project).
- Enter "NA" if a measure is not applicable (e.g., your ARC project did not provide any services to students).

Participant type	Actual number served or improved
Students served—the number of children and youth that enrolled in prekindergarten programs through 12th grade, as well as the number of adults that enrolled in postsecondary educational programs	
Students improved—the number of student participants that (1) enhanced their knowledge or skills; (2) passed or graduated to the next grade or level necessary to continue their education; (3) received an educational credential; (4) received a career credential; (5) made progress toward a degree, diploma, or certification; and/or (6) obtained a job in the field for which they were specifically trained	
Workers/trainees served—the number of individuals that received training or participated in an activity designed to enhance their employability, but not necessarily leading to a certification, diploma, or degree	
Workers/trainees improved—the number of participants that (1) obtained new/ improved knowledge or skills; (2) received an educational credential; (3) received a career credential; and/or (4) obtained/enhanced their employment status (e.g., received higher pay or better positions)	
Participants served—the number of individuals that attended an educational presentation or program (e.g., a community-wide computer skills training course)	
Participants improved—the number of individuals that benefited from their participation in an educational presentation or program (e.g., the number of individuals that enhanced their computer skills and/or increased their Internet usage as a result of their participation in an educational presentation or program)	

8. If applicable, list any additional outputs or outcomes that have occurred as a result of your ARC project:

9. *(if students improved >0)* **Please indicate how students have been improved by your ARC project** *(check all that apply):*

- ❑ Improved attendance on a daily/regular basis
- ❑ decreased suspensions and other problem behaviors
- ❑ Enrolled in more challenging classes
- ❑ Remained in school when at risk of dropping out
- ❑ Re-entered an educational program after dropping out
- ❑ Improved school readiness
- ❑ Obtained basic or academic skills in a specific subject
- ❑ Obtained vocational and technical skills
- ❑ Obtained a high school diploma, GED, or equivalent
- ❑ Tested at or above grade level
- ❑ Advanced to next grade level
- ❑ Increased scores on statewide assessments or other standardized tests
- ❑ Enrolled in college or postsecondary program
- ❑ Obtained a postsecondary degree, credential, or certification

10. *(if students improved >0)* **If applicable, list any additional student outcomes that have occurred since the beginning of your ARC project:**

11. *(if workers/trainees improved >0)* **Please indicate how workers/trainees have been improved by your ARC project** *(check all that apply):*

- ❑ Obtained vocational and technical skills
- ❑ Obtained basic or academic skills
- ❑ Obtained other employability skills (e.g., work attitudes/habits)
- ❑ Obtained a credential or certification
- ❑ Teachers or instructors enhanced their classroom practices
- ❑ Maintained current employment
- ❑ Obtained new part-time employment
- ❑ Obtained new full-time employment
- ❑ Increased job status and/or earned increased wages
- ❑ Retrained in another field and obtained new employment
- ❑ Obtained/maintained employer-provided health benefits
- ❑ Reduced dependence on public assistance

12. *(if workers/trainees improved >0)* **If applicable, list any additional worker/trainee outcomes that have occurred as a result of your ARC project:**

Section C: Worker/Trainee Outcomes Over the Life of the Project

13. *(if workers/trainees improved >0 in ANY year)* **How many of the workers./trainees that your ARC project has served since the beginning of your ARC project:**

Had ***never*** been employed when they entered your program	
Had ***previously*** been employed—but were ***unemployed*** when they entered your program	
Were employed on a ***part-time*** basis when they entered you program	
Were employed on a ***full-time*** basis when they entered your program	
Don't know	
Total	

14. For those who were *unemployed* when they entered your program, how many:

Were still ***unemployed*** after completing your program	
Obtained ***part-time*** employment after completing your program	
Obtained ***full-time*** employment after completing your program	
Don't know	
Total	

15. For those who were *employed* on a part-time or full-time basis when they entered your program, how many:

Were ***unemployed*** after completing your program	
Were employed at a ***lower*** level or at the ***same*** level (e.g., pay, skills, hours) after completing your program	
Enhanced their employment status (e.g., pay, skills, hours) after completing your program	
Don't know	
Total	

16. How many of the workers/trainees served by your ARC project found work in the following industries:

Agriculture	
Government	
Manufacturing	
Mining	
Retail	
Services	
Other *(specify)*	
Don't know	
Total	

17. How many of the individuals served by your ARC project found work at the following annual wage rates (excluding benefits):

Less than $20,000/year	
$20,001 - $39,999	
$40,000 - $69,999	
$70,000 - $99,999	
$100,000 or more	
Don't know	
Total	

Section D: Economic Benefits for the Past Year

18. What specific economic benefits have been achieved since the beginning of your ARC project?

- Provide cumulative data since the beginning of your project.
- Please provide a numerical answer where appropriate.
- Enter "DK" if you do not have information for a relevant measure (e.g., you are unable to anticipate the number of trainees/participants that will be served by your ARC project).
- Enter "NA" if a measure is not applicable (e.g., your ARC project has not created any jobs).

Economic benefit	Impact
Jobs created—the total number of (1) direct hires you made as a result of the project's operation (e.g. teachers, public safety, information services, etc.); and (2) private sector jobs created. Does ***not*** include construction jobs for buildings funded by this ARC grant. In the case of part-time jobs, please convert these to full-time equivalent and round up to report whole numbers.	
Jobs retained—the total number of jobs retained because of an ARC investment and jobs in continued operations in the area (e.g., training workers to use new machinery).	
Business created—the total number of businesses that located in the region as a direct/indirect result of ARC-supported workforce training.	
Businesses retained—the total number of existing regional businesses that improved their competitiveness because they gained access to a more skilled labor force and/or because their existing workforce was upgraded.	
Leveraged private investments—the total dollar amount for private sector financial commitments that was not be part of the project funding, but followed as a result of the completion of your ARC project (such as an infrastructure project) or the delivery of services (e.g., worker training, marketing campaign, export promotion program).	
Revenues increased (nonexport)—the total dollar amount for any increase in nonexport sales that occurred among participating businesses as a result of your ARC project.	
Revenues increased (export)—the total dollar amount for any increase in export sales that occurred among participating businesses as a result of your ARC project.	
Costs reduced—the total dollar amount for any cost reductions among participating organizations and businesses that occurred as a result of your ARC project.	

19. If applicable, list any additional economic impacts that occurred since the beginning of your ARC project:

Appendix E:

Online Questionnaire Administered With ARC Education and Workforce Development Projects

ARC Questionnaire for Education and Workforce Development Projects

As a recipient of grant funds from the Appalachian Regional Commission, you are being asked to complete this follow-up questionnaire about project performance. While your participation is voluntary, it is very important that you complete it. We need your assistance in updating ARC records and assuring that the information we report to Congress and other stakeholders about ARC-funded projects is accurate and reflects the full range of benefits that have occurred as a result of ARC funding. Projects that complete the questionnaire will receive a summary of questionnaire results and a copy of the final report on ARC's education and workforce development projects.

This questionnaire should take about 20 minutes to complete. Please complete this questionnaire no later than [INSERT DATE].

If you have any questions, please contact [INSERT CONTACT NAME]. [He/She] can be reached by phone at [INSERT PHONE NUMBER] or by email at [INSERT EMAIL ADDRESS].

***1. If you agree to complete the questionnaire, please check the following box to acknowledge your consent.**

☐ I consent to participate in this questionnaire as part of the ARC evaluation of education and workforce development projects.

ARC Questionnaire for Education and Workforce Development Projects

Section A: Background Information

***2. To enable us to follow-up with you, please provide your contact information. Your contact information will be kept strictly confidential.**

Name of person completing this questionnaire	
Organization	
Street address	
City	
State	
Zip code	
Phone	
Email	
Website	

***3. What was the title for this ARC project:**

***4. What was the ARC project number (for example, AL-12345):**

***5. In what month and year was the ARC-funded portion of your ARC project closed out?**
(Indicate N/A if the project is still operational)

ARC Questionnaire for Education and Workforce Development Projects

6. In what jurisdiction was the ARC project primarily implemented? For example, where was the training provided and/or where were most students or trainees from?

City	
State	
County	
Local Development District	
Congressional District	

7. In what other jurisdictions was the ARC project implemented:

Cities	
Counties	
Local Development Districts	
Congressional Districts	

ARC Questionnaire for Education and Workforce Development Projects

Section B: Project-Related Activities

8. What proportion of the individuals served by your ARC project were in the following age groups? ***(Sum of responses must equal 100 percent)***

0-18	
19-24	
25-29	
30-39	
40-49	
50+	
Don't' Know	

9. Which of the following populations were targeted by your ARC project? ***(Check all that apply)***

- ☐ Pre-school children
- ☐ K-12 students
- ☐ Out-of-school youth
- ☐ Post-secondary students
- ☐ Adults (not including post-secondary students or teachers)
- ☐ Teachers

10. If applicable, list any additional populations that were targeted by your ARC project:

11. Which general activities were conducted or supported by your ARC project? ***(Check all that apply)***

- ☐ Educational attainment or achievement (e.g., for students pursuing a high school diploma or post-secondary degree)
- ☐ Adult education (e.g., literacy/numeracy, GED, basic work skills, etc.)
- ☐ Career and technical education (e.g., skills and job training that leads to a career credential or certification)
- ☐ Workforce training (e.g., skills and job training that does not lead to a diploma or degree)
- ☐ Child development (e.g., child care, early childhood education)
- ☐ Teacher training (e.g., skills enhancement for in-service and/or pre-service teachers)

ARC Questionnaire for Education and Workforce Development Projects

12. Which specific activities were conducted or supported by your ARC project? ***(Check all that apply)***

- ☐ Skills/training that enhanced employability
- ☐ Specific occupational/job skills training or instruction
- ☐ GED preparation
- ☐ Computer skills training/instruction
- ☐ Apprenticeship or other job exposure opportunities
- ☐ Instruction in business management
- ☐ Provided instruction in knowledge/skills for a specific academic subject

- ☐ Developed or purchased educational materials (e.g., manuals, books, software, etc.)
- ☐ Developed or purchased curriculum, instructional program, or course
- ☐ Provided special use classroom equipment (e.g., computers, networks, tools, equipment, science lab, etc.)
- ☐ Provided distance learning infrastructure (e.g., software, equipment, technology)
- ☐ Provided or improved physical structures (e.g., buildings, renovation, equipment, furniture, etc.)
- ☐ Course in parenting skills
- ☐ Pedagogy or teaching skills training for teachers or instructors

- ☐ Conducted community outreach activities
- ☐ Established community or business partnerships
- ☐ Provided social support services
- ☐ Distributed funds/mini-grants/stipends
- ☐ Provided or arranged for child care services

- ☐ Provided college counseling
- ☐ Provided career counseling (e.g., discussions, diagnostic/aptitude testing)
- ☐ Provided/developed job search/placement assistance (e.g., job bank, employer outreach)
- ☐ Provided referrals to other agencies for job assistance /career counseling

ARC Questionnaire for Education and Workforce Development Projects

13. If applicable, list any additional educational and workforce development activities that were conducted by your ARC project:

ARC Questionnaire for Education and Workforce Development Projects

Please provide the following information about the number of individuals who received services and benefited as a result of your ARC project.

For Question 14, provide a numerical answer for the number served or improved.

For Question 15, indicate the number of years for which your project tracked the number served or improved.

If an output or outcome is not applicable to your ARC project, please enter "NA" in the corresponding box in Question 14 (e.g., if your project did not provide services to workers/trainees, enter "NA").

If an output or outcome is applicable to your ARC project, but you did not track information about it, please enter "DK" in the corresponding box in Question 14 (e.g., if your project provided services to workers/trainees, but you do not know the number of workers/trainees served, enter "DK").

Use the definitions at the bottom of the page to determine how a given output or outcome should be addressed.

14. Number served/benefited

Students served	
Students improved	
Workers/trainees served	
Workers/trainees improved	
Participants served	
Participants improved	

15. Number of years tracked

ARC Questionnaire for Education and Workforce Development Projects

Definitions

Students served: the cumulative total number of students who participated in your ARC project, from project inception until now. For the purposes of this questionnaire, students include children and youth in pre-Kindergarten programs through 12th grade, as well as adults in post-secondary educational programs.

Students improved: the cumulative total number of student participants who (1) enhanced their knowledge or skills; (2) passed or graduated to the next grade or level necessary to continue their education; (3) received an educational credential; (4) received a career credential; (5) made progress toward a degree, diploma, or certification; and/or (6) obtained a job in the field for which they were specifically trained.

Workers/trainees served: the cumulative total number of individuals that received training or participated in an activity designed to enhance their employability, but not necessarily leading to a certification, diploma, or degree.

Workers/trainees improved: the cumulative total number of participants (1) with new/improved knowledge or skills; (2) that received an educational credential; (3) that received a career credential; and/or (4) that obtained/enhanced their employment status (e.g., received higher pay or better positions).

Participants served: the cumulative total number of individuals who attended an educational presentation or program (e.g., a community-wide computer skills training course).

Participants improved: the cumulative total number of individuals who benefited from their participation in an educational presentation or program (e.g., the number of individuals who enhanced their computer skills and/or increased their Internet usage as a result of their participation in an educational presentation or program).

ARC Questionnaire for Education and Workforce Development Projects

Please provide the following information about the economic benefits that occurred as a result of your ARC project.

In Question 16, provide a numerical answer for the number benefited/dollar amount.

In Question 17, indicate the number of years for which your project tracked the economic benefit.

If you did not track information for a given economic benefit, please enter "DK" in the corresponding box in Question 16 (e.g., you do not have information about the number of jobs created as a result of your ARC project).

If an economic benefit is not applicable to your ARC project, please enter "NA" in the corresponding box in Question 16 (e.g., your project was not designed to create new jobs).

Use the definitions at the bottom of the page to determine how a given economic benefit should be addressed.

16. Number benefited/dollar amount

Jobs created	
Jobs retained	
Businesses created	
Businesses retained	
Leveraged private investment ($)	
Revenues increased (non export, $)	
Revenues increased (export, $)	
Costs reduced ($)	

17. Number of years tracked

ARC Questionnaire for Education and Workforce Development Projects

Definitions

Jobs created: the total number of (1) direct hires made as a result of the project's operation (e.g. teachers, public safety, information services, etc.); and (2) private sector jobs created in the three years following the delivery of ARC-funded services or project completion. Does NOT include construction jobs for buildings funded by this ARC grant. In the case of part-time jobs, please convert these to full-time equivalent and round up to report whole numbers.

Jobs retained: the total number of jobs that were retained because of an ARC investment needed to keep the business and jobs in continued operations in the area (e.g., training workers to use new machinery).

Business created: the total number of businesses that located in the region as a direct/indirect result of ARC-supported workforce training.

Businesses retained: the total number of existing regional businesses that improved their competitiveness because they gained access to a more skilled labor force and/or because their existing workforce was upgraded.

Leveraged private investments: the total dollar amount for private sector financial commitments that were not part of the project funding, but followed as a result of the completion of your ARC project (such as an infrastructure project) or the delivery of services (e.g., worker training, marketing campaign, export promotion program).

Revenues increased (non-export): the total dollar amount for any increase in non-export sales that occurred among participating businesses as a result of your ARC project.

Revenues increased (export): the total dollar amount for any increase in export sales that occurred among participating businesses as a result of your ARC project.

Costs reduced: the total dollar amount for any cost reductions among participating organizations and businesses that occurred as a result of your ARC project.

ARC Questionnaire for Education and Workforce Development Projects

18. If applicable, list any additional individual and/or economic outcomes that were measured by your ARC project:

19. If applicable, provide any information that would help to explain how the individual and/or economic outcome figures in Questions 14-18 were collected or calculated:

ARC Questionnaire for Education and Workforce Development Projects

20. Please indicate how students were improved by your ARC project: ***(Check all that apply)***

- ☐ None—my project did not have any student outcomes

- ☐ improved attendance on a daily/regular basis
- ☐ decreased suspensions and other problem behaviors
- ☐ enrolled in more challenging classes
- ☐ remained in school when at risk of dropping out
- ☐ re-entered an educational program after dropping out

- ☐ improved school readiness
- ☐ obtained basic or academic skills in a specific subject
- ☐ obtained vocational and technical skills
- ☐ obtained a high school diploma, GED, or equivalent
- ☐ tested at or above grade level
- ☐ advanced to next grade level
- ☐ increased scores on statewide assessments or other standardized tests
- ☐ enrolled in college or post-secondary program
- ☐ obtained a post-secondary degree, credential, or certification

21. If applicable, list any additional student outcomes that occurred as a result of your ARC project:

ARC Questionnaire for Education and Workforce Development Projects

22. Please indicate how workers/trainees were improved by your ARC project: ***(Check all that apply)***

- ☐ None—my project did not have any worker/trainee outcomes

- ☐ Obtained vocational and technical skills
- ☐ Obtained basic or academic skills
- ☐ Obtained other employability skills (e.g., work attitudes/habits)
- ☐ Obtained a credential or certification
- ☐ Teachers or instructors enhanced their classroom practices

- ☐ Maintained current employment
- ☐ Obtained new part-time employment
- ☐ Obtained new full-time employment
- ☐ Increased job status and/or earned increased wages
- ☐ Retrained in another field and obtained new employment
- ☐ Obtained/maintained employer-provided health benefits
- ☐ Reduced dependence on public assistance

23. If applicable, list any additional worker/trainee outcomes that occurred as a result of your ARC project:

ARC Questionnaire for Education and Workforce Development Projects

Section E: Long-Range Impacts

Using the measures below, how would you rate the long-range impacts of your project on the economy, sustainability, and quality of life in your community?

None: Project had little impact on trend
Slight: Project impact not enough to reverse or stabilize trend
Moderate: Project impact contributed to the stabilization or reversal of trend
High: Project impact was responsible for significant improvement in trend

24. Economic Measures

	None	Slight	Moderate	High
Attracting new residents or stabilizing the area's population	◯	◯	◯	◯
Attracting new jobs, new businesses, or increasing employment	◯	◯	◯	◯
Creating new sources of income or increasing income for local residents	◯	◯	◯	◯
Increasing local business sales or the value of business assets (such as equipment, real estate)	◯	◯	◯	◯
Increasing the value of household assets (such as homes, land, farms) for local residents	◯	◯	◯	◯
Increasing the value of community assets (such as community buildings, schools, infrastructure, parks)	◯	◯	◯	◯

25. Competiveness Measures

	None	Slight	Moderate	High
Improving the stability and sustainability of the local economy	◯	◯	◯	◯
Improving the efficiency of business operations or public services	◯	◯	◯	◯
Improving the productivity of students, employees, businesses, land, or other assets	◯	◯	◯	◯
Improving the skill level of the workforce	◯	◯	◯	◯
Increasing the viability of local businesses	◯	◯	◯	◯
Increasing access to new markets for local products, businesses, artisans, and entrepreneurs	◯	◯	◯	◯

ARC Questionnaire for Education and Workforce Development Projects

26. Quality of Life Measures

	None	Slight	Moderate	High
Improving access to culture, arts, and other amenities	○	○	○	○
Improving civic life and governance	○	○	○	○
Improving public health, safety, or well-being	○	○	○	○
Improving public services & institutions	○	○	○	○
Improving recreational opportunities	○	○	○	○
Improving the diversity (age, gender, race, ethnicity, economic status) of the population	○	○	○	○
Increasing knowledge and educational levels of the population	○	○	○	○

27. Environmental Measures

	None	Slight	Moderate	High
Improving air or water quality	○	○	○	○
Improving quality and/or access to land and natural resources	○	○	○	○
Waste reduction or improving waste management (reuse, recycling, alternative energy, biofuels)	○	○	○	○
Improving energy security and independence	○	○	○	○
Improving energy efficiency or conservation	○	○	○	○
Other environmental quality measures	○	○	○	○

28. If applicable, identify any additional long-range impacts that occurred as a result of your project:

ARC Questionnaire for Education and Workforce Development Projects

Section F: Economic Impacts

29. For how long did you track the progress of program participants after they had completed your program? ***(Check one)***

- ◯ Not applicable to our program
- ◯ We did not track the progress of program participants after they completed our program
- ◯ For up to ***1 year*** after participants completed our program
- ◯ For up to ***2 years*** after participants completed our program
- ◯ For ***more than 2 years*** after participants completed our program

ARC Questionnaire for Education and Workforce Development Projects

30. What was the status of individuals *before* they entered your program? *(Sum of responses must equal 100 percent)*

Never previously employed when they entered your program	
Previously employed, but were unemployed when they entered your program	
Employed on a part-time basis when they entered you program	
Employed on a full-time basis when they entered your program	
Don't know	

31. What was the status of individuals after they exited your program? *(Sum of responses must equal 100 percent)*

Unemployed after completing your program	
Employed on a part-time basis after completing your program	
Employed on a full-time basis after completing your program	
Don't know	

32. What proportion of the individuals served by your ARC project? *(Sum of responses must equal 100 percent)*

Remained in the county in which they resided after completing your program	
Relocated to another county after completing your program	
Don't know	

ARC Questionnaire for Education and Workforce Development Projects

33. What proportion of the individuals served by your project found work in the following industries? ***(Sum of responses must equal 100 percent)***

Agriculture	
Government	
Manufacturing	
Mining	
Retail	
Services	
Other	
Don't know	

34. What industries did you count as "Other?"

35. What proportion of the individuals served by your project found work at the following annual wage rates (excluding benefits)? ***(Sum of responses must equal 100 percent)***

Less than $20,000/year	
$20,001 - $39,999	
$40,000 - $69,999	
$70,000 - $99,999	
$100,000 or more	
Don't know	

Appendix F:

Protocol for Telephone Interviews With a Sample of ARC Education and Workforce Development Projects That Collected Follow-up Data From Former Participants

Telephone Interviews With a Sample of ARC Education and Workforce Development Projects That Collected Follow-up Data From Former Participants

Project name: _____

Project ID: _____

Respondent name: _____

Date: _____

Thank you for taking the time to talk to me today about your experience as an ARC grantee. The results of this questionnaire will help the ARC fulfill its mission to promote economic development in the region, and assist current and future grantees with project performance measurement.

This interview will take about 20 minutes to complete. There are no correct or incorrect answers to the questions I'm going to ask you. The most important thing is that you feel comfortable giving me your honest opinions. Everything we discuss today will be strictly confidential. Information from this interview will be summarized and presented in the aggregate in our final report; your name will not be used.

Part A Project Efforts to Obtain Follow-up Data on Program Participants

You indicated on your questionnaire that your project collected follow-up data from participants. The ARC is interested in learning more about these efforts and obtaining additional information about the outcomes associated with your project.

1. What prompted your project to collect outcome data from participants after they completed your program?

2. What type of data did your project collect from program participants?

3. How often did your project collect these data?

4. What methods did your project use to collect these data?

5. What steps did your project take to validate the accuracy of these data?

6. From how many individuals did your project collect outcome data? What was your project's response rate? What steps did your project take to obtain data from nonrespondents?

7. How did your project make use of these data?

8. What problems did your project encounter when collecting these data? What steps did your project take to address these problems?

9. Are there any data that your project was unable to collect? What factors prevented your project from collecting these data?

10. What recommendations would you have for other ARC projects that want to collect and make use of similar data?

11. Is there any technical assistance that the ARC could have provided your project that would have made it easier to collect these data (e.g., ideas about how to collect data, sample protocols and reporting formats)?

Part B Information About the Overall Project

The ARC is also looking for information about potentially promising practices that might be adapted in other communities.

12. What was your project's most significant accomplishment? What made this accomplishment significant?

13. What was your project's greatest challenge? How did you overcome this challenge?

14. What promising approaches emerged from your project that you would recommend be adopted in other communities? What made these approaches promising? What conditions would need to be in place to adopt these approaches elsewhere?

15. What difficulties emerged from your project that could be avoided in other communities? What caused these difficulties? What did you learn from these difficulties that might be useful to other communities?

16. What factors led to the success of your ARC education and workforce development project? Are there any steps that the ARC (or other communities) can take to maximize these enabling factors?

17. What obstacles did you encounter that limited the success of your ARC education and workforce development project? Are there any steps that the ARC (or other communities) can take to avoid these limiting factors?

18. What lessons did you learn in implementing your project that might be of interest to future ARC grant recipients?

Appendix G:

Protocol for Telephone Interviews With a Sample of ARC Education and Workforce Development Projects That Did Not Collect Follow-up Data From Former Participants

Telephone Interviews With a Sample of ARC Education and Workforce Development Projects That Did Not Collect Follow-up Data From Former Participants

Project name: _____

Project ID: _____

Respondent name: _____

Date: _____

Thank you for taking the time to talk to me today about your experience as an ARC grantee. The results of this survey will help the ARC fulfill its mission to promote economic development in the region, and assist current and future grantees with project performance measurement.

This interview will take about 20 minutes to complete. There are no correct or incorrect answers to the questions I'm going to ask you. The most important thing is that you feel comfortable giving me your honest opinions. Everything we discuss today will be strictly confidential. Information from this interview will be summarized and presented in the aggregate in our final report; your name will not be used.

Part A Project Efforts to Obtain Follow-up Data on Program Participants

You indicated on your survey that your project did not collect data about outcomes. The ARC is interested in learning more about the factors that prevented you from obtaining information about the outcomes associated with your project.

1. What type of data would you have liked to collect from program participants? What factors prevented you from collecting these data?

2. How would your project have been able to make use of these data?

3. Is there any technical assistance that the ARC could have provided your project that would have made it possible to collect these data (e.g., ideas about how to collect data, sample protocols and reporting formats)?

Part B Information about the Overall Project

The ARC is also looking for information about potentially promising practices that might be adapted in other communities.

4. What was your project's most significant accomplishment? What made this accomplishment significant?

5. What was your project's greatest challenge? How did you overcome this challenge?

6. What promising approaches emerged from your project that you would recommend be adopted in other communities? What made these approaches promising? What conditions would need to be in place to adopt these approaches elsewhere?

7. What difficulties emerged from your project that could be avoided in other communities? What caused these difficulties? What did you learn from these difficulties that might be useful to other communities?

8. What factors led to the success of your ARC education and workforce development project? Are there any steps that the ARC (or other communities) can take to maximize these enabling factors?

9. What obstacles did you encounter that limited the success of your ARC education and workforce development project? Are there any steps that the ARC (or other communities) can take to avoid these limiting factors?

10. What lessons did you learn in implementing your project that might be of interest to future ARC grant recipients?