

The Adult Training and Education Survey (ATES) Pilot Study

Technical Report

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Executive Summary

The measurement of educational attainment has been a staple in social and economic research for decades, and federal data collections have long collected reliable, valid data on postsecondary academic degrees, including associate's, bachelor's, and graduate and professional degrees. This long-standing ability to measure degree-based educational credentials has played a significant role in helping researchers learn about the relationship between educational attainment and employment outcomes and in shaping public policy aimed at increasing Americans' access to education. In recent years, the role of credentials other than academic degrees in helping out-of-school youth and adults obtain jobs and advance in careers has become a more prominent part of policy discussions.

However, there is no federal data collection that measures the prevalence of industry-recognized certifications, state and local government issued licenses, subbaccalaureate educational certificates, noncredit instruction, and other nondegree credentials among the U.S. adult population. The number of U.S. adults who have these credentials and are using them in their jobs cannot be studied through institution-based data collection efforts, such as the National Center for Education Statistics' (NCES) Integrated Postsecondary Education Data System (IPEDS). IPEDS collects information on certificates awarded, but is limited to counting awards based on credit-bearing instruction in institutions of higher education that participate in federal student financial aid programs. Students also receive educational certificates from institutions that do not participate in federal student financial aid programs, and they receive certifications and licenses from a wide variety of institutional bodies other than postsecondary institutions such as trade associations, private companies, state governments, and employers. As a result, no institutional sampling frame is available for enumerating these credentials at the national level. Additionally, information about certifications, licenses, and certificates is not adequately covered in federal data collections that survey adults directly. Without the ability to count certifications, licenses, and certificates, it is difficult to accurately assess their effects on social and economic outcomes and difficult to evaluate public policies designed to help Americans access and benefit from these credentials.

In 2009, a federal Interagency Working Group on Certificates and Certifications was formed to improve federal data collection about these credentials. In 2012, the working group's scope expanded to include measures of participation and enrollment in federal surveys and the group is now referred to as the Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA). GEMEnA consists of senior representatives from the Bureau of the Census, the Bureau of Labor Statistics (BLS), the National Science Foundation (NSF), as well as CEA, NCES, OMB, and OUS. The working group undertook the development of a short set of survey items to measure the prevalence of certifications, licenses, and educational certificates. This development effort culminated in the Adult Training and Education Survey (ATES) Pilot Study, a national household survey of noninstitutionalized adults ages 18 and over.¹ The pilot was conducted from September 2010 to January 2011, and the results are presented in this summary.

The ATES Pilot Study included measures of the prevalence of certifications, licenses and certificates. In addition, the study included measures of key factors that may be associated with these credentials, based on a literature review, expert input, and qualitative research with credential holders. These factors—measured by one or more items—included the level of effort to obtain the credential, examination and performance assessment requirements, type of provider or awarding body, industry recognition and occupational specificity of the credential, requirement for employment, suspension or revocation potential, and perceived labor-market value. Items representing key factors were used to describe credentials, and to analyze underreporting among convenience samples of adults known to have these credentials, based on information from the credential provider or awarding agency. Commonly reported credential characteristics (i.e., “defining characteristics”) of known credentials were then used to estimate overreporting among the convenience samples of known credential holders, and in the population.

The research effort described in this summary was undertaken for questionnaire and procedural development purposes only. The information collected and published from this effort should not be used to generate or cite population estimates or other statistics because the sample design and data collection procedures for this pilot study were not intended for that purpose, but rather to support the evaluation of questionnaire items.

¹ Although these types of credentials are also relevant to out-of-school youth, the ATES Pilot Study was conducted with adults ages 18 or older.

Findings

Before the ATEs Pilot Study was conducted, cognitive research was undertaken to assess familiarity of terminology and adults' understanding of potential survey items. The cognitive research included focus groups of known credential holders to learn the language that potential respondents use and in-depth, one-on-one interviews to get respondent feedback on potential questionnaire items. Key findings included:

- First, focus groups and cognitive interviews indicated that the terms “certification” and “license” are not always distinguishable to respondents. Consequently, the decision was made to ask about certifications and licenses jointly.
- Second, focus groups confirmed that certification and license holders do not view their certifications or licenses as educational credentials. Respondents instead considered these credentials to be professional qualifications. Consequently, questions about certifications and licenses were not asked within the questionnaire section on educational attainment.
- Third, the cognitive interviews showed that respondents also had trouble distinguishing between the terms “certification” and “certificate.” The cognitive interviews revealed that some respondents who have a certification will answer that they have a “certificate” if the questionnaire asked about certificates *before* certifications. Therefore, the questionnaire was designed to specifically ask about certifications and licenses first and certificates second.
- Finally, for certificates, a key finding was that respondents' interpretation of the term “certificate” was varied when given little or no definitional context. Accordingly, a definition of certificate, as well as examples of certificate types and appropriate certificate providers were included in the lead item asking whether or not a respondent has a certificate.

Based on the ATEs Pilot Study, approximately 38 percent of adults reported holding a certification, license, or subbaccalaureate educational certificate in 2010–11, which translates into roughly 82 million adults in the United States. About 30 percent of adults reported holding a certification or license and 14 percent reported they earned a certificate.

These estimates are broadly comparable to estimates from other surveys of similar populations, including the nonfederal Princeton Data Improvement Initiative (PDII) for certifications/licenses, and the Census Bureau's Survey of Income and Program Participation (SIPP) for certificates.²

Key factors for certifications and licenses were relatively consistent across these credentials, but the key factors for educational certificates showed a concerning level of variation. For certifications and licenses, most items examined showed the expected results—for example, 90 percent of certifications or licenses were pursued for mainly work-related reasons, and 91 percent of the most recent work-related certifications or licenses required respondents to pass a test or exam—however, certain types of items requiring detailed information were problematic. For example, it was difficult for respondents to report on the amount of time spent in coursework or training for the credential. Responses to key factor items for certificates were less predictable compared to certifications and licenses. For example, 26 percent of certificates were reported as having been obtained from “other” sources besides the types of educational institutions that most commonly offer a certificate program of study. The level of variation suggests that either the interpretation or definition of certificates is too broad to be adequately measured with the current approach. Measurement of certificates, therefore, requires further research.

The study also included an evaluation of proxy reports; these were reports of credentials made by another adult member of the household on behalf of the sampled adult. The results of the analysis suggest that proxy respondents were a reasonable source of information on the main credential items and on some of the key factor items, such as whether the credential was obtained for work-related reasons, but not a good source of information on items that prompt respondents for detailed information (e.g., credential name, the year earned, or the time to complete a credential).

² The PDII data are available at http://irs.princeton.edu/Conferences/PDII/PDII_RDD_Survey.dta, and the SIPP 2008 data are available at <http://www.bls.census.gov/sipp ftp.html>.

Recommendations

The ATES Pilot Study findings have implications for determining a parsimonious set of items that could be included in other federal household surveys of adults—either in the near future for those items requiring no further development, or after additional testing has been conducted to address the measurement issues identified in the pilot. It is important to note that although results of the pilot are used in this section to recommend items for researchers with various goals, the properties of the items may differ in other survey administration contexts.

The remainder of this section provides the recommendations of GEMEnA for items to use in other household surveys with the following research goals:

- Counting individuals with a certification or license;
- Distinguishing between certifications and licenses;
- Describing the field of certification or license; and
- Determining whether the certification or license is related to work.

The recommendations of GEMEnA are based on the results of the ATES Pilot Study, described in this report, as well as GEMEnA's subsequent survey development work conducted in preparation for a related study, the 2013 National Adult Training and Education Survey (NATES) Pilot Study.³

Counting individuals with a certification or license

To count the number of individuals in the United States who have a certification or license, GEMEnA recommends pilot item CN1:

Now I'd like to ask you about professional certification and licensure. Do you/person have a professional certification or a state or industry license?

³ The subsequent survey development work consisted of 14 cognitive interviews conducted in preparation for the 2013 NATES Pilot Study, as well as additional focus groups of certificate holders—many of whom also held certifications and licenses—conducted to inform future potential administrations of the NATES. The 2013 NATES Pilot Study is a household survey of adults being conducted to test the feasibility of administering an education and training survey by mail rather than by telephone. More information on the NATES is available on the GEMEnA website, at <http://nces.ed.gov/surveys/gemena/strand4.asp>.

This recommended item is referred to as the main certification/license item; it is an aggregate, broad measurement item that could be administered alone or in conjunction with credential-specific items to provide counts of adults with work-relevant credentials. To reduce measurement error, survey sponsors may consider adding to this item one to three of the items that measure key defining characteristics of certifications/licenses. These items include whether or not the certification/license is work-related (CN6); if the individual had to pass a test or exam (CN10b), and; if the certification/license is transferable (CN15b). When considering these additional items, however, analysts should recognize their potential for eliminating true credentials if used as screening questions. Not all certifications and licenses require a test or exam, for example.

In contrast, the main *certificate* item was found to have a high underreporting rate among the seeded sample respondents in the ATES Pilot Study and is not recommended for use at this time. The main certificate item and the series of items tested in the certificate questionnaire section require additional testing before they should be used. This additional testing is part of the ongoing development work of GEMEnA.

Distinguishing between certifications and licenses

Because certifications reflect a demonstration of skill while licenses convey a legal authority to work in an occupation, the questions researchers ask about these two types of credentials may differ. The ATES Pilot Study asked a follow-up question (item CN4) to the main certification/license question to see if the respondent considered a credential a certification, a license, or both. However, the focus group, cognitive interview, and ATES Pilot Study findings, as well as GEMEnA's subsequent survey development work, confirmed that some respondents have difficulty distinguishing between certifications and licenses, particularly in occupations (including many healthcare fields) in which an industry-recognized certification demonstrating skill attainment is the main requirement for the state license. Therefore, GEMEnA recommends the inclusion of an item designed to help determine whether a respondent holds a certification or a license, rather than rely on respondents' direct report using item CN4.

One of the defining differences in the definitions of certifications and licenses in the ATES Pilot Study was the entity that awarded the credential. Certifications are awarded by industry or professional organizations while licenses are issued by government agencies.

The ATES pilot study asked the respondent what kind of organization awarded the credential with item CN14, which asked respondents whether they were certified/licensed by their state, industry, a company, a professional association, or some other organization. However, based on the ATES findings and GEMEnA's subsequent survey development work, GEMEnA recommends the following question be used instead of ATES item CN14 to distinguish between certifications and licenses:

Who issued this certification or license? (Mark one.)

- Federal, state, or local government*
- Professional or trade association (for example, Pediatric Nursing Certification Board, National Exercise and Sports Trainers Association, CompTIA)*
- Business or company (for example, Microsoft, 3M Company, Xerox)*
- Other group or organization (specify)*

Describing the field of certification or license

GEMEnA recognizes that information about the field, industry, or occupation of a credential is critical to answering important questions about the relationship between employer needs and the supply of human capital. The dynamic of credential supply and demand takes place within specific occupational fields. National household studies measuring certifications and licenses should consider including questions to identify the field of the credential. The ATES Pilot Study asked respondents for verbatim responses to a question about the name of the certification or license (CN3A) and the kind of work it is for (CN3). Based on the ATES findings and GEMEnA's subsequent survey development work, GEMEnA recommends the following questions be used instead of ATES items CN3A and CN3:

What is the name of your [TEXT1][MOST RECENT] certification or license?

Please do not use abbreviations.

What kind of work is this certification or license for? (For example: teaching, vocational nursing, computer network administration, auditing, truck driving)

Surveys with limited space can limit these questions to respondents' most recent certification or license, while surveys with more space can collect information on multiple credentials of this type. The responses to these questions can be collected verbatim and

used individually, or used together to develop a set of occupation categories after data collection. The second question gives coders additional information to clarify the response.

Determining if the certification or license is related to work

GEMEnA has heard from the Council of Economic Advisors, prominent researchers, and other experts about the importance of specifying whether a credential is related to the respondent's current job. The question used in the ATES Pilot Study (item CN6) focused on whether or not the credential was primarily "work-related" and was found to be associated with true certifications and licenses in the seeded sample. However, based on GEMEnA's preference to focus the item on the respondent's current job, the following item was tested in cognitive interviews and included in the 2013 NATES Pilot Study:

Is this certification or license for the job you have now? If you are currently not employed, please answer "no." (Mark one.)

- No
- Yes, and it is required for my job
- Yes, but it is NOT required for my job

GEMEnA recommends this adaptation of the ATES question to clarify the relationship between the credential and the current job and to distinguish between credentials required for the job and those related to, but not required for, the job. Household surveys conducted by telephone or computer-assisted personal interviews may need to adapt this item for oral administration.

Next Steps on Education, Training, and Credentials for Work

With GEMEnA's expert guidance and support, NCES has embarked upon a multifaceted effort to apply best-practice survey development principles towards the goal of developing valid national measures of the participation in and credentialing of education and training for work, and to build government-wide consensus for the adoption of these measures.

GEMEnA's portfolio is described in Chapter 4 and includes four main strands of work:

1. *Develop and deploy a core set of survey items related to the prevalence and key characteristics of industry-recognized certifications and occupational licenses.*
2. *Develop and deploy of a core set of survey items related to the prevalence and key characteristics of subbaccalaureate educational certificates.*
3. *Consider new and revised measures of participation in education and training designed to prepare out-of-school youth and adults for work.*
4. *Support NCES in the development of a new household study on education, training, and credentials for work.*

The work described in this pilot study is in support of strands 1 and 2—to develop and deploy a core set of survey items related to the prevalence and key characteristics of industry-recognized certifications, occupational licenses, and subbaccalaureate educational certification. The results of this pilot study also inform strand 4—to develop a new household study on education, training, and credentials for work.

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Foreword

In February of 2009, President Obama in his State of the Union address called for the U.S. to become once again “first in the world” in postsecondary educational attainment by the year 2020. As a means to this goal, he asked each American “...to commit to at least one year or more of higher education or career training. This can be a community college or a four-year school, vocational training or an apprenticeship. But whatever the training may be, every American will need to get more than a high school diploma.” Concurrently, the deepening recession was leading to greater interest in the role of industry-conferred and recognized credentials in preparing adults for specific, living-wage jobs.

In this context, the Council of Economic Advisors and the Office of Management and Budget partnered with the Office of the Under Secretary in the U.S. Department of Education to convene senior staff from the Census Bureau, the Bureau of Labor Statistics (BLS), and the National Center for Education Statistics (NCES) to discuss ways to improve federal statistical data on educational certificates and industry-recognized certifications in order to meet research and policy data needs. After a series of initial meetings outlining the goals and resources of the project, an interagency working group was formed in December of 2009 to develop survey items on the prevalence and key characteristics of these credentials. Since its initial conception, the group’s composition has expanded to include the National Science Foundation and its charge has expanded to include enrollment and participation in education and training for work. Current and past members of this Interagency Working **Group on Expanded Measures of Enrollment and Attainment** (GEMEnA) are listed in appendix A.

This report describes the rigorous process of survey item development GEMEnA undertook to meet its initial goal: the identification of a short set of survey items that would count the number of educational certificates and industry-recognized certifications in the U.S. adult population. The report includes detailed analyses of a pilot study designed to evaluate item validity by comparing its results against population estimates from other sources and by assessing the key characteristics of known credentials. The final chapter contains recommendations for using tested items and a discussion of next steps in development. These recommendations and their associated measurement discussions may

help survey developers decide how best to incorporate these items into surveys about education, training, and occupational credentials for out-of-school youth and adults.

GEMEnA guided the item development work, providing detailed feedback at each stage, reviewing table results, discussing findings, and developing recommendations. GEMEnA's members have also worked within their respective agencies to find opportunities to further develop, test, and use the validated questionnaire items from this project. NCES managed, staffed, and funded the work described in this report and is responsible for its contents.

Jack Buckley
Commissioner
National Center for Education Statistics

Contents

Executive Summary	iii
Findings	v
Recommendations	vii
Next Steps on Education, Training, and Credentials for Work	x
Foreword.....	xiii
List of Tables	xvii
1. Introduction	1
1.1 Need for Data	1
1.2 Definitions.....	4
1.3 The ATES Pilot Study	5
1.4 Objectives of This Report	8
1.5 Structure of This Report.....	9
2. Prevalence of Certifications/Licenses and Certificates in the Population	11
2.1 Overall Rates of Certifications/Licenses and Certificates	11
2.2 Rates of Certifications/Licenses and Certificates by Subgroup	13
2.3 Comparison of Estimates From the ATES Pilot Study to Previous Data Collections	18
2.4 Unweighted Responses to Items Related to Certifications/Licenses and Certificates	19
2.4.1 Findings related to certifications/licenses held.....	21
2.4.2 Findings related to certificates held	23
2.5 Summary of Findings on Prevalence of Certifications/Licenses and Certificates.....	25
3. Evaluation of Measurement Error.....	27
3.1 Methods	28
3.2 Analysis of Underreporting	28
3.3 Analysis of True Credentials and Credential Commonalities.....	35
3.3.1 Matching frame credentials to self-reported credentials.....	35
3.3.2 Items with high rates of common responses in the seeded sample	37
3.3.3 Using credential commonalities to estimate overreporting in the national sample	40
3.4 Proxy Responses to Certification/License and Certificate Items	41
3.5 Use of Help Text Probes.....	49
3.6 Summary of Findings on Measurement Error	50

4. Conclusions and Next Steps	53
4.1 Summary of Findings From the ATES Pilot Study.....	53
4.1.1 Do the ATES Pilot Study estimates seem reasonable?	53
4.1.2 To what extent do respondents misreport certifications, licenses, and certificates, and what are the characteristics of respondents and credentials associated with misreports? To what extent can proxy respondents provide valid answers to questions about certifications, licenses, and certificates?	54
4.2 Recommendations for Items to Include in Other Surveys	55
4.2.1 Counting individuals with a certification or license	56
4.2.2 Distinguishing between certifications and licenses	57
4.2.3 Describing the field of certification or license.....	58
4.2.4 Determining if the certification or license is related to work	59
4.2.5 Measurement implications for certifications/licenses	60
4.3 Next Steps on Education, Training, and Credentials for Work.....	61
4.3.1 Strand 1: Certifications and Licenses	61
4.3.2 Strand 2: Certificates.....	62
4.3.3 Strand 3: Enrollment and Participation	64
4.3.4 Strand 4: Household Study on Education, Training, and Credentials for Work	65
4.4 Ensuring Relevance to Policy and Research	66
References	67
Appendix A: Details on the Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA).....	A-1
Appendix B: ATES Pilot Study Design and Methodology	B-1
Appendix C: Supplemental Tables	C-1
Appendix D: Standard Error Tables.....	D-1
Appendix E: ATES Pilot Study Annotated Extended Interview Questionnaire	E-1
Appendix F: ATES Focus Group Report.....	F-1
Appendix G: ATES Cognitive Interview Report.....	G-1

List of Tables

Table 2-1.	Number and percentage distribution of respondents reporting a certification/license or certificate, by type of credential reported: 2010–11	12
Table 2-2.	Number and percentage distribution of reported credentials, by type and number of credentials: 2010–11	12
Table 2-3.	Number and percentage distribution of respondents reporting any credentials, percentage of respondents reporting any certification/license or certificate, and among those reporting any credentials, percentage distribution reporting a certification/license or certificate only, or both credentials, by respondent characteristics: 2010–11	14
Table 2-4.	Percentage of adults who reported holding certifications/licenses in the Princeton Data Improvement Initiative (PDII) and the Adult Training and Education Survey (ATES) Pilot Study and percentage of adults who reported holding a certificate in the Survey of Income and Program Participation (SIPP) and the Adult Training and Education Survey (ATES) Pilot Study by educational attainment level: 2008, 2009, and 2010–11.....	20
Table 2-5.	Percentage distribution of certifications/licenses pursued for mainly work-related reasons or for personal interest: 2010–11	21
Table 2-6.	Percentage distribution of certifications/licenses related to respondents' current jobs: 2010–11	22
Table 2-7.	Percentage of the most recent certifications/licenses requiring courses or training, performance evaluations, and ongoing maintenance: 2010–11	22
Table 2-8.	Percentage of most recent certifications/licenses, by issuing organization and whether certification/license can be revoked or suspended: 2010–11	23
Table 2-9.	Percentage distribution of most recent certificate, by source of certificate: 2010–11.....	24
Table 2-10.	Percentage distribution of most recent certificates, by number of credit hours required to complete certificate: 2010–11	25
Table 3-1.	Percentage distribution of respondents from the certification/license seeded sample frame and percentage and odds ratios of seeded sample respondents who did not report the credential listed in the frame (underreporting), by selected respondent characteristics: 2010–11	31
Table 3-2.	Percentage distribution of respondents from the certificates seeded sample frame and percentage and odds ratios of seeded sample respondents who did not report the credential listed in the frame (underreporting), by selected respondent characteristics: 2010–11.....	33
Table 3-3.	Percentage of respondents from the certification/license seeded sample frame who reported a credential that matched a credential in the frame, by credential type and credential matching result: 2010–11.....	36
Table 3-4.	Percentage of respondents from the certificates seeded sample frame who reported a credential that matched a credential in the frame, by credential matching result: 2010–11.....	36

Table 3-5.	Percentage distribution of true certifications and licenses, by credential type and certification/license item: 2010–11	38
Table 3-6.	Percentage of most recent true certifications and licenses, by credential type and certification/license item: 2010–11	38
Table 3-7.	Percentage of true certifications/licenses that would be miscategorized as overreports, by type of certification/license sample and criteria for identifying overreports: 2010–11	42
Table 3-8.	Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and selected survey items: 2010–11	43
Table 3-9.	Percentage distribution of responses to certificate survey items, by reporting method, difference between the reporting method, and select survey items: 2010–11	47
Table A-1.	Timeline for GEMEnA activities: 2009–11	A-4
Table B-1.	Estimated percentage of adult population and expected number of completed ATES sampled adult surveys, by key subgroup characteristics: 2005.....	B-8
Table B-2.	Number of completed proxy interviews required to support detection of various levels of differences in item response rates, by item response rate for self reports and percent difference in item response rates: 2010–11	B-10
Table B-3.	Number of household screeners and extended surveys fielded in the ATES Pilot Study, by count of expected and actual number completed and survey type: 2010–11	B-11
Table B-4.	Numbers of screeners mailed in each wave of the ATES Pilot Study, by sample type: 2010–11.....	B-13
Table B-5.	Number and percentage distribution of ATES Pilot Study screeners and extended interviews completed, by week: 2010–11	B-17
Table B-6.	Potential responses and response rates for imputed items in the ATES Pilot Study: 2010–11.....	B-22
Table B-7.	Number of sampled addresses and completed screeners, and screener unit response rates, in the ATES Pilot Study, by sample type: 2010–11	B-26
Table B-8.	Number and percentage of cases failing to return a completed screener, by sample type and type of return: 2010–11	B-27
Table B-9.	Number of eligible adults sampled for the extended interview and number of completed extended interviews in the ATES Pilot Study, by sample type: 2010–11.....	B-28
Table B-10.	Distribution of reasons for nonresponse to the extended interview in the ATES Pilot Study (national sample only): 2010–11	B-29
Table B-11.	Control totals for raking the ATES person-level weights, by characteristics used in raking: 2010–11.....	B-33
Table B-12.	Number of respondents and response rates for each wave and screener, by sample type: 2010–11	B-37

Table B-13.	Cumulative number and percentage of sampled adults who responded to the screener in the ATEs Pilot Study, by screener mailing wave and characteristics: 2010–11	B-40
Table B-14.	Number of screener and extended interview respondents and response rates and number and percentage of respondents providing a telephone number in the screener of the ATEs Pilot Study, by type of incentive treatment: 2010–11	B-41
Table B-15.	Telephone number availability of sampled adults in ATEs Pilot Study, by source of phone number: 2010–11	B-42
Table B-16.	Comparison of screener characteristics of sampled adults in ATEs Pilot Study (national sample only), by source of telephone numbers: 2010–11	B-43
Table B-17.	Comparison of screener characteristics of sampled adults in ATEs Pilot Study (national sample only), by source of telephone numbers (collapsed): 2010–11	B-44
Table B-18.	Comparison of characteristics of extended survey respondents in ATEs Pilot Study (national sample only), by source of telephone numbers (collapsed): 2010–11	B-47
Table B-19.	Comparison of characteristics of extended survey respondents in ATEs Pilot Study (national sample only), by source of telephone numbers: 2010–11	B-50
Table B-20.	Screener and extended survey response rates in ATEs Pilot Study (national sample only), by address characteristics: 2010–11	B-53
Table B-21.	Source of telephone numbers for sampled adults for whom a telephone number was available in ATEs Pilot Study (national sample only), by address characteristics: 2010–11	B-54
Table C-1.	Percentage distribution of respondents, by highest reported level of education: 2010–11	C-3
Table C-2.	Percentage of respondents reporting a certification/license or certificate: 2010–11	C-3
Table C-3.	Percentage distribution of respondents who reported any credentials, percentage of respondents who reported any certification/license or certificate, and percentage distribution of certification/license or certificate among those who reported any credentials, by respondent characteristics: 2010–11	C-4
Table C-4.	Percentage distribution of respondents reporting certifications/licenses, by number of certifications/licenses reported: 2010–11	C-7
Table C-5.	Percentage distribution of certifications/licenses, by respondents' classification of certification/license type: 2010–11	C-7
Table C-6.	Percentage distribution of respondents' five most recent certifications/licenses and percentage distribution of respondents' most recent certification/license, by Standard Occupational Classification (SOC): 2010–11	C-8
Table C-7.	Percentage distribution of most recent certification/license, by number of weeks needed to complete certification/license: 2010–11	C-10
Table C-8.	Percentage distribution of certifications/licenses related to respondents' current jobs, by certification/license requirement: 2010–11	C-10

Table C-9.	Percentage of respondents' self-reported benefit from earning most recent certification/license or certificate, by benefit type and number of benefits: 2010–11.....	C-11
Table C-10.	Percentage distribution of respondents reporting certificates, by number of certificates reported: 2010–11.....	C-11
Table C-11.	Percentage distribution of respondents' five most recent certificates and most recent certificate, by Classification of Instructional Program (CIP): 2010–11.....	C-12
Table C-12.	Percentage distribution of respondents' certificate completion status: 2010–11.....	C-14
Table C-13.	Percentage distribution of most recent certificates, by number of credit hours or hours required to complete the certificate program: 2010–11.....	C-15
Table C-14.	Percentage of respondents' benefits received by earning most recent certificate that was not part of the coursework or training taken for a certification or license, by benefit type and number of benefits: 2010–11.....	C-16
Table C-15.	Percentage of certificates, by whether they were identified to be a part of the coursework or training taken for a previously reported certification/license: 2010–11.....	C-17
Table C-16.	Percentage distribution of respondents, by response to the certification/license question and interviewers' use of the certification probe: 2010–11.....	C-17
Table C-17.	Percentage distribution of respondents, by response to the certificate question and interviewers' use of the certificate probe: 2010–11.....	C-17
Table C-18.	Percentage distribution of respondents in seeded sample reporting certification/license not matching certification/license reported in seeded certification/license frame, by credential type: 2010–11.....	C-18
Table C-19.	Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and selected survey items, with "don't know" and "refused" set to missing: 2010–11.....	C-19
Table D-1.	Standard errors for Table 2-3: Number and percentage distribution of respondents who reported any credentials, percentage of adults who reported any certification/license or certificate, and among those who reported any credentials, percentage distribution who reported a certification/license only, a certificate only, or both credentials, by respondents characteristics: 2010–11.....	D-3

1. Introduction

Education and training beyond high school are important for securing opportunities for high-wage jobs in the United States. Academic degrees awarded by institutions of higher education represent a key component of the post-high-school credentials available to the American labor force. Other credentials, such as industry-recognized certifications, occupational licenses, and subbaccalaureate educational certificates have also emerged as key credentials with potential labor market value. This report describes work undertaken by the federal Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA) to develop a short set of survey items to measure the prevalence of these credentials.

The development of survey measures to enumerate adults with certifications, licenses, and certificates culminated in the Adult Training and Education Survey (ATES) Pilot Study, a national household survey of noninstitutionalized adults ages 18 and over. The primary objective of the study was to evaluate a set of survey items in order to determine the most parsimonious set of items needed to accurately measure the prevalence of certifications, licenses, and certificates in the U.S. adult population. The purpose of this report is to present the results of this evaluation and make recommendations for survey items to use in existing and future federal data collections.

The research effort described in this report was undertaken for questionnaire and procedural development purposes only. The information collected and published from this effort should not be used to generate or cite population estimates or other statistics.

1.1 Need for Data

The link between educational attainment and a host of positive social and economic outcomes is well-documented (e.g., Bailey, Kienzl, and Marcotte 2004; Kane and Rouse 1993; Pascarella and Terenzini 2005). The measurement of educational attainment has been a staple in social and economic research for decades, and federal data collections have long collected reliable, valid data on educational degrees, including associate's, bachelor's, and graduate and professional degrees. This long-standing ability to measure degree-based educational credentials has played a significant role in helping researchers

learn about the relationship between educational attainment and employment (and other) outcomes and in shaping public policy aimed at increasing Americans' access to education.

The relationship between the attainment of a postsecondary credential and job prospects has recently been prominent in the national conversation (Baker 2011; Bureau of Labor Statistics 2012; Career One Stop n.d.; Carnevale, Rose, and Hanson 2012; Carnevale, Smith, and Strohl 2010; Julian and Kominski 2011). This attention has brought to light certain weaknesses in our federal data collection systems, most notably the lack of information on nondegree credentials that have labor market value. These credentials include industry-recognized certifications and occupational licenses. They also include subbaccalaureate educational certificates that prepare adults for work. To understand how adults acquire work-related credentials, policymakers and researchers also need data on the enrollment and participation of out-of-school youth and adults in education and training. Such training may include noncredit instruction in community colleges, formal on-the-job training, and adult basic skills education. There is currently no federal data collection that measures the prevalence of industry-recognized certifications, occupational licenses, and educational certificates among the U.S. adult population. The number of U.S. adults who have these credentials and are using them in their jobs cannot be studied through institution-based data collection efforts, such as the National Center for Education Statistics' (NCES) Integrated Postsecondary Education Data System (IPEDS). Although IPEDS collects information on certificate programs, it is limited to counting annual awards based on credit-bearing instruction in institutions of higher education that participate in federal student financial aid programs. Many out-of-school youth and adults receive educational certificates from institutions that do not participate in federal student financial aid programs, and many receive certifications and licenses from a wide variety of institutional bodies such as trade associations, private companies, state governments, and employers. As a result, no institutional sampling frame is available for enumerating these credentials at the national level. Additionally, information about certifications, licenses, and certificates is not adequately covered in federal data collections that survey adults directly. Without the ability to count certifications, licenses, and certificates, it is difficult to accurately assess their role in social and economic outcomes; and difficult to evaluate public policies designed to help Americans access and benefit from these credentials.

These concerns are not new to the federal statistical community. In early 2000, a Federal Interagency Committee on Educational Attainment was formed to consider improving the measurement of educational attainment. The committee recognized the federal interest in developing survey questions to accurately count and classify educational certificates and industry-recognized certifications, and enable analysis of the connection between certification and employment outcomes. The committee acknowledged that it would take research and testing to develop a set of survey questions to address these issues, but because of the technical complexity of the topic and a lack of sustained policy interest, no further action was taken.

In February 2009, President Obama asked every American "...to commit to at least one year or more of higher education or career training. This can be a community college or a four-year school, vocational training, or an apprenticeship. But whatever the training may be, every American will need to get more than a high school diploma."¹ This proposal—and similar calls from foundations and other organizations—led to renewed interest in certificates and industry-recognized certifications.

In the fall of 2009—at the request of the Council of Economic Advisors (CEA), the Office of Management and Budget (OMB), and the Under Secretary of Education (OUS)—the National Center for Education Statistics (NCES) began a new interagency effort to improve federal statistical data on the education, training, and credentials that out-of-school youth and adults need for jobs. An Interagency Working Group on Certificates and Certifications was founded to oversee this work. In 2012, the group's scope expanded to include measures of participation and enrollment in federal surveys and its name changed to the Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA). GEMEnA consists of senior representatives from the Bureau of the Census, the Bureau of Labor Statistics (BLS), the National Science Foundation (NSF), as well as CEA, NCES, OMB, and OUS.² With GEMEnA's expert guidance and support, NCES has embarked upon a multifaceted effort to apply best-practice survey development principles towards the goal of developing valid national measures of the participation in and

¹ Address to Joint Session of Congress, February 24, 2009. Full text available at: http://www.whitehouse.gov/the_press_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress/.

² More information on GEMEnA is provided in appendix A.

credentialing of education and training for work, and to build government-wide consensus for the adoption of these measures.

GEMEnA's portfolio includes four main strands of work, described in more detail in chapter 4:

1. Develop and deploy a core set of survey items related to the prevalence and key characteristics of industry-recognized certifications and occupational licenses.
2. Develop and deploy a core set of survey items related to the prevalence and key characteristics of subbaccalaureate educational certificates.
3. Consider new and revised measures of participation in education and training designed to prepare out-of-school youth and adults for work.
4. Support NCES in the development of a new household study on education, training, and credentials for work.

The work described in this pilot study is in support of strands 1 and 2—to develop and deploy a core set of survey items related to the prevalence and key characteristics of industry-recognized certifications, occupational licenses, and subbaccalaureate educational certification. The results of this pilot study also inform strand 4—to develop a new household study on education, training, and credentials for work.

1.2 Definitions

GEMEnA began its work with a review of the research literature on education and training credentials and the development of a list of existing survey items on certifications, licenses, and educational certificates. Based on this background research and discussions with experts, certifications and licenses were found to be distinct from educational certificates in that they are a job or occupational requirement meant to demonstrate that the holder has the authority or skill qualifications necessary to perform specific job duties; educational certificates are awarded to show completion of a program of study—which may help in the performance of a specific job, but is not necessarily required or considered proof of qualification. This review led to the following working definitions of these credentials for the purposes of pilot testing:

Certification: A credential awarded by a certification body based on an individual demonstrating, through an examination process, that he or she has acquired the designated knowledge, skills, and abilities to perform a specific job. The examination can be written, oral, or performance-based. Certification is a time-limited credential that is renewed through a recertification process.

License: A credential awarded by a licensing agency based on predetermined criteria. The criteria may include some combination of degree attainment, certifications, certificates, assessment, apprenticeship programs, or work experience. Licenses are time limited and must be renewed periodically.

Educational certificate: A credential awarded by a training provider or educational institution based on completion of all requirements for a program of study, including coursework and tests or other performance evaluations. Certificates, as an academic award, are not time limited and do not need to be renewed. Most educational certificates are awarded at the subbaccalaureate level, but a small number are awarded after the completion of a postsecondary degree. Certificates of attendance or participation are not in the definitional scope for educational certificates.

As the definitions illustrate, although these credentials have specific characteristics and definitions, they are not mutually exclusive. Individuals may enroll in a certificate program to gain the knowledge needed to attain a certification which may be required prior to applying for a license. The interrelated nature of these credentials was important to consider when developing and evaluating potential survey measures.

GEMEnA's next step was to engage in a process of survey item development designed to yield a short series of measures to enumerate adults with certifications, licenses, or certificates that could be used in existing federal household data collections. This process led to the development of the ATES Pilot Study questionnaire.

1.3 The ATES Pilot Study

The 15-minute ATES Pilot Study questionnaire was developed based on the results of focus groups, in-depth cognitive interviews, and GEMEnA input. Four major findings from the focus groups and cognitive interviews influenced key decisions during the questionnaire design. First, the focus groups showed that the terms "certification" and "license" are not

always distinguishable to respondents. As noted above, certification is often the process by which someone gains the prerequisite qualifications needed to be awarded a license, and several focus group participants did not make a distinction between the process and the outcome. Consequently, the decision was made to ask about certification and licensure jointly.

Second, focus groups confirmed that certification and license holders do not view their certifications or licenses as educational credentials. When asked where they would place a certification on their resume, respondents indicated it would be placed under a header such as Professional Qualifications or Professional Certifications. Consequently, certifications/licenses were not asked about within the questionnaire section on educational attainment.

Third, the cognitive interviews showed that respondents also had trouble distinguishing between the terms “certification” and “certificate.” These two terms sound similar and, in fact, are shown as synonyms in the Merriam-Webster dictionary (2012). The cognitive interviews revealed that some respondents who have a certification will answer that they have a “certificate” if the questionnaire asked about certificates *before* certifications. Therefore, the questionnaire was designed to specifically ask about certifications and licenses first and certificates second.

Fourth, respondents’ interpretation of the term “certificate” was varied and broad when given little or no definitional context. Accordingly, a definition of certificate, as well as examples of certificate types and appropriate certificate providers were included in the lead item asking whether or not a respondent has a certificate.

The focus groups and cognitive interviews also helped to identify key factors associated with certifications, licenses, and certificates, and these factors formed the operational constructs for the remainder of the questionnaire items. They included the level of effort to obtain the credential, examination and performance assessment requirements, type of provider or awarding body, industry recognition, occupational specificity, requirement for employment, suspension or revocation potential, continuing education and recertification requirements, and perceived labor-market value. As appropriate to the credential, these factors were collected for respondents’ most recent certification/license and certificate.

Finally, the questionnaire collected information about respondents' demographic characteristics, such as age, gender, employment status, race/ethnicity, and income. These questions were derived from the NCES National Household Education Survey (NHES) and the Current Population Survey (CPS).

The ATES Pilot Study was administered from September 2010 through January 2011. It is important to note that the pilot study was not conducted for the purpose of collecting data to make population estimates (although survey weights were developed to examine the reasonableness of population estimates generated from the survey measures). The primary purpose of the pilot study was to examine the empirical properties of potential survey measures.

The ATES Pilot Study was conducted by mail and telephone using an address-based sample study covering the 50 states and the District of Columbia. A two-phase study was chosen to improve coverage of all households in the United States through the use of the address-based sample at the first phase, while allowing the topical study to be conducted by telephone at the second phase to match the mode of administration used by the CPS. The study was sponsored by NCES and designed and implemented by the American Institutes for Research (AIR) and Westat. The ATES Pilot Study data file contains a nationally representative sample of 3,730 adults (aged 18 or older), of whom 1,230 reported certifications/licenses and 530 reported certificates (220 reported both).³ In addition to the nationally representative sample, the ATES Pilot Study data file contains a convenience, or "seeded," sample of 340 adults, some of whom were voluntarily reported by three community colleges to have been awarded a certificate, and others reported by five credentialing bodies to have received a certification or license.⁴ The seeded sample contains state license holders in public health; electrical, pharmaceutical, plumbing, real estate, and energy-related fields; certifications/licenses in lab technology, radiation, and other health-related fields; and community college certificates covering a variety of programs. The seeded sample is not a representative sample and was used primarily to assess underreporting of credentials. Although care was taken to find current and reliable administrative records for the seeded sample by requesting records

³ The pilot study data are not available for secondary analysis due to their preliminary nature, their methodological rather than reporting purpose, and disclosure concerns.

⁴ It is not possible to identify the specific credentialing bodies for disclosure reasons.

directly from awarding bodies, these records have unknown measurement error, and therefore, at least some portion of the reporting error discussed in the findings of this report may be attributed to errors in the seeded sample frame.

Finally, in a subsample of approximately 1,000 households with two or more adults, the responding adult was also asked to report on certifications, licenses, and certificates held by another adult in the household. This was done in order to examine measurement error for responses reported by proxy because federal surveys that may be candidates for the inclusion of these new items may use proxy respondents when they are unable to interview the sampled adult in the household. Appendix B contains detailed information about the study methodology.

The first stage of data collection employed a mailed screener that was used to enumerate all adults in the household for sampling purposes. The response rate for the mailed screener was 52 percent. The second stage of data collection involved a telephone interview to conduct the extended survey. The response rate for the second stage was 44 percent (unweighted) and 42 percent (weighted). It should be noted that limited refusal conversion was undertaken at the telephone stage in order to maintain timeliness of the data collection. Timeliness and sample yield were a higher priority for the pilot study than were response rates.

The data file used for the analyses in this report underwent limited data editing. Imputation was performed on variables needed for weighting and on the overall certification/license and certificate items. Weights and variables to calculate standard errors were developed and used to examine the reasonableness of population estimates generated from the survey items.

1.4 Objectives of This Report

This report summarizes the analyses performed on the ATES Pilot Study data file. These analyses were designed to answer the primary research question:

What are the key survey measures that must be asked to generate valid population estimates of the prevalence of certifications and certificates in the U.S. adult population?

In order to answer this question, the report discusses the following questions:

1. Do the population estimates generated from the ATES Pilot Study measures seem reasonable?
2. To what extent do respondents misreport certifications, licenses, and certificates, and what are the characteristics of respondents and credentials associated with misreports? To what extent can proxy respondents provide valid answers to questions about certifications, licenses, and certificates?

1.5 Structure of This Report

The remainder of this report consists of three chapters, plus seven appendices, as described below.

Chapter 2 presents ATES Pilot Study estimates of the prevalence of certifications/licenses and certificates among U.S. adults, overall and by respondent characteristics (age, sex, race/ethnicity, educational attainment, industry, labor force participation, and immigration status). The chapter then examines the reasonableness of the ATES estimates by comparing them, where possible, to estimates from existing data sources. The chapter concludes by examining the extent to which the properties of certifications/licenses and certificates enumerated in this survey were consistent with key factors found to be associated with each type of credential in background research and cognitive interviews.

Chapter 3 presents an analysis of misreporting. This analysis first compares the seeded sample records (the administrative list of certification, license, and certificate holders from credentialing bodies) against survey reports to examine the extent to which respondents underreport (fail to report) their certifications/licenses or certificates. The analysis considers levels of misreporting by respondent and credential characteristics. Next, using data from the seeded and national samples, the chapter analyzes credential commonalities, which can be considered the empirical “defining characteristics” of credentials. This analysis examines the information provided by seeded sample respondents about their certifications/licenses and certificates to identify characteristics that were shared by a high proportion of certifications/licenses and certificates, respectively. The analysis then determines whether the commonalities identified in the seeded sample can be

used to identify possible instances of overreporting of credentials in the national sample (i.e., to determine whether someone who reports a certification/license or certificate describes the same key characteristics of that credential as do known credential holders). Chapter 3 ends with an examination of the feasibility of proxy reports by analyzing the frequency of “don’t know” and other responses to the certification/license and certificate items.

The report concludes with chapter 4, containing GEMEnA’s recommendations for a parsimonious set of survey items to measure certifications/licenses and a description of work planned under strands 2 through 4.

The report also includes the following supporting appendices:

- A. Details on the Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA)
- B. ATES Pilot Study Design and Methodology
- C. Supplemental Tables
- D. Standard Error Tables
- E. ATES Pilot Study Annotated Extended Interview Questionnaire
- F. ATES Focus Group Report
- G. ATES Cognitive Interview Report

2. Prevalence of Certifications/Licenses and Certificates in the Population

This chapter presents estimates of the overall rates of certifications/licenses and certificates among U.S. adults in 2010–11 and examines how those rates varied across subgroups of adults.⁵ In addition, the estimates derived from the ATES Pilot Study are compared to estimates from other nationally representative data collections. A final section examines responses to items found to be associated with each type of credential during background research and cognitive testing, such as certification/license holders' reports that obtaining their credential required passing a test or examination. Taken together, these analyses provide an indication of the validity of responses obtained from the ATES Pilot Study items. The estimates reported in this chapter are provided for the purpose of evaluating the questionnaire items, and should not be used to generate or cite population estimates. The sample design and data collection procedures were not intended for that purpose.

2.1 Overall Rates of Certifications/Licenses and Certificates

Responses from the ATES sample were weighted to represent all U.S. adults ages 18 and older.⁶ As shown in table 2-1, an estimated 38 percent of adults, or approximately 82 million adults, reported having at least one of the credentials of interest. A certification or license was more prevalent than a certificate; 30 percent of adults reported having a certification or license, compared to 14 percent who reported having a certificate.⁷

Credential holders were also asked to report how many of each type of credential they held. Most certification/license or certificate holders reported having one or two credentials of the same type (table 2-2) and few reported having three or more certifications/licenses or certificates.

⁵ Note that the estimates provided in chapter 2 exclude proxy respondents.

⁶ See appendix B for details on methods for calculating sampling errors and methods for calculating and applying weights, appendix C for tables of unweighted sample estimates, and appendix D for standard error tables.

⁷ Although the primary interest of the ATES Pilot Study was on subbaccalaureate certificates, the survey instrument did not distinguish the level of the certificate, so respondents may have reported postbaccalaureate certificates.

Table 2-1. Number and percentage distribution of respondents reporting a certification/license or certificate, by type of credential reported: 2010–11

Type of credential reported	Number	Percent	95 percent confidence interval	
			Lower bound	Upper bound
Either credential(s) reported	82,348,000	37.5	35.8	39.3
Certifications/licenses	65,324,000	29.8	28.1	31.5
Certificates	29,901,000	13.6	12.3	14.9
No credentials were reported	137,076,000	62.5	60.7	64.3

NOTE: Figures represent weighted estimates. Respondents were able to select multiple credentials; therefore, details may not sum to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table 2-2. Number and percentage distribution of reported credentials, by type and number of credentials: 2010–11

Type and number of credentials reported	Number	Percent	95 percent confidence interval	
			Lower bound	Upper bound
Total	219,424,000	100.0	†	†
Certifications/licenses				
None	153,180,000	69.8	68.1	71.5
One or more	65,065,000	29.7	28.0	31.3
1	41,188,000	18.8	17.3	20.3
2	14,309,000	6.5	5.7	7.4
3	5,515,000	2.5	1.9	3.1
4	1,628,000	0.7	0.5	1.0
5 or more	1,758,000	0.8	0.5	1.1
Number not specified	668,000	#	†	†
Don't know/refused	1,179,000	0.5	0.2	0.8
Certificates				
None	188,480,000	85.9	84.6	87.2
One or more	29,852,000	13.6	12.3	14.9
1	21,047,000	9.6	8.4	10.8
2	3,768,000	1.7	1.2	2.2
3	2,130,000	1.0	0.6	1.3
4	470,000	#	†	†
5 or more	1,777,000	0.8	0.4	1.2
Number not specified	661,000	#	†	†
Don't know/refused	1,091,000	#	†	†

Rounds to zero.

† Not applicable.

NOTE: Figures represent weighted estimates. Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Among all adults who reported holding a certification, license, or certificate, 64 percent reported holding a certification/license only, 21 percent reported holding a certificate only, and 16 percent reported holding both types of credentials (table 2-3). In addition, an analysis of the overlap between certifications/licenses and certificates found that 31 percent of certificates were obtained as part of the coursework or training taken for a certification or license (not shown in tables). However, because certifications/licenses and certificates are distinct types of credentials, they were treated separately in the pilot study and the report.

Similarly, although the cognitive interviews indicated that some respondents used “certification” and “license” interchangeably, an analysis was conducted to determine how they would respond if prompted for more information about their specific credential type. The analysis found that when respondents who reported a certification or license were asked if their credential was a certification, a license, or both, 45 percent (unweighted) responded “certification only,” 29 percent responded “license only,” and 22 percent responded “both” (4 percent of responses were missing; not shown in tables).

2.2 Rates of Certifications/Licenses and Certificates by Subgroup

Table 2-3 presents the percentages of adults holding one or both types of credentials, broken out by subgroup. The percentage of adults who reported holding any credential (a certification/license, and/or a certificate) did not vary measurably by sex, race/ethnicity, or immigration status; however, there were significant differences by age group, educational attainment level, and labor force status. A smaller percentage of the youngest and oldest adults held a credential compared to adults in the middle age ranges; for example, adults ages 45 to 54 reported higher rates of any credential than adults ages 18 to 24 and adults ages 75 or older (47 percent vs. 13 and 23 percent, respectively).

Table 2-3. Number and percentage distribution of respondents reporting any credentials, percentage of respondents reporting any certification/license or certificate, and among those reporting any credentials, percentage distribution reporting a certification/license or certificate only, or both credentials, by respondent characteristics: 2010–11

Respondent characteristics	Number	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported any credentials, percentage distribution of respondents who reported		
		No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate
Total	219,424,000	62.5	37.5	29.8	13.6	63.7	20.7	15.6
Sex								
Male	105,957,000	62.9	37.1	30.3	12.7	65.8	18.4	15.8
Female	113,467,000	62.1	37.9	29.3	14.5	61.8	22.8	15.5
Race/ethnicity ¹								
White	151,856,000	61.5	38.5	31.2	13.2	65.6	18.9	15.4
Black	23,306,000	62.7	37.3	26.8	16.9	54.8	28.2	17.0
Hispanic	29,027,000	62.7	33.3	26.6	12.7	62.0	20.1	17.9
Asian	5,844,000	68.3	31.7	26.7	9.7	69.4	15.6	15.1
Other	2,974,000	62.1	37.9	26.7	13.3	64.9	29.5	5.6
Two or more races	6,416,000	61.2	38.8	24.4	19.2	50.7	37.1	12.2
Age								
18 to 24 years old	28,799,000	87.3	12.7	11.6	2.7	78.5	8.9	12.5
25 to 34 years old	37,102,000	58.8	41.2	34.1	12.5	69.7	17.4	12.9
35 to 44 years old	38,192,000	55.5	44.5	37.2	13.9	68.8	14.2	16.9
45 to 54 years old	40,629,000	53.1	46.9	36.4	19.6	58.2	22.2	19.5
55 to 64 years old	34,498,000	57.0	43.0	31.9	17.1	60.3	25.8	13.9
65 to 74 years old	22,186,000	62.1	37.9	28.0	15.6	58.9	26.3	14.8
75 years old and over	18,018,000	77.2	22.8	15.3	10.5	54.1	32.9	13.0

See notes at end of table

Table 2-3. Number and percentage distribution of respondents reporting any credentials, percentage of respondents reporting any certification/license or certificate, and among those reporting any credentials, percentage distribution reporting a certification/license or certificate only, or both credentials, by respondent characteristics: 2010–11—Continued

Respondent characteristics	Number	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported any credentials, percentage distribution of respondents who reported		
		No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate
Highest reported level of education								
Less than high school	33,485,000	79.0	21.0	14.5	9.4	55.1	30.7	14.3
Grades 1–11	23,931,000	81.8	18.2	12.9	8.8	51.9	29.4	18.8
12th grade (no diploma)	9,554,000	72.1	27.9	18.8	11.1	60.3	32.8	6.9
High school (or equivalent)	67,299,000	72.9	27.1	20.3	11.7	56.8	25.1	18.0
Regular high school diploma	59,781,000	72.6	27.4	20.6	11.9	56.8	24.9	18.3
GED or alternative credential	7,518,000	75.3	24.7	18.1	10.5	57.6	26.9	15.5
Some college or associate's degree	58,385,000	54.4	45.6	32.1	22.5	50.6	29.7	19.8
Some college credit, but less than 1 year	11,267,000	59.5	40.5	23.3	25.4	37.1	42.3	20.5
1 or more years of college credit, no degree	35,054,000	55.5	44.5	31.8	21.0	52.9	28.6	18.6
Associate's degree	12,064,000	46.5	53.5	41.0	24.3	54.6	23.4	22.1
Bachelor's degree	36,225,000	55.1	44.9	40.7	9.0	79.9	9.4	10.7
Graduate or professional degree	24,030,000	41.0	59.0	55.4	10.2	82.7	6.1	11.2
Master's degree	17,881,000	43.4	56.6	52.1	11.2	80.2	7.9	11.9
Professional degree beyond a bachelor's degree	2,690,000	18.1	81.9	80.2	11.7	85.7	2.1	12.2
Doctorate degree	3,458,000	46.3	53.7	53.3	3.9	92.8	0.8	6.4

See notes at end of table.

Table 2-3. Number and percentage distribution of respondents reporting any credentials, percentage of adults reporting any certification/license or certificate, and among those reporting any credentials, percentage distribution reporting a certification/license or certificate only, or both credentials, by respondent characteristics: 2010–11—Continued

Respondent characteristics	Number	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported any credentials, percentage distribution of respondents who reported			
		No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate	
Labor force status									
Employed	123,556,000	55.2	44.8	37.8	13.8	69.3	15.4	15.3	
Unemployed (seeking employment)	21,438,000	73.3	26.7	20.4	12.0	55.1	23.8	21.2	
Not in labor force	71,369,000	72.1	27.9	18.0	13.6	51.1	35.4	13.5	
Labor force status unknown	3,060,000	52.8	47.2	44.4	20.0	57.6	6.1	36.3	
Immigration status									
Born in U.S.	196,861,000	62.6	37.4	29.5	13.6	63.6	21.1	15.3	
Born outside of U.S.	22,563,000	61.6	38.4	31.9	13.6	64.6	16.9	18.6	

¹ Black includes African American. Hispanic includes Latino. Other includes Pacific Islanders and American Indians (including Alaska Natives), and two or more races includes non-Hispanics reporting more than one race. Race categories exclude persons of Hispanic ethnicity.

NOTE: Figures represent weighted estimates. Credentials include certifications and certificates. Imputed data were used for all respondent characteristics except labor force status, for which imputed data were not available. Details may not sum to totals because of rounding. Because a certificate represents an educational attainment level, the findings by educational attainment are discussed separately for certifications/licenses and for certificates. In general, certification/licensing rates increased with educational attainment. Approximately 13 percent of adults with the lowest level of education (grades 1–11) held a certification/license, and 21 percent of adults with a regular high school diploma held one of these credentials. These estimates were lower than those for adults with higher levels of attainment; for example, 32 percent of adults with one or more years of college credit (but no degree) reported a certification/license, as did 80 percent of adults with a post-bachelor's professional degree (e.g., an M.D. or J.D.).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Looking at certificates, 9 percent of adults with a grades 1–11 education held a certificate, and 12 percent of adults with a regular high school diploma held one of these credentials.⁸ A higher percentage of adults with some college (but no degree) or an associate’s degree reported holding a certificate (23 percent) than any other group. This is consistent with certificates being predominantly a subbaccalaureate credential. Unlike certifications/licenses, however, adults with bachelor’s and master’s degrees did not have higher certificate rates than those with a high school degree or lower; 9 percent of bachelor degree holders and 10 percent of advanced degree holders reported holding a certificate.

Finally, employed adults reported higher rates of credentials than did unemployed adults and those not in the labor force (45 percent compared to 27 and 28 percent, respectively, for any credential). Looking separately at certifications/licenses and certificates, however, the differences remained significant only among certification/license holders.

⁸ This finding is somewhat puzzling because we would anticipate that respondents who reported their highest level of educational attainment to be a high school diploma or lower would not have also reported that they had a subbaccalaureate educational certificate from a postsecondary institution. There are at least two possible explanations for this finding: (1) The main educational attainment item did not have a “certificate” response option; although respondents could have selected a “some college” option, some certificate holders may not have perceived that option as relevant to them; and (2) The main certificate item could be capturing noneducational certificates that people obtained through other types of organizations, such as the workplace. These possibilities will be investigated in future research studies on certificates.

2.3 Comparison of Estimates From the ATES Pilot Study to Previous Data Collections

To determine whether the ATES Pilot Study estimates were consistent with past research, the ATES estimates were compared to estimates derived from the Princeton Data Improvement Initiative (PDII) for certifications/licenses and to the Survey of Income and Program Participation (SIPP) for certificates.

The PDII survey was conducted in 2008 by Westat on behalf of Princeton University and covered the topics of worker perceptions of the “offshoreability” of their jobs, occupational licensing, and lifetime work experience.⁹ Participants were adults in the labor force, currently employed or unemployed and looking for work. After restricting the ATES and PDII samples to adults who were currently employed, the percentage of adults reporting a certification/license was 38 percent based on the ATES Pilot Study data and 34 percent based on the PDII data (table 2-4). Although the ATES estimate was measurably different from the PDII estimate, the difference is small enough to be considered reasonable, given dissimilarities in the data sets in terms of timing, item wording, and item order. When broken out by educational attainment level, the rate of certifications/licenses was not measurably different for adults whose highest level of education was below a bachelor’s degree, but was measurably higher in ATES than in the PDII for those at the bachelor’s degree level and above (by around 7 to 8 percentage points).

To examine the ATES estimates on certificates, the ATES data were reanalyzed and compared to 2008 data from the U.S. Census Bureau’s SIPP, using adults ages 23–64 who reported an income or reported working for earnings in the past year.¹⁰ The overall rate of certificates based on ATES was 15 percent, compared to 18 percent for SIPP. Again, the difference was statistically significant, but reasonable given the dissimilarities between the two surveys (e.g., timing, mode of interview). Significant differences also existed between the two surveys for adults with educational attainment levels at or below high school level, and at the graduate or professional degree level (differences in the range of 2 to 6 percentage points). There were no measurable differences in the estimates for adults with some college, an associate’s degree, or a bachelor’s degree.

⁹ The PDII data are available at http://irs.princeton.edu/Conferences/PDII/PDII_RDD_Survey.dta.

¹⁰ The SIPP 2008 data are available at <http://www.bls.census.gov/sippftp.html>.

2.4 Unweighted Responses to Items Related to Certifications/Licenses and Certificates

Based on ATEs developmental work, several factors were expected to covary with holding a certification/license or certificate. First, certification/license holders were expected to report that their credentials were in some way job relevant; for example, respondents might report that their certifications/licenses were required for their current job. Respondents were also expected to report taking courses or training to earn the certification/license and that they had been required to demonstrate their knowledge or skills in order to be certified/licensed. Finally, respondents were expected to report being certified or licensed by a state, industry, company, or professional association and that their certification/license could be revoked or suspended. Factors expected to be related to certificates reflected the fact that this type of credential is obtained through an educational program. Therefore, certificate holders were expected to report that their credentials were awarded by an educational institution (e.g., a community college).

The remainder of this chapter summarizes the findings from an analysis of unweighted responses to items asked of credential holders on the factors described above. Respondents were asked some items, such as the name and year the credential was obtained, for all certifications/licenses or certificates held (up to five of each), whereas the majority of credential-specific items were only asked for the most recent certificate earned and the most recent *work-related* certification/license held.¹¹ Because information was collected on potentially multiple credentials per respondent, items were analyzed at the credential level rather than the respondent level and are reported as the percentage of certifications/licenses or certificates held by respondents. In addition, these analyses are not weighted because, unlike comparisons of estimates, they are methodological analyses of sample characteristics and are not intended to show population characteristics.

¹¹ If respondents reported any certifications/licenses but did not report any work-related certifications/licenses, they were asked a set of follow-up questions about the most recent credential they obtained for personal interest.

Table 2-4. Percentage of adults who reported holding certifications/licenses in the Princeton Data Improvement Initiative (PDII) and the Adult Training and Education Survey (ATES) Pilot Study and percentage of adults who reported holding a certificate in the Survey of Income and Program Participation (SIPP) and the Adult Training and Education Survey (ATES) Pilot Study by educational attainment level: 2008, 2009, and 2010–11

Educational attainment level	Certifications/licenses				Certificates			
	PDII	ATES	ATES 95 percent confidence interval		SIPP:08 ¹	ATES	ATES 95 percent confidence interval	
			Lower bound	Upper bound			Lower bound	Upper bound
Total	34.4	37.8*	35.5	40.2	18.1	15.1*	13.2	17.0
Highest level of education								
Less than high school diploma	18.5	27.2	17.5	36.8	7.3	11.7*	5.2	18.3
High school diploma	25.7	27.8	23.6	32.1	22.2	15.8*	12.0	19.6
Some college	33.9	38.1	33.0	43.2	24.8	23.2	17.3	19.1
Associate's degree	—	—	—	—	34.3	24.3	15.4	33.2
Bachelor's degree	35.1	42.7*	37.7	47.6	10.3	9.4	7.0	11.9
Graduate or professional degree	50.3	56.8*	50.5	63.2	6.4	8.8*	5.1	12.6

— Not available.

* $p < 0.05$.

¹ Survey of Income and Program Participation, 2008.

NOTE: Figures represent weighted estimates. Data for certifications/licenses limited to those currently employed or looking for employment. Data for certificates limited to those who were between 23 and 64 years of age and reported an income or earnings in the previous year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11; U.S. Department of Commerce, Census Bureau, Survey of Income and Program Participation (SIPP), 2008; Kleiner, M.M., and Krueger, A.B., *Analyzing the Extent and Influence of Occupational Licensing on the Labor Market*, Princeton Data Improvement Initiative (PDII), 2009.

2.4.1 Findings related to certifications/licenses held

Certifications/licenses are occupation and/or industry specific and were therefore expected to be related to—and in some cases required for—respondents’ jobs (e.g. medical licenses). The ATES pilot test results supported this expectation: the majority of certifications/licenses held by respondents were pursued for mainly work-related reasons (90 percent), while 8 percent were pursued for mainly personal interest (table 2-5). Similarly, for the most recent work-related certification/license reported by currently employed respondents, 82 percent were related to their current job, and 60 percent were required for their current job (table 2-6).

Adults can prepare for a certification/license by taking courses and/or training or through self-study. Among the ATES Pilot Study sample, 90 percent of the most recent work-related certifications/licenses were earned after taking some type of courses and/or training (table 2-7). In addition, 91 percent of the most recent work-related certifications/licenses required respondents to pass a test or exam, 66 percent required a demonstration of skills while on the job, and 31 percent required the submission of a portfolio of work. Overall, 96 percent of these credentials had one or more of these performance evaluation requirements. To maintain the credential, 64 percent of certifications/licenses required respondents to take continuing education units in order to maintain them, 31 percent required periodic testing, and 70 percent had one or both of these requirements.

Table 2-5. Percentage distribution of certifications/licenses pursued for mainly work-related reasons or for personal interest: 2010–11

Reason for pursuing certification/license	Percent
Mainly work-related	90.2
Mainly personal interest	7.9
Data missing or not collected	1.9
Don't know	1.1
Refused	#
Not collected	#

Rounds to zero.

NOTE: Figures represent unweighted estimates. Survey question was asked for the first five certifications/licenses identified per respondent. Includes self-reported data only; data completed by proxy were excluded from the analysis. Details may not sum to total because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table 2-6. Percentage distribution of certifications/licenses related to respondents' current jobs: 2010–11

Certification/license relatedness to current job	Percent
Related to current job	81.9
Required for current job	59.5
Not required for current job (include missing)	22.3
Not related to current job (include missing)	18.1

NOTE: Figures represent unweighted estimates. Survey questions were asked only for the most recent work-related certification/license or, if none were identified as work related, for the most recent certification/license. Additionally, this survey question was only asked of those respondents who reported being currently employed. Includes self-reported data only; data completed by proxy were excluded from the analysis. Details may not sum to total because of rounding. SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table 2-7. Percentage of the most recent certifications/licenses requiring courses or training, performance evaluations, and ongoing maintenance: 2010–11

Certification/license requirements	Percent of certifications/licenses
Course or training requirements	
Took courses or training, or both	90.0
Did not take courses or training	9.6
Performance evaluation requirements	
Demonstration of skills while on-the-job	65.7
Passing a test or exam	91.0
Submitting a portfolio of work	31.4
Any of the above	96.0
Ongoing maintenance requirements	
Continuing education classes or units (CEUs)	63.6
Periodic tests	31.0
Any of the above	69.6

NOTE: Figures represent unweighted estimates. Survey questions were asked only for the most recent work-related certification/license or, if none were identified as work-related, for the most recent personal interest certification/license. Includes self-reported data only; data completed by proxy were excluded from the analysis. Respondents were able to select multiple requirements; therefore, estimates are not mutually exclusive. SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Certifications/licenses can be conferred by states, industries, companies, and professional associations. Among the most recent work-related certifications/licenses obtained by the ATES Pilot Study respondents, most were issued either by a state (68 percent) or a professional association (16 percent) (table 2-8). Although 14 percent of certifications/licenses were reported to have an “other” provider, analysis of the verbatim responses to the “other” category suggest that adding response options for local and federal

governments could capture 37 percent of these “other” responses (or about 5 percent of all responses) (not shown in tables).

Finally, respondents indicated that 76 percent of their certifications/licenses could be revoked or suspended (e.g., for not meeting continuing education requirements).

Table 2-8. Percentage of most recent certifications/licenses, by issuing organization and whether certification/license can be revoked or suspended: 2010–11

Certification/license characteristic	Percent of certifications/licenses
Organization issuing certification/license	
State	67.8
Industry	2.6
Company	5.1
Professional association	15.9
Other	13.8
Don't know	1.6
Certification/license can be revoked or suspended	
Certification/license can be revoked or suspended for any reason	76.3
Certification/license cannot be revoked or suspended for any reason	14.8
Don't know	8.9

NOTE: Figures represent unweighted estimates. Survey questions were asked only for the most recent work-related certification/license or, if none were identified as work-related, for the most recent certification/license. Includes self-reported data only; data completed by proxy were excluded from the analysis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

2.4.2 Findings related to certificates held

The purpose of the ATES certificate items was to measure the prevalence of *educational* certificates: that is, certificates earned as part of an educational program of study, as opposed to certificates of attendance, achievement, or completion that were not part of a program of study. Therefore, it was expected that the organization conferring the certificate would be a type of educational institution—a community college, another type of university or college, or a trade school. Table 2-9 shows that overall, 57 percent of the certificates reported by ATES Pilot Study respondents were awarded by these types of institutions, with 21 percent being earned from a community college, 15 percent from another type of university or college, and 22 percent from a trade school (figures do not sum to the total due to rounding). Fourteen percent of the remaining certificates were conferred by other specified types of organizations, and 26 percent were reportedly obtained from a

type of organization not listed in the survey. However, an analysis of verbatim responses for the “other” category found that 50 percent of those cases could have been categorized as an educational institution. Adding these cases to the educational provider categories would raise the percentage of certificates awarded by educational institutions from 57 to 73 (not shown in tables).

Table 2-9. Percentage distribution of most recent certificate, by source of certificate: 2010–11

Source of certificate	Percent of certificates
A community college	20.5
Another university or college	14.7
A trade school	21.5
Business or company	5.2
Professional association	2.9
Trade union	1.6
Nonprofit organization	0.8
A federal, state, or local government	3.5
Other	25.6
Don't know, refused, or missing	3.7

NOTE: Figures represent unweighted estimates. Survey question was asked only for the most recent certificate.

Includes self-reported data only; data completed by proxy were excluded from the analysis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

The number of credits or course hours required for an educational certificate was also expected to vary to some extent; however, certificates earned through short-term training, such as a 1-day course, were not considered educational certificates, according to the ATES definition. As a frame of reference, a minimum of approximately 30 credit hours would be required to complete a one-year certificate program.¹²

Overall, only 16 percent of ATES certificate-holders reported credit hour information. Among these respondents, 15 percent of the most recent certificates earned were reported to require fewer than 5 credit hours to complete, and the majority (57 percent) required 21 or more credit hours to complete (table 2-10).¹³ The average number of credit hours reported to earn the most recent certificate was 92; when responses were capped at

¹² This number is based on an informal review of college websites and the guidance provided to institutions responding to NCEs’s Integrated Postsecondary Education Data System (IPEDS) surveys. IPEDS defines a postsecondary award, certificate, or diploma of at least 1 but less than 2 academic years as requiring one of the following: (1) at least 900, but less than 2,100 contact or clock hours; (2) at least 30, but less than 60 semester or trimester credit hours; or (3) at least 45, but less than 90 quarter credit hours.

150 credit hours, the average number of credit hours was 32 (not shown in tables). Over half of the certificate holders reported that they did not know the time taken to complete their certificate. This, combined with the high credit hours reported by some respondents, indicate that this information is difficult for respondents to provide. For example, three respondents reported that their most recent certificate required 2,000 credit hours.

Table 2-10. Percentage distribution of most recent certificates, by number of credit hours required to complete certificate: 2010–11

Number of credit hours required to complete certificate	Percent
People who reported in credit hours	100.0
1 to 4 credit hours	14.6
5 to 8 credit hours	6.1
9 to 12 credit hours	6.1
13 to 20 credit hours	15.9
21 or more credit hours	57.3
Data missing or not collected	100.0
Don't know	93.8
Refused	1.0
Missing	5.2

NOTE: Figures represent unweighted estimates. Survey questions were asked only for the most recent certificate. Includes self-reported data only; data completed by proxy were excluded from the analysis. The average number of credit hours needed to earn the most recent certificate was 92. However, inspection of the extreme outliers indicated that a reporting error for fewer than 3 respondents reporting an excess of 2000 credit hours skewed the average. When credit hour responses were capped at 150, the average number of credit hours needed was 32. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

2.5 Summary of Findings on Prevalence of Certifications/Licenses and Certificates

This chapter presented the overall rates of certifications/licenses and certificates among U.S. adults in 2010–11 and investigated how these rates varied across subgroups of adults and data collections. Overall rates of certifications/licenses and certificates based on ATES Pilot Study data were found to be reasonable in comparison with other studies of similar populations. The ATES Pilot Study found that 38 percent of U.S. adults reported holding at least one credential, with certifications/licenses being reported by a higher percentage of adults than certificates—30 percent reported a certification/license, while

¹³ Inspection of the extreme outliers for this question indicated that a reporting error for fewer than 3 respondents reporting an excess of 2000 credit hours skewed the average. With the outliers removed, the maximum number of credit hours reported was 150.

14 percent reported a certificate. These estimates did not vary by sex, race/ethnicity, or immigration status; however, they did vary by several background characteristics, including age group, educational attainment level, and labor force status, in ways that one might expect. For example, younger and older adults were less likely to report holding these credentials than were mid-aged adults, and employed adults were more likely to report them than were adults who were not employed.

In addition to producing estimates that were consistent with those from other data collections, the ATES Pilot Study found relationships between holding a certification/license or certificate and other factors as expected, based on ATES developmental work and the definitions of the credentials. For example, most certifications/licenses were pursued for mainly work-related reasons (90 percent), and most work-related certifications/licenses required the respondent to pass a test or exam (91 percent) and take continuing education units to maintain them (64 percent). The majority of most recent certifications/licenses could be revoked or suspended (76 percent). Similarly, the majority of most recent certificates were conferred by an educational institution (57 to 73 percent) and required 21 or more credit hours to complete (57 percent for those reporting in credit hours). Instances where these expected relationships were not found might indicate misreporting by respondents; this issue is examined in the next chapter.

3. Evaluation of Measurement Error

This chapter presents analyses of misreporting in the ATEs Pilot Study. The first analysis compares the seeded sample records against survey reports, to examine the extent to which respondents underreported their certifications/licenses or certificates (i.e., “false negatives”). The analysis evaluates levels of underreporting by respondent and credential characteristics. The seeded sample is a convenience sample of adults who were reported by three community colleges and five credentialing bodies to have received a certification, license, or certificate; it is not a representative sample of any credentialed group. The seeded sample contains state license holders in alcohol- and drug-related fields and electrical, pharmaceutical, plumbing, real estate, and energy-related fields; certifications/licenses in lab technology, radiation, and other health-related fields; and community college certificates covering a variety of programs. Please refer to appendix B for more information on this sample.¹⁴

The analysis of credential commonalities follows the examination of underreporting, and uses data from the seeded and national samples. First, the analysis examines the information provided by confirmed seeded sample respondents (i.e., “true positives”) about their certifications/licenses and certificates to identify related factors (e.g., test or exam requirements) that were shared by a high proportion of certifications/licenses and certificates, respectively. Using this information, the next part of the analysis considers whether the commonalities identified using the seeded sample can be used to identify possible instances of credential overreporting (i.e., “false positives”) in the national sample. Note that the seeded sample is a nonrepresentative convenience sample, and therefore all results based on the seeded sample should be considered illustrative only.

Finally, this chapter provides an analysis of the reasonableness of proxy reports by comparing respondent self-reports to proxy reports for each certification/license and certificate item and examines the use of help text probes for the main certification/license and certificate items.

¹⁴ It is not possible to identify the specific credentialing bodies for disclosure reasons.

3.1 Methods

The ATES seeded sample is a convenience sample of 340 respondents known to have specific certifications/licenses or certificates (see appendix B for detailed information about the seeded sample). For certifications/licenses, credential holder lists from one state (for licenses) and four national accrediting bodies (for certifications) were used to develop a list sampling frame that included the name and address of the credential holder and the type of credential.¹⁵ A number of people known to have earned certificates from three community colleges were also sampled.¹⁶ Although the seeded sample is not representative of all credential holders, it does allow us to examine the measurement properties of the survey items in three important ways. First, this sample allows for an evaluation of underreporting rates for selected certifications/licenses and certificates using reverse record checks. Second, the sample can be used to determine whether the self-reported credentials match the credentials provided by the credentialing body. Lastly, the characteristics of true credentials (those reported by both the respondents and the credentialing bodies) can then provide a rule-of-thumb for identifying credential overreports. Credentials reported in the nationally representative sample that do not reflect the expected characteristics of credentials, as identified using the seeded sample, may not be true credentials. However, the validity of this approach is limited by the extent to which the seeded sample may or may not reflect the characteristics of all credentials.

3.2 Analysis of Underreporting

Reverse record checks, like the one employed in the ATES Pilot Study, are designed to measure underreporting of known characteristics. In doing so, seeded samples can be used to identify characteristics of respondents and/or credentials that could help explain underreporting. This analysis examined differential underreporting rates by educational attainment, sex, race, age, and employment industry. Some portion of underreports could also be due to errors in the administrative records or data collection, such as reaching the wrong individual.

¹⁵ Certification/license types included in the seeded sample were alcohol and drug counselor or aide; health technician, specialist, or sonographer; pharmacy technician; electrical aide; plumber; HVAC technician; and fuel technician.

¹⁶ Certificate types included in the seeded sample were, among others, accounting; business management; cabinet and furniture technology; dental assisting; diesel mechanics technology; drafting technology; graphic communications; photography; and real estate.

One possible explanation for underreporting is that respondents may misidentify a certification/license as a certificate (or vice versa). Differential underreporting rates can be used to evaluate this by determining whether a certificate was also reported by the respondent (and whether that certificate was from someplace other than a college or other educational program, as this would be an indication that the credential was more likely a certification/license than a certificate). Similarly, the evaluation of seeded certificates looked for differential underreporting rates by whether a certification/license was also reported by the respondent and whether those certifications/licenses were part of a degree or other educational program. Finally, the evaluation of seeded certifications/licenses assessed differential underreporting rates by credential type (certification or license). These additional analyses can provide evidence of credential misidentification at an aggregate level.

A record was classified (at the person level) as a certification/license underreport if a respondent who was sampled from the seeded certification/license frame answered “no,” “don’t know,” or “refused” to the main certification/license survey question (question CN1: Do you have a professional certification or a state or industry license? See appendix E for the survey instrument). Similarly, a record was classified (at the person level) as a certificate underreport if a respondent who was sampled from the certificate frame answered “no,” “don’t know,” or “refused” to the main certificate survey question (question CT1: Some people decide to enroll at a college, university, community college, or trade school to earn a certificate rather than a degree. Have you ever earned this type of certificate?). Proxy responses were not included in this analysis to avoid confounding the possibility of limited proxy knowledge with actual underreports.¹⁷

The overall underreporting rate for seeded certifications/licenses was 15 percent, and the overall underreporting rate for seeded certificates was 50 percent.¹⁸ The results

¹⁷ In addition, respondents selected from one of the community colleges in the certificate sample frame were removed after finding that they had an unusually high certificate underreporting rate (85 percent); further investigation revealed that there was a problem with the sample frame itself. The school had mistakenly encoded students who achieved a transfer sequence of 18 to 60 units as “certificates.” These students represented about 78 percent of the records in the sampling frame and 86 percent of the survey respondents for this school. The sampled respondents with problematic records from this school had an underreporting rate of 93 percent, while the sampled respondents with valid records had an underreporting rate of 57 percent. However, while the rate for the latter group is more in line with the other certificate samples, the sample size was too small to be included in the analyses ($n < 10$).

¹⁸ Based on the inaccuracies in the certificate seeded sampling frame described above, it is possible that similar (though less extensive) issues existed in data supplied by the other community colleges and that the high underreporting rate found for certificates is partially due to characteristics of the frame. This possibility will be investigated by NCES in upcoming work on certificate item development and testing.

from this analysis are presented in tables 3-1 and 3-2 for certifications/licenses and certificates, respectively. The tables report the response distributions for each seeded sample and the differential underreporting rates by selected respondent characteristics. To help describe the strength of the association between each of the selected respondent characteristics and credential underreporting, the tables also provide estimates of the unadjusted odds ratios. The unadjusted odds ratios presented in the tables estimate the odds that a credential will not be reported given that respondent's characteristics. To allow for comparisons and significance testing across subgroups, the 95 percent confidence interval of the odds ratio is also provided in the tables.

Few of the differences in underreporting rates by subgroup were statistically significant, as evidenced by the overlapping confidence intervals for the odds ratios. However, additional analyses suggest that labor force status may be driving the underreporting results. A multivariate logistic regression model was used to estimate the probability of underreporting (a binary outcome variable where 1 indicates an underreport and a 0 indicates no underreport), as a function of three predictor variables: work status in the last 12 months (1=Has worked; 0=Has not worked), age (1=18–64 years of age; 2=65 or more years of age), and sex (1=Male; 2=Female). Logistic regression works by modeling the log-odds of a particular binary response as a linear combination of regression coefficients, or predictor variables. This analysis modeled the probability that the binary response variable (UNDERREPORT) equaled 1, which indicated an underreport. To aid interpretability, the coefficients produced through the multivariate logistic regression model were converted to adjusted odds ratios, which show the increased odds of underreporting attributable to labor force status while all other factors controlled for in the model are held constant. Regardless of sex or age group, currently employed respondents were found to be the most accurate at reporting on these types of credentials (not shown in tables).¹⁹ For example, whereas the underreporting rate for certifications/licenses among males under the age of 65 who have worked in the last 12 months was 8 percent, the corresponding rate for males under age 65 who have not worked in the past 12 months was 44 percent (not shown in tables).

¹⁹ When controlling for age and sex, respondents who have not worked in the past 12 months were 5.1 times more likely to omit their certification or license than respondents who have worked in the past 12 months ($p = 0.0018$). The odds ratios associated with age and sex were not significantly different from zero at the $p < 0.05$ level. A possible explanation for this finding is salience of the credential to the employed respondents; most employed respondents reported that their credentials were related to their current jobs, and therefore these credentials may be more likely to be remembered than credentials that are not currently being used.

Table 3-1. Percentage distribution of respondents from the certification/license seeded sample frame and percentage and odds ratios of seeded sample respondents who did not report the credential listed in the frame (underreporting), by selected respondent characteristics: 2010–11

Selected respondent characteristics	Percent of respondents from the certification/license seeded sample frame	Percent of respondents who did not report the credential listed in the frame (underreporting rate)	Odds ratio of underreporting	95 percent confidence interval for odds ratio	
				Lower bound	Upper bound
Total	100.0	15.0	(1)	(1)	(1)
CN4. Type of certification					
Certification	38.5	17.1	1.3	0.6	2.8
License	61.5	13.7	(1)	(1)	(1)
ED3. Highest reported level of education					
High school or less than high school	30.8	16.9	(1)	(1)	(1)
Some college or associate's degree	39.8	13.1	0.7	0.3	1.8
Bachelor's, graduate, or professional degree	29.4	16.1	0.9	0.4	2.4
AL1. Age					
18 to 34 years old	19.8	19.0	1.8	0.7	4.5
35 to 64 years old	68.9	11.6	(1)	(1)	(1)
65 years old and over	11.3	29.2	3.1	1.1	8.6
AL3/AL4. Race/ethnicity					
White ²	92.4	14.4	(1)	(1)	(1)
All other races/ethnicities	7.6	18.8	1.4	0.4	5.1
AL6. Sex					
Male	64.3	11.7	(1)	(1)	(1)
Female	35.7	21.1	2.0	0.9	4.3

See notes at end of table.

Table 3-1. Percentage distribution of respondents from the certification/license seeded sample frame and percentage and odds ratios of seeded sample respondents who did not report the credential listed in the frame (underreporting), by selected respondent characteristics: 2010–11—Continued

Selected respondent characteristics	Percent of respondents from the certification/license seeded sample frame	Percent of respondents who did not report the credential listed in the frame (underreporting rate)	Odds ratio of underreporting	95 percent confidence interval for odds ratio	
				Lower bound	Upper bound
IN6/IN7. Employment Industry					
Private company	48.8	15.4	(1)	(1)	(1)
Government, nonprofit, or self-employed	33.8	6.9	0.4	0.1	1.2
Two or more industries	4.2	#	†	†	†
Don't know/refused industry	1.9	#	†	†	†
Not employed	11.3	45.8	4.7	1.8	12.2
CT1. Reporting of the certificate(s)					
Certificate(s) reported	31.5	7.5	(1)	(1)	(1)
No certificate reported	68.5	18.5	2.8	1.0	7.7

† Not applicable

Rounds to zero.

¹ Reference group for odds ratio.

² Excludes persons of Hispanic ethnicity.

NOTE: Figures represent unweighted estimates. Observations with missing data for a given variable are excluded. Includes self-reported data only; data completed by proxy were excluded from the analysis. Details may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table 3-2. Percentage distribution of respondents from the certificates seeded sample frame and percentage and odds ratios of seeded sample respondents who did not report the credential listed in the frame (underreporting), by selected respondent characteristics: 2010–11

Selected respondent characteristics	Percent of respondents from the certificate seeded sample frame	Percent of respondents who did not report the credential listed in the frame (underreporting rate)	Odds ratio of underreporting	95 percent confidence interval for odds ratio	
				Lower bound	Upper bound
Total	100.0	50.0	(1)	(1)	(1)
ED3. Highest reported level of education					
High school or less than high school	7.1	‡	(1)	(1)	(1)
Some college or associate's degree	74.3	50.0	0.7	0.1	4.3
Bachelor's, graduate, or professional degree	18.6	46.2	0.6	0.1	4.6
AL1. Age					
18 to 34 years old	46.3	48.4	1.0	0.4	2.7
35 to 64 years old	46.3	48.4	(1)	(1)	(1)
65 years old and over	7.5	‡	†	†	†
AL3/AL4. Race/ethnicity					
White ²	51.5	47.1	(1)	(1)	(1)
All other races/ethnicities	48.5	56.3	1.4	0.5	3.8
AL6. Sex					
Male	52.2	44.4	(1)	(1)	(1)
Female	47.8	57.6	1.7	0.6	4.5

See notes at end of table.

Table 3-2. Percentage distribution of respondents from the certificates seeded sample frame and percentage and odds ratios of seeded sample respondents who did not report the credential listed in the frame (underreporting), by selected respondent characteristics: 2010–11—Continued

Selected respondent characteristics	Percent of respondents from the certificate seeded sample frame	Percent of respondents who did not report the credential listed in the frame (underreporting rate)	Odds ratio of underreporting	95 percent confidence interval for odds ratio	
				Lower bound	Upper bound
IN6/IN7. Employment industry					
Private company	37.7	46.2	(1)	(1)	(1)
Government	14.5	30.0	0.5	0.1	2.4
Nonprofit	10.1	42.9	0.9	0.2	4.7
Self-employed	8.7	50.0	1.2	0.2	6.9
Two or more industries	5.8	‡	†	†	†
Not employed	23.2	62.5	1.9	0.5	6.9
CN1. Reporting of the certification(s)					
Certification	58.6	51.2	1.1	0.4	2.9
No certification	41.4	48.3	(1)	(1)	(1)
CN7/CN7A/CN7B. Training and education taken to earn most recent certification or license					
Certification received as part of a degree	45.7	56.3	(1)	(1)	(1)
Certification received not as part of a degree (includes missing)	12.9	33.3	0.4	0.1	1.8
No certification	41.4	48.3	0.7	0.3	2.0

† Not applicable

‡ Data suppressed because reporting standards were not met and estimates are unreliable.

¹Reference group for odds ratio.

²Excludes persons of Hispanic ethnicity.

NOTE: Figures represent unweighted estimates. Observations with missing data for a given variable are excluded. Includes self-reported data only; data completed by proxy were excluded from the analysis. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

3.3 Analysis of True Credentials and Credential Commonalities

Matched cases are considered true credentials because they are a report of a credential that is confirmed both in the administrative records data and by the survey data. The characteristics of true credentials can provide a rule-of-thumb for identifying reported credentials in the nationally representative sample that do not reflect the expected characteristics of credentials, as identified using the seeded sample. These cases are classified as credential overreports. The following sections provide additional indicators of reporting accuracy in the ATEs pilot study through the analysis of true credentials and their characteristics.

3.3.1 Matching frame credentials to self-reported credentials

All of the credentials reported by seeded sample respondents were evaluated to see which, if any, matched the seeded sample frame data in order to create a dataset of matching and nonmatching seeded credentials. Table 3-3 shows the credential matching results for persons selected from the certification and license frames, and table 3-4 shows the credential matching results for persons selected from the certificate frame.²⁰ The overall match rate—which takes into account underreports as well as persons with no seeded credential matches—was 77 percent for both seeded certifications and seeded licenses, yielding a combined overall match rate of 77 percent.²¹ This implies that 23 percent of certifications and licenses included in the seeded frame were not reported (not shown in tables), although error associated with the contacting of seeded sample adults (e.g. the wrong adult was reached) could also contribute to this difference. The overall match rate for certificates was 41 percent.²² The relatively low match rate for the certificates largely reflects the extensive underreporting among the seeded certificate sample (as discussed previously in section 3.2).

²⁰ For the purposes of this section, responses related to certifications and licenses are reported separately.

²¹ The conditional credential match rate—which looks only at the percent of matches where at least one credential of the same type was provided during the interview—was 93 percent for the persons sampled from the certification/license frame who answered “yes” to CN1. The corresponding conditional credential match rate for persons sampled from the license frame was 90 percent, yielding a combined credential match rate of 91 percent.

²² The conditional credential match rate for the persons sampled from the certificate frame who answered “yes” to CT1 was 86 percent.

Table 3-3. Percentage of respondents from the certification/license seeded sample frame who reported a credential that matched a credential in the frame, by credential type and credential matching result: 2010–11

Comparison of seeded sample survey responses to seeded sample frame	Total percent	Percent of certifications	Percent of licenses
Respondent reported a certification/license in the survey	84.5	82.4	85.8
Number of reported certifications/licenses with a match in seeded sample frame			
0	7.8	5.9	9.0
1	68.9	64.7	71.6
2 or more	7.8	11.8	5.2
Respondent did not report a certification/license in the survey	15.5	17.6	14.2
No credentials reported in certification/license or certificate survey sections	12.8	14.1	11.9
Respondent reported a certificate in the survey ¹	2.7	3.5	2.2
Credential match rate (conditional; person-level)	90.8	92.9	89.6
Overall match rate (person-level)	76.7	76.5	76.8

¹ Includes instances where seeded certification/license was reported as a certificate in the certificate module of the survey as well as instances where the certificate reported in the survey did not match the seeded certification/license.

NOTE: Figures represent unweighted estimates. Includes self-reported data only; data completed by proxy were excluded from the analysis. The credential match rate refers to the proportion of reported certifications/licenses matching a certification/license in the seeded sample frame. The overall match rate—which takes into account underreports as well as persons with no seeded credential matches—refers to the proportion of people on the seeded sample frame who during the survey reported at least one of the certifications/licenses provided on the seeded sample frame.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

Table 3-4. Percentage of respondents from the certificates seeded sample frame who reported a credential that matched a credential in the frame, by credential matching result: 2010–11

Comparison of seeded sample survey responses to seeded sample frame	Percent
Respondent reported a certificate in the survey	48.0
Number of reported certificates with a match in seeded sample frame	
0	6.7
1	37.3
2 or more matches	4.0
Respondent did not report a certificate in the survey	52.0
No credentials reported in certificate or certification/license survey sections	21.3
Seeded certificate was misreported as a certification/license in the survey	21.3
Certification/license was reported, but did not match seeded frame certificate	9.3

See notes at end of table.

Table 3-4. Percentage of respondents from the certificates seeded sample frame who reported a credential that matched a credential in the frame, by credential matching result: 2010–11—Continued

Comparison of seeded sample survey responses to seeded sample frame	Percent
Credential match rate (conditional; person-level)	86.1
Overall match rate (person-level)	41.3

NOTE: Figures represent unweighted estimates. One certificate sample source was dropped from all analyses because of problems with the sample frame. Includes self-reported data only; data completed by proxy were excluded from the analysis. The credential match rate refers to the proportion of reported certificates matching a certificate in the seeded sample frame. The overall match rate—which takes into account underreports as well as persons with no seeded credential matches—refers to the proportion of people on the seeded sample frame who during the survey reported at least one of the certificates provided on the seeded sample frame.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

3.3.2 Items with high rates of common responses in the seeded sample

Tables 3-5 and 3-6 show the distributions in respondent reports of the certification and license-specific items; the distributions are presented for those credentials that matched the seeded sample frame—considered to be true credentials and reported in this section—by credential type (certification or license). Table 3-5 presents general information on all (up to 5) certifications and licenses reported, whereas table 3-6 presents more specific information on the most recent certification or license only. Similar to the results reported for the national sample in chapter 2, a high percentage of certifications (95 percent) that matched the seeded sample frame were obtained for mainly work-related reasons (table 3-5). For the most recent matching certification or license reported, 86 percent of certifications and 68 percent of licenses were reported to be related to the respondent’s current job (table 3-6, item CN12). Of these, 60 percent of the certifications and 79 percent of the licenses were required for the respondent’s current job (item CN13).

Table 3-5. Percentage distribution of true certifications and licenses, by credential type and certification/license item: 2010–11

Certification/license item ¹	Percent of certifications	Percent of licenses
CN4. "Is that a certification, a license, or both?"		
Certification	79.2	8.1
License	9.1	67.6
Both	11.7	24.3
CN6. "Did you get this certification/license mainly for work-related reasons or mainly for personal interest?"		
Mainly work-related	94.8	‡
Mainly personal interest	5.2	‡
Don't know/Refused/Missing	#	‡

Rounds to zero.

‡ Data suppressed because reporting standards were not met and estimates are unreliable.

¹ Items asked for each of the first five certifications or licenses, or both.

NOTE: Figures represent unweighted estimates. True certifications and licenses are credentials reported by respondents that match certifications and licenses provided in the sample frames. Includes self-reported data only; data completed by proxy were excluded from the analysis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

Table 3-6. Percentage of most recent true certifications and licenses, by credential type and certification/license item: 2010–11

Certification/license item ¹	Percent of certifications	Percent of licenses
CN7/CN7A/CN7B/CN7C. Training and education taken to earn certification or license		
Took courses or training to earn certification/license	75.5	75.0
Took courses as part of associate's degree, bachelor's degree, or certificate program	18.4	10.3
Took course as part of some other degree program	57.1	65.7
Coursework was mainly self-study	28.6	23.5
Coursework was mainly instructor (nondegree)	28.6	41.2
Did not take courses or training to earn certification/license	24.5	25.0
CN10. "Did you have to do any of the following to get this certification/license..."		
Demonstrate skills while on the job?	71.4	62.3
Pass a test or exam?	100.0	79.7
Submit a portfolio of work?	55.1	17.4
Any of the above	100.0	89.9

See notes at end of table.

Table 3-6. Percentage of most recent true certifications and licenses, by credential type and certification/license item: 2010–11—Continued

Certification/license item ¹	Percent of certifications	Percent of licenses
CN11. "Did you have to take..."		
Continuing education classes or earn continuing education units to maintain the certification/license?	98.0	44.9
Periodic tests?	28.6	29.0
Any of the above	98.0	55.1
CN12. "Is this certification/license related to your current job?"		
Yes	85.7	68.1
CN13. "Is it required for current job?" (<i>Asked only if CN12=Yes</i>)		
Certification/license is related to current job	100.0	100.0
Certification/license is required for current job	59.5	78.7
Certification/license is not required for current job (includes missing)	40.5	21.3
CN14. Were you certified/licensed by your state, industry, a company, a professional association, or some other organization? (Mark all that apply.)		
State	‡	88.4
Professional association	71.4	11.6
Industry, company, or some other organization	24.5	10.1
Don't know/Refused/Missing	‡	#
CN15. "Can this [certification] [license] be..."		
Revoked or suspended for any reason	81.6	82.6
Used to get a job with any employer in that field	95.9	100.0

Rounds to zero.

‡ Data suppressed because reporting standards were not met and estimates are unreliable.

¹ Items asked of the most recent certifications or licenses, or both.

NOTE: Figures represent unweighted estimates. True certifications and licenses are credentials reported by respondents that match certifications and licenses provided in the seeded sample frames. Includes self-reported data only; data completed by proxy were excluded from the analysis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

Among the matching seeded sample credentials, 76 percent of the most recent certifications and 75 percent of the most recent licenses reported were earned after taking some type of courses and/or training (table 3-6, item CN7). In addition, 100 percent of the most recent matching certifications and 80 percent of the most recent licenses required respondents to pass a test or exam; 71 percent of certifications and 62 percent of licenses required a demonstration of skills while on the job; and 55 percent of certifications and 17 percent of licenses required the submission of a portfolio of work (item CN10). Nearly all certifications and licenses had at least one of these requirements (100 percent of certifications and 90 percent of licenses).

After the most recent matching certifications or licenses were obtained, 98 and 45 percent of these credentials, respectively, required respondents to take continuing education units to maintain them (table 3-6, item CN11). The majority of the certifications were issued by a professional association (71 percent), while most of the licenses were issued by a state (88 percent, item CN14). According to respondents, 82 percent of the certifications and 83 percent of the licenses could be revoked or suspended, and 96 percent of the certifications and 100 percent of the licenses could be used to get a job with any employer in the field (item CN15).

The factors associated with certificate matches also varied in expected ways. Community colleges were the most frequently cited source of the most recent matching certificate (>80 percent), followed by university or college and a trade school (not shown in tables). The median number of credit hours required for the most recent matching certificate was 27, although it should be noted that 36 percent of certificates required less than 17 credits to complete (not shown in tables).

3.3.3 Using credential commonalities to estimate overreporting in the national sample

The next analysis considers whether the credential commonalities that were identified using the seeded sample can be used to identify possible instances of overreporting of credentials in the national sample (“false positives”), by determining the extent to which a reported certification/license does not have the characteristics of a typical credential. Using this approach, uncommon responses (e.g., reporting a certification/license, but *not* reporting that the certification/license was work-related) are used to flag possible instances of overreporting.

Table 3-7 shows the percentage of matching seeded sample certifications/licenses that would be miscategorized as an overreport in the seeded sample—and possibly in the national sample—based on uncommon responses to various combinations of three related factors measured by items CN6 (credential for personal interest), CN10a/b (no test or demonstration of skills required), and CN15b (credential could not be used to get a job). The results of the seeded sample, which is limited in its coverage of credentials, suggests that all combinations perform fairly well at identifying true positives (while minimizing overreporting) and that any one of the factors could be used independently to eliminate

overreporting. It should be noted that because the sample was not representative of all types of credential holders, it is possible that some uncommon responses were not misreports. The national sample results provide some indication of how many certifications/licenses would be identified as overreports using the various criteria combinations. While comparison record data are not available for the national sample, those results imply that while there is some overlap between CN10a/b (no test or demonstration of skills required) and CN15b (credential could not be used to get a job), using CN6 (credential for person of interest) alone or with CN10a/b and/or CN15b would identify a slightly different group of possible certification/license overreports.²³

3.4 Proxy Responses to Certification/License and Certificate Items

To determine whether proxy respondents are a reliable source of data on certifications/licenses and certificates, proxy reported data were compared to self-reported data.²⁴ Information was collected from a proxy responder for about 1,000 households. The proxy responder was an adult in the household who answered the survey questions about another adult in the household. A self-responder answered questions about him or herself.

The study did not include a proxy report validation. The intended focus of the proxy study was to analyze the percentage of “don’t know” responses in the proxy-reported responses compared to self-reported responses. For most questions in the survey, a response of “don’t know” would be considered item-missing data. High rates of item-missing data can potentially lead to bias in the survey estimates. Therefore, first, the frequency of “don’t know” responses to each certification/license and certificate item was examined for proxy and self-reported data to provide an indication of the extent to which proxy respondents, in comparison to self-reporting respondents, are able to provide the requested information (tables 3-8 and 3-9). Second, the analysis looked at differences in estimates of valid responses when “don’t know” is excluded as an indication of potential bias in proxy reporting. Estimates that exclude “don’t know” are presented in table C-19 in appendix C.

²³ This analysis was not performed for the certificates items because of other measurement issues reported previously (e.g., a high underreporting rate on the main certificate item).

²⁴ See appendix B for more information about the proxy respondents included in the ATES Pilot Study.

The results of the analysis suggest that proxy respondents were a reasonable source of information on the main credential items and on some of the additional items, but not on others. Items that prompt respondents for detailed information—such as a credential name, an estimate of the year earned, or time to complete a credential—were particularly difficult for proxy respondents.

Table 3-7. Percentage of true certifications/licenses that would be miscategorized as overreports, by type of certification/license sample and criteria for identifying overreports: 2010–11

Criteria for identifying overreports	Percent reported by the seeded sample	Percent reported by the national sample
Based on one item asked of certification/license holders...		
Certification/license was pursued for personal interest (item CN6)	‡	6.4
Certification/license did not require a demonstration of skills while on the job or passing a test or exam (item CN10a/b)	5.1	4.5
Certification/license could not be used to get a job with any employer in that field (item CN15b)	#	4.2
Based on two items asked of certification/license holders...		
Certification/license was pursued for personal interest (item CN6) OR certification/license did not require a demonstration of skills while on the job or passing a test or exam (item 10a/b)	6.8	10.5
Certification/license was pursued for personal interest (item CN6) OR certification/license could not be used to get a job with any employer in that field (item CN15b)	‡	10.3
Certification/license did not require a demonstration of skills while on the job or passing a test or exam (item 10a/b) OR certification/license could not be used to get a job with any employer in that field (item CN15b)	5.1	7.6
Based on three items asked of certification/license holders...		
Certification/license was pursued for personal interest (item CN6) OR certification/license did not require a demonstration of skills while on the job or passing a test or exam (item 10a/b) OR certification/license could be used to get a job with any employer in that field (item 15b)	6.8	13.3

Rounds to zero.

‡ Data suppressed because reporting standards were not met and estimates are unreliable.

NOTE: Figures represent unweighted estimates. True certifications/licenses are credentials reported by respondents that match certifications/licenses provided in the sample frames. Data from all certification/license questions were available for 119 certifications/licenses that matched seeded sample frame credentials, and 1,229 certifications/licenses from the national sample. “Don’t know” responses and refusals were treated as neutral.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

Table 3-8. Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and selected survey items: 2010–11

Selected survey items	Reported by sampled adult (self-reported)	Reported by another household member on behalf of sampled adult (proxy-reported)	Percent difference ¹
CN1. "Now I'd like to ask you about professional certification and licensure. Do you/person have a professional certification or a state or industry license?"			
Yes	32.9	30.4	-2.5
No	66.6	62.9	-3.7
Don't know	#	6.6	†
CN1A. "Have more than one certification or license?"			
Yes	34.9	29.3	-5.6
No	64.7	62.2	-2.5
Don't know	#	8.5	†
CN1B. "How many certifications/licenses do you/person have?"			
1	64.8	62.2	-2.6
2	21.2	17.1	-4.1
3	7.9	5.5	-2.4
4	2.8	1.5	-1.3
5 or more	2.7	0.9	-1.8
Don't know	0.7	12.8	12.1
CN3AR1. "Name of most recent certification/license"			
Name reported	98.6	86.8	-11.8
Don't know	1.4	13.2	11.8
CN4R1. "Is that a certification, a license, or both?"			
Certification	41.3	32.2	-9.1
License	33.6	27.6	-6.0
Both	22.7	26.4	3.7
Don't know	2.4	13.8	11.4

See notes at end of table.

Table 3-8. Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and select survey items: 2010–11—Continued

Select survey items	Reported by sampled adult (self-reported)	Reported by another household member on behalf of sampled adult (proxy-reported)	Percent difference ¹
CN6R1. "Did you/person get this certification/license mainly for work-related reasons, or mainly for personal interest?"			
Mainly work related	91.6	91.0	-0.6
Mainly personal interest	7.9	7.5	-0.5
Don't know	#	1.6	†
CN7A. "Did you/person take the coursework or training for the certification/license as part of a college or university certificate or degree program?"			
Yes	55.3	55.8	0.5
No	43.7	36.6	-7.1
Don't know	1.0	7.5	6.5
CN7B. "Was that a certificate program, an associate's degree program, a bachelor's degree program, or something else?"			
Certificate	18.3	10.4	-7.9
Associate's	10.4	11.0	0.6
Bachelor's	33.8	40.5	6.7
Other	35.1	32.5	-2.6
Don't know	2.4	5.5	3.2
CN7C. "Was the coursework or training mainly self-study or mainly classes or courses with an instructor?"			
Mainly self-study	11.8	11.0	-0.8
Mainly with and instructor	87.6	85.6	-2.0
Don't know	0.6	3.4	2.9
CN8NR. "How many weeks or months was the course?"			
Answer reported	93.0	65.5	-27.5
Don't know	7.0	34.5	27.5
CN9NR. "How many hours with an instructor?"			
Answer reported	88.2	50.7	-37.4
Don't know	11.8	49.3	37.4

See notes at end of table.

Table 3-8. Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and select survey items: 2010–11—Continued

Select survey items	Reported by sampled adult (self-reported)	Reported by another household member on behalf of sampled adult (proxy-reported)	Percent difference ¹
"Did you/person have to do any of the following to get this certification/license..."			
CN10A. "- demonstrate skills while on-the-job?"			
Yes	65.7	65.5	-0.2
No	33.6	24.5	-9.2
Don't know	0.7	10.0	9.4
CN10B. "- pass a test or exam?"			
Yes	91.0	90.6	-0.4
No	‡	5.6	†
Don't know	#	3.8	†
CN10C. "...submit a portfolio of work?"			
Yes	31.4	26.6	-4.8
No	66.0	53.6	-12.4
Don't know	2.6	19.7	17.2
"Have to take..."			
CN11A. "- continuing education classes or earn continuing education units to maintain it?"			
Yes	63.6	58.0	-5.6
No	35.3	33.2	-2.1
Don't know	1.1	8.8	7.7
CN11B. "- periodic tests?"			
Yes	31.0	32.0	1.0
No	67.2	54.2	-13.0
Don't know	1.8	13.8	12.0
CN12. "Is this certification related to current job?"			
Yes	81.9	85.6	3.7
No	‡	14.4	†
Don't know	#	#	†
CN13. "Is it required for current job?"			
Yes	72.7	79.9	7.2
No	‡	16.9	†
Don't know	#	3.2	†

See notes at end of table.

Table 3-8. Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and select survey items: 2010–11—Continued

Select survey items	Reported by sampled adult (self-reported)	Reported by another household member on behalf of sampled adult (proxy-reported)	Percent difference ¹
CN14. “[certified] [licensed] by ...”			
State	67.8	68.9	1.1
Industry	2.6	3.8	1.2
Company	5.1	2.5	-2.6
Professional association	15.9	10.4	-5.5
Some other organization	13.8	9.1	-4.7
Don't know	1.6	9.7	8.2
“Can this certification/license be...”			
CN15A. “- revoked or suspended for any reason?”			
Yes	76.3	66.9	-9.4
No	14.8	13.2	-1.6
Don't know	8.9	19.9	10.9
CN15B. “- used if you/person wanted to get a job with any employer in that field?”			
Yes	92.9	91.8	-1.1
No	4.3	1.9	-2.5
Don't know	2.8	6.3	3.5
CN17. “Is the certification/license currently valid or has it expired?”			
Currently valid	70.7	66.1	-4.7
Expired	24.1	26.7	2.5
Don't know	5.1	7.3	2.2
CN18. “Do you/person plan to renew it?”			
Yes	11.2	‡	†
No	85.9	‡	†
Don't know	2.9	#	†

Rounds to zero.

† Not applicable.

‡ Data suppressed because reporting standards were not met and estimates are unreliable.

¹ Difference is the proxy percentage minus the self-reported percentage.

NOTE: Figures represent unweighted estimates. Only valid responses are reported in the table; respondents not asked questions because of legitimate skips due to earlier responses are excluded. Item level refusals are also excluded from this table because in all instances the sample sizes were too small to meet reporting standards.

Source: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

Table 3-9. Percentage distribution of responses to certificate survey items, by reporting method, difference between the reporting method, and select survey items: 2010–11

Select survey items	Reported by sampled adult (self-reported)	Reported by another household member on behalf of sampled adult (proxy-reported)	Percent difference ¹
CT1. "Some people decide to enroll at a college, university, community college, or trade school to earn a certificate rather than a degree. Have you/person ever earned this type of certificate?"			
Yes	14.2	9.1	-5.1
No	85.4	84.0	-1.4
Don't know	#	6.9	†
CT2. "Do you/person have more than one certificate?"			
Yes	29.7	21.6	-8.0
No	‡	71.1	†
Don't know	#	7.2	†
CT2A. "How many certificates do you/person have?"			
1	70.1	71.1	1.0
2	15.0	8.2	-6.7
3	7.2	5.2	-2.0
4 or more	6.2	3.1	-2.9
Don't know	1.6	12.4	10.8
CT2CR1. "Is most recent certificate part of the coursework or training you/person took for a certification or license?"			
Yes	72.5	85.0	12.5
No	24.8	15.0	†
Don't know	2.8	#	†
CT3R1. "What is the subject or major field of study?"			
Answer reported	98.8	90.7	-8.1
Don't know	1.2	9.3	8.1
CT4R1. "What is the name of the certificate?"			
Answer reported	82.1	52.6	-29.5
Don't know	17.9	47.4	29.5
CT6R1. "In what year did you/person complete it?"			
Answer reported	93.3	69.6	-23.8
Don't know	6.7	30.4	23.8
CT8. "What type of school or organization provided the certificate program?"			
Community college	20.8	22.9	2.1

See notes at end of table.

Table 3-9. Percentage distribution of responses to certificate survey items, by reporting method, difference between the reporting method, and select survey items: 2010–11—Continued

Select survey items	Reported by sampled adult (self-reported)	Reported by another household member on behalf of sampled adult (proxy-reported)	Percent difference ¹
CT8—Continued			
Another university or college	14.9	13.5	-1.4
Trade school	21.8	24.0	2.2
Business or company	5.3	4.2	-1.1
Professional association	2.9	‡	†
Trade union	1.6	‡	†
Nonprofit organization	0.8	#	†
Federal, state, local government	3.5	‡	†
Other	25.9	16.7	-9.3
Don't know	2.4	14.6	12.2
CT9. "How many credits or hours did it take?"			
Answer reported	45.4	30.9	-14.5
Don't know	54.6	69.1	14.5
CT10. "Did you/person take the education or training to earn continuing education units or continuing education units?"			
Yes	27.3	21.1	-6.3
No	64.8	58.9	-5.9
Don't know	7.9	20.0	12.1
CT11. "Was the training mainly self-study or mainly classes or courses with an instructor?"			
Mainly self-study	9.9	4.8	-5.1
Mainly with and instructor	87.8	88.7	0.9
Don't know	2.3	6.5	4.2
CT12. "Is this certificate related to your/person current job?"			
Yes	49.4	50.0	0.6
No	‡	‡	†
Don't know	‡	‡	†

See notes at end of table.

Table 3-9. Percentage distribution of responses to certificate survey items, by reporting method, difference between the reporting method, and select survey items: 2010–11—Continued

Select survey items	Reported by sampled adult (self-reported)	Reported by another household member on behalf of sampled adult (proxy-reported)	Percent difference ¹
CT13. "Is it required for current job?"			
Yes	26.2	47.1	20.9
No	73.8	‡	†
Don't know	#	‡	†

Rounds to zero.

† Not applicable.

‡ Data suppressed because reporting standards were not met and estimates are unreliable.

¹ Difference is the proxy percentage minus the self-reported percentage.

NOTE: Figures represent unweighted estimates. Only valid responses are reported in the table; respondents not asked questions because of legitimate skips due to earlier responses are excluded. Item level refusals are also excluded from this table because in all instances the sample sizes were too small to meet reporting standards.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

3.5 Use of Help Text Probes

The ATES Pilot Study questionnaire offered interviewers a standardized probe that could be used if respondents' asked for further explanation or expressed confusion about the main certification/license and certificate items. Interviewers recorded when they read the probe to the respondent. The estimate of the main certifications/licenses item when the certification/license probe was used was similar to the estimate when it was not used. This suggests that the probe confirmed respondents' interpretation of the meaning of the item. However, the use of the certificates probe approximately doubled reports of certificates.

The probe for certifications/licenses was: "A professional certification or license shows you are qualified to perform a specific job and includes things like Licensed Realtor, Certified Medical Assistant, Certified Construction Manager, a Project Management Professional or PMP certification, or an IT certification."

The probe for certifications/licenses was used for 17 percent of all respondents; 34 percent of respondents who received the probe reported they held a certification/license compared to 33 percent of respondents who did not receive the probe (unweighted estimates; see table C-16 in appendix C).

The probe for certificates was: “An educational certificate is typically earned by completing a program of study offered by a college or university, a community college, or a trade school, but it does not lead to an associate’s, bachelor’s, or graduate degree. Sometimes these are also called vocational diplomas, for example, a cosmetology or mechanics diploma, which differs from a high school diploma.”

The probe for certificates was used for 15 percent of all respondents; 27 percent of respondents who received the probe reported they had earned a certificate compared to 12 percent of respondents who did not receive the probe (unweighted estimates; see table C-17 in appendix C).

3.6 Summary of Findings on Measurement Error

This chapter presented findings on measurement error in the ATES Pilot Study, including an analysis of the underreporting of credentials, credential commonalities among true positives (defining characteristics of credentials), and proxy responses. The analysis of underreporting used data from the seeded certification, license, and certificate samples to calculate the percentage of known credentials that respondents did not report during the study. The overall underreporting rate for seeded certifications/licenses was found to be 15 percent, while the underreporting rate for seeded certificates was 50 percent. These rates did not vary by most subgroups; however, multivariate analyses suggested that the rates are being driven, in part, by labor force status and that employed respondents were more accurate in their reporting of seeded credentials than were other respondents. This finding may reflect credential “salience;” because most credentials are work-related, respondents who are working view their credentials as relevant and therefore report them. Respondents who are not working do not attach as much value to credentials they are not using, and therefore do not report them. However, this possibility was not addressed in the current study.

Credential commonalities were analyzed for the “true positive” credentials—that is, reported credentials that matched those in the seeded sample frames. This analysis found that the characteristics expected to be related to certifications/licenses and certificates did, in fact, covary with reports of those credentials in predictable ways. Similar to the results reported in chapter 2 for the national sample, a high percentage of certifications (95 percent) that matched the seeded sample frame were obtained mainly for work-related

reasons. In addition, 100 percent of the most recent matching certifications and 80 percent of the most recent matching licenses required respondents to pass a test or exam; 96 percent of these certifications and 100 percent of the licenses could be used to get a job with any employer in the field. These results suggest that these three characteristics (measured by items CN6, CN10b, and CN15b) can be considered “defining characteristics” of certifications and licenses, and can therefore be used to identify overreporting of these credentials.

The factors associated with certificate true positives also varied in expected ways. Community colleges were the most frequently cited source of the most recent matching certificate (81 percent), followed by another university or college (12 percent) and a trade school (8 percent). The median number of credit hours required for the most recent matching certificate was 27, although it should be noted that 36 percent of certificates required less than 17 credits to complete.

Next, this chapter presented the results of an analysis of proxy respondents’ responses. To determine whether proxy respondents are a reliable source of data on certifications/licenses and certificates, the frequency of proxy respondents’ responses to each certification/license and certificate item was compared to the frequency of self-reported responses. The results of the analysis suggested that proxy respondents were a reasonable source of information on the main credential items and on some of the related items—such as whether the credential was obtained for work-related reasons—but not a good source of information on some of the other items. Items that prompt respondents for detailed information—such as a credential name, an estimate of the year earned, or the time to complete a credential—were particularly difficult for proxy respondents.

Finally, an analysis of the use of help text probes showed that comparable numbers of respondents reported a certification or license after hearing the help text for the main certification item but that more respondents reported a certificate after hearing the help text for the main certificate item. This may suggest that the meaning of the main certification/license item is clear without the help text while the main certificate item requires additional clarification.

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4. Conclusions and Next Steps

The primary goal of the ATES Pilot Study was to identify a parsimonious set of survey items that can be used to generate valid population estimates of the prevalence of certifications/licenses and certificates in the U.S. adult population. To evaluate survey items, this report examined two topics:

1. Do the population estimates generated from the ATES Pilot Study measures seem reasonable?
2. To what extent do respondents misreport certifications, licenses, and certificates, and what are the characteristics of respondents and credentials associated with misreports? To what extent can proxy respondents provide valid answers to questions about certifications, licenses, and certificates?

This chapter first provides a summary of the answers to each of these questions. Next, the chapter presents GEMEnA recommendations—based on the ATES Pilot Study results and GEMEnA’s subsequent survey development work—for survey items appropriate for addressing researchers’ and policymakers’ concerns about industry-recognized certifications, occupational licenses and educational certificates. Finally, the chapter provides an overview of future work GEMEnA member agencies hope to pursue in order to refine and expand the data collected by the federal statistics system on the role of these credentials in signaling labor force readiness and on the economic returns to individual credential attainment.

4.1 Summary of Findings From the ATES Pilot Study

4.1.1 Do the ATES Pilot Study estimates seem reasonable?

As shown in chapter 2, the ATES estimates of the overall rates of certifications/licenses and certificates among U.S. adults were reasonable when compared to estimates from other surveys of similar populations, with differences of 3 to 4 percentage points. Based on similar samples of currently employed adults, the percentage of adults reporting a certification/license was 38 percent in ATES and 34 percent in the Princeton Data Improvement Initiative (PDII) sample. In addition, using similar samples of adults ages 23–64 who reported an income or reported working for earnings in the past year, the overall

rate of certificates was 15 percent based on ATEs and 18 percent based on the Survey of Income and Program Participation (SIPP). These differences were statistically significant; however, given that the surveys were administered in different years and had different item wording, a difference of 3 to 4 percentage points can be considered reasonable.

The results from credential-specific items were mixed. Most items examined showed the expected results and were therefore considered reasonable. For example, 90 percent of certifications/licenses were pursued for mainly work-related reasons, and 91 percent of the most recent work-related certifications/licenses required respondents to pass a test or exam. However, certain types of items were problematic. For example, it was difficult for respondents to report on the time spent in coursework or training pursuing a credential. The reported number of hours required to attain a certificate varied widely, and over half of certificate holders reported that they did not know the required hours.

In addition, 26 percent of certificates were reported as coming from “other” sources than educational institutions. An analysis of the write-in responses to this item showed that half (or 13 percent of “other” source responses) of the 26 percent actually were conferred from an educational institution, suggesting a problem with item response options or interviewer coding (not shown in tables). An analysis of “true positives” (certificates listed in the seeded sample and later reported during the survey) offers another possibility for the remaining 13 percent of cases. This analysis found that among confirmed certificates, no respondents reported obtaining their credential from “other” sources. The credentials held by seeded sample respondents were not representative of all types of certifications; however, this finding suggests that a subset of the national sample reports of “other” sources of certificates may actually be overreports (noncertificate holders).

4.1.2 To what extent do respondents misreport certifications, licenses, and certificates, and what are the characteristics of respondents and credentials associated with misreports? To what extent can proxy respondents provide valid answers to questions about certifications, licenses, and certificates?

Chapter 3 presented overall findings on measurement error in the ATEs Pilot Study. In the seeded sample certifications/licenses were underreported by 15 percent, while certificates were underreported by 50 percent. Multivariate analyses suggested that the underreporting was being driven, in part, by labor force status and that employed

respondents were more accurate in their reporting than were respondents who were not employed. As with all results based on the seeded sample (a nonrepresentative convenience sample), these results should be considered illustrative rather than definitive. The finding on certificates is particularly tentative; issues with one of the seeded sampling frames raised the possibility that the remaining certificate frames contained individuals who did not, in fact, hold the credential defined for this study as an educational certificate, in which case at least some of what appears to be underreporting may be accurate reporting.

To determine whether proxy respondents could reliably report on certifications/licenses and certificates, chapter 3 included a comparison of proxy and self-reported responses to the main certification/license and certificate items and to the credential-specific items. The results of the analysis suggested that proxy respondents were a reasonable source of information on the main credential items and on some of the related items—such as whether the credential was obtained for work-related reasons—but not a good source of information on some of the other items. Items that prompt respondents for detailed information—such as a credential name, the year a credential was earned, or the time to complete a credential—were particularly difficult for proxy respondents.

4.2 Recommendations for Items to Include in Other Surveys

The ATES Pilot Study was conducted as part of a multiyear, interagency effort to improve the measurement of nondegree credentials in federal household studies of adults. The findings in this report have implications for determining a parsimonious set of items that could be included in household surveys of adults—either in the near future for those items requiring no further development or after additional testing has been conducted to address the measurement issues identified in this report. It is important to note that the items developed for the pilot test were limited in their scope. They were designed specifically to enumerate adults with specific nondegree credentials, and their utility as survey measures outside the scope of this Pilot Study has not been tested. Therefore, although results of the pilot are used in this section to recommend items for researchers with various goals, the properties of the items may differ in other survey administration contexts.

With that caveat, the remainder of this chapter summarizes GEMEnA's recommendations for items to use in other household surveys trying to achieve the following research goals:

- Counting individuals with a certification or license;
- Distinguishing between certifications and licenses;
- Describing the field of certification or license; and
- Determining whether the certification or license is related to work.

The recommendations of GEMEnA are based on the results of the ATES Pilot Study, described in this report, as well as GEMEnA's subsequent survey development work conducted in preparation for a related study, the 2013 National Adult Training and Education Survey (NATES) Pilot Study.²⁵ This section ends with a discussion of the main measurement lessons from the ATES Pilot Study.

4.2.1 Counting individuals with a certification or license

To count the number of individuals in the United States who have a certification or license, GEMEnA recommends pilot item CN1:

Now I'd like to ask you about professional certification and licensure. Do you/person have a professional certification or a state or industry license?

This recommended item is referred to as the main certification/license item; it is an aggregate, broad measurement item that could be administered alone or in conjunction with credential-specific items to provide counts of adults with work-relevant credentials. To give analysts the option to reduce measurement error, survey sponsors could adopt one to three additional items that the seeded sample results suggest describe the characteristics of true certifications and licenses. These items include whether or not the certification/license is

²⁵ The subsequent survey development work consisted of 14 cognitive interviews conducted in preparation for the 2013 NATES Pilot Study, as well as additional focus groups of certificate holders—many of whom also held certifications and licenses—conducted to inform future potential administrations of the NATES. The 2013 NATES Pilot Study is a household survey of adults being conducted to test the feasibility of administering an education and training survey by mail rather than by telephone. More information on the NATES is available on the GEMEnA website, at <http://nces.ed.gov/surveys/gemena/strand4.asp>.

work-related (CN6); if the individual had to pass a test or exam (CN10b); and if the certification/license is transferable (CN15b). When considering these additional items, however, analysts should recognize their potential for eliminating true credentials if used as screening questions. Not all certifications and licenses require a test or exam, for example.

The main *certificate* item was found to have a high underreporting rate among the seeded sample respondents in the ATES Pilot Study and is not recommended for use at this time. The main certificate item and the series of items tested in the certificate questionnaire section require additional testing before they can be used. This ongoing development work is the focus of GEMEnA work described in more detail in Section 4.3.

4.2.2 Distinguishing between certifications and licenses

Researchers and policymakers have informed GEMEnA that it is important to distinguish between industry-recognized certification and occupational licenses. Because certifications are awarded by a credentialing body while licenses are issued by a government (often the state), these two types of credentials may be subject to different policy levers. Because certifications reflect a demonstration of skill while licenses convey a legal authority to work in an occupation, the questions researchers ask about these two types of credentials may differ. The ATES Pilot Study asked a follow-up question (item CN4) to the main certification/license question to see if the respondent considered a credential a certification, a license, or both.

However, the focus group, cognitive interview, and ATES Pilot Study findings, as well as GEMEnA's subsequent survey development work, confirmed that some respondents have difficulty distinguishing between certifications and licenses, particularly in occupations (including many healthcare fields) in which an industry-recognized certification demonstrating skill attainment is the main requirement for the state license. Therefore, GEMEnA recommends the inclusion of an item designed to help determine whether a respondent holds a certification or a license, rather than rely on respondents' direct report using item CN4.

One of the defining differences in the definitions of certifications and licenses in the ATES Pilot Study was the entity that awarded the credential. Certifications are awarded by industry or professional organizations while licenses are issued by government agencies.

The ATES pilot study asked the respondent what kind of organization awarded the credential with item CN14, which asked respondents whether they were certified/licensed by their state, industry, a company, a professional association, or some other organization.

However, based on the ATES findings and GEMEnA's subsequent survey development work, GEMEnA recommends the following question be used instead of ATES item CN14 to distinguish between certifications and licenses:

Who issued this certification or license? (Mark one.)

- Federal, state, or local government*
- Professional or trade association (for example, Pediatric Nursing Certification Board, National Exercise and Sports Trainers Association, CompTIA)*
- Business or company (for example, Microsoft, 3M Company, Xerox)*
- Other group or organization (specify)*



Analysts could code a response to the first option as a license and responses to the second and third options as certifications. The other (specify) category could be post-coded (as possible) and used to assess the inclusivity of the response options, particularly in a pilot study context. This question will be fielded in the 2013 NATES Pilot Study, described in more detail in Section 4.3. Because certification requirements for licensure vary by occupation and state, surveys focusing on the distinction between these types of credentials may want to include additional items to add more specificity.

4.2.3 Describing the field of certification or license

GEMEnA recognizes that information about the field, industry, or occupation of a credential is critical to answering important questions about the relationship between employer needs and the supply of human capital. The dynamic of credential supply and demand takes place within specific occupational fields. National household studies measuring certifications and licenses should consider including questions to identify the field of the credential. The ATES Pilot Study asked respondents for verbatim responses to a

question about the name of the certification or license (CN3A) and the kind of work it was for (CN3). Based on the ATES findings and GEMEnA's subsequent survey development work, GEMEnA recommends the following questions be used instead of ATES items CN3A and CN3:

What is the name of your [TEXT1][MOST RECENT] certification or license?

Please do not use abbreviations.

Write in:

What kind of work is this certification or license for? (For example: teaching, vocational nursing, computer network administration, auditing, truck driving)

Surveys with limited space can limit these questions to respondents' most recent certification or license, while surveys with more space can collect information on multiple credentials of this type. The responses to these questions can be collected verbatim and used individually, or used together to develop a set of occupation categories after data collection. The second question gives coders additional information to clarify the response.

4.2.4 Determining if the certification or license is related to work

GEMEnA has heard from the Council of Economic Advisors, prominent researchers, and other experts about the importance of specifying whether a credential is related to the respondent's current job. The question used in the ATES Pilot Study (item CN6) focused on whether or not the credential was primarily "work-related" and, was found to be highly associated with true certifications and licenses in the seeded sample. However, based on GEMEnA's preference to focus the item on the respondent's current job, the following item was tested in cognitive interviews and included in the 2013 NATES Pilot Study:

Is this certification or license for the job you have now? If you are currently not employed, please answer "no." (Mark one.)

- No*
- Yes, and it is required for my job*
- Yes, but it is NOT required for my job*

GEMEnA recommends this adaptation of the ATES question to clarify the relationship between the credential and the current job and to distinguish between credentials required for the job and those related to, but not required for, the job. Household surveys conducted by telephone or computer-assisted personal interviews may need to adapt this item for oral administration to make clear to the respondent the need to distinguish between credentials required and not required for the job.

4.2.5 Measurement implications for certifications/licenses

The results of the pilot have several implications for measurement. First, the items in the ATES were tested in a short survey focused on certifications, licenses, and certificates. It is possible that the items may perform differently in different survey contexts, particularly in surveys where other topics are covered in more depth. In the ATES Pilot Study context, additional measurement implications are discussed below.

Cognitive testing for the ATES showed an order effect when asking about certifications and certificates. If certification holders were asked about certificates before certifications, they would report a certification as a certificate. Also, cognitive testing confirmed that respondents do not think of certifications and licenses as educational attainment, leading the ATES to ask about them in separate sections. Researchers should carefully consider the placement of the items within a survey.

As mentioned previously, the salience of the credential (as characterized by time and relevance) affects the ability to collect even basic information such as date earned and credential name. It also affects which credentials are reported. If respondents are reporting their most salient credentials, results may be biased toward the credentials held and used by those currently employed.

The ATES collected limited detailed information about each specific credential and focused the majority of detailed items on the most recent credential. While it is possible to ask many questions about each certification or license, it is important to consider that

(1) few respondents reported more than 2 credentials; (2) it takes additional time for the respondent to report detail about multiple certifications; and (3) the reporting error associated with older and less salient credentials could be high. Additionally, proxy reporting exacerbates problems with items asking for detailed information.

When considering sampling options, it is important to note that respondents who were not employed had greater reporting error compared to employed respondents.

4.3 Next Steps on Education, Training, and Credentials for Work

GEMEnA has defined a multiyear program of rigorous item development to improve how federal statistical agencies gather information about education, training, and credentials for work. Building from the initial work described in this report, GEMEnA's current data development program is summarized in the four strands of work described in detail below.

4.3.1 Strand 1: Certifications and Licenses

GEMEnA's first strand of work is to *develop and deploy a core set of survey items related to the prevalence and key characteristics of industry-recognized certifications and occupational licenses*. The ATES pilot test described in this report was the first step in this strand of work. Moving forward, GEMEnA member agencies are looking within their own agencies for opportunities to incorporate the ATES-tested items into ongoing or planned studies of out-of-school youth and adults. In addition, they are seeking ways to test these items further to explore their performance in different survey contexts. These plans are described below.

NCES. NCES is incorporating a set of questions on certifications/licenses into its upcoming Baccalaureate and Beyond (B&B) longitudinal study of 2008 Bachelor's degree recipients. Ongoing secondary longitudinal studies (the High School Longitudinal Study of 2009 freshmen and the Education Longitudinal Study of 2002 sophomores) will incorporate questions on certification for out-of-school youth and young adults.

Census. The Census Bureau has added a topical module on credential attainment based on the ATES Pilot Study to the 13th wave of the 2008 panel of the Survey of Income and Program Participation (SIPP). The module was fielded in the fall of 2012 for release in

fall of 2013. These data will provide the first official statistics from the federal government on the prevalence of industry-recognized certifications and occupational licenses. The module is available at http://www.reginfo.gov/public/do/PRAViewIC?ref_nbr=201202-0607-002&icID=182115. In addition, Census has identified an opportunity for further testing of certification/license items in the field test of the redesigned SIPP. The inclusion of these items in a different survey context will test the robustness of the items across platforms.

Other GEMEnA member agencies, including BLS and NSF, are considering placement of certification/license items in their household studies related to education and training for work. GEMEnA will continue to identify opportunities to recommend the inclusion of validated survey items in appropriate federal household data collections.

While survey data from US adults can tell us a great deal about the prevalence and key characteristics of industry-recognized certifications, administrative data from organizations that issue certifications or those that accredit the certification process could provide a richer information. During the ATES Pilot Study, GEMEnA worked with the two major US accrediting agencies, the American National Standards Institute (ANSI) and the Institute for Credentialing Excellence (ICE), to identify certifying bodies willing to share data for the seeded sample.²⁶ ANSI and ICE cannot be used, however, as a source of administrative data on certifications; in addition to legal issues concerning confidentiality, these organizations do not include the universe of certification providers. It is also infeasible at this time to collect administrative data from individual credentialing bodies. Nonetheless, the movement towards accreditation and standards could pave the way for future access to these records, yielding significant new information for research and policy related to certifications.

4.3.2 Strand 2: Certificates

GEMEnA's second strand of work is to develop and deploy of a core set of survey items related to the prevalence and key characteristics of subbaccalaureate educational certificates. Due to the inconclusive results of the ATES Pilot Study data on certificates, GEMEnA has recommended additional developmental work on survey items related to

²⁶ ANSI (<http://www.ansi.org>) has developed a process to accredit credentialing systems that lead to "better educated and qualified workers." ICE (www.credentialingexcellence.org) develops standards for both certification and certificate programs and serves as a clearinghouse for information on trends in certification.

certificate attainment. In addition, NCES is responding to increased interest in subbaccalaureate educational certificates by improving the ability of its current data collections to measure these credentials. The three projects described below will improve and expand the ability of NCES studies to answer important policy questions about the prevalence and economic impact of certificate education.

1. Developing a Valid Survey Item to Enumerate Certificates in Federal Surveys

A new pilot study is being designed to improve on the measurement of subbaccalaureate certificates that was attempted in ATES. The work will include a sharper focus on measures specific to certificates and will feature a larger and cleaner sample of known certificate holders. The study will begin with focus groups to determine how certificate holders talk and think about their credential. Next, questionnaire items will be developed and tested in cognitive interviews. Finally, the new questions will be tested in a pilot study using a larger sample of known certificate holders that is more representative both geographically and by field of study than was the seeded sample in the ATES pilot study. Paired with a new national sample, this new seeded sample will provide a more rigorous test of the validity of the new certificate items. This work is expected to take approximately 18 months.

2. Improving Institutional Data Collection on Certificates

NCES currently collects annual counts of the number of certificates awarded, through its Integrated Postsecondary Education Data System (IPEDS). IPEDS gathers information from every college, university, and technical and vocational institution that participates in federal student aid programs—over 7,000 postsecondary institutions in all. The IPEDS data collection is guided by the National Postsecondary Education Cooperative (NPEC), which oversees IPEDS research and development.

NPEC has recently created a working group to look at how institutions report certificate completions to IPEDS in order to improve the quality, comparability, and usefulness of these data. To support this work, an NPEC working group recently conducted a study of certificate reporting practices. The working group began meeting in October 2011; a final report was released in September 2012 (Sykes 2012).

GEMEnA supports the recommendations of the working group to 1) clarify IPEDS instructions and definitions for certificates; 2) convene a Technical Review Panel to explore the feasibility of modifying and expanding IPEDS certificate categories; and 3) collect noncredit certificate data. Improvements in institutional reporting of certificate awards and the addition of data on noncredit certificates would greatly enhance the accuracy and utility of administrative data on subbaccalaureate educational credentials.

3. Oversampling Certificate Holders in BPS:12

Since 1996, NCES has conducted a periodic longitudinal study of students who have recently matriculated into postsecondary education, the Beginning Postsecondary Students Study (BPS). The BPS is conducted about every eight years, with the most recent study initiated in 2012. BPS is the largest federal survey that regularly examines the economic outcomes of students in subbaccalaureate programs. However, due to sample size limitations, previous rounds of BPS have lacked the capacity to conduct in-depth analyses of the economic returns to educational certificates in specific fields of study. Starting in 2012, BPS features a larger sample size for beginning students who enter postsecondary education with the goal of attaining an educational certificate. This oversample will allow finer-grained analysis of the characteristics of students in such programs, their persistence and attainment, and their occupational and economic outcomes.

4.3.3 Strand 3: Enrollment and Participation

GEMEnA's third strand of work is to consider new and revised measures of participation in education and training designed to prepare out-of-school youth and adults for work. Existing federal data collections with survey items on enrollment and participation will benefit from a freshening of questionnaire items to better reflect current trends in delivery (including the expansion of on-line learning) and expanded policy interest related to federal and state investments in education and training for work. To begin this strand, GEMEnA has commissioned a background paper describing types of education and training for work that occur outside of traditional credit-bearing postsecondary education. The paper will focus on two high-frequency types of work-related education and training: noncredit coursework and formal on-the-job training. In consultation with experts, GEMEnA will then identify key research and policy questions and focus its development efforts—expected to parallel those for certifications/licenses and certificates—on high priority data needs. Along

with the first two strands of work, this strand will support the development of a new federal household survey focusing on education, training, and credentials (strand 4).

4.3.4 Strand 4: Household Study on Education, Training, and Credentials for Work

GEMEnA's fourth strand of work is to *support NCES in the development of a new household study on education, training, and credentials for work*. This strand of work is proceeding in two stages. First, NCES will evaluate the feasibility of using a mail-out methodology to conduct a household survey on education, training, and credentials for work. Second, assuming a positive outcome on the first step, NCES will proceed with planning for a full-scale household data collection on US adults ages 16 to 65.

Due to growing problems reaching survey respondents by telephone, NCES has recently shifted its household data collection program from a telephone-based collection to a mail-based collection. The mail-based methodology has been found to yield acceptable response rates for surveys asking about children's education, but is untested for surveys asking adults about their own education and training. Thus, the first stage in this strand is to determine whether this methodology is feasible for such a survey. For this purpose, GEMEnA has developed the National Adult Training and Education Survey (NATES) Pilot Study survey instrument. The NATES Pilot Study will collect in-depth information on credentials related to work, including formal educational attainment, industry-recognized certifications, occupational licenses, and formal apprenticeships—based in part on the developmental work in strands 1 and 2. It also collects detailed information about the education and training that adults participate in to acquire the skills and knowledge needed for jobs based on the developmental work in strand 3. Finally, NATES Pilot Study includes a set of employment and demographic items derived in part from strands 1–3 work and in part from existing Census Bureau data collections. Because the question-development work in strands 1–3 has not been completed, the Pilot Study version of the NATES instrument includes many test and placeholder questions, but the overall instrument is designed to approximate the structure, content, and length desired for a final household survey on adults' education, training, and credentials for work.

This NATES instrument will be used in a pilot test of the mailout methodology to be conducted in the winter and spring of 2013. The 2013 NATES Pilot Study will examine

response rates at both the unit and item level and includes a nonresponse bias study based on in-person interviews with a sample of nonrespondents. The Census Bureau is conducting the data collection on behalf of NCES, collecting information from adults ages 16 to 65 in approximately 10,000 households.

If response rates on the NATES Pilot Test are sufficiently high or if nonresponse bias is deemed to be sufficiently negligible, and pending availability of funds, NCES could field a production NATES in the near future. The production version of NATES would be developed after completion of all work in strands 1–3, so that it could incorporate the lessons learned from all of GEMEnA’s work; it would provide the synthesis and culmination of these work strands, and would initiate a new federal data collection to meet pressing research and policy data needs.

4.4 Ensuring Relevance to Policy and Research

GEMEnA began its work with a clear mandate from the fall 2009 Brookings Institute meeting: develop new federal survey measures of industry-recognized certifications and subbaccalaureate educational certificates. As the member agencies now seek to deploy developed items to relevant federal surveys, continue developmental work, and begin a new focus on participation in education and training for work, GEMEnA wants to ensure the relevance of its efforts for answering critical policy and research questions. To this end, GEMEnA has established an Expert Panel to offer guidance and support on the four strands of work described in section 4.3. The Expert Panel is comprised of senior researchers and policymakers who use data to understand the role of education and training for work and meets annually beginning in the fall of 2012. The Expert Panel’s initial membership is listed below.

GEMEnA Expert Panel Members

- Thomas Bailey
- Anthony Carnevale
- Evelyn Ganzglass
- Morris Kleiner
- Christopher Mullin
- James Parker
- Kenneth Poole
- Andrew Reamer
- Jesse Rothstein
- Jim Van Erden
- Holly Zanville

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**Appendix A:
Details on the Interagency Working
Group on Expanded Measures of
Enrollment and Attainment (GEMEnA)**

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A. Details on the Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA)

Beginning in December 2009, the federal Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA) convened monthly to develop new survey measures of certifications, licenses, and certificates. A timeline for the activities of the GEMEnA is provided in table A-1. The GEMEnA represents a broad range of federal agencies committed to improving the measurement of work-related credentials. Current members of GEMEnA, as well as past members from each participating agency include:

Census Bureau

Bob Kominski
Stephanie Ewert

Bureau of Labor Statistics

Harley Frazis
Dori Allard
Tom Nardone (past)

Office of Management and Budget

Shelly Martinez
Rachel Zinn

Department of Education, Office of the Undersecretary

Jon O'Bergh

Council of Economic Advisors

Chinhui Juhn
Elizabeth Ananat (past)
Sarena Goodman (past)
Jesse Rothstein (past)
Chuck Pierret(past)

National Science Foundation

Dan Foley

John Finamore

National Center for Education Statistics

Sharon Boivin

Sarah Crissey

Lisa Hudson

Kashka Kubzdela

Isaiah O'Rear

Matthew Soldner

Andrew Zukerberg

Tom Weko (past)

Table A-1. Timeline for GEMEnA activities: 2009–11

Activities	Date
Reviewed research and data available on credentials, and developed a bank of existing survey items	October 2009
Developed focus group protocols and conducted certificates and certifications/licenses focus groups	November to December 2009
Discussed focus group results and developed plans for cognitive interviews	January to March 2010
Began planning for pilot study; discussed pilot study parameters, mode, and key measures	April to May 2010
Developed draft pilot study questionnaire items	April 2010
Conducted cognitive interviews	May 2010
Discussed results of cognitive interviews and final pilot study questionnaire	June 2010
Conducted pilot study	September 2010 to January 2011
Discussed pilot study analysis plans	September 2010
Discussed initial pilot study results	February and March 2011
Reviewed preliminary analysis tables	May to June 2011
Discussed item inclusion in other surveys and future work	August 2011
Reviewed final report and provided recommendations	September to November 2011

SOURCE: GEMEnA Internal Records, 2009–11.

**Appendix B:
ATES Pilot Study Design and
Methodology**

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B. ATES Pilot Study Design and Methodology

B.1 Introduction

The Adult Training and Education Survey (ATES) Pilot Study is being used to evaluate the quality of data received using newly developed certification/license and certificate measures. It was not a goal of the Pilot Study to generate national estimates for publication. Rather, information gathered from it will ultimately be used to make recommendations for a core set of items that can be used by the National Center for Education Statistics (NCES) and other federal statistical agencies to measure the prevalence of professional certifications/licenses and education certificates in the United States.

In the process of designing the ATES Pilot Study, the primary objective was a design that favored timeliness and sample yield over high response rates. In an effort to boost yield while limiting additional costs, a few methodological experiments were embedded in the design. These experiments also allowed for an assessment of the effect of various treatments on response rates. This appendix serves as documentation of the study's design and operations and provides the results of the methodological experiments. Section B.2 contains an overview of the study and sample design. The data collection methods are detailed in section B.3. Item response rates and imputation, and unit response rates and weighting, are discussed in sections B.4 and B.5, respectively. The methodological analysis is presented in section B.6. Section B.7 contains a discussion of the study results and presents considerations that might be relevant to the design of future studies.

B.2 Study and Sample Design

The ATES Pilot Study included two samples: an address-based sample (ABS) of 18,750 addresses that represents the 50 states and the District of Columbia and a convenience sample (or "seeded sample") of 1,250 individuals with known credentials.¹ The purpose of the national sample was to provide a representative sample for testing ATES Pilot Study survey items that examine education issues that have not been

¹ As is discussed in section C.2.1.2, a total of 800 additional cases corresponding to individuals with known credentials were loaded for telephone interview attempts.

adequately studied through other data collection efforts. The seeded sample was designed to evaluate the rate of underreporting on reports of certificates, certifications, and licenses and to examine the measurement properties of items related to the classification of these credentials.

Households were sampled as described below, and a screener² survey was administered by mail to an adult household respondent. Following completion of the screener by mail, one eligible adult per household was selected, and an extended survey was conducted by telephone with the sampled adult.

In order to minimize household response burden, only one adult per household was sampled for the extended survey. In households where there was more than one eligible adult, within-household sampling procedures were implemented to select only one of them. However, if there was more than one eligible adult in a household, the sampled adult was also designated to serve as a proxy for another adult in the household in order to evaluate potential measurement error in proxy responses; after completing the extended interview about himself or herself, the sampled adult was asked to provide information about the proxy subject's participation in certificate/certification/license programs. (See section B.2.3 below for further details on proxy response.)

This section describes the sample design and selection for the ATES Pilot Study. Section B.2.1 discusses the sampling of households for the study, followed by a discussion of the procedural details for selecting both households and adults within households for the nationally representative and seeded samples (sections B.2.1.1 and B.2.1.2, respectively). Section B.2.2 examines the sample size requirements needed for study purposes. Section B.2.3 discusses proxy response, and section B.2.4 details the expected and actual sample yields.

B.2.1 Sample Selection

As noted above, the ATES Pilot Study consisted of two samples: a nationally representative sample of addresses and a seeded sample of individuals with known

² While the term "screener" is used here (to adhere to conventional terminology), it is a bit of a misnomer in this context, in that it is actually an enumeration instrument and not a screening device.

credentials. The selection of the nationally representative sample is discussed in section B.2.1.1, and the procedures used to identify seeded sample participants are described in section B.2.2.2.

B.2.1.1 Nationally representative sample. The nationally representative sample of 18,750 addresses was drawn in a single stage from a file of residential addresses maintained by a vendor, based on the U.S. Postal Service (USPS) Computerized Delivery Sequence (CDS) file. To accommodate the use of computer-assisted telephone interviewing (CATI) to administer the extended survey, the sample of addresses was reverse-matched to landline telephone directories; a telephone number was obtained through the reverse match for 63 percent of the sampled addresses.

For this nationally representative portion of the ATES sample, in each household that had completed a screener, one adult was randomly selected from all eligible adults. To be eligible, an adult had to be age 18 or older. As completed screeners were returned, they were scanned for data capture. The sampling was done using a preloaded random number that was attached to each address. That random number—a pseudo-random draw from a uniform (0,1) distribution—was multiplied by the count of eligible adults to determine which adult to select.

Sampling one adult per household had the advantage of minimizing intrahousehold burden. Additionally, with this approach, in contrast to an approach that selects more than one adult in some households, any intrahousehold correlations—either in certificate credentials or certification/license participation (or in measurement error in the responses to the certificate/certification/license questions)—do not adversely affect the precision of estimates.

B.2.1.2 Seeded sample. A convenience sample of approximately 1,250 respondents with known credentials was targeted in order to evaluate the rate of underreporting on reports of certificates, certifications, and licenses and to examine the measurement properties of items related to the classification of these credentials. This seeded sample of 1,250 respondents was expected to be sufficient to detect an underreporting rate (i.e., the proportion of persons with certificates/certifications/licenses who fail to report the certificates/certifications/licenses) as small as 2 percent.

The sampling frame for the seeded sample was developed from 27 files of certification and license holders from one state and five national accrediting bodies. It is not possible to identify the specific credentialing bodies for disclosure reasons. These files included the credential holder's name and address and the name/subject of the credential. A telephone number was available from these source files for 74 percent of the seeded sample cases; this was used to accommodate the use of the telephone to administer the extended survey.

The original set of files of certificate and certification/license holders contained a total of 33,495 records. After cleaning (to eliminate records with incomplete or invalid address information) and eliminating duplicate files (i.e., those with the same street address), a total of 23,101 records remained. Target sample sizes from each file were established with the goal of obtaining sufficient numbers of certificate and certification/license holders from a variety of fields. The seeded sample contains state license holders in alcohol- and drug-related fields; electrical, pharmaceutical, plumbing, real estate, and energy-related fields; certifications/licenses in lab technology, radiation, and other health-related fields; and community college certificates covering a variety of programs.

In order to facilitate data collection procedures for the seeded sample that were comparable to those for the nationally representative sample, small modifications were made that aimed to ensure that the person in the seeded sample source file was the "sampled adult." (For cases in which none of the enumerated household members appeared to match the name of the person listed in the seeded sample file, one adult was randomly selected from the set of eligible adults in the household and the uncertainty in the match was flagged in the database.)

Due to lower-than-expected yield for the seeded sample, on January 12, 2011, a supplemental seeded sample (800 cases) was loaded into the CATI system in an effort to increase the number of sampled adult interviews completed with seeded sample cases. Unlike the original seeded sample, these supplemental cases were not mailed screeners. Instead, the adult listed in the seeded sample source file was loaded as the "sampled adult," and the telephone number available from the seeded sample source file was used to contact the sampled adult for the extended survey.

B.2.2 Sample size requirements

The key objective of the ATES Pilot Study was to assess the measurement properties of a new series of items about certifications/licenses and certificates. Thus, during the design of the ATES Pilot Study, it was determined that the sample requirements should enable the generation of cross-sectional estimates of certification/license and certificate holders in the population (although there were no plans to publish these estimates), allowing for analysis of a series of 10 to 15 items for some key subgroup analysis.

Table B-1 shows the expected numbers of completed extended surveys for subgroups defined by credential status, educational attainment, age, and race/ethnicity. MacCallum et al. (1999) cite various recommendations in the literature for minimum sample sizes. Although these sample size recommendations vary, there appears to be a general consensus among the source papers cited that a sample size of 500 is generally adequate, and some authors cited indicate that sample sizes in the range of 100 to 250 may be sufficient. While the sample sizes shown in table B-1 are not sufficient to support analyses by race/ethnicity for adults with educational attainment of Associate's degree, some college, or other postsecondary less than B.A., they are generally large enough to support analyses by credential status, by age, and for the educational attainment subgroups shown in the table. Additionally, analyses of some subgroups of adults with less than a bachelor's degree are supported. Thus, the expected sample sizes shown in table B-1 were deemed sufficient for the desired analyses.

B.2.3 Proxy response

It is often difficult in household surveys to contact and interview a specific adult householder. For this reason, a response from another adult in the household is sometimes used as a proxy for the specific sampled adult or for all adults in the household. There are concerns about the ability of proxy responders to report accurately about certifications/licenses and certificates. The ATES cognitive research suggested that spouses and partners feel confident in reporting some basic information by proxy (such as whether or not their spouse or partner has a certification/license and the occupational field), but not detailed information (such as credit hours or provider).

The ATES Pilot Study was used to empirically evaluate the feasibility of using a proxy responder to report on certifications/licenses and certificates. Conducting proxy interviews about adults facilitates the analysis of item-by-item differences between item response rates for self-reports versus for proxy reports, as well as the percentage of “don’t know” responses.

Table B-1. Estimated percentage of adult population and expected number of completed ATES sampled adult surveys, by key subgroup characteristics: 2005

Key subgroup characteristics	Estimated percentage of adult population	Expected number of completed ATES surveys
Total	100	4,505
Credential status		
Has certificate, certification, or license ¹	24	1,092
Educational attainment		
High school diploma or less	66	2,995
Associate’s degree, some college, other less than B.A.	6	277
Age		
18 to 30 years old	23	1,023
31 to 45 years old	29	1,328
46 years old and over	48	2,155
Select characteristics by educational attainment		
Less than bachelor’s degree		
Has certificate, certification, or license ¹	14	621
Hispanic	11	481
Black, Asian, American Indian, or Pacific Islander	14	629
White	48	2,162
Associate’s degree, some college, other less than B.A.		
Has certificate, certification, or license ¹	2	105
Hispanic	1	32
Black, Asian, American Indian, or Pacific Islander	1	58
White	4	188

¹ The percentage of adults who reported that their occupation has legal or professional requirements for continuing education or training.

NOTE: Hispanic includes Latino, Black includes African American, American Indian includes Alaska Native, and Pacific Islander includes Native Hawaiian. Race categories exclude persons of Hispanic ethnicity.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education for Work-Related Reasons Survey of the National Household Education Surveys Program (NHES), 2005.

Proxy respondents were identified using a two-pronged approach:

- After the sampled adult completed the interview about himself or herself, he/she was asked to complete an interview about a preidentified proxy subject (who is another adult household member).
- Once the calling protocol was fulfilled, if personal contact was made on the final attempt but an interview could not be completed with the sampled adult, an eligible proxy respondent (another adult household member) was asked to complete an interview about the sampled adult.

Both the sampled adult and the proxy subject were identified during sample selection based on the adult household members enumerated in the screener; all eligible proxy respondents were also identified based on the enumeration information provided in the screener. The 800 supplemental seeded sample cases that were loaded into the CATI system late in the data collection period were not eligible for proxy interviews. Because a proxy response could potentially have a negative impact on data accuracy, the proxy interviews can be distinguished in the data file from the interviews conducted with the sampled adult. Table B-2 shows the numbers of completed proxy interviews required to support the detection of 2 through 10 percent point differences in item response rates; various levels of item response rates are shown in this table.

B.2.4 Expected and actual sample yield

Screeners were sent to each of the 20,000 sampled addresses (excluding the 800 supplemental seeded sample cases identified late in the data collection period). An expected screener unit response rate of 55 percent was assumed, which would have yielded 9,900 completed screeners. However, a total of only 9,113 completed screeners were returned, 8 of which did not have an eligible adult.

Table B-2. Number of completed proxy interviews required to support detection of various levels of differences in item response rates, by item response rate for self reports and percent difference in item response rates: 2010–11

Item response rate for self reports	Percentage point difference in item response rates (self report vs. proxy report)	Minimum number of completed proxy interviews required to detect difference in item response rates	
		Based on a one-tailed test	Based on a two-tailed test
80 percent	2 percent	1,528	2,501
80 percent	3 percent	596	891
80 percent	4 percent	328	479
80 percent	5 percent	211	305
80 percent	6 percent	149	213
80 percent	7 percent	111	159
80 percent	8 percent	87	124
80 percent	9 percent	70	99
80 percent	10 percent	57	82
85 percent	2 percent	1,181	1,861
85 percent	3 percent	485	717
85 percent	4 percent	273	396
85 percent	5 percent	179	257
85 percent	6 percent	127	183
85 percent	7 percent	96	138
85 percent	8 percent	76	108
85 percent	9 percent	62	88
85 percent	10 percent	51	73
90 percent	2 percent	826	1,255
90 percent	3 percent	362	528
90 percent	4 percent	211	304
90 percent	5 percent	141	202
90 percent	6 percent	103	147
90 percent	7 percent	79	112
90 percent	8 percent	63	90
90 percent	9 percent	52	74
90 percent	10 percent	44	62
95 percent	2 percent	474	696
95 percent	3 percent	229	329
95 percent	4 percent	141	202
95 percent	5 percent	99	141
95 percent	6 percent	74	106
95 percent	7 percent	59	83
95 percent	8 percent	48	68
95 percent	9 percent	40	57
95 percent	10 percent	35	49

NOTE: Differences are expected to be detectable at the level of $\alpha = .05$.

It was expected that a telephone number would be available (either from the vendor match or from a response to the telephone number question in the screener) for 70 percent of households with a completed screener, or about 6,930 households. As a result, the extended survey was expected to be attempted with about 6,930 adults. In actuality, a telephone number was available (either from the vendor match or from the screener) for 96 percent of sampled adults (8,774 sampled adults). Late in the data collection period, an additional 800 records with phone numbers were selected from the seeded sample sampling frame to increase the sample yield, for a total of 9,574 phone numbers fielded for the extended survey. (These additional 800 seeded sample cases were not mailed a screener; for these cases, data collection began with the extended interview.)

For the extended survey, a unit response rate of 65 percent was assumed, which would have yielded about 4,505 completed interviews. However, only 4,073 respondents completed extended surveys; 3,730 were from the national sample and 343 were from the seeded sample.

Table B-3 summarizes the number of screeners and extended surveys expected to be and actually completed in the ATES Pilot Study.

Table B-3. Number of household screeners and extended surveys fielded in the ATES Pilot Study, by count of expected and actual number completed and survey type: 2010–11

Survey type	Number fielded	Number completed	
		Expected	Actual
Household screeners	20,000	9,900	9,113
Extended surveys	9,574	4,505	4,073
Sampled adult interviews completed with sampled adult	—	—	2,823
Sampled adult interviews completed with eligible proxy	—	—	1,142
Proxy subject interviews completed	—	—	108

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

B.3 Data Collection Methods

The ATES Pilot Study was conducted using two complementary survey systems. Hard copy screener questionnaires were designed and captured using TeleForm, software for document scanning and imaging. The sampled adult extended interviews were conducted using a CATI system. For the screener, the following features were important for the ATES Pilot Study:

- **Forms design:** Questionnaires were created using the Teleform Designer module. Form templates were used to classify each data entry field, and completed hard copy forms were processed by TeleForm to capture the responses.
- **Receipt control:** The case management system provided for automatic receipt control in a flexible manner that was used to produce status reports that allowed ongoing monitoring of the survey's progress.
- **Image preprocessing:** TeleForm applied image preprocessing to the forms to correct any skewing that may have occurred during scanning or faxing and to remove other unwanted marks from the forms.
- **Data capture:** TeleForm read the form image files and extracted data according to rules established for each questionnaire. TeleForm can recognize handwritten, printed, check box, and "bubble" data types.
- **Verification:** Extracted data were subjected to validation. If a data value violated validation rules, the data were interactively reviewed by verifiers, and validation errors were resolved.

The most important features of the CATI system for the ATES Pilot Study were the following:

- **Scheduling:** The CATI scheduler was used to route telephone numbers to interviewers, maintain a schedule of callback appointments, and reschedule unsuccessful contact attempts to an appropriate day and time.

- **Skip patterns:** The CATI system automatically guided interviewers through the skip patterns in the questionnaire, reducing the potential for interviewer error and shortening the questionnaire administration time.

Section B.3.1 below contains details about the data collection procedures for the screener. The extended survey data collection protocol and procedures are described in section B.3.2. Section B.3.3 contains a discussion of data collection procedures aimed at attaining high response rates. Section B.3.4 discusses data editing procedures.

B.3.1 Screener data collection procedures

Table B-4 shows the schedule for the screener mailings, as well as the number of screeners sent in each mailing, by sample. An initial screener was mailed via First-Class mail to each sampled address on September 15, 2010. Each initial screener mailing contained a \$2 cash incentive. One week after the initial screener mailing, a thank you/reminder postcard was mailed to each address. A follow-up screener was mailed via First-Class mail on October 6, 2010, to the 13,750 addresses that did not respond to the first screener mailing. A second follow-up screener was sent via FedEx 2-Day³ on October 20, 2010, to the 11,393 addresses that did not respond to the initial or first follow-up screener mailings. CATI data collection for the extended interviews was conducted between October 20, 2010, and January 19, 2011.

Table B-4. Numbers of screeners mailed in each wave of the ATES Pilot Study, by sample type: 2010–11

Sample type	Initial screener mailing (09/15/2010)	First follow-up screener mailing (10/06/2010)	Second follow-up screener mailing (10/20/2010)
Total	20,000	13,570	11,393
National sample	18,750	12,711	10,666
Seeded sample	1,250	859	727

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

The ATES Pilot Study contained an experiment to evaluate the relative effectiveness of three levels of promised incentives together with the effects of having informed the respondent in the screener mailing of the potential incentive for completion of the extended

³ USPS Priority Mail was used for addresses that could not be delivered via FedEx (e.g., P.O. Box addresses).

interview and having provided a first stage prepaid incentive. Households were randomly assigned to \$0 (no incentive), \$10, or \$20 incentive treatment groups (approximately 20 percent to the \$0 group, 40 percent to the \$10 group, and 40 percent to the \$20 group); these incentives were to be issued if the sampled adult completed the extended interview. All adults assigned to the \$10 or \$20 group who completed the extended survey were sent a check for the incentive amount.⁴

In order to provide information about the effect of the level of incentive and the effect of notification, these two conditions were tested experimentally. In about 60 percent of the screener mailings (75 percent of the 80 percent of households assigned to the \$10 or \$20 incentive groups), the letter enclosed in the mailing notified the household that if an adult in the household was selected for the extended telephone survey, the adult would be offered a specified amount to complete the survey. Half of these respondents were notified of a \$10 incentive, and half were notified of a \$20 incentive. Respondents were reminded of the incentive at the start of the telephone interview. In the remaining 25 percent of the households assigned to the \$10 or \$20 group, the screener letter contained no mention of the incentive for completing the extended interview, and respondents were notified of the incentive amount only when they were contacted for the extended interview.

Although promised incentives have been shown in random-digit-dial (RDD) surveys to be less effective than prepaid incentives (Berk et al. 1987; Church 1993), their relative effectiveness in two-phase surveys such as the ATES Pilot Study is unknown. Due to the fact that the household will have already received an incentive in the initial screener mailing, and a relationship with the household will have already been established, it is possible that the relative effectiveness of the promised incentive to a prepaid incentive may be different in this context. Some of the results of the incentive experiment can be found in the methodological analysis in section B.6 below.

B.3.2 Extended survey data collection procedures

As noted earlier, the ATES Pilot Study extended survey interviews were administered using CATI technology. The CATI system was programmed to automatically guide the interviewers through the complex skip patterns contained in the survey. This

⁴ A total of 136 adults refused to provide a name for the check and, therefore, were not mailed a check.

reduced the potential for interviewer error and helped to minimize the time for administering the interviews. The CATI system's scheduling feature allowed cases to be automatically fielded for appointments and callback attempts to complete interviews not completed on the first call. Data were entered directly into the CATI database, which also contained the call history of each case.

In the screener, the respondent was asked to provide a telephone number for each enumerated adult. Taking into account both the vendor-matched phone numbers and the respondent-provided phone numbers, a telephone number was available for 96 percent of sampled adults. For a given person, if both a vendor-matched telephone number and a respondent-provided telephone number were available, the extended survey was attempted using the respondent-provided telephone number.

Telephone interviewers for the ATES Pilot Study were Westat interviewers who were identified to work on the study based on their experience and availability. All 27 interviewers who worked on the study had prior experience in Westat studies, and 18 had previous experience in education-related surveys. ATES Pilot Study interviewer training included a self-paced review of the training manual and program, training in the CATI system, a trainer-led WebEx session, and a supervised role-play to practice interviewing.

Call attempts for the ATES Pilot Study were limited to 9 a.m. to 9 p.m. Monday through Friday, 2 p.m. to 6 p.m. Saturday, and 2 p.m. to 9 p.m. Sunday in the respondent's local time. The maximum number of call attempts to complete an extended survey was 49, but 99 percent of households received fewer than 36 call attempts and 90 percent of households received fewer than 30 call attempts. The overall mean number of call attempts was 10, and the mean number of call attempts to complete an extended survey was 5.5. The average time to complete the extended survey was 13.1 minutes.

For the first 2 months of CATI data collection, no refusal conversion was attempted for households that initially refused to complete the survey. In early December, due to lower-than-expected response rates, refusal conversion was implemented.⁵ Approximately one-third of the interviewers—those with the highest cooperation rates, willingness, and

⁵ Although attaining high response rates and minimizing nonresponse bias were not primary goals of this study, the lower-than-expected response rates were affecting sample yield.

availability—worked on refusal conversion. Prior to beginning the conversion efforts, these interviewers attended further training to refresh their skills in using refusal conversion strategies. Refusal conversion was attempted only on nonhostile refusals. Second refusals were considered final.

Telephone interviewer performance was monitored throughout the field period. One important purpose of monitoring was to ensure high-quality interviews by reinforcing good interviewing practices and by helping to build interviewing skills through coaching. Monitors evaluated interviewers on their telephone manner and relationship with respondents, specifically on their level of skill in reading the questions, listening to the comments and questions of respondents and providing accurate probes and replies, correctly recording the information, and gaining respondent cooperation. The total time spent monitoring interviewers was approximately 230 hours over the extent of the CATI data collection period.

Table B-5 presents the number of screener and extended interviews completed during each week of data collection. Forty-five percent of the screener interviews (4,141) were completed by October 3. By November 14 (the end of week 7), 8,927 screeners, about 98 percent of the total, had been completed. The extended telephone survey interviews began in the third week of data collection.

Table B-5. Number and percentage distribution of ATES Pilot Study screeners and extended interviews completed, by week: 2010–11

Week	Week ending	Screeners completed		Extended interviews completed	
		Number	Percent	Number	Percent
Total		9,113	100.0	4,075	100.0
1	October 3, 2010	4,141	45.4	—	—
2	October 10, 2010	1,220	13.4	—	—
3	October 17, 2010	656	7.2	—	—
4	October 24, 2010	977	10.7	184	4.5
5	October 31, 2010	1,238	13.6	375	9.2
6	November 7, 2010	551	6.0	431	10.6
7	November 14, 2010	144	1.6	461	11.3
8	November 21, 2010	88	1.0	454	11.1
9	November 28, 2010	25	0.3	199	4.9
10	December 5, 2010	29	0.3	462	11.3
11	December 12, 2010	22	0.2	334	8.2
12	December 19, 2010	8	0.1	346	8.5
13	December 26, 2010	3	#	130	3.2
14	January 2, 2011	4	#	194	4.8
15	January 9, 2011	4	#	267	6.6
16	January 16, 2011	3	#	179	4.4
17	January 23, 2011	0	#	59	1.4

— Not available.

Rounds to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

B.3.3 Data collection procedures aimed at attaining high response rates

Although attaining high response rates was not a primary goal of the ATES Pilot Study, the design incorporated a number of features that may be used in an effort to maximize response rates. The following is a discussion of those features.

Total design method/respondent-friendly design. This approach combined the attributes of the least expensive and best methods available, beginning with the least labor-intensive mode and moving to modes requiring increasingly greater amounts of labor. While this placed an emphasis on the use of resources, these procedures created a respondent-friendly approach that used design attributes, a scheduled sequence of contacts, and survey mode to motivate and encourage survey participation. Surveys that take advantage of a respondent-friendly design have demonstrated increases in survey response (Dillman, Smyth, and Christian 2008; Dillman, Sinclair, and Clark 1993).

Engaging respondent interest and cooperation. The content of respondent letters and frequently asked questions (FAQs) was focused on communicating the legitimacy and importance of the study. Interviewer training focused on strategies for communicating the importance and legitimacy of the survey and gaining cooperation.

Nonresponse follow-up. The data collection protocol included several stages of nonresponse follow-up. In addition to the number of contacts, changes in follow-up method (mail, FedEx) were designed to capture the attention of potential respondents. Refusal conversion was used during the CATI portion of data collection to try to increase response rates.

Flexibility in scheduling interviews. Whenever possible, telephone interviewers attempted to complete the extended interview at the time of first contact with the household. In situations where a respondent was unavailable, a call appointment was entered into the CATI management system with notations on the best time to reach the respondent.

Incentives. Incentives were used at both the screener and extended interview levels. A prepaid incentive of \$2 was used for the screener, and a promised incentive of \$10 or \$20 was offered to a random subsample of sampled adults for completing the extended survey. (See section B.3.1 above for further details on the incentive experiment.)

B.3.4 Data editing

The ATES data collection process culminated in the delivery of edited data files and associated documentation. Limited data editing (correcting interviewer, respondent, and processing errors) was performed during the TeleForm processing (i.e., the scanning of the hard copy screener forms) and during administration of the CATI extended interview. This section provides details about the edits that were performed.

Returned screener forms were reviewed as the mail was opened to identify any forms with unusual processing issues, such as illegible marks across the page or damage that may have occurred in the mail. Those cases were flagged for special handling and supervisor review. All screener forms with at least one question answered were scanned into the TeleForm database.

The extracted data were subjected to field validation according to project specifications. Data items identified by TeleForm for additional review went through a verification process. In the verification process, a staff member trained in data verification business rules for ATES (see attachment B-1 to this appendix) reviewed the data items and posted updates as needed. All phone numbers provided in the screener were verified for accuracy. For other screener items, if a data value violated validation rules, the data were flagged for review by verifiers who interactively reviewed the images and the corresponding extracted data, and resolved validation errors.

Frequencies and cross-tabulations of screener variables were reviewed during post-data collection data editing to ensure that the screener variables were complete, accurate, and error-free. Any data issues encountered during processing were noted in a data decision log and reviewed. Global data decisions, such as how to handle “mark one” responses when two answers were given by the respondent, are included in attachment B-1.

During the development of the CATI specifications for the extended interview, a limited number of range edits were included. Since a primary objective of the ATES Pilot Study was to evaluate data quality, there were very few edits to the CATI data other than those built into the survey instrument. The only data edits occurred as a result of corrections to minor CATI programming errors and affected very few cases.

B.4. Item Response Rates and Imputation

In the ATES Pilot Study, as in most surveys, the responses to some data items were not obtained for all interviews. There are numerous reasons for item nonresponse. Some respondents do not know the answer for the item or do not wish to respond for other reasons. Some item nonresponse arises when an interview is interrupted and not continued later, leaving items at the end of the interview blank. Item nonresponse may also be encountered because responses provided by the respondent are not internally consistent, and this inconsistency is not discovered until after the interview is completed; for ATES, any such inconsistencies remained in the data files since no consistency edits were administered.

For the ATES Pilot Study, imputation was used on a very limited basis to address item nonresponse. Data items needed for weighting, the key outcome variables, and select demographic variables were imputed. This imputation was done for sampled adult self-reported interview variables only; missing responses for proxy subject variables were not imputed. The final data file contains both the imputed and unimputed versions of each item that was imputed. The following variables were imputed:

Screener

SEX: Gender of the sampled adult

Extended interview

IN5: Worked at a job for pay or income in last 12 months

CN1: Has professional certification or state/industry license

ED1: Currently attending/enrolled in school

ED3: Highest degree/level of school completed

CT1: Has certificate

AL1: Year born

AL3: Spanish/Hispanic/Latino origin

AL4: Race⁶

AL8: State/country/territory born

AM12A: Household income range: \$25K or less, > \$25K

AM12B: Household income range: \$50K or less, > \$50K

AM121: Detailed household income range: \$0–\$25K

AM122: Detailed household income range: \$25K–\$50K

AM123: Detailed household income range: > \$50K

AM3: Own home/rent/other arrangement

B.4.1 Item response rates

For most of the imputed data items collected in the ATES Pilot Study, the item response rate was very high. Table B-6 shows the item response rates for the imputed items as well as the number of cases for which each item was attempted. The only items

⁶ Separate binary variables were derived from AL4 that indicate the race or races reported.

with item response rates less than 90 percent are those pertaining to household income, which was expected due to the sensitive nature of the question.

B.4.2 Imputation

For the ATES Pilot Study, imputation was done for two reasons. First, complete responses were needed for the variables used in developing the sampling weights. Second, data users will be employing a variety of methods of analysis, and complete responses may aid some analyses. Separate preimputation and post-imputation versions of each imputed variable were provided in order to enable the data users to identify the imputed values. Imputation was performed only on the self-reported variables; proxy subject variables were not imputed.

For several of the variables that were imputed, a hot-deck procedure was used to impute missing responses. In this approach, the entire file was sorted into cells defined by characteristics that were likely to be associated with key outcome variables or with differences in item response propensities. Within each cell, cases were divided into two classes, depending on whether or not the item was missing. For an observation with a missing value, a value from a randomly selected donor (observation in the same cell, but with the item completed) was used to replace the missing value. This method is called a hot-deck procedure, because actual values are imputed from donors selected from the current dataset as opposed to an external dataset.

Table B-6. Potential responses and response rates for imputed items in the ATES Pilot Study: 2010–11

Variable	Label	Potential responses	Item response rate (percent)
ED1	Currently attending/enrolled in school	4,073	99.93
IN5	Worked at a job for pay or income in last 12 months	4,073	99.90
CN1	Has professional certification or state/industry license	4,073	99.48
ED3	Highest degree/level of school completed	4,073	99.48
CT1	Has certificate	4,073	99.46
AL8	State/country/territory born	4,073	98.87
AL3	Spanish/Hispanic/Latino origin	4,073	98.85
AL1	Year born	4,073	98.38
AGE	Respondent's age	4,073	97.77
SEX	Respondent's gender	4,073	97.30
AM3	Own home/rent/other arrangement	4,073	96.88
AL4C1	Race White	4,073	96.76
AL4C2	Race Black or African American	4,073	96.76
AL4C3	Race American Indian or Alaska Native	4,073	96.76
AL4C4	Race Asian	4,073	96.76
AL4C5	Race Native Hawaiian or Other Pacific Islander	4,073	96.76
AM123	Detailed household income range: >\$50K	1,961	78.63
AM121	Detailed household income range: \$0–\$25K	1,038	74.37
AM12B	Household income range: \$50K or less, > \$50K	2,627	71.72
AM122	Detailed household income range: \$25K–\$50K	1,074	71.69
AM12A	Household income range: \$25K or less, > \$25K	3,407	71.68

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

The characteristics used to form the hot-deck cells are referred to as sort variables or boundary variables. Two types of boundary variables were used. Hard boundary variables were considered to be so important that the donor and the recipient were required to match exactly. For the other boundary variables, called soft boundary variables, the values did not have to match exactly. The WesDeck software was used to implement the hot-deck imputation procedure. WesDeck is a proprietary SAS macro developed by Westat to form hot-deck cells, impute using the hot-deck method, and generate output to verify the imputation.

Gender, year born, current enrollment status, highest degree/level of school, and race/ethnicity were imputed manually; all other items were imputed using the hot-deck procedure. Variables that are manually imputed typically involve complex relationships and/or constraints (for example, using information about household members who were not sampled) that would require extensive programming in order to impute using a hot-deck procedure. Furthermore, the reasonableness of imputed values for these characteristics can often be assessed by examining the values of these variables for other members of the household. The use of the manual imputation approach in this situation permits the review of the characteristics of household members when imputing the missing values.

For manual imputation, three sort variables were used. State was used as the first sort variable; that is, whenever possible, all values were imputed from within-state donors. Because there is some geographic clustering of subpopulations within states, zip code was used as the second sort variable. Cases were then sorted by the household identification number. The general approach used to find a donor was to search upward in the sorted list. If no donor was found (within zip code, within state), a downward search was used. If there was no eligible donor within the same zip code, the zip code restriction was lifted and the search was expanded (first upward, then downward when necessary) within a state.

For gender, either male or female was imputed with equal probability based on a random number. The variable AL1 (year born) was imputed using the adult's age as reported in the screener. When the age from the screener was not available, the manual procedure described above was used to impute year born. For state/country/territory where the respondent was born, the hard boundary variable was the adult's state of residence.

The hard boundary variables for the questionnaire items on certificate attainment and certifications and licenses (CT1 and CN1) as well as for home tenure (AM3) and all of the income variables were as follows:

- AGECAT—a categorical variable derived from adult's year born, with the categories 18 through 29 years, 30 through 49 years, and 50 or older;
- EDUC—a variable that indicates whether or not the adult has at least a high school diploma or the equivalent (derived from ED3);
- EMPSTAT— a variable that indicates whether or not the respondent worked at a job for pay or income in the last 12 months (IN5). In deriving EMPSTAT, adults with missing values for IN5 were grouped together with adults reported not to have worked in the last 12 months.

After values were imputed for all observations with missing values, the distribution of the items prior to imputation (i.e., the respondents' distribution) was compared to the post-imputation distributions of the imputed values alone and of the imputed values together with the observed values.

For each data item for which any values were imputed, an imputed version of the variable was created that had the original variable name with “_I” attached to the end; for example, the original variable IN5 has a corresponding imputed variable IN5_I. Both the original variables and the imputed variables are provided in the data files. This gives data users the ability to employ alternative imputation procedures or account for the imputation in computations of the reliability of the estimates produced from the dataset (see, e.g., Rao and Shao 1992 or Rubin 1987). For example, some users might wish to analyze the data with the missing values rather than the imputed values, in which case the original variables can be used. Additionally, missing values in the original variables could be replaced with other values imputed by some user-defined imputation approach.

B.5. Unit Response Rates and Weighting

Unit nonresponse is generally regarded as one measure of survey quality. Response rates are of concern because survey estimates could potentially suffer from nonresponse

bias if those who respond to a survey are very different from those who do not, and the risk of nonresponse bias is considered greater when unit nonresponse is higher. Although producing population estimates was not an objective of the ATES Pilot Study, unit response rates are presented here for the benefit of the data file user who is interested in these measures.

There are no plans to release survey estimates from the ATES Pilot Study; the aim of the Pilot Study is to provide a large-scale methodological evaluation of survey measures. However, to facilitate computation of preliminary estimates of the number of certification/license and certificate holders (overall and for key subgroups) so as to aid in the evaluation of the accuracy of the survey measures, weights were computed to account for differential within-household selection probabilities and to adjust for biases due to differential nonresponse to the screener or the extended survey and due to differential coverage.

This section gives unit response rates and discusses weighting procedures for the ATES Pilot Study. Section B.5.1 defines unit response rates, followed by details of the screener (section B.5.1.1) and extended survey (section B.5.1.2) unit response rates. Weighting procedures are discussed in section B.5.2. Section B.5.3 gives details on methods for computing sampling errors, including using replication (section B.5.3.1) and Taylor series approximation (section B.5.3.2).

B.5.1 Definition of unit response rates

A unit response rate is the ratio of the number of units responding to the survey (for example, the units could be households or persons) to the number of units sampled and eligible for the survey. In some cases, these rates are easily defined and computed, while in other cases the numerator or denominator of the ratio must be estimated.

For reporting the results from the ATES Pilot Study, the overall unit response rate indicates the percentage of possible surveys that were completed taking all survey stages into account, while the unit response rate measures the percentage of surveys that were completed for a specific stage of the survey. Specifically, household members were identified for interviews in a two-stage process. As described in section B.3.1, screener questionnaires were used to enumerate household members; as completed screeners were returned, one eligible adult was sampled in each household, and then the extended

interview was attempted (by phone) with the sampled adult. If a household member failed to complete the first stage screener, no member of that household could be sampled for the extended interview. Under this design, the unit response rate for the second stage (extended survey) is the percentage of sampled persons who completed these interviews. The overall unit response rate is the product of the first- and second-stage unit response rates (i.e., the screener unit response rate multiplied by the extended survey unit response rate).

B.5.1.1 Screener response rates. As described earlier, screeners were sent to each of the 20,000 sampled addresses. The overall screener unit response rate was calculated as the ratio of the number of completed screeners to the total number sampled, excluding the cases with nondeliverable screener forms. (Nondeliverable addresses are treated as ineligible.) The rates given here are unweighted; however, since the sample of addresses selected into the national sample was an equal probability sample, the weighted and unweighted screener unit response rates for the national sample are identical. Table B-7 shows the distribution of sampled and completed screeners, by sample type. The overall screener unit response rate was 52 percent, slightly lower than the assumed 55 percent screener unit response rate. There were a total of 9,113 completed screeners, 8 of which did not have an eligible adult. For the national sample, a total of 8,478 screeners were completed, for a screener unit response rate of 51 percent; 635 screeners were completed among seeded sample cases, for a screener unit response rate of 55 percent.

Table B-7. Number of sampled addresses and completed screeners, and screener unit response rates, in the ATES Pilot Study, by sample type: 2010–11

Sample type	Number of sampled addresses	Number completed		Screener unit response rate (%)
		Expected	Actual	
Total	20,000	9,900	9,113	51.5
National	18,750	—	8,478	51.2
Seeded ¹	1,250	—	635	55.3

—Not available.

¹ Counts exclude the supplemental sample of 800 additional seeded sample cases (see section B.2.1.2).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table B-8 shows the distribution of screener cases by type of return for cases that did not complete the screener. About 12 percent (2,301 screeners) of screener cases were classified as ineligible due to nondeliverable screener forms. About 41 percent of cases

failed to return a screener, less than 1 percent of cases returned blank screeners, and less than 1 percent returned screeners with annotations indicating refusal.

Table B-8. Number and percentage of cases failing to return a completed screener, by sample type and type of return: 2010–11

Sample type	Type of return	Number of cases	Percent of cases
Total		10,887	100.0
All	Nondeliverables (ineligible)	2,301	11.5
	Nonrespondents		
	Form not returned	8,257	41.3
	Blank form returned	173	#
	Refused on form	156	#
National	Nondeliverables (ineligible)	2,198	11.7
	Nonrespondents		
	Form not returned	7,765	41.4
	Blank form returned	159	#
	Refused on form	150	#
Seeded	Nondeliverables (ineligible)	103	8.2
	Nonrespondents		
	Form not returned	492	39.4
	Blank form returned	14	1.1
	Refused on form	6	#

Rounds to zero.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

B.5.1.2 Extended interview response rate. The extended interview unit response rate was calculated, for the national sample only, as the ratio of the number of completed extended interviews to the number of eligible sampled adults. For the national sample, a total of 3,730 extended interviews were completed, for unweighted and weighted extended interview unit response rates of 44 percent and 42 percent, respectively. (The expected extended interview unit response rate was 65 percent; see section B.7 below for discussion of factors likely to have affected this unit response rate.) Additionally, there were 343 completed extended interviews from the seeded sample (including those completed among the 800 supplemental seeded sample cases that were released late in the data collection period). Because there are no reliable estimates of the size of the certifications/licenses and certificates population and the sampling frames used for the seeded sample were very selective (with, undoubtedly, very low coverage of this population), response rates were not

calculated for the seeded sample. Table B-9 shows the distribution of sampled and completed extended surveys, by sample type.

Table B-9. Number of eligible adults sampled for the extended interview and number of completed extended interviews in the ATES Pilot Study, by sample type: 2010–11

Sample type	Number of eligible adults sampled for the extended interview	Number of completed extended interviews	
		Expected	Actual
Total	9,905	4,505	4,073
National	8,471	4,205	3,730
Seeded	1,434	300	343

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Of the total 3,730 completed extended interviews from the national sample, 3,637 were completed with the sampled adult himself or herself. Ninety-three of the interviews were completed about the sampled adult by an eligible proxy. Of the 3,637 interviews completed by the sampled adult about himself or herself, another 1,045 interviews were completed by the same sampled adult about a second eligible adult in the household.

As mentioned, the focus of ATES, particularly for the seeded sample, was on sample yield and timeliness as opposed to response rates. As a result, techniques that could have been used to improve response were not employed in the extended survey administration. For example, no Spanish language surveys were administered, and refusal conversion did not begin until late in the extended interview data collection period.

Table B-10 shows the distribution of reasons for nonresponse to the extended interview in the national sample. About 7 percent of extended interview nonresponse was due to the lack of an available phone number for the sampled adult, and 13 percent was because the phone number available was a “bad” match (a nonworking or nonresidential number or a number that was not associated with the sampled adult). About 32 percent (1,520 cases) of extended interview nonresponse was due to reaching the maximum number of call attempts after making contact with the household, about 19 percent were final noncontact cases, about 24 percent were refusals, and about 6 percent finalized with other reasons for nonresponse.

Table B-10. Distribution of reasons for nonresponse to the extended interview in the ATES Pilot Study (national sample only): 2010–11

Reason for nonresponse	Number	Percent
Total	4,746	100.0
No phone number available	315	6.6
Maximum calls	1,520	32.0
Noncontact	890	18.8
Nonworking, nonresidential, or mismatched phone number	615	13.0
Refusal	1,122	23.6
Other nonresponse ¹	284	6.0

¹ Other nonresponse includes reasons such as English language or cognitive ability problems.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

B.5.2 Weighting

Weights were calculated for sampled adults in the ATES national sample only; weights were not provided for the seeded sample since this sample was purposively selected and was not intended to be used for inference to any particular subpopulation. For ATES, weighting was necessary to account for differential probabilities of selection for persons within households and to reduce potential bias due to differential nonresponse and differential coverage of subpopulations.

For ATES, an eligible adult was defined to be a household member 18 years of age or older. Person-level weights were created for the sampled adult. The first step in computing the person-level weight was to compute the address-level base weight, which is the reciprocal of the probability of selection of the address. Since an equal probability sample of addresses was used for the national sample, the address-level base weight is a constant;⁷ this weight is denoted as H . The person-level weight for sampled person j in household i , PW_j , is the product of the address-level base weight and two weight adjustment factors:

- A weight associated with sampling the person from among all eligible persons in the household, A_j ; and

⁷ For a very small proportion of households (roughly estimated from another study conducted by Westat to be about 4 percent of households [Norman and Sigman 2009]), the household may have been selected at any of two or more addresses; for ATES, there was no attempt to measure the number of distinct addresses at which a household could have been selected.

- An adjustment associated with raking the person-level weights to American Community Survey (ACS) estimates of the number of persons in the target population, $B_{j(k)}$ (see discussion of raking below).

The procedures for computing the person-level weight adjustments are as follows.

The first adjustment, which accounts for the probability of sampling person j from among all eligible adults in household i , is

$$A_j = N_i,$$

where N_i is the number of eligible adults in household i . For each sampled person j , the unadjusted person-level weight, UPW_j , can be written as the product of the household-level weight and the adjustment for within-household sampling. That is, for sampled person j in household i , the unadjusted person-level weight is

$$UPW_j = H \cdot A_j.$$

The second adjustment involves raking the person-level weights, SPW , to national control totals. Raking was proposed by Deming and Stephan (1940) as a way to ensure consistency between complete counts and sample data from the 1940 U.S. Census of population. For ATES, raking was used to correct for the bias due to nonresponse or noncoverage. The raking procedure was carried out in a sequence of adjustments: first, the base weights were adjusted to one marginal distribution (or dimension) and then the second marginal distribution, and so on. One sequence of adjustments to the marginal distributions is known as a cycle or iteration. The procedure was repeated until convergence of weighted totals to all sets of marginal distributions was achieved. (See Deming and Stephan [1940] for further details on raking and the convergence process.) For ATES, the raking iterations continued until the estimated totals were within 1 of all the control totals.

Four dimensions were used for raking the ATES person-level weights: (1) a cross of number of persons in the household (exactly one/more than one) with age (18–29 years/30–49 years/50 years or more) and sex; (2) a cross of number of persons in the household with the adult’s race/ethnicity (Black, non-Hispanic/Hispanic/other); (3) a cross of number of

persons in the household with highest educational attainment (less than high school diploma/high school diploma or the equivalent/some college); and (4) a cross of number of persons in the household with Census region (Northeast/South/Midwest/West). These raking dimensions were used because they included important analysis variables (e.g., educational attainment) and characteristics that are typically associated with nonresponse (e.g., region). The control totals used in this raking adjustment, shown in table B-11, were obtained from the 5-year 2005–09 ACS.

The final person-level weight for each sampled person j is

$$PW_{j(k)} = SPW_j \cdot B_{j(k)},$$

where $B_{j(k)}$ is the raking adjustment factor for raking cell k and person j has the attributes corresponding to the levels of the dimensions of raking cell k .

B.5.3 Methods for computing sampling errors

In surveys with complex sample designs, such as the ATES Pilot Study, direct estimates of the sampling errors assuming a simple random sample will typically underestimate the variability in the estimates (Wolter 1985). The ATES sample design and estimation included procedures that deviate from the assumption of simple random sampling, such as sampling persons within households with differential probabilities and raking to control totals.

B.5.3.1 Replication sampling errors. One method for computing sampling errors to reflect these aspects of the sample design and estimation is the replication method. Replication involves splitting the entire sample into a set of groups, or replicates, based on the actual sample design of the survey. The survey estimates can then be computed for each of the replicates by creating replicate weights that mimic the actual sample design and estimation procedures used in the full sample. The variation in the estimates computed from the replicate weights can then be used to estimate the sampling errors of the estimates from the full sample.

A total of 80 replicates were defined for the ATES national sample, based on the sampling of addresses. This number was chosen to provide reliable estimates of sampling

errors with reasonable data processing time and effort. The specific replication procedure used was a jackknife replication method (Wolter 1985). It involved dividing the sample into 80 random subsamples (replicates) for the computation of the replicate weights. The 80 replicates were formed on the sampling order of the addresses. For each replicate, a replicate weight was developed using the same weighting procedures that were used to develop the full sample weight.

Table B-11. Control totals for raking the ATEs person-level weights, by characteristics used in raking: 2010–11

Characteristics	Control totals ¹
Total	219,423,725
Number of persons in household, by age and sex	
One person in household	
18 to 29 years old	
Male	2,036,107
Female	2,899,421
30 to 49 years old	
Male	5,850,267
Female	7,079,923
50 years old and over	
Male	6,820,442
Female	12,923,845
More than one person in household, by age and sex	
18 to 29 years old	
Male	21,565,302
Female	20,126,967
30 to 49 years old	
Male	35,499,210
Female	35,312,422
50 years old and over	
Male	34,185,192
Female	35,124,627
Number of persons in household, by race/ethnicity	
One person in household	
Black	6,249,931
Hispanic	3,024,686
Other	28,335,388
More than one person in household	
Black	18,853,684
Hispanic	26,002,526
Other	136,957,510
Number of persons in household by educational attainment	
One person in household	
Less than high school diploma	5,671,998
High school diploma or the equivalent	19,170,215
Some college	12,767,792
More than one person in household	
Less than high school diploma	27,812,662
High school diploma or the equivalent	94,450,782
Some college	59,550,276

See notes at end of table.

Table B-11. Control totals for raking the ATES person-level weights, by characteristics used in raking: 2010–11—Continued

Characteristics	Control totals ¹
Number of persons in household, by Census region ²	
One person in household	
Northeast	7,013,500
South	8,855,790
Midwest	14,049,680
West	7,691,035
More than one person in household	
Northeast	33,542,149
South	39,464,681
Midwest	65,960,587
West	42,846,303

¹ The control totals are numbers of adults.

² The following states and the District of Columbia are in each Census region: Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT; South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV; Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI; West: AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY.

NOTE: Black includes African American, Hispanic includes Latino, and Other includes all non-Black, non-Hispanics. Race categories exclude persons of Hispanic ethnicity.

SOURCE: U.S. Department of Commerce, Bureau of the Census, American Community Survey (ACS), 2005–09.

The jackknife variance estimator has the form

$$v(\hat{\theta}) = \frac{G-1}{G} \sum_{k=1}^G (\hat{\theta}_{(k)} - \hat{\theta})^2$$

Where θ is the population parameter of interest; $\hat{\theta}$ is the estimate of θ based on the full sample; $\hat{\theta}_{(k)}$ is the estimate of θ based on the observations included in the k th replicate; and G is the total number of replicates. (For ATES, $G = 80$.) For ATES, the replicate weights are included in the file as FAWT1 through FAWT80.

The computation of the sampling errors using these replicate weights can be done easily using the Windows-based software packages WesVar, SUDAAN (Shah et al. 1995), Stata, or AM Statistical Software; in WesVar, SUDAAN, or AM, the replication method should be specified as JK1. The current version of WesVar (version 5) is available from Westat; information can be obtained at www.westat.com. Information on obtaining SUDAAN can be found at www.rti.org/sudaan, and the AM software is available at am.air.org.

B.5.3.2 Taylor series approximation. Another valid approach to the estimation of sampling errors for complex sample designs is to use a Taylor series approximation. To produce standard errors using a Taylor series program, such as SUDAAN (Shah et al. 1995), AM, or the survey data analysis procedures (e.g., PROC SURVEYMEANS, PROC SURVEYREG) in SAS version 9, two variables are required to identify the stratum and the primary sampling unit (PSU). The stratum-level variable is the indicator of the variance estimation stratum from which the unit (address or sampled person) was selected. The PSU is an arbitrary numeric identification number for the unit within the stratum. For ATES, the stratum variable is a dummy variable set to 1 for all records; the PSU variable was assigned sequentially so that each sampled address has a unique value.

The PSU and stratum variables appear in the file as the variables TS_PSU and TS_STRAT. These variables can be used in SUDAAN to produce standard errors by specifying that the design is a “with replacement” sample (DESIGN = WR) and that the sampling levels are given by the appropriate stratum and PSU variables. For example, use TS_STRAT and TS_PSU in the NEST statement. (Information on obtaining SUDAAN can be found at www.rti.org/sudaan.) In the SAS version 9 or higher survey procedures, the stratum and PSU variables are specified in the STRATA and CLUSTER statements, respectively. (Information on obtaining SAS version 9 or higher can be found at www.sas.com.)

Stata also uses the PSU and stratum variables to define the units needed for computation of Taylor series variance estimates. (Information on obtaining Stata is available at www.stata.com.) To specify the stratum, PSU, and weight variables in Stata, use the svyset strata, svyset psu, and svyset pweight commands. For example, use the following commands to specify these design parameters:

```
svyset strata TS_STRAT
svyset psu TS_PSU
svyset pweight FAWT0
```

Data users should be aware that the use of different approaches or software packages in the calculation of standard errors may result in slightly different standard errors. Estimates of standard errors computed using the replication method and the Taylor series

method are nearly always very similar, but not identical. For a discussion of this issue, see Broene and Rust (2000).

B.6 Methodological Analysis

In order to determine the effectiveness of the design and methodology used for the ATEs Pilot Study, several aspects of the survey were examined. These included an analysis of screener mail response rates after each wave of screener mailings (initial, first follow-up, and second follow-up); an analysis of several characteristics of screener respondents after each mailing stage; an examination and comparison of the effectiveness of the monetary incentive and whether or not the respondent was notified about the incentive on screener response, whether or not the respondent provided a telephone number, and extended interview response; an examination of characteristics of sampled adults by the source(s) of the telephone number(s); and an examination of screener response rates and phone number availability by type of address.

Both weighted and unweighted results are presented in the tables in this section. Results pertaining to screener response and some screener characteristics contain unweighted estimates, while results pertaining to the extended interview contain weighted estimates. Tables displaying the types of telephones (landline vs. cell/wireless) associated with the sampled addresses also show weighted estimates. Chi-square statistics are presented where applicable, and all findings described in the text are statistically significant at the .05 level.

B.6.1 Screener response rates and characteristics of screener respondents

Table B-12 gives the number of respondents and associated response rates after the initial screener mailing, the first follow-up screener mailing, and the second follow-up screener mailing, for both the national and seeded samples. The final overall screener response rate of 51 percent increased from 33 percent after the initial mailing and from 42 percent after the first follow-up mailing.

Table B-12. Number of respondents and response rates for each wave and screener, by sample type: 2010–11

Sample type	Initial screener mailing (wave 1 respondents only)		First follow-up screener mailing (wave 1 and 2 respondents)		Second follow-up screener mailing (wave 1, 2, and 3 respondents)	
	Number	Response rate	Number	Response rate	Number	Response rate
Total	6,055	33.1	7,476	41.8	9,113	51.5
National	5,640	33.0	6,969	41.7	8,478	51.2
Seeded	415	34.4	507	43.0	635	55.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

While the screener follow-up mailings were effective in boosting the screener unit response rate, an important question is whether there is any indication that they reduced nonresponse bias. To examine this, various characteristics of the sampled adults obtained after each wave of screener mailings were tabulated; these are given in table B-13. The sampled adults resulting from the screener follow-up mailings differ from those in the initial screener in terms of age (those sampled as a result of the follow-ups were younger), educational attainment (the sampled adults from the follow-ups had lower levels of educational attainment), and type of phone number provided (those sampled from the follow-ups provided cell/wireless numbers in greater proportions). The Chi-square tests were conducted on the noncumulative samples.

B.6.2 Incentive experiment results

As discussed in section B.3.1, an experiment was conducted to assess the effectiveness of offering different levels (\$10 and \$20) of a promised incentive. This experiment also varied whether the household was notified of the promised incentive in the letter enclosed in the screener mailings.

The effect of the incentive and also the effect of prenotification (given a particular incentive level) were each tested using chi-square tests. This approach was used because at these levels, there was no a priori belief that there should be an interaction effect and there is more power to test for the separate main effects. That is, the issues addressed through this set of tests are, first, whether the incentive has an effect and, second, if an incentive is used, should it be communicated to the respondent with a prenotification? For the national sample, the level of incentive was found to have a statistically significant effect

on the screener response rate and on the percentage of respondents providing a phone number in the screener, but it did not affect the extended interview response rate (table B-14). For those designated to receive an incentive for completing the extended interview, notification of the incentive was found to have a significant effect on both the screener and extended interview response rates and on the percentage of respondents providing a phone number in the screener. Post-hoc analyses to examine individual differences were not conducted.

B.6.3 Differences in characteristics of sampled adults according to availability of telephone numbers

Table B-15 provides statistics about the availability of telephone numbers. At the time of sample selection, sampled addresses were reverse-matched to directory listings by a vendor in an effort to obtain phone numbers. As a result of this reverse-match, phone numbers were available for 63 percent of sampled addresses and 67 percent of sampled adults. The ATES screener also requested a phone number for each enumerated adult. (See attachment B-2 for an illustration of the screener.) Taking into account both the vendor-matched phone numbers and the numbers provided in the screener, phone numbers were available for 96 percent of sampled adults.

While requesting a phone number for each enumerated adult clearly boosted the proportion of sampled adults with whom the extended interview could be attempted, an additional question is whether this also changed the characteristics of the sample and, in doing so, potentially reduced bias. To examine this, tabulations of various characteristics of the sampled adults reported in the screener by source(s) of phone number(s) are given in table B-16.

Table B-17 is similar to table B-16, except that the source(s) of the phone number have been collapsed to more clearly demonstrate any changes resulting from obtaining a phone number in the screener that was not previously available for the sampled adult. As shown in table B-17, asking for a phone number in the screener resulted in the ability to attempt an extended interview with a set of adults who were younger and less highly educated than those for whom the vendor phone number was used to attempt the extended interview. (The table also indicates a much higher proportion of screener-provided phone numbers that were cell/wireless, but this was to be expected since the vendor matches are,

by design, virtually all landline numbers.) For each of these characteristics, including the cases for which the screener phone number was used to attempt the extended interview resulted in a set of sampled adults that more closely resembles the population distribution. (Estimates of the population distribution are from the 3-year 2006–08 ACS.)

Table B-13. Cumulative number and percentage of sampled adults who responded to the screener in the ATES Pilot Study, by screener mailing wave and characteristics: 2010–11

Screener characteristic	ACS percentage	Initial response (wave 1 respondents only) ¹		After first screener follow-up (wave 1 and 2 respondents) ¹		After second screener follow-up (wave 1, 2, and 3 respondents) ¹	
		Number of respondents	Percent of respondents	Number of respondents	Percent of respondents	Number of respondents	Percent of respondents
Age							
18 to 29 years old	21.3	758	13.6	954	13.8	1,204	14.3
30 to 49 years old	38.2	1,703	30.6	2,133	30.8	2,654	31.5
50 years old and over	40.6	3,102	55.8	3,847	55.5	4,579	54.3
Chi-square		28.58		25.28			
<i>p</i> value		<0.0001		<0.0001			
Sex							
Male	48.3	2,561	45.7	3,130	45.3	3,779	45.0
Female	51.7	3,037	54.3	3,781	54.7	4,624	55.0
Chi-square		4.12		1.32			
<i>p</i> value		0.13		0.52			
Education							
Less than HS	15.3	400	7.1	506	7.3	656	7.8
HS or equivalent	51.8	2,681	47.8	3,353	48.5	4,118	48.9
Some college	33.0	2,528	45.1	3,059	44.2	3,641	43.3
Chi-square		29.57		26.00			
<i>p</i> value		<0.0001		<0.0001			
Type of phone							
Landline		2,925	62.4	3,541	62.1	4,198	61.5
Cell/wireless		1,752	37.4	2,148	37.7	2,619	38.3
Both checked		7	0.1	11	0.2	14	0.2
Chi-square		8.73		8.04			
<i>p</i> value		0.07		0.09			

¹ Counts do not sum to totals and differ across characteristics, due to the exclusion of cases with missing values for the particular characteristic.

NOTE: ACS is the American Community Survey. The chi-square tests are based on comparisons of individual waves of ATES respondents.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11. U.S. Department of Commerce, U.S. Census Bureau, American Community Survey (ACS), 2005–09.

Table B-14. Number of screener and extended interview respondents and response rates and number and percentage of respondents providing a telephone number in the screener of the ATES Pilot Study, by type of incentive treatment: 2010–11

Incentive/notification treatment	Number of screener respondents	Screener response rate	Standard error	Number of extended interview respondents	Extended interview response rate (weighted)	Standard error	Among screener respondents		
							Number providing phone number	Percent providing phone number	Standard error
\$0	1,650	50.3	0.01	689	42.2	1.33	1,437	87.2	0.01
\$10–notified	2,566	51.0	0.01	1,177	45.5	1.14	2,318	90.4	0.01
\$10–not notified	802	49.6	0.02	326	40.0	1.78	703	87.8	0.01
\$20–notified	2,632	52.5	0.01	1,177	44.2	0.93	2,395	91.1	0.01
\$20–not notified	828	51.3	0.02	361	43.7	1.99	718	86.7	0.01
\$0	1,650	50.3	0.01	689	42.2	1.33	1,437	87.2	0.01
\$10	3,368	50.7	0.01	1,503	44.2	0.97	3,201	89.8	0.01
\$20	3,460	52.2	0.01	1,538	44.1	0.87	3,113	90.0	0.01
Chi-square	786.81			1.60			10.39		
<i>p</i> value	<0.0001			0.45			0.006		
\$10 or \$20–notified	5,198	51.8	0.01	2,354	44.9	0.74	4,713	90.7	0.00
\$10 or \$20–not notified	1,630	50.5	0.01	687	41.9	1.29	1,421	87.2	0.01
Chi-square	461.11			3.89			16.81		
<i>p</i> value	<0.0001			0.048			<0.0001		

NOTE: Screener response rates and the percentage of respondents providing a phone number in the screener are unweighted estimates and have simple random sampling standard errors, while extended interview response rates are weighted estimates and have standard errors that reflect the complex sample design and estimation procedures. The chi-square tests are testing for association between the two treatment main effects (incentives and notification, separately) and screener response, extended interview response, and the proportion providing a phone number.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table B-15. Telephone number availability of sampled adults in ATES Pilot Study, by source of phone number: 2010–11

Source of phone number	Number of sampled adults	Percent of sampled adults
Total	8,471	100.0
No telephone number available	315	3.7
Vendor phone number, no screener phone number	585	6.9
Screener phone number same as vendor phone number	2,947	34.8
Screener phone number, different from vendor phone number	2,305	27.2
Screener phone number, no vendor phone number	2,319	27.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table B-16. Comparison of screener characteristics of sampled adults in ATES Pilot Study (national sample only), by source of telephone numbers: 2010–11

Screener characteristic	Percent of population (ACS)	Only vendor phone available			Only screener phone available			Screener phone is identical to vendor phone			Screener phone is different from vendor phone		
		Number	Percent	Standard error	Number	Percent	Standard error	Number	Percent	Standard error	Number	Percent	Standard error
Total		585	6.3	0.31	2,319	28.0	0.49	2,947	35.6	0.53	2,305	26.5	0.53
Age													
18 to 29 years old	21.3	44	10.1	1.66	424	22.0	0.98	227	11.3	0.56	467	23.1	1.00
30 to 49 years old	38.2	138	26.6	1.94	925	38.9	1.08	688	24.7	0.85	796	34.4	1.07
50 years old and over	40.6	392	63.4	2.22	964	39.1	0.90	2,027	64.0	1.06	1,034	42.5	1.24
Sex													
Male	48.3	222	42.3	2.27	1,081	48.4	1.25	1,290	46.8	1.16	1,053	48.0	1.01
Female	51.7	352	57.7	2.27	1,219	51.7	1.25	1,639	53.2	1.16	1,237	52.0	1.01
Education													
Less than HS	15.3	44	6.9	1.13	195	9.1	0.64	200	6.8	0.50	190	8.5	0.58
HS or equiv.	51.8	311	54.1	2.06	1,094	48.4	0.97	1,461	49.9	1.00	1,091	49.1	1.15
Some college	33.0	220	39.1	1.82	1,014	42.5	1.00	1,277	43.3	0.91	1,005	42.5	1.16
Type of phone													
Landline	—	54	72.6	6.05	871	42.7	1.24	2,561	99.2	0.20	698	32.6	1.00
Cell/wireless	—	14	21.7	5.02	1,177	57.2	1.26	16	0.5	0.14	1,386	67.3	1.00
Both checked	—	3	5.7	3.46	2	0.1	0.07	7	0.3	0.14	2	0.1	0.04

— Not available.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11; and U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2005–09.

Table B-17. Comparison of screener characteristics of sampled adults in ATES Pilot Study (national sample only), by source of telephone numbers (collapsed): 2010–11

Screener characteristic	ACS Proportion	Any valid phone number available			Only vendor phone available or vendor phone is identical to screener phone			Only screener phone available or vendor phone is different from screener phone		
		Number	Percent	Standard error	Number	Percent	Standard error	Number	Percent	Standard error
Total		8,156	100.0	†	3,532	43.5	0.53	4,624	56.5	0.53
Age										
18 to 29 years old	21.3	1,162	17.6	0.45	271	11.1	0.54	891	22.6	0.68
30 to 49 years old	38.2	2,547	31.6	0.50	826	25.0	0.76	1,721	36.7	0.72
50 years old and over	40.6	4,417	50.8	0.62	2,419	63.9	0.92	1,998	40.8	0.73
Chi-square					439.60					
p value					<0.0001					
Sex										
Male	48.3	3,646	47.3	0.70	1,512	46.1	1.12	2,134	48.2	0.87
Female	51.7	4,447	52.7	0.70	1,991	53.9	1.12	2,456	51.8	0.87
Chi-square					2.28					
p value					0.131					
Education										
Less than HS	15.3	629	7.9	0.31	244	6.8	0.44	385	8.8	0.42
HS or equivalent	51.8	3,957	49.5	0.53	1,772	50.5	0.85	2,185	48.7	0.69
Some college	33.0	3,516	42.6	0.54	1,497	42.7	0.79	2,019	42.5	0.75
Chi-square					10.98					
p value					0.004					

See notes at end of table.

Table B-17. Comparison of screener characteristics of sampled adults in ATES Pilot Study (national sample only), by source of telephone numbers (collapsed): 2010–11—Continued

Screener characteristic	ACS Proportion	Any valid phone number available			Only vendor phone available or vendor phone is identical to screener phone			Only screener phone available or vendor phone is different from screener phone		
		Number	Percent	Standard error	Number	Percent	Standard error	Number	Percent	Standard error
Type of phone										
Landline	—	4,184	61.9	0.58	2,615	98.6	0.24	1,569	37.7	0.80
Cell/wireless	—	2,593	37.9	0.58	30	1.0	0.19	2,563	62.2	0.81
Both checked	—	14	0.2	0.06	10	0.4	0.15	4	0.1	0.04
Chi-square					2,113.67					
<i>p</i> value					<0.0001					

— Not available.

† Not applicable.

NOTE: The Chi-square test is testing for association between the given screener characteristic and phone number source (“Only vendor phone available or vendor phone is identical to screener phone”/“Only screener phone available or vendor phone is different from screener phone”).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11; and U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2006–09.

Table B-18 presents characteristics of extended interview respondents according to the source(s) of the phone number(s); the tabulations include both base-weighted distributions and final-weighted distributions. Table B-19 shows the same characteristics with chi-square test statistics and p values based on the final-weighted distributions. The estimates in table B-19 indicate that asking for a phone number in the screener resulted in the ability to complete an extended interview with a set of adults who were younger, were more likely to be Hispanic or Black, had an income distribution that was shifted downward, were more likely to have worked in the last 12 months, were less likely to own their homes, and were more likely to live in the South or West than those for whom the vendor phone number was used to complete the extended interview. For each of these characteristics other than income, including the cases for which the screener phone number was used to attempt the extended interview resulted in completed interviews with a set of sampled adults that more closely resembles the population distribution. (Estimates of the population distribution are from the 5-year 2005–09 ACS.)

B.6.4 Unit response rates by characteristics of the address

The ABS includes various characteristics of the address, maintained by the USPS. These characteristics include an indicator of whether the address is seasonal and an indicator of whether the address is vacant. Another characteristic included in the file is whether the address is a drop point—a single delivery point that services more than one residential unit (with no separate USPS delivery to each individual unit). Drop points are problematic because, without a name, there is no way to specify delivery to a particular unit.

In the ATE Pilot Study, screeners were mailed to each of these types of addresses; none were specifically excluded. However, because it is likely that address eligibility rates and response rates may differ according to these characteristics, it is worthwhile to consider them. Table B-20 gives address eligibility, screener response rates, and extended interview response rates by characteristics of the address, and table B-21 contains tabulations on the source of phone numbers by characteristics of the address (for the subset of sampled adults for whom a phone number was available).

Table B-18. Comparison of characteristics of extended survey respondents in ATEs Pilot Study (national sample only), by source of telephone numbers (collapsed): 2010–11

Respondent characteristic	Only vendor phone available or vendor phone is identical to screener phone					Any phone number available				
	Number	Base weighted percent	Base weighted (standard error)	Final weighted percent	Final weighted (standard error)	Number	Base weighted percent	Base weighted (standard error)	Final weighted percent	Final weighted (standard error)
Age										
18 to 29 years old	74	7.1	0.69	11.4	1.03	479	15.4	0.72	21.3	0.00
30 to 49 years old	325	23.0	1.36	29.6	1.24	1,111	30.8	0.89	38.2	0.00
50 years old and over	1,154	69.9	1.51	59.1	1.35	2,140	53.9	0.97	40.6	0.00
Sex										
Male	650	45.4	1.39	48.9	1.24	1,631	45.6	0.94	48.3	0.00
Female	903	54.6	1.39	51.1	1.24	2,099	54.4	0.94	51.7	0.00
Education										
Less than HS	140	8.5	0.75	13.9	1.10	337	8.9	0.48	15.3	0.00
HS or equiv.	705	45.5	1.47	53.9	1.14	1,602	43.3	0.86	51.8	0.00
Some college	708	45.9	1.42	32.2	0.98	1,791	47.8	0.92	33.0	0.00
Race/ethnicity ¹										
Black	95	5.9	0.63	7.2	0.78	346	8.7	0.48	10.6	0.18
Hispanic	41	2.7	0.45	5.2	0.91	236	6.9	0.43	13.2	0.00
Other	1,384	89.1	0.90	85.5	1.43	3,044	81.7	0.66	73.2	0.28
Two or more races	33	2.2	0.38	2.1	0.36	104	2.8	0.29	2.9	0.35

See notes at end of table.

Table B-18. Comparison of characteristics of extended survey respondents in ATES Pilot Study (national sample only), by source of telephone numbers (collapsed): 2010–11—Continued

Respondent characteristic	Only vendor phone available or vendor phone is identical to screener phone					Any phone number available				
	Number	Base weighted percent	Base weighted (standard error)	Final weighted percent	Final weighted (standard error)	Number	Base weighted percent	Base weighted (standard error)	Final weighted percent	Final weighted (standard error)
Income										
\$0–25K	394	21.0	1.01	25.0	1.32	998	23.3	0.69	28.0	0.79
\$25,001–75K	702	45.7	1.33	45.6	1.55	1,659	44.6	0.71	45.2	0.89
\$75K+	457	33.3	1.20	29.4	1.20	1,073	32.0	0.63	26.8	0.72
Employment status										
Worked in the last 12 months	806	56.9	1.20	58.4	1.31	2,344	65.6	0.76	66.8	0.84
Did not work in the last 12 months	747	43.1	1.20	41.7	1.31	1,386	34.4	0.76	33.2	0.84
Home tenure										
Own home	1,297	83.3	0.99	78.7	1.32	2,621	70.6	0.80	63.4	0.94
Rent home	160	9.3	0.75	11.4	0.99	817	19.8	0.75	24.4	0.91
Other	96	7.5	0.75	10.0	1.10	292	9.6	0.49	12.3	0.66

See notes at end of table.

Table B-18. Comparison of characteristics of extended survey respondents in ATES Pilot Study (national sample only), by source of telephone numbers (collapsed): 2010–11—Continued

Respondent characteristic	Only vendor phone available or vendor phone is identical to screener phone					Any phone number available				
	Number	Base weighted percent	Base weighted (standard error)	Final weighted percent	Final weighted (standard error)	Number	Base weighted percent	Base weighted (standard error)	Final weighted percent	Final weighted (standard error)
Census region ²										
Northeast	338	21.9	1.09	23.2	1.00	676	18.4	0.56	18.5	0.00
Midwest	446	28.3	1.18	25.2	1.14	950	25.2	0.62	22.0	0.00
South	525	33.4	1.13	35.7	1.14	1,303	34.1	0.63	36.5	0.00
West	244	16.4	1.03	15.9	1.00	801	22.4	0.59	23.0	0.00

¹ Black includes African American, Hispanic includes Latino, Other includes all other races, and two or more races includes non-Hispanics reporting more than one race.

² The following states and the District of Columbia are in each Census region: Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT; South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV; Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI; West: AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY.

NOTE: Chi-square statistics test vendor phone availability with screener phone availability for the given characteristics.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11; and U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2006–08.

Table B-19. Comparison of characteristics of extended survey respondents in ATEs Pilot Study (national sample only), by source of telephone numbers: 2010–11

Respondent characteristic	ACS proportion	Only vendor phone available or vendor phone is identical to screener phone			Only screener phone available or vendor phone is different from screener phone		
		Number	Final weighted percent	Final weighted (standard error)	Number	Final weighted percent	Final weighted (standard error)
Age							
18 to 29 years old	21.3	74	11.4	1.03	405	27.0	0.55
30 to 49 years old	38.2	325	29.6	1.24	786	43.2	0.68
50 years old and over	40.6	1,154	59.1	1.35	986	29.7	0.61
Chi-square		271.53					
ρ value		<0.0001					
Sex							
Male	48.3	650	48.9	1.24	981	47.9	0.73
Female	51.7	903	51.1	1.24	1,196	52.1	0.73
Chi-square		0.26					
ρ value		0.611					
Education							
Less than HS	15.3	140	13.9	1.10	197	16.1	0.64
HS or equiv.	51.8	705	53.9	1.14	897	50.5	0.68
Some college	33.0	708	32.2	0.98	1,083	33.4	0.58
Chi-square		3.52					
ρ value		0.172					
Race/ethnicity ¹							
Black	11.1	95	7.2	0.78	251	12.7	0.54
Hispanic	13.2	41	5.2	0.91	195	18.0	0.53
Other	74.6	1,384	85.5	1.43	1,660	66.0	0.73
Two or more races	1.1	33	2.1	0.36	71	3.4	0.53
Chi-square		126.88					
ρ value		<0.0001					

See notes at end of table.

Table B-19. Comparison of characteristics of extended survey respondents in ATEs Pilot Study (national sample only), by source of telephone numbers: 2010–11—Continued

Respondent characteristic	ACS proportion	Only vendor phone available or vendor phone is identical to screener phone			Only screener phone available or vendor phone is different from screener phone		
		Number	Final weighted percent	Final weighted (standard error)	Number	Final weighted percent	Final weighted (standard error)
Income							
\$0–25K	16.1	394	25.0	1.32	604	29.9	1.07
\$25,001–75K	43.6	702	45.6	1.55	957	44.9	1.15
\$75K+	33.2	457	29.4	1.20	616	25.3	0.98
Chi-square		10.22					
<i>p</i> value		0.006					
Employment status							
Worked in the last 12 months	64.8	806	58.4	1.31	1,538	71.7	1.27
Did not work in the last 12 months	34.8	747	41.7	1.31	639	28.3	1.27
Chi-square		45.39					
<i>p</i> value		<0.0001					
Home tenure							
Own home ²	67.1	1,297	78.7	1.32	1,324	54.4	1.43
Rent home	32.9	160	11.4	0.99	657	32.0	1.32
Other ¹	—	96	10.0	1.10	196	10.0	1.10
Chi-square		130.53					
<i>p</i> value		<0.0001					

See notes at end of table.

Table B-19. Comparison of characteristics of extended survey respondents in ATES Pilot Study (national sample only), by source of telephone numbers: 2010–11—Continued

Respondent characteristic	ACS proportion	Only vendor phone available or vendor phone is identical to screener phone			Only screener phone available or vendor phone is different from screener phone		
		Number	Final weighted percent	Final weighted (standard error)	Number	Final weighted percent	Final weighted (standard error)
Census region ³							
Northeast	18.5	338	23.2	1.00	338	15.7	0.57
Midwest	22.0	446	25.2	1.14	504	20.2	0.67
South	36.5	525	35.7	1.14	778	36.9	0.67
West	23.0	244	15.9	1.00	557	27.2	0.58
Chi-square		61.79					
p value		<0.0001					

— Not available.

¹ Black includes African American, Hispanic includes Latino, Other includes all other races, and two or more races includes non-Hispanics reporting more than one race.

² The ACS combines the “Own home” and “Other” categories.

³The following states and the District of Columbia are in each Census region: Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT; South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV; Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI; West: AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY.

NOTE: The Chi-square test is testing for association between the given characteristic and phone number source (“Only vendor phone available or vendor phone is identical to screener phone”/“Only screener phone available or vendor phone is different from screener phone”).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11; and U.S. Department of Commerce, Census Bureau, American Community Survey (ACS), 2005–09.

Table B-20. Screener and extended survey response rates in ATES Pilot Study (national sample only), by address characteristics: 2010–11

Characteristic of address	Total sampled addresses		Address eligibility ¹		Screener response		Extended interview response	
	Number	Percent	Number	Eligibility rate	Number	Response rate	Number	Response rate
Seasonal address								
No	18,604	99.2	16,488	88.6	8,442	51.2	3,716	43.8
Yes	146	0.8	64	43.8	36	56.3	14	39.7
Vacant								
No	17,595	93.8	16,267	92.5	8,360	51.4	3,672	43.7
Yes	1,155	6.2	285	24.7	118	41.4	58	51.0
Drop point								
No	18,584	99.1	16,398	88.2	8,410	51.3	3,694	43.8
Augmented drop point ²	48	0.3	47	97.9	25	53.2	16	55.0
Yes	118	0.6	107	90.7	43	40.2	20	45.8

¹ An address was considered eligible if a screener sent to that address was not returned as undeliverable.

² Augmented drop points are drop point addresses in which the vendor was able to append specific unit information by linking to other (non-USPS) data sources.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table B-21. Source of telephone numbers for sampled adults for whom a telephone number was available in ATES Pilot Study (national sample only), by address characteristics: 2010–11

Characteristic of address	Screener respondents		Only vendor phone available or vendor phone is identical to screener phone		Only screener phone available or vendor phone is different from screener phone	
	Number	Percent	Number	Percent	Number	Percent
Total	8,478	100.0	3,532	43.5	4,624	56.5
Seasonal address						
No	8,442	99.6	3,519	43.3	4,601	56.7
Yes	36	0.4	13	36.1	23	63.9
Vacant						
No	8,360	98.6	3,524	43.8	4,520	56.2
Yes	118	1.4	8	7.2	104	92.9
Drop point						
No	8,410	99.2	3,497	43.3	4,591	56.8
Augmented drop point ¹	25	0.3	9	36.0	16	64.0
Yes	43	0.5	26	60.5	17	39.6

¹ Augmented drop points are drop point addresses in which the vendor was able to append specific unit information by linking to other (non-USPS) data sources.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

B.7 Discussion

Although the ATES Pilot Study was designed to facilitate analyses aimed at determining the best ways to capture information on the attainment of education certificates and of industry-based licenses and certifications, it has important implications for future studies of the educational attainment and credentials of adults. A key finding is that, in the face of declining unit response rates to telephone surveys and declining coverage of landline RDD surveys, the ABS approach used for the ATES Pilot Study was generally successful. The screener attained a unit response rate of 51 percent (for the national sample) and, after screening, telephone numbers were available for 96 percent of sampled adults. These results bode well for a general population household study aiming to reach randomly selected adults to conduct an extended interview by telephone. However, it should be noted that factors such as sponsorship, topic salience, the length of the data collection period, the number and sequenced nature of the screener follow-up mailings, the use of incentives, specifics of the survey materials, and the use of FedEx delivery service for the final screener follow-up mailing may each have had important effects on the ability to attain high unit response rates. Additionally, strategies not used in the Pilot Study, such as offering a bilingual or dual (English and Spanish) screener, and offering a larger screener incentive in the initial screener mailing, might result in higher unit response rates.

The unit response rate to the extended interview (42 percent for the national sample in the ATES Pilot Study) is lower than might otherwise be attained, due to the following considerations:

- The primary foci of the ATES Pilot Study were sample yield and timeliness, not response rate. As a result, the data collection efforts were in some cases curtailed (e.g., limited telephone nonresponse follow-up).
- The extended interview was attempted only in English. (About 5 percent of nonresponse to the extended interview was the result of the case being coded a final language problem.)
- The incentive for completing the extended interview was promised in the screener letter (for the cases randomly designated to be notified in advance) and at the

beginning of the extended interview call. Offering a prepaid (rather than promised) incentive for completing the extended interview might have increased cooperation. However, the large prepaid incentives required to significantly boost response would also significantly increase cost and extend the length of the survey period (for the telephone interview) because an additional mailing is required.

- Refusal conversion did not begin until late in the extended interview data collection period.
- For cases in which the phone number loaded for the extended interview was not working, was a business number, or could not be used to get in touch with the sampled adult, no attempt was made to reach the adult using any other phone number that might have been available.

In addition to these factors, mode considerations are known to be important drivers of response rates. For example, in a large-scale pilot study conducted for the National Household Education Surveys Program (NHES) in 2009, the telephone was shown to be a much less effective mode for nonresponse follow-up than mail (Montaquila et al. 2010). Although it was necessary to conduct the extended interview in the ATES Pilot Study by telephone only, the use of mail in place of, or in combination with, the telephone (and possibly other modes) would likely have an effect on response rates.

The ABS sampling frame used to select the national sample of addresses for the ATES Pilot Study covers virtually all residential addresses in the United States. By comparison, it is currently estimated that only 71 percent of households (73 percent of adults) have a landline phone number (Blumberg and Luke 2010), and a sizable proportion of these numbers are not included in the standard list-assisted landline RDD sampling frames. And it has been well established that characteristics of persons in cell-only households differ from those in households with landline phones (Blumberg and Luke 2010). Although coverage may be increased by using a dual-frame (landline and cell) RDD approach, there are many operational issues and substantial cost implications with doing so, and the differential response of dual-user (landline and cell) households according to the frame from which they are sampled presents some challenging estimation issues (AAPOR

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***ATTACHMENT B-1:
Details of the Teleform Verification
Process***

A Verifier operator reviewed the responses in each form in a multistep process in a module of Cardiff TeleForm called Verifier. Verifier operators were provided with written rules for the Adult Training and Education Survey (ATES) Pilot Study indicating how to handle values that were out of range or responses that did not conform to the data specifications. If a response did not conform to the data specifications and a rule did not exist for handling the response, then the Verifier operator recorded in the Data Decision Log (DDL) the ID number, the field name, the response (as written on the paper copy of the form), and the response as it appeared in Verifier. Once verification was complete, the form was automatically exported to the database.

TeleForm Verifier rules were written to enable the Verifier operator to review any data fields flagged in the scan process and to either make the necessary clarification and/or flag the item(s) for further review. Project-specified Verifier rules used for the ATES Pilot Study are as follows (these are written as they were provided to the Verifier operators):

- Responses should appear exactly as written, except where indicated in Exhibit B-1 below.
- Do not scan blank forms. If a survey is blank, then notify the supervisor and **DO NOT VERIFY. Check that the correct disposition code MN1 is recorded in the receipt system.** Forms that are returned with only Question 1 answered (NUM18Up and no other data) should be treated as blanks (coded MN1). Forms with Q1 blank, but other data are entered are processed.
- If more than one response is provided but Verifier will only accept one response, then leave the field blank and **RECORD THIS IN YOUR DATA DECISION LOG.** Please see Exhibit B-1 below for exceptions to this rule.
- If the respondent marks between two boxes, then leave the question blank and **RECORD THIS IN YOUR DATA DECISION LOG.**
- If the respondent writes NA, N/A, not applicable, DK, don't know, unknown, or something similar and no boxes are checked, then leave the question blank and **RECORD THIS IN YOUR DATA DECISION LOG.** You do not need to record this in your entry log if there are no data in the column, i.e., there are no additional adults in

the household and the respondent writes NA at the top of the column, or across the page.

- If you have trouble reading the handwriting, then alert your supervisor. If a decision cannot be made, then leave blank. **RECORD THIS IN YOUR DATA DECISION LOG.**
- If a form has been completed using something that will not be picked up in scanning (e.g., light pencil, gold glitter pens), or a form is torn or too damaged to scan, alert your supervisor. Data should be carefully copied to a clean form and QCed by another team member. Record this in your entry log, and file both copies together.
- Enter numbers exactly as written. If Verifier gives you a field validation message saying that the value is out of range, then enter the number as written and click “Accept value and set field status to OK.”
- In the unlikely event that we received a form from the call center, process (receipt-scan) as usual.
- Duplicate forms should be scanned.
- For comments in the margins, process only scannable data.
- In the case of a barcode that has been cut off, check if a phone number has been provided. If there is a phone number, send it to the data manager for follow up with project staff. If there is no phone number, file.
- Rounding Rule: 0.5 and up, round up; below 0.5, round down.

Exhibit B-1. Additional Verification Procedures for Screener Questionnaire Items

Question Number	Variable Name	Scenario	Instructions
Q1	NUM18UP	Response is incongruent (e.g., under 18 years old).	Process as is.
Q3	AGE1 AGE2 AGE3 AGE4	AGE is less than 18	Leave as is (LAI) and process. It is not necessary to record this in the entry log.
Q4	SEX1 SEX2 SEX3 SEX4	More than one box is marked.	Leave blank.
Q5	GRADE1 GRADE2 GRADE3 GRADE4	Multiple responses checked.	Record highest response.
Q6	PHONE1 PHONE2 PHONE3 PHONE4	Incomplete phone number.	Process.
Q6	SAMEPHONE2 SAMEPHONE3 SAMEPHONE4	Box checked and different phone number provided.	Leave as is and process.
Q7	TYPEPHONE1 TYPEPHONE2 TYPEPHONE3 TYPEPHONE4	Both landline and cell phone checked.	Teleform should not stop. The value '9' will be written to the database for this variable.
Q7	TYPEPHONE1 TYPEPHONE2 TYPEPHONE3 TYPEPHONE4	Neither box is checked, and respondent writes home phone or similar next to box	Check home phone box

***ATTACHMENT B-2:
 Screener Questionnaire, Cover Letters,
 and Reminder Postcard Examples***

Table of Contents

Screener Questionnaire B-67
 Cover Letters B-69
 Reminder Post Card Examples B-77

Commonly Asked Questions

Q: How did you get my address?

A: Your address was randomly selected from among all of the residential mailing addresses in the nation. It was selected using scientific sampling methods to represent other households in the U.S.

Q: Why don't you ask more questions about training and education in this questionnaire?

A: The purpose of this questionnaire is to find out if anyone in your household is eligible for the next stage of the survey. If so, we will contact a member of your household to ask about their educational experiences.

Q: Why should I take part in this survey? Do I have to do this?

A: You represent thousands of other households like yours, and you cannot be replaced. Your answers and opinions are very important to the success of this survey. Your participation is voluntary. You may choose not to answer any or all questions in this survey. There are no penalties should you choose not to participate in this survey. In order for the survey to be representative it is important that you complete and return this questionnaire.

Q: How will the information I provide be used?

A: Your responses will be combined with those of others to produce statistical summaries and reports. Your individual data will not be reported. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law [Education Sciences Reform Act of 2002 (ESRA 2002) Public Law 107-279, Section 183].

Q: How much time will it take?

A: On average, it should take 3 minutes for you to respond, including the time for reviewing instructions, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: The Adult Training and Education Survey, National Center for Education Statistics, U.S. Department of Education, 1990 K Street NW, Washington, DC 20006-5650. Do not return the completed form to this address.

Q: Should I include my son/daughter who is away at school? Should I include my mother who is visiting for the summer?

A: Include adults age 18 and older who are temporarily away from home (for example, attending college or university) if they have no other permanent home. Do not include guests/visitors who have another permanent home.

Q: What should I do if there are more than 4 adults in my household?

A: If there are more than four adults in your household, please call 1-888-627-5304 for instructions about how to complete the form.

Q: Who is sponsoring the survey? Is this survey conducted by the Federal Government?

A: The National Center for Education Statistics, within the Department of Education, is authorized to conduct this survey (Section 9543, 20 US Code). Westat has been contracted to conduct this survey. This survey has been approved by the Office of Management and Budget, the office that reviews all federally sponsored surveys. The approval number assigned to this survey is 1850-0803. You may send any comments about this survey, including its length, to the Federal Government. Write to The Adult Training and Education Survey, National Center for Education Statistics, U.S. Department of Education, 1990 K Street NW, Washington, DC 20006-5650. You may send e-mail to ATESInfo@Westat.com.

Q: Who is Westat?

A: Westat is a research company located in Rockville, Maryland. Westat is conducting this survey under contract to the U.S. Department of Education. If you have any questions about the survey, contact Westat toll-free at 1-888-627-5304.

OMB No. 1850-0803 OMB APPROVED

U.S. Department of Education
National Center for Education Statistics



The Adult Training and Education Survey



The National Center for Education Statistics is authorized to conduct this survey under Section 9543, 20 US Code. Your participation is voluntary. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law [Education Sciences Reform Act of 2002 (ESRA 2002) Public Law 107-279, Section 183]. The information you provide will be combined with information from other participants to produce statistical summaries and reports.



Adult Training and Education Survey

U.S. Department of Education
National Center for Education Statistics



Start Here

The Department of Education is studying adult training and education. Each household is different and we need your response so we can contact you to administer a survey that is right for your household.

- ▶ Return this form even if no one in your household is currently in an adult training or education program.
- ▶ This survey should be filled out by an adult household member living at this address.
- ▶ Please use a blue or black pen if available.

1. How many people age 18 or older live in this household?

Include adults age 18 and older who are temporarily away from home (for example, attending college or university) if they have no other permanent home.

number age 18 or older

- ▶ Continue answering questions 2 through 7 for each person age 18 or older living in this household. Start with yourself.

You (Adult 1)

2. What is his or her first name, initials, or nickname?
First names will be used only to ask further questions about a specific person.

3. How old is this person in years? years

4. What is this person's sex? Male
 Female

5. What is the highest level or degree of schooling this person has completed? ONE only.
 Less than high school
 High school or GED
 Some college, no degree
 Two-year degree
 Bachelor's degree
 Higher than bachelor's degree

6. What is the best phone number to use to contact this person? - -
The phone number will only be used for the purpose of this research study.

7. What type of phone number is this? Landline/wired
 Cell/wireless

Adult 2

2. What is his or her first name, initials, or nickname?
First names will be used only to ask further questions about a specific person.

3. How old is this person in years? years

4. What is this person's sex? Male
 Female

5. What is the highest level or degree of schooling this person has completed? Less than high school
 High school or GED
 Some college, no degree
 Two-year degree
 Bachelor's degree
 Higher than bachelor's degree

6. What is the best phone number to use to contact this person? Same As Adult 1, or - -

7. What type of phone number is this? Landline/wired
 Cell/wireless

Adult 3

2. What is his or her first name, initials, or nickname?
First names will be used only to ask further questions about a specific person.

3. How old is this person in years? years

4. What is this person's sex? Male
 Female

5. What is the highest level or degree of schooling this person has completed? Less than high school
 High school or GED
 Some college, no degree
 Two-year degree
 Bachelor's degree
 Higher than bachelor's degree

6. What is the best phone number to use to contact this person? Same As Adult 1, or - -

7. What type of phone number is this? Landline/wired
 Cell/wireless

Adult 4

2. What is his or her first name, initials, or nickname?
First names will be used only to ask further questions about a specific person.

3. How old is this person in years? years

4. What is this person's sex? Male
 Female

5. What is the highest level or degree of schooling this person has completed? Less than high school
 High school or GED
 Some college, no degree
 Two-year degree
 Bachelor's degree
 Higher than bachelor's degree

6. What is the best phone number to use to contact this person? Same As Adult 1, or - -

7. What type of phone number is this? Landline/wired
 Cell/wireless

- ▶ Please verify that you have reported for each adult living in this household. If there are more than 4 adults living in this household, please call 1-888-627-5304 for instructions.

▶ Thank you. Please return this form in the postage-paid envelope provided or mail it to:
The Adult Training and Education Survey
Westat
1600 Research Blvd., RC B16
Rockville, MD 20850-3129

ATES



U.S. DEPARTMENT OF EDUCATION
INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
[CITY], [ST] [ZIPCODE]-[ZIP4]

September 15, 2010

Dear [City] Household:

The U.S. Department of Education is conducting an important national research study, and we need your help. This short survey is the first step in a study about job and career training opportunities for people of all ages. It will let us know if anyone in your household is eligible for the study.

Please fill out this short survey and mail it back in the postage-paid envelope that is provided.

- It takes only a couple of minutes to fill out.
- Every type of household in America needs to be included.
- If no one in your household is eligible, we will not contact you again about this study.
- The results of the study will help policymakers, researchers, and educators understand the job and career training needs of our diverse population in changing times.

Your household was chosen as part of this voluntary scientific survey, and we cannot replace you with someone else. All information you provide may only be used for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law [Education Sciences Reform Act of 2002 (ESRA 2002) Public Law 107-279, Section 183].

We have enclosed a small cash token of our appreciation.

Westat, a survey research group, is conducting this survey on our behalf. If you have questions or need assistance, please contact them at 1-888-627-5304. You can find more information about this study online at nces.ed.gov/ATES.

Thank you for taking part in this important study.

Sincerely,

Stuart Kerachsky
Acting Commissioner
National Center for Education Statistics

Enclosure

WASHINGTON, D.C. 20006



U.S. DEPARTMENT OF EDUCATION
INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
[CITY], [ST] [ZIPCODE]-[ZIP4]

September 15, 2010

Dear [City] Household:

The U.S. Department of Education is conducting an important national research study, and we need your help. This short survey is the first step in a study about job and career training opportunities for people of all ages. It will let us know if anyone in your household is eligible for the study.

Please fill out this short survey and mail it back in the postage-paid envelope that is provided.

- It takes only a couple of minutes to fill out.
- Every type of household in America needs to be included.
- If no one in your household is eligible, we will not contact you again about this study.
- The results of the study will help policymakers, researchers, and educators understand the job and career training needs of our diverse population in changing times.

Your household was chosen as part of this voluntary scientific survey, and we cannot replace you with someone else. All information you provide may only be used for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law [Education Sciences Reform Act of 2002 (ESRA 2002) Public Law 107-279, Section 183].

We have enclosed a small cash token of our appreciation. If someone in your household is selected for a telephone follow-up interview, we will send an additional \$10 after the telephone interview is completed.

Westat, a survey research group, is conducting this survey on our behalf. If you have questions or need assistance, please contact them at 1-888-627-5304. You can find more information about this study online at nces.ed.gov/ATES.

Thank you for taking part in this important study.

Sincerely,

Stuart Kerachsky
Acting Commissioner
National Center for Education Statistics

Enclosure

WASHINGTON, D.C. 20006



U.S. DEPARTMENT OF EDUCATION
INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
[CITY], [ST] [ZIPCODE]-[ZIP4]

September 15, 2010

Dear [City] Household:

The U.S. Department of Education is conducting an important national research study, and we need your help. This short survey is the first step in a study about job and career training opportunities for people of all ages. It will let us know if anyone in your household is eligible for the study.

Please fill out this short survey and mail it back in the postage-paid envelope that is provided.

- It takes only a couple of minutes to fill out.
- Every type of household in America needs to be included.
- If no one in your household is eligible, we will not contact you again about this study.
- The results of the study will help policymakers, researchers, and educators understand the job and career training needs of our diverse population in changing times.

Your household was chosen as part of this voluntary scientific survey, and we cannot replace you with someone else. All information you provide may only be used for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law [Education Sciences Reform Act of 2002 (ESRA 2002) Public Law 107-279, Section 183].

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U.S. DEPARTMENT OF EDUCATION
INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
[CITY], [ST] [ZIPCODE]-[ZIP4]

October 6, 2010

Dear [City] Household:

We recently mailed you a short survey about an important national research study and have not heard back from you. This short survey is the first step in a study about job and career training opportunities for people of all ages. It will let us know if anyone in your household is eligible for the study.

Please fill out this short survey and mail it back in the postage-paid envelope that is provided. If you have already mailed in your survey and this letter has reached you late, we apologize for the duplication, and thank you!

- It takes only a couple of minutes to fill out.
- Every type of household in America needs to be included.
- If no one in your household is eligible, we will not contact you again about this study.
- The results of the study will help policymakers, researchers, and educators understand the job and career training needs of our diverse population in changing times.

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INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
[CITY], [ST] [ZIPCODE]-[ZIP4]

October 6, 2010

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INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
[CITY], [ST] [ZIPCODE]-[ZIP4]

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INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
[CITY], [ST] [ZIPCODE]-[ZIP4]

October 20, 2010

Dear [City] Household:

We have been trying to reach you about an important national research study. Unfortunately, we have not yet received your completed questionnaire.

We have mailed this third questionnaire using rush delivery because of the importance of your response.

This short survey is the first step in a study about job and career training opportunities for people of all ages. Please fill out this short survey and mail it back in the postage-paid envelope that is provided. If you have already mailed in your survey and this letter has reached you late, thank you!

- It takes only a couple of minutes to fill out.
- Every type of household in America needs to be included.
- If no one in your household is eligible, we will not contact you again about this study.
- The results of the study will help policymakers, researchers, and educators understand the job and career training needs of our diverse population in changing times.

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U.S. DEPARTMENT OF EDUCATION
INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
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Sincerely,

Stuart Kerachsky
Acting Commissioner
National Center for Education Statistics

Enclosure

WASHINGTON, D.C. 20006



U.S. DEPARTMENT OF EDUCATION
INSTITUTE OF EDUCATION SCIENCES

NATIONAL CENTER FOR EDUCATION STATISTICS

[CITY] RESIDENT
[ADDRESS]
[CITY], [ST] [ZIPCODE]-[ZIP4]

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- Every type of household in America needs to be included.
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Thank you for taking part in this important study.

Sincerely,

Stuart Kerachsky
Acting Commissioner
National Center for Education Statistics

Enclosure

WASHINGTON, D.C. 20006

September 22, 2010

Last week we mailed you a questionnaire for the Adult Training and Education Survey, sponsored by the U.S. Department of Education. If someone in your household has already returned the survey, we thank you very much for your help.

If you have not completed and returned your survey, please do so right away. We need to hear from everyone and your help is very important to us. Your household was randomly selected to take part in this survey and cannot be replaced.

If you have any questions, feel free to contact us at 1-888-627-5304.

Sincerely,

A handwritten signature in black ink, appearing to read "Stuart Kerachsky". The signature is written in a cursive style with a large, prominent "S" at the beginning.

Stuart Kerachsky, Acting Commissioner,
National Center for Education Statistics

Appendix C: Supplemental Tables

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Table C-1. Percentage distribution of respondents, by highest reported level of education: 2010–11

Highest reported level of education	Percent
Total	100.0
Less than high school	9.0
Grades 1–11	6.6
12th grade, no diploma	2.4
High school (or equivalent)	24.9
Regular high school diploma	22.3
GED or alternative credential	2.7
Some college or associate's degree	25.8
Some college credit, but less than 1 year	4.8
1 or more years of college credit, no degree	13.2
Associate's degree	7.8
Bachelor's degree	23.4
Graduate or professional degree	16.9
Master's degree	12.4
Professional degree beyond a bachelor's degree	1.9
Doctorate degree	2.5

NOTE: Figures represent unweighted estimates. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-2. Percentage of respondents reporting a certification/license or certificate: 2010–11

Reporting of credentials	Percent
Certification(s)/license(s)	33.1
Certificate(s)	14.1
No credentials were reported	58.8

NOTE: Figures represent unweighted estimates. Respondents were able to select multiple credentials; therefore, column totals may not add to 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-3. Percentage distribution of respondents who reported any credentials, percentage of respondents who reported any certification/license or certificate, and percentage distribution of certification/license or certificate among those who reported any credentials, by respondent characteristics: 2010–11

Respondent characteristics	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported credentials, percentage distribution of respondents who reported		
	No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate
Total	58.8	41.2	33.1	14.1	65.7	19.7	14.6
Sex							
Male	59.3	40.7	33.0	13.6	66.6	18.8	14.6
Female	58.4	41.6	33.2	14.5	65.1	20.3	14.7
Race/ethnicity ¹							
White	58.8	41.3	33.9	13.4	67.6	17.8	14.7
Black	58.4	41.6	29.8	17.9	56.9	28.5	14.6
Hispanic	58.5	41.5	33.9	15.3	63.3	18.4	18.4
Asian	64.1	35.9	28.2	10.7	70.3	21.6	8.1
Other	61.8	38.2	23.5	17.7	53.9	38.5	7.7
Two or more races	55.8	44.2	27.9	22.1	50.0	37.0	13.0
Age							
18 to 24 years old	83.8	16.2	14.9	3.1	81.1	8.1	10.8
25 to 34 years old	56.2	43.8	37.8	11.0	74.9	13.7	11.4
35 to 44 years old	53.0	47.0	41.2	12.9	72.5	12.4	15.1
45 to 54 years old	53.0	47.0	37.4	18.3	61.0	20.5	18.5
55 to 64 years old	53.4	46.6	35.6	17.6	62.3	23.6	14.1
65 to 74 years old	57.8	42.2	32.9	15.9	62.3	22.1	15.6
75 years old and over	74.3	25.7	17.9	10.6	59.0	30.3	10.7

See notes at end of table.

Table C-3. Percentage distribution of respondents who reported any credentials, percentage of respondents who reported any certification/license or certificate, and percentage distribution of certification/license or certificate among those who reported any credentials, by respondent characteristics: 2010–11—Continued

Respondent characteristics	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported credentials, percentage distribution of respondents who reported		
	No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate
Highest reported level of education							
Less than high school	78.6	21.4	14.0	10.4	51.4	24.7	13.9
Grades 1–11	82.2	17.8	12.2	8.9	50.0	31.8	18.2
12th grade, no diploma	68.9	31.1	18.9	14.4	53.6	39.3	7.1
High school (or equivalent)	72.1	27.9	19.7	12.8	54.1	29.3	16.6
Regular high school diploma	71.8	28.2	20.0	13.0	53.9	29.1	17.1
GED or alternative credential	74.8	25.3	17.2	11.1	56.0	32.0	12.0
Some college or associate's degree	54.6	45.4	31.6	23.3	48.7	30.4	20.8
Some college credit, but less than 1 year	63.1	36.9	21.8	23.5	36.4	40.9	22.7
1 or more years of college credit, no degree	54.3	45.8	32.2	22.7	50.4	29.7	19.9
Associate's degree	49.8	50.2	36.7	24.2	51.7	26.9	21.4
Bachelor's degree	54.9	45.1	40.1	9.8	78.4	10.9	10.7
Graduate or professional degree	40.3	59.7	55.7	10.2	83.0	6.7	10.4
Master's degree	42.0	58.0	53.2	11.2	80.7	8.2	11.2
Professional degree beyond a bachelor's degree	20.8	79.2	76.4	11.1	86.0	3.5	10.5
Doctorate degree	46.8	53.2	52.1	4.3	92.0	2.0	6.0

See notes at end of table.

Table C-3. Percentage distribution of respondents who reported any credentials, percentage of respondents who reported any certification/license or certificate, and percentage distribution of certification/license or certificate among those who reported any credentials, by respondent characteristics: 2010–11—Continued

Respondent characteristics	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported credentials, percentage distribution of respondents who reported		
	No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate
Labor force status							
Employed	52.0	48.0	41.4	13.6	71.7	13.9	14.4
Unemployed (seeking employment)	64.3	35.7	25.9	16.5	53.7	27.4	19.0
Not in labor force	67.8	32.2	22.3	14.2	55.8	30.8	13.4
Labor force status unknown	47.5	52.5	47.5	22.5	57.1	9.5	33.3
Immigration status							
Born in U.S.	59.0	41.0	32.9	14.1	65.5	19.8	14.7
Born outside of U.S.	56.4	43.6	35.6	14.2	67.4	18.4	14.3

¹ Black includes African American, Other includes Pacific Islanders and American Indians (including Alaska Natives), and two or more races includes non-Hispanics reporting more than one race. Race categories exclude persons of Hispanic ethnicity.

NOTE: Figures represent unweighted estimates. Imputed data were used for all respondent characteristics except labor force status, for which imputed data were not available. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-4. Percentage distribution of respondents reporting certifications/licenses, by number of certifications/licenses reported: 2010–11

Number of certifications/licenses reported	Percent
Total	100.0
None	66.5
One or more	33.0
1	21.3
2	6.9
3	2.6
4	0.9
5 or more	0.9
Number not specified	#
Don't know	0.5

Rounds to zero.

NOTE: Figures represent unweighted estimates. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-5. Percentage distribution of certifications/licenses, by respondents' classification of certification/license type: 2010–11

Respondents' classification of certification/license type	Percent
Total	100.0
Certification only	44.9
License only	29.4
Certification and license both	22.0
Data missing or not collected	3.7
Don't know	3.0
Refused	#
Not collected	#

Rounds to zero.

NOTE: Figures represent unweighted estimates. Survey question was asked for the first five certifications and licenses identified per respondent for 1,196 respondents. Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-6. Percentage distribution of respondents' five most recent certifications/licenses and percentage distribution of respondents' most recent certification/license, by Standard Occupational Classification (SOC): 2010–11

Standard Occupational Classification (SOC)	Percentage distribution of recently earned certifications/licenses	
	Five most recent	Most recent
Total	100.0	100.0
Architecture, engineering, and information technology	5.6	4.5
Computer occupations	3.1	2.2
Architects, surveyors, cartographers and engineers	2.0	2.0
Drafters, engineering technicians, and mapping technicians	#	#
Media and communication equipment workers	#	#
Business	15.5	16.4
Management occupations	3.9	4.3
Business and financial operations	2.7	3.3
Financial and insurance sales occupations	4.4	3.3
Real estate brokers and sales agents	2.7	3.3
Other sales and related occupations	0.8	0.9
Office and administrative support occupations	1.0	1.3
Health	23.3	24.7
Health diagnosing and treating practitioners, except nurses	3.7	4.4
Health technologists and technicians	6.8	6.7
Nursing occupations	7.1	7.4
Health care support occupations	5.7	6.2
Personal services	4.2	4.8
Personal appearance workers (cosmetologists, etc.)	1.8	2.3
Other personal care and service workers	2.4	2.6
Public and social services	10.1	10.2
Community and social service occupations	4.0	4.3
Lawyers, judges, and related workers	2.9	2.8
Legal support workers	#	#
Protective service occupations	2.8	2.7

See notes at end of table.

Table C-6. Percentage distribution of respondents' five most recent certifications/licenses and percentage distribution of respondents' most recent certification/license, by Standard Occupational Classification (SOC): 2010–11—Continued

Standard Occupational Classification (SOC)	Percentage distribution of recently earned certifications/licenses	
	Five most recent	Most recent
Education	20.4	19.6
Pre-K–12 teachers	18.2	18.0
Other education and training occupations	2.3	1.7
Trades	14.8	15.0
Construction and extraction occupations	3.8	3.6
Vehicle and mobile equipment mechanics, installers, and repairers	1.8	1.3
Heating, air conditioning, refrigeration mechanics, and installers	0.8	0.7
Other installation, maintenance, and repair workers	1.4	1.4
Production occupations, except food production	1.6	1.8
Transportation and material moving occupations	5.4	6.3
Other	4.0	4.3
Mathematics and science occupations	0.6	0.5
Art and design workers	#	#
Entertainers and performers, sports, and related workers	#	#
Media and communication workers	#	#
Food processing and preparation occupations	1.3	1.5
Building cleaning and grounds maintenance occupations	0.9	1.0
Farming, fishing, and forestry occupations	#	#
Missing or cannot determine placement	2.3	0.6

Rounds to zero.

NOTE: Figures represent unweighted estimates. Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding. Respondents were asked to report the credential most recently earned, followed by the next most recently earned and so on up to five credentials.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-7. Percentage distribution of most recent certification/license, by number of weeks needed to complete certification/license: 2010–11

Number of weeks needed to earn most recent certification/license	Percent
Total	100.0
Earned through a degree program	22.0
Less than 1 week	6.0
1 to 4 weeks	12.5
5 to 12 weeks	14.1
13 to 24 weeks	7.9
25 to 52 weeks	10.0
53 to 104 weeks	8.9
Greater than 104 weeks	12.9
Data missing or not collected	5.9

NOTE: Figures represent unweighted estimates. Survey questions were asked only for the most recent work-related certification/license or, if none were identified as work-related, for the most recent certification/license. The average number of weeks taken to earn the most recent certification/license was 54 ($n = 863$). Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-8. Percentage distribution of certifications/licenses related to respondents' current jobs, by certification/license requirement: 2010–11

Certification/license requirement	Percent
Total	100.0
Required for current job	72.8
Not required for current job	27.2

NOTE: Figures represent unweighted estimates. Survey questions were asked only for the most recent work-related certification/license or, if none were identified as work-related, for the most recent certification/license. Additionally, this survey question was only asked of those respondents who reported being currently employed. Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-9. Percentage of respondents' self-reported benefit from earning most recent certification/license or certificate, by benefit type and number of benefits: 2010–11

Benefit type and number of benefits	Percent
Benefit type	
Promotion	2.2
Higher pay or bonus	22.2
Career advancement	12.2
Is just mandatory or required for job	19.3
Improved job performance	5.2
Helped me stay current with new regulations, laws, or technologies	6.3
To change job or career field, enter the workforce, or start own business	18.2
No benefits received	10.2
Other	32.3
Don't know/Refused	0.8
Number of benefits	
1	76.2
2	18.2
3	4.0
4	0.8
Missing	0.9

NOTE: Figures represent unweighted estimates. Includes self-reported data only; data completed by proxy were excluded from this analysis. Question was asked as an open-ended question. Interviewers were instructed to select all that apply; therefore, column totals may exceed 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-10. Percentage distribution of respondents reporting certificates, by number of certificates reported: 2010–11

Number of certificates reported	Percent
Total	100.0
None	85.4
One or more	14.1
1	9.9
2	2.1
3	1.0
4	#
5 or more	0.6
Number not specified	#
Don't know/Refused	0.5

Rounds to zero.

NOTE: Figures represent unweighted estimates. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-11. Percentage distribution of respondents' five most recent certificates and most recent certificate, by Classification of Instructional Program (CIP): 2010–11

Classification of Instructional Program	Percentage distribution of recently earned certificates	
	Five most recent	Most recent
Total	100.0	100.0
Architecture, engineering, and information technology	14.3	14.5
Architecture and engineering	3.1	3.9
Communications technologies/technologists	0.6	0.6
Computer and information sciences	7.9	6.8
Engineering and related technologies	2.7	3.3
Business	13.6	14.5
Business management	6.5	6.8
Business support	4.5	5.8
Marketing	2.7	1.9
Health	15.3	18.6
Health professions, except nursing	1.2	1.6
Nursing	3.9	5.6
Health technologists and technicians	6.6	7.8
Health aides	3.6	3.7
Personal services	7.1	8.9
Cosmetology	3.7	5.2
Culinary arts	1.9	2.1
Personal services (other than cosmetology and culinary arts)	1.5	1.6
Public and social services	8.9	8.7
Legal professions	#	#
Legal support services	1.2	1.6
Library sciences	#	#
Protective services	5.1	3.5
Public administration and human services	2.2	3.1

See notes at end of table.

Table C-11. Percentage distribution of respondents' five most recent certificates and most recent certificate, by Classification of Instructional Program (CIP): 2010–11—Continued

Classification of Instructional Program	Percentage distribution of recently earned certificates	
	Five most recent	Most recent
Education	5.0	4.7
Education	5.0	4.7
Trades	20.4	18.6
Construction trades	5.6	5.6
Manufacturing	2.7	2.7
Mechanic and repair technologies	8.5	6.2
Transportation and material moving	3.6	4.1
Other	5.9	5.6
Visual and performing arts	1.7	1.2
Humanities and general studies	0.5	0.8
Mathematics and science	0.6	0.6
Psychology	#	#
Social sciences and history	#	#
Agriculture and natural resources	1.8	1.9
Communications, journalism, and related programs	0.8	0.6
Missing or cannot determine placement	9.7	5.8

Rounds to zero.

NOTE: Figures represent unweighted estimates. Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding. Respondents were asked to report the credential most recently earned, followed by the next most recently earned and so on up to five credentials.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

**Table C-12. Percentage distribution of respondents' certificate completion status:
2010–11**

Certificate completion status	Percent
Total	100.0
Certificate completed	93.3
Certificate not completed	1.8
Don't know	2.2
Refused	0.9
Missing/Not collected	1.7

NOTE: Figures represent unweighted estimates. Survey question was asked for the first five certificates identified per respondent for 520 respondents. Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-13. Percentage distribution of most recent certificates, by number of credit hours or hours required to complete the certificate program: 2010–11

Number of credit hours or hours	Percent
Reported in credit hours	100.0
1 to 4 credit hours	14.6
5 to 8 credit hours	6.1
9 to 12 credit hours	6.1
13 to 20 credit hours	15.9
21 or more credit hours	57.3
Reported in hours	100.0
1 to 4 actual hours	2.8
5 to 8 actual hours	5.6
9 to 12 actual hours	3.5
13 to 20 actual hours	6.9
21 to 50 actual hours	23.6
51 to 75 actual hours	6.9
76 to 100 actual hours	6.9
101 to 200 actual hours	16.7
201 to 300 actual hours	2.1
301 to 400 actual hours	2.1
401 to 500 actual hours	2.1
501 or more actual hours	20.8
Data missing or not collected	100.0
Don't know	93.8
Refused	1.0
Missing	5.2

NOTE: Figures represent unweighted estimates. Survey questions were asked only for the most recent certificate. The average number of credit hours needed to earn the most recent certificate was 92, and the average number of actual hours needed to earn the most recent certificate was 388. When credit hour responses were capped at 150, the average number of credit hours needed was 32 and when actual hour responses were capped at 2,100, the average number of actual hours needed was 334. Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-14. Percentage of respondents' benefits received by earning most recent certificate that was not part of the coursework or training taken for a certification or license, by benefit type and number of benefits: 2010–11

Benefit type and number of benefits	Percent
Type of benefit	
Promotion	2.0
Higher pay or bonus	7.8
Career advancement	10.6
Is just mandatory or required for job	9.0
Improved job performance	5.9
Helped me stay current with new regulations, laws, or technologies	6.7
To change job or career field, enter the workforce, or start own business	20.5
No benefits received	13.2
Other	37.0
Don't know/Refused/Missing	3.4
Number of benefits	
1	84.0
2	9.8
3 or more	2.8
Missing	3.4

NOTE: Figures represent unweighted estimates. Survey question was asked only for the most recent certificate. Includes self-reported data only; data completed by proxy were excluded from this analysis. Question was asked as an open-ended question. Interviewers were instructed to select all that apply; therefore, column totals may exceed 100 percent. Additionally, questions asked about the most recent certification and licensure were not asked again about the most recent certificate if a respondent said that their most recent certificate was part of the coursework or training taken for “a certification or license” at item CT2C. However, because the ATEs pilot interviews did not explicitly confirm that the most recent certificate was part of the coursework or training taken for the most recent certification or license, the direct reports (those reported directly in the certificate section) are presented separately from the indirect reports (those who said “Yes” to item CT2C and therefore reported in the certification/license section). Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-15. Percentage of certificates, by whether they were identified to be a part of the coursework or training taken for a previously reported certification/license: 2010–11

Certificate holder reporting of certifications/licenses	Percent
Certification/license was reported	43.1
Certificate is part of coursework or training taken for certification/license	71.1
Certificate is not part of coursework or training taken for certification/license	21.8

NOTE: Figures represent unweighted estimates. Includes respondents' first five reported certificates only. Includes self-reported data only; data completed by proxy were excluded from this analysis. Question was asked only if respondent previously reported having a certification/license. In all, the question was asked of 43.1 percent of all reported certificates where the respondent also reported having a certification/license. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-16. Percentage distribution of respondents, by response to the certification/license question and interviewers' use of the certification probe: 2010–11

Interviewers' use of the certification probe	Total percent	Percent of respondents reporting a certification/license	Percent of respondents not reporting a certification/license	Percent of respondents answering "Don't know" or "Refused" to certification/license question
Probe used	100.0	33.6	64.5	1.9
Probe not used	100.0	32.8	67.0	#

Rounds to zero.

NOTE: Figures represent unweighted estimates. The probe was used with 17 percent of all respondents. Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-17. Percentage distribution of respondents, by response to the certificate question and interviewers' use of the certificate probe: 2010–11

Interviewers' use of the certificate probe	Total percent	Percent of respondents reporting a certificate	Percent of respondents not reporting a certificate	Percent of respondents answering "Don't know" or "Refused" to certificate
Probe used	100.0	26.6	71.9	1.5
Probe not used	100.0	12.1	87.7	#

Rounds to zero.

NOTE: Figures represent unweighted estimates. The probe was used with 15 percent of all respondents. Includes self-reported data only; data completed by proxy were excluded from this analysis. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

Table C-18. Percentage distribution of respondents in seeded sample reporting certification/license not matching certification/license reported in seeded certification/license frame, by credential type: 2010–11

Credential type ¹	Percent of certifications	Percent of licenses
CN4. "Is that a certification, a license, or both?"		
Certification	53.8	22.1
License	31.2	50.8
Both	10.8	23.0
Don't know/Refused/Missing	4.3	4.1
CN6. "Did you get this certification/license mainly for work-related reasons or mainly for personal interest?"		
Mainly work-related	85.0	91.8
Mainly personal interest	11.8	4.9
Don't know/Refused/Missing	3.2	3.3

¹ Items asked of the first five certifications or licenses, or both.

NOTE: Figures represent unweighted estimates. Includes self-reported data only; data completed by proxy were excluded from this analysis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

Table C-19. Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and selected survey items, with “don’t know” and “refused” set to missing: 2010–11

Certification/licensure item	Self-reported estimate	Proxy-reported estimate	Percentage difference¹
CN1. Now I'd like to ask you about professional certification and licensure.			
Do you/person have a professional certification or a state or industry license?			
Yes	33.1	32.6	-0.5
No	66.9	67.4	0.5
CN1A. Have more than one certification or license?			
Yes	35.0	32.0	-3.0
No	65.0	68.0	3.0
CN1B. How many certifications do you/person have?			
1	65.2	71.3	6.1
2	21.3	19.6	-1.7
3	7.9	6.3	-1.6
4	2.9	1.7	-1.2
5 or more	2.7	1.0	-1.7
CN3AR1. Name of most recent certification			
Name reported	100.0	99.0	-1.1
CN4R1. Is that a certification, a license, or both?			
Certification	42.3	37.4	-5.0
License	43.5	32.0	-11.4
Both	23.2	30.6	7.4
CN6R1. Did you/person get this certification mainly for work-related reasons, or mainly for personal interest?			
Mainly work-related	92.0	92.4	0.4
Mainly personal interest	8.0	7.6	-0.4

See notes at end of table.

Table C-19. Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and selected survey items, with “don’t know” and “refused” set to missing: 2010–11—Continued

Certification/licensure item	Self-reported estimate	Proxy-reported estimate	Percentage difference ¹
CN7A. Did you/person take the coursework or training for the certification as part of a college or university certificate or degree program?			
Yes	55.9	60.4	4.5
No	44.1	39.6	-4.5
CN7B. Was that a certificate program, an associate's degree program, a bachelor's degree program, or something else?			
Certificate	18.8	11.0	-7.7
Associate's	10.7	11.7	1.0
Bachelor's	34.6	42.9	8.3
Other	36.0	34.4	-1.6
CN7C. Was the coursework or training mainly self-study or mainly classes or courses with an instructor?			
Mainly self-study	11.9	11.4	-0.5
Mainly with an instructor	88.1	88.7	0.5
CN8NR. How many weeks was the course?			
Less than 1 week	8.3	8.6	0.2
1 to 4 weeks	17.4	16.5	-0.9
5 to 12 weeks	19.5	19.7	0.3
13 to 24 weeks	10.9	7.2	-3.7
25 to 52 weeks	13.8	11.2	-2.6
53 to 104 weeks	12.3	19.1	6.8
Greater than 104 weeks	17.8	17.8	-0.1
CN9NR. How many hours per week with an instructor?			
Less than 1 hour	3.8	3.8	0.0
1 to 4 hours	14.0	9.5	-4.5
5 to 8 hours	19.4	20.0	0.6
9 to 12 hours	10.2	8.6	-1.6
13 to 20 hours	17.1	17.1	0.1
21 to 50 hours	34.4	38.1	3.7
51 or more hours	1.1	2.9	1.7
CN10A. Did you/person have to do any of the following to get this— demonstrate skills while on the job?			
Yes	66.2	72.8	6.7
No	33.8	27.2	-6.7
CN10B—pass a test or exam?			
Yes	91.1	94.1	3.0
No	8.9	5.9	-3.0

See notes at end of table.

Table C-19. Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and selected survey items, with “don’t know” and “refused” set to missing: 2010–11—Continued

Certification/licensure item	Self-reported estimate	Proxy-reported estimate	Percentage difference ¹
CN10C. Submit a portfolio of work?			
Yes	32.3	33.2	0.9
No	67.7	66.8	-0.9
CN11A. Have to take...continuing education classes or earn CEUs to maintain it?			
Yes	64.3	63.6	-0.8
No	35.7	36.4	0.8
CN11B—periodic tests?			
Yes	31.6	37.1	5.5
No	68.4	62.9	-5.5
CN12. Is this certification related to current job?			
Yes	82.0	85.6	3.6
No	18.4	14.4	-3.6
CN13. Is it required for current job?			
Yes	72.8	82.5	9.7
No	27.2	17.5	-9.7
CN14. Issuing organization			
CN14. [certified] [licensed] by state			
Yes	68.9	76.3	7.4
No	31.1	23.7	-7.4
CN14. [certified] [licensed] by industry			
Yes	2.6	4.2	1.6
No	97.4	95.8	-1.6
CN14. [certified] [licensed] by company			
Yes	5.2	2.8	-2.4
No	94.8	97.2	2.4

See notes at end of table.

Table C-19. Percentage distribution of responses to certification/license survey items, by reporting method, difference between the reporting method, and selected survey items, with “don’t know” and “refused” set to missing: 2010–11—Continued

Certification/licensure item	Self-reported estimate	Proxy-reported estimate	Percentage difference ¹
CN14. Issuing organization—Continued			
CN14. [certified] [licensed] by professional association			
Yes	16.1	11.5	-4.6
No	83.9	88.5	4.6
CN14. [certified] [licensed] by other body			
Yes	14.0	10.1	-3.9
No	86.0	89.9	3.9
CN15A. Can this certification be...revoked or suspended for any reason?			
Yes	83.8	83.5	-0.3
No	16.3	16.5	0.3
CN15B—used if you/person wanted to get a job with any employer in that field?			
Yes	95.5	98.0	2.5
No	4.5	2.0	-2.5
CN17. Is the certification currently valid or has it expired?			
Currently valid	74.6	71.2	-3.3
Expired	25.5	28.8	3.3
CN18. Do you/person plan to renew it?			
Yes	11.5	‡	†
No	88.5	‡	†

† Not applicable.

‡ Data suppressed because reporting standards were not met and estimates are unreliable.

¹ Difference is the proxy percentage minus the self-reported percentage.

NOTE: Figures represent unweighted estimates. Only valid responses are reported in the table; respondents not asked questions because of legitimate skips due to earlier responses are excluded. Proxy reports are when the respondent to the main interview answered questions about another randomly selected adult in the household.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES), Pilot Study, 2010–11.

Appendix D: Standard Error Tables

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Table D-1. Standard errors for Table 2-3: Number and percentage distribution of respondents who reported any credentials, percentage of adults who reported any certification/license or certificate, and among those who reported any credentials, percentage distribution who reported a certification/license only, a certificate only, or both credentials, by respondents characteristics: 2010–11

Respondent characteristics	Number (in thousands)	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported any credentials, percentage distribution of respondents who reported		
		No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate
Total	#	0.90	0.90	0.84	0.66	1.59	1.16	1.25
Sex								
Male	#	1.40	1.40	1.27	0.99	2.36	1.47	1.92
Female	#	1.27	1.27	1.12	0.92	2.05	1.73	1.49
Race/ethnicity ¹								
White	#	1.05	1.05	0.97	0.82	1.77	1.4	1.27
Black	#	2.93	2.93	2.73	2.47	5.49	4.44	3.44
Hispanic	#	3.36	3.36	3.24	2.2	6.16	5.02	4.77
Asian	#	4.81	4.81	4.61	3.30	9.38	6.15	8.53
Other	#	9.66	9.66	9.97	5.60	15.95	15.23	5.94
Two or more races	#	6.4	6.34	5.12	4.70	9.03	8.67	6.60
Age								
18 to 24 years old	1,203.5	2.36	2.36	2.38	1.00	7.57	5.56	6.01
25 to 34 years old	1,760.0	2.71	2.71	2.43	1.48	3.17	2.97	2.50
35 to 44 years old	1,439.2	2.45	2.45	2.33	1.71	3.74	2.53	3.00
45 to 54 years old	1,399.4	2.29	2.29	2.19	1.75	3.00	3.02	2.68
55 to 64 years old	1,085.0	2.12	2.12	2.17	1.50	3.01	2.92	2.35
65 to 74 years old	894.3	2.23	2.23	1.91	1.87	3.84	3.56	2.68
75 years old and over	828.8	2.42	2.42	1.96	1.79	6.22	4.73	4.42

See notes at end of table.

Table D-1. Standard errors for Table 2-3: Number and percentage distribution of respondents who reported any credentials, percentage of adults who reported any certification/license or certificate, and among those who reported any credentials, percentage distribution who reported a certification/license only, a certificate only, or both credentials, by respondents characteristics: 2010–11—Continued

Respondent characteristics	Number (in thousands)	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported any credentials, percentage distribution of respondents who reported		
		No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate
Highest reported level of education								
Less than high school	#	2.43	2.43	2.37	1.65	6.90	6.38	4.29
Grades 1–11	1,110.2	2.98	2.98	2.81	2.04	9.59	8.69	6.75
12th grade (no diploma)	1,110.2	5.68	5.68	5.60	3.34	12.09	11.21	5.79
High school (or equivalent)	1,732.5	1.60	1.60	1.45	1.15	3.33	2.90	2.90
Regular high school diploma	1,477.5	1.88	1.88	1.59	1.30	3.47	2.93	3.09
GED or alternative credential	852.1	5.17	5.17	4.90	3.71	12.68	10.58	10.89
Some college or associate's degree	1,796.0	2.00	2.00	1.88	1.70	2.97	2.63	2.75
Some college credit, but less than 1 year	862.9	3.91	3.91	3.60	3.61	6.39	6.29	5.24
1 or more years of college credit, no degree	1,572.7	3.07	3.07	2.76	2.46	4.54	3.43	3.72
Associate's degree	700.2	3.02	3.02	3.09	3.34	5.33	4.07	4.89
Bachelor's degree	968.7	2.17	2.17	2.10	1.03	2.21	1.53	1.71
Graduate or professional degree	953.0	2.42	2.42	2.54	1.49	2.42	1.36	2.06
Master's degree	875.0	3.06	3.06	3.10	1.82	3.08	1.81	2.46
Professional degree beyond a bachelor's degree	372.7	4.62	4.62	4.75	4.97	6.13	1.59	6.00
Doctorate degree	449.6	6.01	6.01	5.95	3.03	5.58	0.77	5.61

See notes at end of table.

Table D-1. Standard errors for Table 2-3: Number and percentage distribution of respondents who reported any credentials, percentage of adults who reported any certification/license or certificate, and among those who reported any credentials, percentage distribution who reported a certification/license only, a certificate only, or both credentials, by respondents characteristics: 2010–11—Continued

Respondent characteristics	Number (in thousands)	Percentage distribution of respondents who reported		Percentage of respondents who reported		Among those who reported any credentials, percentage distribution of respondents who reported			
		No credentials	Any credentials	Any certification/license	Any certificate	Certification/license only	Certificate only	Both a certification/license and certificate	
Labor force status									
Employed	1,687.8	1.24	1.24	1.17	0.94	1.88	1.44	1.47	
Unemployed (seeking employment)	1,460.2	3.28	3.28	2.67	2.55	7.12	5.93	5.67	
Not in labor force	1,574.8	1.36	1.36	1.19	0.95	2.77	2.69	1.74	
Labor force status unknown	532.8	8.64	8.64	8.75	7.32	13.35	4.66	13.23	
Immigration status									
Born in U.S.	1,452.0	0.95	0.95	0.89	0.69	1.63	1.26	1.30	
Born outside of U.S.	1,452.0	3.51	3.51	3.14	2.19	4.99	3.53	3.94	

Rounds to zero.

¹ Black includes African American, Other includes Pacific Islanders and American Indians (including Alaska Natives), and two or more races includes non-Hispanics reporting more than one race. Race categories exclude persons of Hispanic ethnicity.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Training and Education Survey (ATES) Pilot Study, 2010–11.

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**Appendix E:
ATES Pilot Study Annotated Extended
Interview Questionnaire**

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2010 Adult Training and Education Survey Pilot Study

ATES Questionnaire

Contents [Ctrl +Click to follow link]

Introduction	E-4
Certification/license and Licensure.....	E-6
Education Attainment Items	E-11
Certificates.....	E-12
Additional Background and Labor Force Participation.....	E-15

SA_NAME = Sampled Adult's name used for Proxy Approach 2 (1 adult sampled)

PR_NAME = Proxy subject's name used for Proxy Approach 1 (2 adults sampled)

TEXT 1 = your / SA_NAME's / PR_NAME's

TEXT2 = you / SA_NAME / PR_NAME

TEXT3 = Were you / Was (SA_NAME/PR_NAME)

TEXT4 = Are you / Is (SA_NAME/PR_NAME)

TEXT5 = Do you / Does (SA_NAME/PR_NAME)

TEXT6 = you / he / she

TEXT7 = you have / (SA_NAME/PR_NAME) has

TEXT8 = Have you / Has (SA_NAME/PR_NAME)

TEXT9 = your / his / her

TEXT10 = yourself / himself / herself

TEXT11 = Were you / Was (he / she)

TEXT12 = Do you / Does (he / she)

TEXT13 = Were you/ Was SA/ PR Name

TEXT14 = do you/ does SA/ PR Name

TEXT15 = are you/ is SA/ PR Name

TEXT16 = have you/ has SA/ PR Name

Introduction

IN1. Hello. My name is _____ from Westat. I'm calling about a research study sponsored by the U.S. Department of Education. Your household recently filled out a short survey for us and I am calling to ask some additional questions about [SA_NAME's] training and education. (May I please speak to [SA_NAME] [the SEX in your household who is age AGE]?)

YES, R SPEAKING 1 (GOTO IN3)
YES, R AVAILABLE 2 (GOTO IN2)
NO, R NOT AVAILABLE* 3 (GOTO IN2A)
NO, R DOES NOT LIVE HERE..... 4 (GOTO RESULT)
NO, DOES NOT KNOW R..... 5 (GOTO RESULT)

** For some of these cases, proxy interviews were conducted and "your" was changed to [NAME] or [HIS/HER].*

IN2. Hi [SA_NAME]. My name is _____ from Westat. I'm calling about a research study sponsored by the U.S. Department of Education. Your household recently filled out a short survey for us and I am calling to ask some additional questions about your training and education. (GO TO IN3)

IN2A. IF PROXY APPROACH 2 AND CALLING ALGORITHM COMPLETE AND THIS IS FINAL CALL GO TO IN2C, OTHERWISE READ:

When would be a good time to call back? SET APPOINTMENT

IN2B. Is this the best phone number to reach [SA_NAME] [you]?

YES..... 1 (GO TO RESULT)
NO 2 (RECORD NEW NUMBER)
REFUSED-7 (GO TO RESULT)
DON'T KNOW-8 (GO TO RESULT)

IN2C. To whom am I speaking?

CATI DISPLAYS NAME, SEX, AGE FOR EACH ELIGIBLE PROXY RESPONDENT (EP_1, EP_2, EP_3)

EP_1..... 1 (GO TO IN2D)
EP_2..... 2 (GO TO IN2D)
EP_3..... 3 (GO TO IN2D)
SOMEONE ELSE 4 (GO TO RESULT)
REFUSED-7 (GO TO RESULT)
DON'T KNOW-8 (GO TO RESULT)

IN2D. We have been trying to reach SA_NAME. Since [he/she] is not available I would like to ask you some questions about [SA_NAME]'s education and training. On average, the interview takes about 15 minutes depending on your responses, and your participation is voluntary. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law. [You will receive [\$10/\$20] for completing the interview.] Is this a good time for you to continue?

- CONTINUE 1 (GO TO IN4)
- NOT A GOOD TIME 2 (GO TO RESULT)
- RESPONDENT ANSWERS FIRMLY CANNOT ANSWER PROXY
QUESTIONS 3 (GO TO RESULT)

IN3. On average, the interview takes about 15 minutes depending on your responses, and your participation is voluntary. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law. [You will receive [\$10/\$20] for completing the interview.] Is this a good time for you to continue?

- YES 1 (CONTINUE)
- NO 2 (SET CALLBACK)

IN4. Let's get started. As we go along, if you don't know an answer to any question, you can just say "don't know." First, I have a few questions about [TEXT1] work experience.

IN5. Did [TEXT2] work at a job for pay or income at any time in the past 12 months, including self-employment?

- YES..... 1 (GOTO IN6)
- NO 2 (GOTO CN1)
- REFUSED-7
- DON'T KNOW-8 (GO TO CN1)

IN6. [TEXT13] employed by a private company, government, a nonprofit organization, or [TEXT11] self-employed? [CODE ALL THAT APPLY – PEOPLE EMPLOYED BY A PERSON OR IN A PRIVATE HOME = PRIVATE COMPANY]

- PRIVATE COMPANY 1 (GOTO IN7)
- GOVERNMENT 2 (GOTO IN6A)
- NONPROFIT ORGANIZATION 3 (GOTO IN7)
- SELF EMPLOYED 4 (GOTO IN7)
- REFUSED-7 (GOTO IN7)
- DON'T KNOW-8 (GO TO IN7)

IN6A. Would that be the federal, state, or local government?

- FEDERAL 1
- STATE 2
- LOCAL (COUNTY, CITY, TOWNSHIP) 3
- REFUSED-7
- DON'T KNOW-8

IN7. [TEXT 4] currently employed?

YES..... 1
NO 2
REFUSED-7
DON'T KNOW-8

Certification and Licensure

CN1. Now I'd like to ask you about professional certification and licensure.
[TEXT5] have a professional certification or a state or industry license?
Probe: A professional certification or license shows you are qualified to perform a specific job and includes things like Licensed Realtor, Certified Medical Assistant, Certified Construction Manager, a Project Management Professional or PMP certification, or an IT certification.

YES 1 (GOTO CN1A)
NO 2 (GOTO ED1)
REFUSED-7 (GOTO ED1)
DON'T KNOW-8 (GOTO ED1)

CNPRO. [DID YOU USE THE PROBE ON CN1?] all cn1 come here before doing above skip

YES..... 1
NO 2

CN1A. [TEXT12] have more than one certification or license?

YES 1 (GOTO CN1B)
NO 2 (GOTO CN3)
REFUSED-7 (GOTO CN3)
DON'T KNOW-8 (GOTO CN3)

CN1B. How many [TEXT14] have? TWO DIGITS

CN2. Let's start with [TEXT1] most recent certification or license.

LOOP: ASK CN3 TO CN6 FOR EACH CERTIFICATION/LICENSE. TAKE UP TO FIVE.

IF CN1A=2, FILL CN3 WITH "[TEXT1]" INSTEAD OF "THIS"

CN3A. What is the name of [TEXT1] certification or license?

VERBATIM TEXT STRING [USE LENGTH OF NHES 2005 OR 2007 ADULT ED STRING]

REFUSED-7
DON'T KNOW-8

CN4. Is that a certification, a license, or both? IF CLEAR FROM NAME, DO NOT ASK

CERTIFICATION..... 1
LICENSE 2
BOTH 3
REFUSED-7
DON'T KNOW-8

CN3. What kind of work is this [certification/license] for?

VERBATIM TEXT STRING

REFUSED-7
DON'T KNOW-8

IF CN4=3 THEN FILL WITH CERTIFICATION

CN5. In what year did [TEXT6] get it?

[ENTER FOUR DIGIT YEAR] RANGE:1925–2010

REFUSED-7
DON'T KNOW-8

IF CN4=3 THEN FILL WITH CERTIFICATION

CN6. Did [TEXT2] get this [certification] [license] mainly for work related reasons or mainly for personal interest?

MAINLY WORK-RELATED 1
MAINLY PERSONAL INTEREST 2
REFUSED-7
DON'T KNOW-8

IF CN4=3 THEN FILL WITH CERTIFICATION

IF CN1A> OR =1: GOTO CN6A TO ASK ABOUT MOST RECENT CERTIFICATION/LICENSE AT CN5 (IF MORE THAN ONE IN A YEAR, TAKE FIRST LISTED AT CN3A) THAT IS WORK-RELATED (CN6=1). IF NONE ARE WORK-RELATED, ASK ABOUT MOST RECENT PERSONAL INTEREST OR REFUSED OR DON'T KNOW (CN6=2, -7,-8).

CN7. These next questions are about the training and education [TEXT2] took in order to earn the [CERTIFICATION/LICENSE NAME][certification] [license].
Did [TEXT6] take courses or training to earn the [CERTIFICATION/LICENSE NAME] [certification] [license]?

YES 1 (GOTO CN7A)
NO 2 (GOTO CN8N)
REFUSED-7 (GOTO CN7A)
DON'T KNOW-8 (GOTO CN8N)

IF CN4=3 THEN FILL WITH CERTIFICATION

CN7A. Did [TEXT6] take the coursework or training for the [certification] [license] as part of a college or university certificate or degree program?

YES 1 (GOTO CN7B)
NO 2 (GOTO CN7C)
REFUSED-7 (GOTO CN7C)
DON'T KNOW-8 (GOTO CN7C)

IF CN4=3 THEN FILL WITH CERTIFICATION

CN7B. Was that a certificate program, an associate's degree program, a bachelor's degree program, or something else?

ASSOCIATE'S 1
BACHELOR'S..... 2
CERTIFICATE 3
OTHER 91
SPECIFY _____
REFUSED-7
DON'T KNOW-8

CN7C. Was the coursework or training mainly self-study or mainly classes or courses with an instructor?

MAINLY SELF-STUDY 1
MAINLY INSTRUCTOR 2
REFUSED-7
DON'T KNOW-8

IF CN7B=1 OR 2, GOTO CN10

CN8. How many weeks or months did it take [TEXT2] to earn the [certification] [license], including coursework and other training?

TWO DIGITS— ENTER '00' IF LESS THAN 1 WEEK. RANGE: 00-99

IF CN8= 00,-7 OR -8, SKIP UNIT

UNIT 1=WEEK
2=MONTH

REFUSED-7
DON'T KNOW-8

IF CN4=3 THEN FILL WITH CERTIFICATION

CN9. About how many hours per week or per month did [TEXT2] spend with an instructor?

TWO DIGITS

NOTE TO INTERVIEWER: ONLINE INSTRUCTOR IS ACCEPTABLE. RANGE: 0-99

0, -7, -8 SKIPS UNIT

REFUSED-7

DON'T KNOW-8

[ONLINE INSTRUCTOR IS ACCEPTABLE]

IF CN7 = 1 OR -7 GO TO CN10. ONLY ASK CN9A IF CN7 = 2 OR -8

CN9A. About how many hours per week or per month did it take [text2] to earn the certification?

TWO DIGITS RANGE: 1-99

IF CN8=-7 OR -8, SKIP UNIT

UNIT 1=WEEK

2=MONTH

REFUSED-7

DON'T KNOW-8

CN10A. Did [TEXT6] have to do any of the following to get this [certification] [license]...

a. demonstrate skills while on the job?..... YES NO

b. pass a test or exam? YES NO

c. submit a portfolio of work? YES NO

REFUSED-7

DON'T KNOW-8

IF CN4=3 THEN FILL WITH CERTIFICATION

CN11. [TEXT5] have to take...

a. continuing education classes or earn CEUs to maintain it?..... YES NO

b. to take periodic tests?..... YES NO

REFUSED-7

DON'T KNOW-8

IF IN7=1 (CURRENTLY EMPLOYED) GOTO CN12, ELSE GOTO CN14

CN12. Is this [certification] [license] related to [TEXT1] current job?

YES..... 1 (GOTO CN13)

NO 2 (GOTO CN14)

REFUSED-7 (GOTO CN14)

DON'T KNOW-8 (GOTO CN14)

CN13. Is it required for [TEXT9] current job?

YES..... 1
NO 2
REFUSED-7
DON'T KNOW-8

CN14. [TEXT3] [certified] [licensed] by [TEXT9] state, industry, a company, a professional association, or some other organization? MARK ALL THAT APPLY

STATE 1
INDUSTRY 2
COMPANY..... 3
PROFESSIONAL ASSOCIATION..... 4
OTHER 91
SPECIFY _____
REFUSED-7
DON'T KNOW-8

CN15a. Can this [certification] [license] be...

a. revoked or suspended for any reason? YES NO
b. used if [TEXT2] wanted to get a job with any employer
in that field?

[CERTIFICATIONS/LICENSES AND LICENSES THAT ARE RECOGNIZED
STATE-WIDE SHOULD BE RECORDED AS "YES."] YES NO

REFUSED-7
DON'T KNOW-8

IF CN4=3 THEN FILL WITH CERTIFICATION

CN16. What benefits did [TEXT2] receive from earning the [certification] [license]? MARK ALL THAT APPLY

PROMOTION 1
HIGHER PAY OR BONUS 2
CAREER ADVANCEMENT 3
IS JUST MANDATORY OR REQUIRED FOR JOB..... 4
IMPROVED JOB PERFORMANCE 5
HELPED ME STAY CURRENT WITH NEW REGULATIONS,
LAWS, OR TECHNOLOGIES..... 6
TO CHANGE JOB OR CAREER FIELD, ENTER THE WORKFORCE,
OR START OWN BUSINESS..... 7
NO BENEFITS RECEIVED 8
OTHER 91
SPECIFY _____
REFUSED-7
DON'T KNOW-8

IF CN13=1 GOTO EDINT, ELSE ASK CN17

IF CN4=3 THEN FILL WITH CERTIFICATION

CN17. Is the [certification][license] currently valid or has it expired?

CURRENTLY VALID 1 (GOTO ED1)
EXPIRED..... 2 (GOTO CN18)
REFUSED-7 (GOTO ED1)
DON'T KNOW-8 (GOTO EDINT)

IF CN4=3 THEN FILL WITH CERTIFICATION

CN18. [TEXT12] plan to renew it?

YES..... 1
NO 2
REFUSED-7
DON'T KNOW-8

Education Attainment Items

ED1. These next questions are about other education or schooling [TEXT2] may have.

[TEXT4] currently attending or enrolled in school?

YES..... 1 (GOTO ED2)
NO 2 (GOTO ED3)
REFUSED-7 (GOTO ED3)
DON'T KNOW-8 (GOTO ED3)

ED2. What grade or year of school [TEXT15] attending?

ELEMENTARY GRADES 1–8 1
HIGH SCHOOL GRADES 9–12..... 2
VOCATIONAL, TECHNICAL, CERTIFICATE, OR
BUSINESS SCHOOL BEYOND HIGH SCHOOL LEVEL..... 3
UNDERGRADUATE COLLEGE OR UNIVERSITY 4
GRADUATE OR PROFESSIONAL SCHOOL..... 5
REFUSED-7
DON'T KNOW-8

ED3. What is the highest degree or level of school [TEXT7] completed?

NO SCHOOLING..... 0
NURSERY SCHOOL N
KINDERGARTEN K
GRADES 1–11 1
12TH GRADE NO DIPLOMA 2
REGULAR HIGH SCHOOL DIPLOMA..... 3
GED OR ALTERNATIVE CREDENTIAL 4
SOME COLLEGE CREDIT, BUT LESS THAN 1 YEAR OF
COLLEGE CREDIT 5
1 OR MORE YEARS OF COLLEGE CREDIT, NO DEGREE 6
ASSOCIATE'S DEGREE (FOR EXAMPLE: AA, AS)..... 7
BACHELOR'S DEGREE (FOR EXAMPLE: BA, BS) 8

MASTER'S DEGREE (FOR EXAMPLE: MA, MS, MENG, MED, MSW, MBA).....	9
PROFESSIONAL DEGREE BEYOND A BACHELOR'S DEGREE (FOR EXAMPLE: MD, DVS, DDM, LLB, JD)	10
DOCTORATE DEGREE (FOR EXAMPLE: PHD, EDD)	11
REFUSED	-7
DON'T KNOW	-8

ED4. INTERVIEWER ONLY: DID THE RESPONDENT SAY THEY HAD A "CERTIFICATE" OR SOME TYPE OF TRADE OR VOCATIONAL DIPLOMA?

YES, CERTIFICATE	1 (GOTO ED5C)
YES, TRADE OR VOCATIONAL DIPLOMA.....	2 (GOTO ED5A)
NO	3 (GOTO CT1)

ED5A. Is that diploma the equivalent of a high school diploma or something else?

HS DIPLOMA EQUIVALENT.....	1 (GOTO CTINT)
SOMETHING ELSE	2 (GOTO ED5B)
REFUSED	-7 (GOTO CT1)
DON'T KNOW	-8 (GOTO CT1)

ED5B. We will refer to these types of vocational or trade diplomas as certificates in the next set of questions.

ED5C. These next questions are about certificates.

Certificates

CT1. CTINT. Some people decide to enroll at a college, university, community college, or trade school to earn a certificate rather than a degree.

[TEXT8] ever earned this type of certificate?

Probe: An educational certificate is typically earned by completing a program of study offered by a college or university, a community college, or a trade school, but it does not lead to an associate's, bachelor's, or graduate degree. Sometimes these are also called vocational diplomas, for example, a cosmetology or mechanics diploma, which differs from a high school diploma.

YES.....	1 (GOTO CT2)
NO	2 (GOTO AL1)
REFUSED	-7 (GOTO AL1)
DON'T KNOW	-8 (GOTO AL1)

CTPRO. DID YOU USE PROBE ON CT1 all ct1's come here before skipping

YES	1
NO	2

CT2. [TEXT12] have more than one certificate?

YES	1 (GOTO CT2A)
NO	2 (GOTO SKIP AT CT2C)
REFUSED	-7 (GOTO SKIP AT CT2C)
DON'T KNOW	-8 (GOTO SKIP AT CT2C)

CT2A. HOW MANY [TEXT14] HAVE? □□ (GOTO CT2B)

CT2B. Let's start with the most recent certificate.

LOOP: ASK CT2C TO CT6 FOR EACH CERTIFICATE. TAKE UP TO FIVE CERTIFICATES.

IF CN1=1 THEN ASK CT2C FOR EACH CERTIFICATE.

CT2C. Is (this/your) certificate part of the coursework or training [TEXT2] took for a certification or license?

[DISPLAY ONLY ON LOOPS 2-5: The next set of questions refers to [TEXT9] next most recent certificate.]

YES..... 1
NO 2
REFUSED-7
DON'T KNOW-8

CT3. What is the major subject or field of study for this/text 9 certificate?

VERBATIM TEXT STRING

REFUSED-7
DON'T KNOW-8

CT4. What is the name of this certificate?

VERBATIM TEXT STRING [USE LENGTH OF NHES 2005 OR 2007 ADULT ED QUEX STRING]

REFUSED-7
DON'T KNOW-8

CT5. Did [TEXT6] complete this certificate program?

YES..... 1
NO 2 (GOTO CT6 BOX)
REFUSED-7 (GOTO CT6 BOX)
DON'T KNOW-8 (GOTO CT6 BOX)

CT6. In what year did [TEXT6] complete it?

[ENTER FOUR DIGIT YEAR] RANGE:1925-2010

REFUSED-7
DON'T KNOW-8

IF CT2=1: GOTO CT8 TO ASK ABOUT MOST RECENT CERTIFICATE (CT6) THAT IS COMPLETED (CT5=1).

CT8. These next questions are about the [CERTIFICATE NAME] certificate.
 What type of school or organization provided the certificate program?
 PROBE FOR CATEGORY

- A COMMUNITY COLLEGE 1
- ANOTHER UNIVERSITY OR COLLEGE..... 2
- A TRADE SCHOOL 3
- BUSINESS OR COMPANY 4
- PROFESSIONAL ASSOCIATION..... 5
- TRADE UNION 6
- NONPROFIT ORGANIZATION 7
- A FEDERAL, STATE, OR LOCAL GOVERNMENT 8
- SOMEPLACE ELSE: 91
- SPECIFY _____
- REFUSED-7
- DON'T KNOW-8

CT9. How many credits or hours were required to complete the certificate program?

- TWO DIGITS □□ (IF ZERO GOTO CT10)
- REFUSED-7 (GOTO CT10)
- DON'T KNOW-8 (GOTO CT10)

CT9A. Is that credits or actual hours?

- CREDITS/CREDIT HOURS 1
- HOURS 2

CT10. Did [TEXT2] take the education or training to earn continuing education units or CEUs?

- YES 1
- NO 2
- REFUSED-7
- DON'T KNOW-8

IF CT2C=1 OR -9 GOTO AL1.

CT11. Was the training mainly self-study or mainly classes or courses with an instructor?

- MAINLY SELF-STUDY 1
- MAINLY INSTRUCTOR 2
- REFUSED-7
- DON'T KNOW-8

[IFIN5 = 2 OR IN7=2 GOTO CT14]

CT12. Is this certificate related to [TEXT1] current job?

- YES..... 1
- NO 2 (GOTO CT14)
- REFUSED-7 (GOTO CT14)
- DON'T KNOW-8 (GOTO CT14)

CT13. Is it required for [TEXT9] current job?

- YES..... 1
- NO 2
- REFUSED-7
- DON'T KNOW-8

CT14. What benefits did [TEXT2] receive from earning the certificate? MARK ALL THAT APPLY

- PROMOTION 1
- HIGHER PAY OR BONUS..... 2
- CAREER ADVANCEMENT 3
- IS JUST MANDATORY OR REQUIRED FOR JOB..... 4
- IMPROVED JOB PERFORMANCE 5
- HELPED ME STAY CURRENT WITH NEW REGULATIONS,
LAWS, OR TECHNOLOGIES..... 6
- NO BENEFITS RECEIVED 8
- OTHER 91
- SPECIFY _____
- REFUSED-7
- DON'T KNOW-8

Additional Background and Labor Force Participation (From CPS and NHES)

AL1. Now I would like to ask you a few more questions about [TEXT1] background. In what year [TEXT13] born?

- YEAR 19□□ RANGE:00–93
- REFUSED-7
- DON'T KNOW-8

AL3. [TEXT4] of Spanish, Hispanic, or Latino origin?

- YES..... 1
- NO 2
- REFUSED-7
- DON'T KNOW-8

AL4. Which of the following races [TEXT14] consider [TEXT10] to be? You may name more than one.

[IF "HISPANIC" PROBE: Is that White Hispanic, Black Hispanic, both, or something else?]
[CODE ALL THAT APPLY]

[TEXT4]...

- WHITE, 1
- BLACK OR AFRICAN AMERICAN, 2
- AMERICAN INDIAN OR ALASKA NATIVE, 3
- ASIAN, OR..... 4
- NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER? 5
- REFUSED-7
- DON'T KNOW-8

Wording experiment – Marital status (Ask AL5V1 for even phone numbers, AL5V2 and AL5V2A for odd phone numbers)

LEVOD (1=EVEN, 2=ODD)
AL5V1. [TEXT4] currently...

MARRIED 1 (GO TO AL5VA)
IN A REGISTERED DOMESTIC PARTNERSHIP OR
CIVIL UNION, 2 (GO TO AL5VA)
WIDOWED, 3 (GO TO AL5OV)
DIVORCED, 4 (GO TO AL5OV)
SEPARATED, OR 5 (GO TO AL5OV)
NEVER MARRIED? 6 (GO TO AL5OV)
REFUSED -7 (GO TO AL5OV)
DON'T KNOW -8 (GO TO AL5OV)

AL5V2. [TEXT4] currently...

MARRIED 1
WIDOWED, 3
DIVORCED, 4
SEPARATED, OR 5
NEVER MARRIED? 6
REFUSED -7
DON'T KNOW -8

AL5VA. [TEXT4] currently living in a registered domestic partnership or civil union?

YES 1 (GO TO AL6)
NO 2 (GO TO AL5OV)
REFUSED -7 (GO TO AL5OV)
DON'T KNOW -8 (GO TO AL5OV)

IF AL5VA = 1 skip AL5OV

AL5OV. [TEXT4] currently living with a partner?

YES 1
NO 2
REFUSED -7
DON'T KNOW -8

AL6. [RECORD SA_NAME SEX; CONFIRM IF NECESSARY]

MALE 1
FEMALE 2
REFUSED -7
DON'T KNOW -8

AL8. In what state, country, or territory [TEXT13] born?

- ONE OF 50 STATES OR THE DISTRICT OF COLUMBIA 1 (GO TO BOX BEFORE AL11)
- ONE OF THE U.S. TERRITORIES [PUERTO RICO, GUAM, AMERICAN SAMOA, U.S. VIRGIN ISLANDS, MARIANA ISLANDS, MIDWAY ISLANDS, OR SOLOMON ISLANDS]..... 91 (GO TO AL8OV)
- SPECIFY _____
- SOME OTHER COUNTRY 92 (GO TO AL8OV)
- SPECIFY _____

- REFUSED-7 (GOTO BOX AT AL11)
- DON'T KNOW-8 (GOTO BOX AT AL11)

AL8OV. How old [TEXT13] when [TEXT6] first moved to the (United States/50 states or the District of Columbia)?

- AGE RANGE:00-99
- REFUSED-7
- DON'T KNOW-8

If AL8OV ≥ 6, go to AL9. Else, go to box before AL11.

AL9. What is the highest degree or level of school [TEXT2] completed before moving to the U.S.?

- NO FORMAL EDUCATION COMPLETED..... 0
- SOME PRIMARY SCHOOL 1
- PRIMARY SCHOOL COMPLETED..... 2
- SECONDARY SCHOOL COMPLETED 3
- SOME UNIVERSITY-LEVEL EDUCATION, WITHOUT DEGREE 4
- UNIVERSITY-LEVEL EDUCATION, WITH DEGREE..... 5
- REFUSED-7
- DON'T KNOW-8

If IN5 = 2 (did not work in the past 12 months), autocode AL11 = 2 and AL12 = 2 and go to box before AL14. Else, go to AL11.

AL11. During the past week, did [TEXT2] work at a job for pay or income, including self-employment?

- YES..... 1 (GO TO AL13)
- NO 2 (GO TO AL12)
- RETIRED..... 3 (GO TO AL14)
- DISABLED/UNABLE TO WORK 4 (GO TO AL14)
- REFUSED-7 (GOTO AL13)
- DON'T KNOW-8 (GOTO AL13)

AL12. [TEXT3] on leave or vacation from a job during the past week?

- YES..... 1 (GO TO AL13)
- NO 2 (GO TO AL14)
- REFUSED-7 (GOTO AL13)
- DON'T KNOW-8 (GOTO AL13)

AL13. About how many total hours per week [TEXT14] usually work for pay or income?
 [IF HOURS VARY, PROBE FOR AVERAGE PER WEEK.]

|__|__| WEEKLY HOURS RANGE:1-90

REFUSED-7
 DON'T KNOW-8

If IN5 = 2 (did not work in the past 12 months), then autocode AL14 = 0 and go to AL15. Else, go to AL14.

AL14. In the past 12 months, how many months [TEXT16] worked for pay or income?

|__|__| RANGE:0-12
 MONTHS

REFUSED-7
 DON'T KNOW-8

If AL11 = 1 (worked last week) or AL12 = 1 (on leave or vacation), go to AL21. Else if AL11 = 3 (retired), then autocode AL17 = 3 and go to AL21. Else if AL11 = 4 (unable to work), then autocode AL17 = 5 and go to AL21A. Else, go to AL15.

AL15. [TEXT8] been actively looking for work in the past 4 weeks?

YES..... 1 (GOTO AL16)
 NO 2 (GOTO AL17)
 REFUSED-7 (GOTO AL17)
 DON'T KNOW-8 (GOTO AL17)

AL16. What [TEXT16] been doing in the past 4 weeks to find work? [TEXT8]...

	<u>YES</u>	<u>NO</u>
a. Checked with an employment agency?	1	2
b. Checked with an employer directly or sent a resume?	1	2
c. Checked with friends or relatives?	1	2
d. Placed or answered job ads?	1	2

If any of AL16 a-d = 1 (actively looking for work), go to box after AL17. Else, go to AL17.

AL17. What [TEXT13] doing most of last week? Would you say...

- KEEPING HOUSE OR CARING FOR CHILDREN OR OTHER DEPENDENTS, 1
- GOING TO SCHOOL, 2
- RETIRED, 3
- VOLUNTEERING, 4
- UNABLE TO WORK, OR 5
- SOMETHING ELSE? 91
- What was that? _____

- REFUSED-7
- DON'T KNOW-8

If IN5 = 2 (not worked in past 12 months), then go to AL18. Else, go to AL21.

AL18. [TEXT8] ever worked at a job for pay or income?

- YES..... 1 (GO TO AL19)
- NO 2 (GO TO AL20)
- REFUSED-7 (GOTO AL19)
- DON'T KNOW-8 (GOTO AL19)

AL19. In what year did [TEXT6] last work for pay or income?

|_|_|_|_| range:1925–2010
YEAR

- REFUSED-7
- DON'T KNOW-8

AL20. [TEXT5] plan to work at a job for pay or income in the next year?

- YES..... 1 (GO TO AM12)
- NO 2 (GO TO AM12)
- REFUSED-7 (GOTO AM12)
- DON'T KNOW-8 (GOTO AM12)

AL21A. For whom did [TEXT2] work at [TEXT9] current or most recent job?
[IF MORE THAN ONE CURRENT JOB, ASK FOR THE COMPANY THEY HAVE WORKED FOR THE LONGEST.]

- NAME OF COMPANY _____
- REFUSED-7
 - DON'T KNOW-8

AL21B. What kind of business or industry is this?

[BUSINESS/INDUSTRY PROBE: For example, TV and radio manufacturing, retail shoe store, state labor department, or farm.] [IF MORE THAN ONE JOB, COLLECT JOB WHERE R HAS WORKED THE LONGEST.]

TYPE OF INDUSTRY _____
REFUSED-7
DON'T KNOW-8

If IN6 = 4 (self-employed in the past 12 months), go to AL22. Else, go to AL23.

AL22. [IS THIS [TEXT9] OWN BUSINESS?]

YES 1
NO 2
REFUSED-7
DON'T KNOW-8

AL23. What kind of work [(are/were) you/(is/was) SA_NAME] doing and what (are/were) [TEXT1] most important activities or duties?

[JOB PROBE: For example, electrical engineer, stock clerk, typist, or farmer.]
[IMPORTANT DUTY PROBE: For example, typing, keeping account books, filing, selling cars, operating printing press, or finishing concrete.]
[IF MORE THAN ONE JOB, COLLECT JOB WHERE R HAS WORKED THE LONGEST.]

KIND OF WORK _____
IMPORTANT DUTY _____
IMPORTANT DUTY _____

REFUSED-7
DON'T KNOW-8

AL25. (If [TEXT2] had worked for all 12 months this past year,) About how much (would [TEXT6/TEXT14] have earned/[TEXT5]earn) before taxes and other deductions at (NAME OF COMPANY/TEXT9 business)?

AMOUNT \$□□□,□□□ RANGE:6.00–200,000

Per
HOUR 1
DAY 2
WEEK 3
BI WEEKLY 4
MONTH 5
YEAR 6
OTHER 91
What (is/was) that? _____
REFUSED-7
DON'T KNOW-8

AL26. Does [TEXT9] occupation have legal or professional requirements for continuing training or education?

YES..... 1
NO 2

IF AL26=1 AND CN1=2 GOTO AL26A, ELSE GOTO AM12

AL26A. [TEXT5] have a qualification that meets those requirements?

YES 1 (GOTO AL26B)
NO..... 2 (GOTO AM12)
REFUSED-7 (GOTO AM12)
DON'T KNOW-8 (GOTO AM12)

AL26B. What is the name of that qualification?

NAME _____
REFUSED-7
DON'T KNOW-8

[IF PROXY APPROACH 1 AND ASKING ABOUT PROXY SUBJECT GO TO AM4]

AM12. What was the total income of all persons in [TEXT1] household over the past year, including salaries or other earnings, interest, retirement, and so on for all household members?
Was it...

IF AL25>\$25,000 GOTO AM12OV

\$25,000 OR LESS, OR 1 (READ SET 1)
MORE THAN \$25,000? 2 (GO TO AM12OV)

IF AL25>\$50,000 GOTO SET3

AM12OV. Was it...

\$50,000 OR LESS, OR 1 (READ SET 2)
MORE THAN \$50,000? 2 (READ SET 3)

Was it...

[SET 1]

\$5,000 OR LESS..... 1
\$5,001 TO \$10,000 2
\$10,001 TO \$15,000 3
\$15,001 TO \$20,000, OR 4
\$20,001 TO \$25,000? 5

[SET 2]

\$25,001 TO \$30,000 6
\$30,001 TO \$35,000 7
\$35,001 TO \$40,000 8
\$40,001 TO \$45,000, OR 9
\$45,001 TO \$50,000? 10

[SET 3]

\$50,001 TO \$60,000, 11
\$60,001 TO \$75,000, 12
\$75,001 TO \$100,000, OR 13
OVER \$100,000?..... 14

REFUSED-7 (GOTO AM3)
 DON'T KNOW-8 (GOTO AM3)

AM3. [TEXT5]...

OWN (HIS/HER) HOME,..... 1
 RENT (HIS/HER) HOME, OR..... 2
 HAVE SOME OTHER ARRANGEMENT? 3
 REFUSED-7
 DON'T KNOW-8

AM3A. Now, I'd like to confirm your address I have...

STREET ADDRESS _____

[RECORD CHANGES TO STREET OR PRESS ENTER IF NO CHANGES]

CITY _____
 [RECORD CHANGES TO CITY OR PRESS ENTER IF NO CHANGES]

STATE _____
 [RECORD CHANGES TO STATE OR PRESS ENTER IF NO CHANGES]

ZIP CODE _____
 [RECORD CHANGES TO ZIP OR PRESS ENTER IF NO CHANGES]

IF PROXY APPROACH 1 AND ASKING ABOUT SAMPLED ADULT ASK CT15, OTHERWISE GO TO AM4.

CT15. Now I would like to ask you about education or training [PR_NAME] may have had.

CONTINUE 1 (GO TO IN5)
 RESPONDENT FIRMLY INDICATES CANNOT ANSWER
 PROXY QUESTIONS 2

[IF R INDICATES THEY HAVE NEVER HEARD OF [PR_NAME] OR [PR_NAME] DOES NOT LIVE IN THE HOUSEHOLD THEN SELECT "RESPONDENT FIRMLY INDICATES CANNOT ANSWER PROXY QUESTIONS" AND FILL OUT A PROBLEM SHEET]

AM4. [IF NO INCENTIVE GO TO CLOSE] Those are all the questions I have. Before I hang up I need information to prepare your (\$10/\$20) check. How should your name appear on the check?

FIRST NAME: _____ MI: _____ LAST NAME: _____

AM4A. Should I use the address:
[DISPLAY CONFIRMED ADDRESS]?

CLOSE. Those are all the questions I have for you./You should receive your check within the next 2 weeks. Thank you for your time.

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Appendix F: ATES Focus Group Report

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Focus Group Findings for New Items to Measure Subbaccalaureate Credentials Among Adults in the United States

February 17, 2010

Prepared for the National Center for Education Statistics by:

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Introduction and Methodology

The Education Statistics Services Institute of the American Institutes for Research (AIR) is helping the National Center for Education Statistics (NCES) develop a government strategy for measuring the prevalence of subbaccalaureate credentials in the United States. As a first step, AIR partnered with Shugoll Research to conduct focus groups with individuals who hold less than a bachelor's degree and work in fields that may offer subbaccalaureate credentials. The purpose of this phase is to understand the language used to describe these credentials and their common attributes.

Shugoll Research conducted a total of three focus groups in suburban Washington, DC, on December 17 and 18, 2009. The groups were held in a specially designed focus group facility with a one-way mirror that allowed for observation of the groups and the opportunity to provide input to the moderator. Two focus groups were with individuals who self-identified as being certified, registered, or licensed in the fields of information technology, health care, or business. These fields were selected because they represent areas where significant certification exists. One focus group was held with individuals who self-identified as holding certifications in other fields or having interest in becoming certified in the future. Respondents in all groups were required to be 21–40 years old with at least a high school degree or GED but less than a bachelor's degree. Participants could have completed some college or obtained an associate's degree. They could not have participated in a focus group within the last 6 months and must have described themselves as being articulate and comfortable expressing themselves in a group.

Respondents were recruited by telephone between December 3 and 16, using a database of potential participants maintained by Shugoll Research. Each prospective respondent was screened using a recruitment screener that is shown in attachment F-1. If they were qualified, respondents were offered a \$75 honorarium to encourage participation. The screener shows that, originally, people in the construction industry were to be included in the information technology/health care/business groups. Finding these people in the short turnaround time available was difficult. Additionally, it was decided that mixing participants employed in the construction industry with the other industries would have resulted in respondents too heterogeneous in background, an attribute not typically desired in a focus group. Ultimately, they were not recruited.¹

The focus groups were led by a professional moderator. The moderator used a topic guide developed by AIR to ensure that all objectives of the study were met. Twelve respondents were recruited for each group with the expectation that fewer would actually show. The size of the focus groups ranged from 5 to 8 participants, and included adults with a variety of racial and ethnic backgrounds, educational attainment, gender, and employment industries. Numbers of respondents with these characteristics are small and are therefore not reported to maintain respondent confidentiality. The focus groups lasted about 90 minutes. The groups were audiotaped and videotaped.

¹ People with certifications in the construction industry will be specially targeted during one-on-one interviews in the next stage of developmental work.

This report summarizes the results of the focus groups. Where appropriate, findings are supported by verbatim comments from respondents.

Limitations

A qualitative research methodology seeks to develop direction, rather than quantitatively precise or absolute measures. Because of the limited number of respondents involved in this type of research, the study should be regarded as exploratory in nature. Results should be used to generate hypotheses for decisionmaking and further testing. The nonstatistical nature of qualitative research means the results cannot be generalized to the population under study with a known level of statistical precision.

Summary of Findings

Terminology

- Respondents used the following words to describe subbaccalaureate credentials: certificate, certification, certified, license, licensure, licensed, registration, and registered.
- Obtaining a certificate typically means receiving a certificate of completion for a training class, and respondents used the term to mean completion of anything from a short course, to a course that is part of an educational module, to a course or courses provided by an educational institution.
- Obtaining a certification, license, or licensure, and obtaining a registration or becoming registered are seen by participants as terms for completing more rigorous training than getting a certificate. Often an exam is required. Coursework may last for up to 2 years, and sometimes hands-on application is also required.
- There are differences within the fields represented in the focus groups (such as information technology vs. health care), but terminology did not vary within field.

Courses, Classes, and Examination

- In some fields, like health care, respondents take extensive coursework over many months or even several years to become certified, with the coursework culminating in an exam.
- Another type of experience is receiving a series of certificates in several training modules. After completing the series, the candidate is then certified in that area.
- The rigor of obtaining any type of subbaccalaureate credential varies. It varies in terms of amount of time doing coursework, whether an exam is required, and whether the credential can be obtained by passing an exam without actually taking classroom work (in these cases, the skills can be obtained from reading materials or manuals or from online study).
- Subbaccalaureate coursework can be provided by a private firm or a university, often depending on the field. For example, there are many private providers of training in the information technology field, while in health care, universities or university hospitals often provide training.

Licensure

- Certification may be a prerequisite for applying for licensure or registration. Licensure or registration is often required to practice in a particular state, and requirements for licensure may vary by state.
- In some fields, professional associations operate the certification and licensure process.

Maintaining Certification or Licensure

- In the case of credentials achieved with less extensive coursework, it appears one cannot lose that credential. In fields that require licensing by a state or professional association, fulfilling continuing education requirements is often necessary to stay credentialed.

Value of Subbaccalaureate Credentials

- Those with some type of subbaccalaureate credential recognize its value. They generally agree that having the credential makes them more marketable, provides them an advantage in the hiring process, and opens a door for promotions and pay increases.
- In some fields, being licensed or registered is required to obtain the job. In the case of certifications, requirements vary across employers. Some require the credential, others prefer the credential, and others seem uninfluenced by the credential. The existence of the credential, as reported by the respondents, appears to be typically recognized by employers across the field.
- There are no indications that perceptions of quality vary greatly across providers. Respondents did not say it would be more prestigious to attend one provider or another.

Putting the Credential in Context: Education and Training

- Many participants without a college degree who had a subbaccalaureate training credential also had some college experience. Many completed an associate's degree and then added on additional professional training. Some started college, but did not finish. Some of them intend to return to college to complete their degree.
- On a resume, participants would list their certifications under a heading such as "professional certification" and not with education.

Detailed Findings

Terminology

Respondents use the following words to describe their subbaccalaureate credentials: certificate, certification, certified, license, licensure, licensed, registration, and registered.

Participants drew a distinction between getting a certificate, which they say is proof of completing a course (proof often being a paper certificate), and being certified, which measures attainment of a skill and requires more training time. Certificate meant anything from a week-long course to a formal education program.

“A certification I think is more detailed, and it certifies you to do a specific skill. A certificate, I would think, it would be a little less intensive. You [get] a certificate that you completed something, and not that you’re certified to do something.”

In some fields there are series of courses that make up a module. You get a certificate for completing each course and passing the test, and become certified in an area when completing the module.

“[You get] a certificate of completion [for each course]. And if you take a series of classes in the same subject, you qualify for the IT certificate in whatever it is. In my case it was a Systems Design Certificate, for certification. And after you complete all of the courses in that curriculum you get certification.”

The only real difference in talking about certification with colleagues versus a layperson is that colleagues know and use the acronyms for the certificates they receive. This is particularly true in the information technology field.

“I would say I’ve got an MCP and an MCSE, a CCNA, and they would all know what I was talking about. We could all use the acronyms and understand. [These mean] Microsoft Certified Professional, Microsoft Certified Systems Engineer, and Cisco Certified Network Associate.”

In some cases, earning certification allows you to place the acronym for the certification next to your name on your business card or resume.

“Next to my name and my job is CMC. So I’m certified. It says I went to the training, I got the certificate.”

“Normally with a certification there is something you can put behind your name, like letters. In the IT field, if you get a certification through, say, Microsoft, there are letters that you can add.”

Courses and Classes

Those with certification or licensure appear to be familiar with the specific requirements to obtain the credential in their field. Those without certification are less knowledgeable about the process, although this may be because some of the fields of work represented in the focus groups do not have certification options.

Obtaining a certificate or getting certified typically means taking a class or classes. There is no consistency in the length of these classes. In some programs, classes last a week or two, others several months, and others up to 2 years.

“Four to 5 days per course.”

“Mine was a week for like 8 hours a day.”

“It was about 3 months, just part time, like 3 hours.”

“I went every Friday night for 4 hours, and then an 8-hour day on Saturday, for 6 months.”

“Mine was 18 months.”

“Every day, Monday through Friday, 8 hours a day, for 24 months.”

Certification can mean different things in different industries. The health care and business administration fields are examples where the term certification or certified refers to completing a detailed, multiyear program. Two respondents received certification in these areas by completing 2-year programs that resulted in an associate's degree from a 4-year institution. One student completed a program in business administration from Georgetown University. The other completed a radiology program from George Washington University.

In certain health care fields, one route to a credential is hospitals that offer a nondegree certificate program. These 2-year hospital-based programs are full time and mix class work with hands-on experience.

“As far as the certificate program to be a radiologic technologist, you can go to a community college and get an associate's degree. Or you can [go to] a 2-year certificate program. There are hospitals in the area that have those programs onsite. I had gone to a hospital-based program, and it was a 2-year, all-year-long program.”

“Probably about 15 hours out of your 40, maybe a little more [you have] actual class, and then you would be in clinicals the rest of the time. So you would be taking what you learn in class and going onto the floor.”

The coursework required for certification and licensure varies, but can be quite extensive. In some cases it is offered by an educational institution, in others by a private vendor. In addition to coursework and an exam, in some cases a certain level of experience is required before you can become certified, licensed, or registered.

“Project Management Professional certification has an extensive application process. It requires you to have so many amount of hours of working in that field of project management. After you obtain those hours, there's an audit that they do, so they will call your job and verify the hours that you worked. The application process is very extensive.”

“Apart from classroom work we also had to show work in the office. As far as taking the x-rays, we had to bring in samples of full-mouth x-rays that we took in the office. While we were taking the course we were allowed to take x-rays in our office under the dentist's supervision. So we had to take a full set of 20 x-rays on some poor patient while we were learning, and bring it in to our teacher and show them. So we had to show a working knowledge that we were applying what they were teaching, as well as sit for the exam. So it wasn't just book learning.”

Examination

In some fields, formal coursework is not a prerequisite to sit for an exam. Participants indicated that you can study for the exam by reviewing books, online materials, or recordings rather than taking an in-person course.

“I read a book in my spare time and tested out on the A+ [certification] test and passed it.”

“You can take the test from self-study. There is no [course] requirement to have the certificates.”

“I think you just study the code book. I’m not aware of any [courses you can take]. They didn’t suggest any classes. They just said, ‘That’s the book.’”

It appears that the rigor of exams might vary across fields. In some, the tests are “open book” or can be taken online. In others, the exam is more of an essay type of test, applying the learning from the courses.

“I do believe it’s open book, and I think you might even be able to take it online.”

“At the end of the training you do a synopsis. You have to write a paper of all the training, all the classes you’ve taken all week long. And it’s an official paper that you submit, and then it’s reviewed by a board. And they send back that you got the grade or you passed.”

Since students pay a fee to a vendor for a course, some question whether the vendor would actually fail students when an exam is required.

“Well, they did have a test, but I’m saying everybody passed the test.”

“We had a lot of foreign students that didn’t speak a lot of English, and they all passed, too.”

Certification classes are often provided by private vendors at a cost to the student. Sometimes the employer will pay some or all of the cost. In some situations, courses are offered by educational institutions. When exams are required, students are often sent to a private testing center. Most do not feel there is a difference in quality across providers in a certain area and believe the course content is basically the same.

“You have outside vendors, like Learning Tree International, Global Knowledge, New Horizons, in the IT field, that you are paying \$4,000, \$5,000, \$6,000 to take this class.”

“Those companies that you’re getting certificates from contract out to a company called Prometric, which is a testing center where you would sit down and test to get your certification.”

“I’m actually going to Advax, another testing center.”

Licensure

Like certification, becoming licensed or registered is usually seen as a more rigorous process and is generally associated with a state licensing process. Licensure almost always requires an exam. In most cases, coursework is necessary before sitting for the exam. After completing the coursework, you get a certificate showing you completed the coursework. You need to have the certificate to take the licensing exam. Some describe the test as “sitting for your boards.”

“You have to have the certificate for taking the course in order to get your Maryland license for radiology. You have to have that 24-hour class to get your certificate. And then you use the certificate to get your license to do the x-ray technology.”

“Remember how they used to give Driver’s Ed in school? You can pass your Driver’s Ed class, but until you go to the governing body of your state and get a license, you can’t actually drive a car.”

“[After completing my courses] I sat for my boards and became registered as a therapist.”

The organization granting the license or registration is often a professional association for the field. In some fields, you must also become licensed to work in a particular state, which may entail a second exam. It could also just require the prospect of completing paperwork, sometimes showing an appropriate level of experience. In some states, you maintain your license forever; in others, you need to renew it periodically.

“You have to be generally registered. And then any state I go to I would have to apply for a license for that state. I would have my [registration], but I would have to apply for the license.”

“Like in South Carolina, it’s \$5 and you’re licensed for life. And in Maryland every 2 years you have to go through it all over again.”

Sometimes, you can perform some of the tasks required for a job without being licensed, but need to be licensed for more technical tasks.

“In Maryland, you can dental assist and learn on the job, or you can go to a school that specializes in teaching you how to dental assist. But you can’t do certain things, like take x-rays, without going and getting specialized training in how to take x-rays. So I took a course that teaches you specifically how to take x-rays. It’s like 24 hours of in-classroom and in-office training to learn how to do that. And then you have to take an exam and apply through the state for board licensure. And then you get permission and licensure through the state to take x-rays.”

Military

An area of subbaccalaureate training not previously covered relates to the military. One person in the focus groups was in the military and attended noncommissioned officers (NCO) school. After passing, he achieved the rank of sergeant and was able to lead a team both stateside and overseas.

“I went to NCO school (noncommissioned officers school). They teach you to be able to use manuals. If there are rules and regulations that are set out, they teach you how to be able to reference them and apply them to different situations. They also teach you to put personal feelings aside, whether you like or dislike somebody.”

“In NCO school, a soldier must pass an oral test first to get into the program. During the program, there are interim tests that measure various skill achievements. After completing the program the soldier does not get a certificate. Rather, he/she gets his/her rank.”

“So, as far as a piece of paper, no. You don’t get much. But once you put the rank on your uniform, as far as soldiers are concerned, that’s all you need.”

“In general, it’s a series of tests, and at the end there’s a graduation ceremony, just like you have at high school or college. Again, out in the field it’s different. You stand in front of your unit. They tear off your rank, and they put on your new rank.”

Maintaining Certification or Licensure

Just as the rigor to obtain a subbaccalaureate credential varies, so do requirements to maintain it. In many cases, it appears that the certification credential is maintained without additional testing. The most common alternative to this seems to be taking additional continuing education (CE) credits or units to maintain certification or licensure.

“You actually have to have 12 credits every 2 years. So it’s not something where you pass a test, they hand it to you, and you have it for the rest of your life. You have to maintain a certain amount of CE credits continually.”

“You have to have a certain amount of CEUs, continuing education units, every 3 years to hold your certification. If you fail to keep those CEUs up, then your certification would lapse, and you’d have to take the exam all over again.”

“In some cases, formal coursework isn’t required to maintain one’s status. The certification agency accepts attending conferences or listening to lectures. Professional associations typically track completion of these requirements.”

“It’s required that you become a member of, for me, ARRT, the American Registry of Radiologic Technology. I can send in my credits, or from the different conferences that they’re a part of, you swipe a card and it automatically goes in that you’ve done this lecture.”

In some technical fields, certification loses value over time as the technology becomes obsolete. For example, Windows 95 was replaced with Windows 2000 and then Windows XP. Getting recertified in the new technology requires going through the original process all over again. You typically cannot just be easily “upgraded.”

“When Windows 2000 came out, they came out with Windows XP right behind it. And people were like, we just got our certifications.”

“Technology changes every 2 years, and then dramatically changes every 4 years. So it’s almost obsolete, someone who had a Windows 95 certification.”

Participants reported that licensure or registration must, almost always, be renewed. This usually means providing proof of completing a certain amount of continuing education credits in the field or working a certain number of hours. Often the specific required courses are listed by the professional association in the field. In some cases, completing a renewal application showing completion of the necessary coursework is required. In other cases, an additional test is required.

“We have to go up for recertification, and you have to answer the same questions again every 2 years.”

It is possible to lose one’s certification, license, or registration if the renewal process is not followed in a timely manner. Sometimes a lapsed renewal can be made current by showing proof of completing the required coursework, paperwork, or additional exam. In other cases, it may mean becoming recertified from scratch, including repassing the original exam.

“If you let your license lapse, then some of them will give you a grace period if you get it in right away. But if you don’t get it in, then you have to sit for the exam again. In my case, I left work for a little while to do another career and let my CDA go. But without

going through the whole course again, I was able to sit for the exam and get it back. They didn't just give it back to me. I had to sit for the 4-hour exam all over again to get my certification back."

When state licensure is required, one can lose the license if there are complaints about quality of work.

"It's kind of like a doctor or a dentist needs to be monitored by the state to practice what they're doing. Like if you make a boo-boo, you can be reported to the state. So it is licensed through the state, it's a little bit bigger than a certificate, because you can get in trouble when you do something wrong."

Value of Subbaccalaureate Credentials

The value of certification varies. In some fields, certification is required, but in many others, even though certification is available in the field, it is not required. For example, the federal government requires certification for certain jobs or to manage projects above a certain dollar value. But in health care, the government doesn't require certification in some areas, although a certification process exists.

"The certification that was required was Project Management Professional certification, which is PMP for short. It's very hot right now in this field, and it was required for me to take this [to] step up to the level I am [at] so I can manage multiple projects. Another one is called ITIL, Information Technology Infrastructure Library, and that's really coming on right now as a hot certification for the IT folks. They are going to pretty much be the standard. Especially in the government you need those certifications to manage projects of a certain amount of money."

"I work in orthodontics, and you can be certified in orthodontics, but I'm not. I don't really have to, and if I did, it wouldn't really do anything because I work for the government. It doesn't really mean anything to them."

In the federal government, a project manager who oversees contractors in a field might not be required to be certified, but the contractor must have staff who are. This impacts someone who wants to move from the government to the private sector.

"The perspective I'm going to talk to you about is from a government perspective. We also contract out to contractors. Now, my contract might state that you must have a certified whatever on staff. So from the contractor's perspective, given they contract to the government, it's a requirement to win that contract to have that sort of certification on staff. So if I go from one government agency to another government agency, that certification won't mean a hill of beans. If I go from a government agency to a private industry, that same certification can move a mountain."

Some employers in a field may not require certification to work in a field, but other employers might.

"Most of the hospitals are not requiring a license to work as a surgical technologist. But some major hospitals, like Johns Hopkins with open heart surgeries, they are requiring licenses, certified in surgical technology, for doing this job."

“Certain counties actually require you to be certified in order to be a lead technician on one of their jobs. Montgomery, for one, requires it.”

In the case where certification is not required by the field, the perceived value of having a subbaccalaureate credential varies. Some, but not all, feel a credential will give them an advantage in the hiring process versus someone without one. Some, but not all, feel that they would receive a higher pay grade with a credential. Some, but not all, feel a credential makes them more likely to receive a promotion before someone without one.

“In order to be able to apply for that position, I had to take the Leadership 2000 [certificate course].”

“I think that certificate opened the door for me. I think that they looked at it as a positive. It was definitely, like I said, a marketing tool. I could go in and say, ‘Hey, I have this. I went through this.’ And definitely it opens up conversation.”

“I’m in a supervisory position. Having a certificate does not actually get you a job. The years of experience and the way you answer my scenario-based questions will actually land you the job. A certificate is a ‘nice to have.’”

“There are bartending schools that can give you a bartender’s license...that conveys that you have the skill set that’s required to be a bartender. I find that most places prefer experience to attending bartending school. I have friends who find it hard to get a job with a bartender’s license. I have worked several different bars, and I’ve never found it difficult [and I’m not certified].”

“I worked at Freddie Mac for a long time as a secretary and I wanted a promotion. So I took the Business Administration [2-year] program at Georgetown University, and I got promoted to Financial Analyst. Now I’m working in the government, where a Business Administration certificate doesn’t help quite as much.”

“In order to receive salary increases, you get certificates so you are more valuable and you can ask for a raise.”

A noncertified respondent who works in the paralegal field acknowledged that she would receive a higher salary if she was a certified paralegal.

“It will make me more marketable if I decide to leave this job. Like on my resume I do have paralegal [experience]. But if I went to a job and they asked me about it, I would not be able to say that I’m certified as a paralegal. I can only say it because I do paralegal work. But they don’t pay me as a paralegal. If I had the certification, at the end of the year I could go in and say, ‘I have this certification,’ and they would probably give me more money.”

In some cases, most of those in a similar position with the same employer are certified. In other cases, the staff is mixed on being certified and not being certified. There are some people who get a credential, even though it is not particularly valued by their employer. They say it increases their knowledge base and helps them do their job.

The respondent in the military believed his training at NCO school gives him some advantages as he transitions to the private sector or nonmilitary government work.

“The training that I received that made me more qualified for my position as a supervisor was when I was in the United States military. It brought a very different management style toward what most university organizations are used to as far as employment. And it’s one of the aspects that my lieutenant really liked when he decided to promote me within the first year that I’d been there.”

“I’m looking to get into police departments as a police officer, and you get preferential treatment as a veteran. But then if you’re a noncommissioned officer or commissioned officer, you get even more so preferential treatment. It shows that you stepped up while you were there.”

Putting the Credential in Context: Education and Training

Several people with a certificate or license completed a 2-year associate’s degree. Some started postsecondary education, attending either a 2-year or 4-year college, but did not finish. Some hope to return to school to complete their degrees.

Respondents do not confuse certification or licensure with obtaining a postsecondary degree. It was projected as an occupational requirement, not an educational requirement. However, on their resume, some put their certificates under the heading of “Education.” For those who have some college work, they might put this here too.

Often they said they would report education and training in a priority order on their resume: college work first, then certifications and licenses, then certificates. In some fields, continuing education courses might also be presented. Others use such words as “Professional Certifications,” “Technical Training,” “Experience,” “Qualifications,” and “Certification Courses and Skills” for their resume heading. When citing their credentials, they would typically list the credential, where they obtained it, the date, and something about the course content or the certification number.

“I put [the heading as] Education, and then I put the little bit at University of New Mexico. And then underneath that, I put separately the professional certification and licensure. Then I put the certificate from the Maryland Dental Society. Then I put the license for the radiation technology. Then I put the two certificates from South Carolina State. And on a separate sheet I put all the continuing education courses that I’ve taken to maintain the license. Dentists like to see that you have maintained your education, so I have like every course that I’ve ever taken for continuing education, but it’s a whole sheet so I do it separately.”

“I would put [the heading as] Education, and then put Professional Certification: Microsoft Certified Systems Engineer [MCSE]. And for MCSE, the date and the certification number.”

Attachment F-1: Recruitment Screener

RESPONDENT NAME: _____

DATE RECRUITED: _____

RECRUITED BY:

DATE CONFIRMED: _____

CONFIRMED BY:

RECRUIT 12 FOR 8 TO 10 TO SHOW PER GROUP.

Hello, this is _____ from Shugoll Research, an independent research firm. We are conducting a brief, but important research study on education and career development sponsored by the National Center for Education Statistics and other federal statistical agencies. This is strictly research. Your participation is voluntary and confidential, and you will receive no sales pitch or sales follow-up calls based on your participation. I'd like to ask you a few questions.

1. First, which of the following categories best describes your level of education? (READ LIST)

		<u>CIRCLE ONE</u>	
	Less than a high school degree	1	→(THANK AND TERMINATE)
	High school degree or GED	2	
	Some college, no degree	3	→(CONTINUE)
	Associate's degree (AA, AAS)	4	
	Bachelor's degree or higher	5	
	Other (SPECIFY)		
	_____	6	→(THANK AND TERMINATE)

(DO <u>NOT</u> READ)	Don't know/refused	7	

2. Do you have a professional certification in any of the following fields (or are you in the process of obtaining a certificate in any of these fields)? (READ LIST. CIRCLE ONE PER ROW)

	<u>Yes</u>	<u>No</u>
<u>Technology</u> (i.e., system administrator, network professional/architect, IT professional, enterprise developer, etc.)	1	2
<u>Health care</u> (i.e., nursing, case management, occupational/physical therapy, social work, counselor, etc.)	1	2
<u>Business</u> (i.e., financial planning, accounting, human resources, marketing, consulting, etc.)	1	2
<u>Construction</u> (i.e., construction project management, construction safety, contracting, etc.)	1	2

↓

(MUST HAVE AT LEAST ONE CIRCLED TO QUALIFY FOR "CERTIFICATE" GROUPS. RECRUIT A MIX. SKIP TO Q.4)

↓

(IF "NO" TO ALL, CONTINUE WITH Q.3A)

3a. Do you have any other type of certification, certificate, license, or similar qualification?

CIRCLE ONE

Yes 1 →(RECRUIT FOR "NONCERTIFICATE" GROUP AND CONTINUE WITH Q.3b)

No 2 →(SKIP TO Q.3c)

3b. What type of qualification do you have? (RECRUIT A MIX)

(RECORD)

3c. How interested would you be in getting a professional certification, certificate, license or similar qualification in any job or industry? (READ LIST)

CIRCLE ONE

Very interested

4

Somewhat interested

3

→(RECRUIT FOR “NONCERTIFICATE” GROUP AND CONTINUE WITH Q.4)

Not very interested

2

Not at all interested

1

→(THANK AND TERMINATE)

(DO NOT READ) Don't know

5

4. Please describe the benefits to you of having a professional qualification. (PROBE)
 What motivated you (or would motivate you) to obtain the qualifications? (RECORD ANSWER VERBATIM. PROBE AND CLARIFY FULLY.)

ANY SCREENER WITHOUT A VERBATIM ANSWER DOES NOT QUALIFY.
 IF RESPONDENT IS UNABLE OR UNWILLING TO GIVE AN ANSWER IN ENGLISH, THANK & TERMINATE.
 IF RESPONDENT HAS HEAVY ACCENT OR CANNOT MAKE HIM OR HERSELF CLEARLY UNDERSTOOD IN ENGLISH, THANK & TERMINATE.

IF RESPONDENT ONLY GIVES ONE OR TWO WORD ANSWERS AND IS UNWILLING OR UNABLE TO ELABORATE ON MEANING, THANK & TERMINATE

5. Which of the following categories includes your age? (READ LIST)

		<u>CIRCLE ONE</u>		
	Under 21	<input type="text" value="1"/>		→(THANK AND TERMINATE)
	21 to 25	<input type="text" value="2"/>		
	26 to 30	<input type="text" value="3"/>		
	31 to 35	<input type="text" value="4"/>		→(CONTINUE. RECRUIT A MIX OF AGES.)
	36 to 40	<input type="text" value="5"/>		
OR	41 or older	<input type="text" value="6"/>		
(DO NOT READ)	Refused	<input type="text" value="7"/>		→(THANK AND TERMINATE)

6. And, are you: (READ LIST)

		<u>CIRCLE ONE</u>		
	Employed full-time	<input type="text" value="1"/>		
	Employed part-time	<input type="text" value="2"/>		→(CONTINUE WITH Q.7)
	Not employed	<input type="text" value="3"/>		
	A full-time student	<input type="text" value="4"/>		→(SKIP TO Q.8)
OR	Retired	<input type="text" value="5"/>		
(DO NOT READ)	Refused	<input type="text" value="6"/>		

7. Who is your current employer? (RECRUIT A MIX OF PUBLIC AND PRIVATE SECTOR)

(RECORD)

8. What is your occupation, that is, what type of work do you do? (RECRUIT A MIX OF JOB TYPES)

(RECORD)

9. Could you please tell me with which one of the following groups you identify most strongly? (READ LIST)

	<u>CIRCLE ONE</u>	
White/Caucasian	1	→(RECRUIT A MIX)
Black/African American	2	
Hispanic/Latino	3	
Asian or Pacific Islander	4	
OR Part of some other racial or ethnic group	5	
(DO NOT READ) Refused	6	

10a. Have you ever participated in a research discussion group?

	<u>CIRCLE ONE</u>	
Yes	1	→(CONTINUE)
No	2	→(SKIP TO Q.11)

10b. How long ago was the last research discussion group you participated in? (DO NOT READ)

	<u>CIRCLE ONE</u>	
Within the past 6 months	1	→(THANK & TERMINATE)
Six or more months ago	2	→(CONTINUE)

10c. What was the topic of the study you participated in? (DO NOT READ)

	<u>CIRCLE ONE</u>	
Education-related	1	→(THANK & TERMINATE)
Job skills/career development-related	2	
Other (SPECIFY _____)	2	→(CONTINUE)

11. Using a scale of “1” to “10,” where a score of “10” means that the statement describes you extremely well and “1” means that the statement does not describe you at all, how well does the following statement describe you? (CIRCLE ONE NUMBER BELOW)

	<u>CIRCLE ONE NUMBER</u>										
	<u>Extremely Well</u>										<u>Not At All</u>
I feel comfortable expressing my opinions in a group	10	9	8	7	6	5	4	3	2	1	
	↓										
NOTE: 6 to 10 MUST BE CIRCLED, OTHERWISE THANK AND TERMINATE.											

RECORD GENDER. DO NOT ASK.

	<u>CIRCLE ONE</u>	
Female	1	→(RECRUIT A MIX)
Male	2	

INVITATION

We are conducting a panel discussion with about 10 people to discuss education, job skills, and career development preferences. The discussion will be held on _____ at _____ PM. The discussion will take about an hour and a half. A cash gift of \$75 will be given to each participant. Are you available to attend the meeting?

CIRCLE ONE

- Yes →(SEND DIRECTIONS)
- No →(THANK AND TERMINATE)

It is possible that during the discussion group you will be asked for your reactions to some written materials. If you require reading glasses, please be sure to bring them to the session. Thank you.

Attachment F-2: Moderator's Guide

The moderator will introduce herself or himself, go over rules and logistics, reference the observation room, and explain the purpose of the group.

Purpose

Thank you for taking the time to join our discussion today. Shugoll Research has been asked by the National Center for Education Statistics and other federal statistical agencies to help them understand more about job education, skills, training, preparation and other similar qualifications people may have. You were invited here because you are local residents who all have or expressed an interest in getting these types of qualifications. I and the federal statistical agencies that are involved are pleased we are able to get your input on this important topic.

Opener – the opening “question” is intended to be friendly, conversational, somewhat relevant to the topic, and easy so respondents feel relaxed and part of a positive discussion.

Let's get started with some introductions. Tell us your name, what you do for a living, and if you are working in the field you thought you would when you were in high school.

Overview questions – these questions are to get the respondent talking about their qualifications and how they are perceived in the industry. We start with a broad question and move onto more specific questions.

MODERATOR: We are interested in the language that participants use to talk about their qualifications (e.g. “certification” “certificate” “license” etc.) Listen carefully for the language and terms participants use. Once the language has been established, use that language throughout the session.

For the next hour or so we are going to talk about your work, and education, training, skills, and qualifications that you or your colleagues might have.

To start, I'd like to hear what you think is the most important qualification people need to get a job like yours.

MODERATOR: Probe on what a person's occupation is if it isn't clear from the intro and the discussion

What kinds of training or preparation did you have to undertake to qualify for your job?

MODERATOR: Only if necessary, probe with “training, qualifications, preparation, certifications, certificates, licenses.”

Are these things required for your job?

Where or how did you get your [USE PARTICIPANT LANGUAGE]?
Is where or how you got it important in your field?

How long did it take you to get these qualifications?

Are there other training, qualifications, preparation, etc. in your field that are good to have, but not required? Probe: Why are they good to have?

Do most of your colleagues have these qualifications?

When you applied or were recruited for your job, did your employer ask you if you had certain qualifications? Do you think having these improved your chances of getting the job? Does it increase your chances of promotion and marketability in general?

What other things are important in your field to help you advance?

Language – the purpose of this set of questions is to get participants to present key information about the qualifications and to use the different terms and language they might use formally and informally.

If you had to describe these types of industry qualifications or (USE PARTICIPANT LANGUAGE) to someone like me who doesn't know a lot about them or someone just starting out in your field, how would you describe them?

What about if you are talking about these qualifications to people who have been in your profession a while? Do you use different terms for it? Like an abbreviation or acronym or something like that?

Do you have some qualifications that are important to your employer, but that are not relevant to other employers? When talking to others, how would you distinguish these qualifications from those that are recognized by employers in general?

Probe on commonality of use of terms that come up.

Resume activity – this is a concrete example intended to focus respondents on short, succinct descriptions of their qualifications/certifications which could provide insight into what is important to highlight in the short, succinct survey questions we are interested in designing.

MODERATOR –list on flip chart:

If you were reviewing or preparing a resume or job application form, under what section heading would you list or expect to see the kinds of qualifications we have been talking about?

What, specifically, would you look for or put in that section? *Probe: Use the specific language you would use or expect to see.*

Let's look at some of these, how would someone demonstrate on a resume or job application form that they had these qualifications and skills?

[Probe for grades, course hours, exam pass/fail]

Certifications focus – this section asks some specific questions about properties of the qualification/certification.

MODERATOR: Again, pick a few from the resume list or from notes to get discussion going on these questions – get to as many of these questions as time allows for:

Do you have to take an exam or pass a performance test in order to get these?

Do you have to renew them?

Do you have to take tests periodically to maintain them?

Can these qualifications be revoked or suspended?

What organizations award them?

Are these part of a licensing process?

Check to see if there are any follow-up questions needed from observation room and END.

Appendix G: ATES Cognitive Interview Report

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Cognitive Interview Findings for New Items to Measure Subbaccalaureate Credentials Among Adults in the United States

October 12, 2010

Prepared for the National Center for Education Statistics by:

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Introduction and Methodology

The Education Statistics Services Institute (ESSI) of the American Institutes for Research (AIR) is helping the National Center for Education Statistics (NCES) develop a government strategy for measuring the prevalence of subbaccalaureate credentials, in particular industry-recognized certifications and educational certificates, in the United States. ESSI/AIR is conducting a multiphase research effort. In Phase I, AIR contracted with Shugoll Research to conduct focus groups with people holding less than Bachelor's degrees who work in fields that may offer subbaccalaureate opportunities. This current report discusses key findings from Phase II, a series of cognitive interviews about potential survey items that may be used to measure certification and certificates.

Shugoll Research and ESSI/AIR conducted a total of 60 cognitive interviews between March 8 and July 2, 2010. The interviews were conducted in three rounds. The first round focused on certification, the second on certificates, and the third on a combined survey instrument. Respondents were required to either have a certification (minimum of 15 interviews), certificate (minimum of 12 interviews) or other training (minimum of 13 interviews).

Of the 60 interviews, 55 were conducted by telephone. Five were conducted in person to determine whether there would be a difference in the quality of responses compared to telephone interviewing. No difference was observed.

To include some regional mix, interviews were divided among people living in three metropolitan areas: Washington, DC, Charlotte, and Minneapolis-St. Paul. Respondents were also mixed on gender, race and ethnicity, whether they worked in the public or private sector, and field (including technology, health care, business, construction and other). All respondents were ages 21 to 40 years old.

Respondents were recruited by telephone from a database maintained by a marketing research company in each city. Each prospective respondent was screened using a recruitment screener that is shown in attachment G-1. If they were qualified, respondents were offered a \$40 honorarium to encourage participation.

The interviews were conducted by a professional interviewer. The interviewer used a topic guide developed by ESSI/AIR (see attachment G-2) to ensure that all objectives of the study were met. Researchers from ESSI/AIR, NCES, and other federal statistical agencies listened in on most of the interviews and provided valuable guidance and feedback throughout the study.

This report summarizes the results of the cognitive interviews. Where appropriate, findings are supported by examples. Interviews were not recorded. Examples are taken from the interviewer's notes.

Limitations

A qualitative research methodology seeks to develop direction rather than quantitatively precise or absolute measures. Because of the limited number of respondents involved in this type of research, the study should be regarded as exploratory in nature. Results should be used to generate hypotheses for decision making and further testing. The nonstatistical nature of

qualitative research means the results cannot be generalized to the population under study with a known level of statistical precision.

Key Findings

Reporting Credential Status

Those with a subbaccalaureate certificate typically know what credential they have, and answer the questions correctly. However, those who take any type of training program and receive a “certificate of completion” at the end often mistakenly say they have a certificate. They do not differentiate between an educational certificate and an occupational certificate. Final questionnaires should further clarify what a subbaccalaureate certificate is. Presenting a clear definition to the respondent in the second wave of interviewing, rather than leaving the term undefined as in the first wave, helped in identifying true subbaccalaureate certificates. However, there still will likely be some miscounting as there appear to be some gray areas between an educational certificate and an occupational certificate. Classroom time and highest degree are two other factors that could be used to clarify whether a certificate is actually a subbaccalaureate certificate. Whether an exam is required to show proficiency seemed to be a good means of clarifying whether someone has a certification.

Another source of confusion happens in some degree programs (e.g., nursing) where students receive “certificates” in various topical areas as they make their way through the program. These are not subbaccalaureate certificates, although a few people in this situation answered “yes” when asked if they had such a certificate. Specifying that a certificate does not lead to an Associate’s, Bachelor’s or graduate degree helped eliminate this confusion. This wording should continue to be used.

The round 3 interviews tested two interviewer-read definitions for certificates; a short definition and a longer one. Respondents were able to answer the question correctly using the short definition. The longer definition has been retained as an interviewer probe. An interviewer probe was also retained for certifications.

Recall about details, like time to complete, is more difficult for older certifications and certificates. The instrument will ask in detail only about the “most recent” certification and certificate.

Question Order

In some fields, such as information technology, the concept of certification is clear. For example, several respondents received Linux + certification, and understood that certification was the correct term for their credential. However, some with certifications or occupational certificates in other fields use the terms certification and certificate interchangeably (e.g., a Master Service Certification in the automotive industry was also referred to as certificate). Because of this tendency to use both terms, it appears that some with a certification will answer “yes” to whether they have a certificate if they are first asked about a certificate program. When asked first about certification, rather than certificate, there seems to be less confusion. This strategy is recommended.

Additionally there are cases where completing a certificate program precedes sitting for a certification exam. For example, one respondent earned a Certificate in Project Management from George Washington University before taking the Project Management Professional (PMP) certification test. Another completed a certificate in Athletic Training so she could be certified as a personal trainer. In these cases, the courses taken for the certificate are, in essence, the same courses used to learn the content for the certification. This again leads to some confusion in identifying accurately what credential an individual has completed. In an open-ended interview, it was possible to clarify this. In a closed-ended situation, it will be more difficult. A question that might clarify this is, “Do you have a certificate that leads to certification?”

The round 3 interviews tested asking about certificates first and certifications first and verified that asking about certifications first was less confusing for all respondents, including those who took a certificate program to attain the certification.

Certification vs. License

When asked whether they had a professional certification, some with a license wondered aloud whether a license and certification were the same thing. An emergency medical technician said this, for example. In the automotive area, a respondent with an Automotive Service Excellence (ASE) certification called his credential “an ASE certified license.” Further, in some cases where a state exam is required to do a certain type of work (e.g., Master Plumber), the words certification and license are sometimes used interchangeably. In some fields that require someone to be certified to practice in the field, even if there is not a state exam, the words certification and license also may be interchangeable. For example, some financial planners with a Series 7 credential refer to it as certification while others call it a license.

The round 3 interviews tested using “certification” and “license” in the same question stem and found this approach worked. In cases where respondents differentiate between a license and certification process, the questions about courses and training apply to the certification process, but not the license process. To clarify this, an introductory statement was added to point out to respondents that the relevant questions are about the training or coursework.

Multiple Credentials

There are cases where respondents have career training in multiple fields. They may have changed careers, and typically are using one area of training and not the other (e.g., one person is licensed as a cosmetologist and is working in the area and also is certified in medical billing but is no longer working in that field). Decisions will need to be made about which certificates, certifications and licensure will be measured or counted.

In some cases certification is required prior to licensing (e.g., a financial planner who first must get his Certified Financial Planner credential and then apply for licensure through the State Board of Standards; a Certified Nurse’s Assistant who must get the certification before becoming licensed to be a phlebotomist). Another case is where someone receives a license without first receiving a certificate or certification. The coursework needed to get the license may be part of a college degree program. This was true with a high school guidance counselor who received her degree and then must pass a state exam to be licensed. In some fields you must be licensed before becoming certified. An example is a realtor who had to get her license first and later could become certified in various areas of specialization. To be licensed, this respondent had to take

120 hours of classes (for which she did not receive a certificate or certification) and then pass a state exam. Certification was a separate and subsequent process.

The round 3 instrument asked about multiple credentials and this approach worked. A question to ask whether or not the certification and certificate reported are related was added to the questionnaire.

Degree and Certificate Overlap

There are cases where people with a college degree (one woman had a Master's degree) take a program that sounds very much like an educational certificate program to increase their job skills or, more likely, to change vocations. Decisions will need to be made regarding how to count such situations. One woman with a Bachelor's degree received a certificate and certification to become a personal trainer. When describing her highest level of education, the certification was not mentioned even though it is the credential most relevant to her current occupation.

Many with college degrees also have a certification in order to work in a particular field (e.g., a Project Management Professional certification to work in project management, Series 7 and Series 63 certifications for securities trading, A+ certification in information technology). These are true certifications that, by definition, are not subbaccalaureate training. Others without college degrees receive certifications in fields to open the door to working in that field, to increase their labor market value or because certification is required to work in that area.

Two questions were added during the round 3 interview to assess whether or not the certification was part of a degree program. These questions worked.

Employment Status

Questions developed for the survey must be written in such a way to reflect several possible employment situations that came up during the cognitive interviews: 1—the person works for some entity, 2—the person is self-employed, 3—the person is currently out of work.

The round 3 interviews included a question to capture this information, and this item worked.

Additional Findings by Item

Possession of Certificate, Certification, or License

The key findings address the findings for the key initial questions about whether or not the respondent has a certification, certificate, or license. To review, the original unaided questions about whether one has taken training to earn a certificate, certification or license are difficult for some to answer, and easy for others, because of question order, and confusion about what to report, particularly for certificates.

Asking about certifications before certificates improves response and when definitions or descriptions of certificates and certification are provided, the respondents' can more easily answer.

No definition is needed for licensure.

Name of Certificate/Certification/Licensure and Completion

Stating the name of one's credential is difficult for some to answer, and easy for others. In some cases of certification such as Project Management Professional (PMP), information technology certifications such as A+ and Linux+ and stocks and securities certifications such as Series 6 or Series 63, the terminology is recognized and always used.

In other cases, respondents cannot produce an accurate answer and tend to give a description of the training. For example, a personal trainer did this.

Respondents can easily answer the question about whether they completed their training.

Subject or Field of Certification and Certificate

Asking respondents to name the subject or field of study for a certificate or certification is difficult to answer after previously giving the name of the certificate or certification. This is because the names of certificates and certifications usually include a description of the field of study (e.g., Project Management Professional, Personal Trainer Certification). Therefore, asking an additional question about the major subject or field of study of a certificate or certification is redundant and often confusing to the respondent. One said, "What do you mean?" Another said, "That's not clear."

The occupational field question was moved to be the first in the series for the round 3 interviews.

Reasons for Getting Occupational Training

The reason for getting occupational training is easy to answer.

Regardless of whether one is talking about a certificate, certification or other training, in most cases respondents take the training to improve their skills, increase their chances for advancement in a current job or make them more marketable. Thus, these credentials are perceived to have labor market value. One person in information technology said his certification "was kind of like a degree. Employers know what it means. It puts me in a better position to get promoted." A legal assistant said, "It puts me in a better position for salary increases and promotions." A Certified Master Plumber said, "I can't own or run a business without it. It opens more doors, more job opportunities. It makes me look better than someone without the license. It makes you more valuable." A social worker indicated, "I do not have an official degree of any kind. Having these certificates is really significant for me. They can lead to higher pay grades and promotions."

Some take the training because it is required for their position. For example, an information technology administrator said he is required to be BICSI certified for his job because it shows he has the experience and ability to work in the cabling area. A legal assistant was required for her job to become a certified notary. A school psychologist was required to be licensed prior to taking her job in a public school. Being certified is required prior to being able to sell stocks or bonds.

Few take training for personal (nonemployment) reasons (e.g., because it could be fun). A certified personal trainer did say, “I got certified because I love sports and love being in the gym.”

There was one case in the interviewing where someone became licensed to work as a volunteer firefighter and emergency medical technician. He does this as volunteer work and his vocation is in another field. This is a case where the reason for getting the license was not related to labor market value. However, he does say that he is highly respected by employers because of his volunteer commitment. It is unclear how many similar cases there are.

Provider Organizations

Naming the provider of their training is easy for most people to answer, but others could not answer it. Some cannot recall the name of their training provider, particularly if it was a private company. Similarly, some are not sure how to describe the type of organization that provided the training.

Providers of subbaccalaureate certificates represented in the research were 4-year colleges and universities (e.g., George Washington University, University of Wisconsin, University of St. Thomas), community colleges (Prince George’s Community College, Central Piedmont Community College) and training providers (e.g., ESI International, World Instructor Training Schools).

Providers of certification training or training to receive licensure can be not-for-profit professional associations (e.g., CompTIA in the information technology field, National Institute for Automotive Service Excellence, Certified Financial Planner Board of Standards, Project Management Institute, etc.) or private training providers (e.g., Empire Beauty Schools).

Exams

This question of whether an exam was required to be credentialed is easy to answer.

Some of those receiving educational certificates have to pass an exam to get their certificate. For example, a respiratory therapist needed to complete an exam to get her certificate while an automotive technician had to pass a test in customer service. Alternatively, some have to pass tests periodically during their training. A social worker with two certificates said she was tested periodically during her training but did not have a final exam.

For occupational training certificates, there are exams in some cases (a construction worker said he had to pass a test to work as a pipe fitter and the test was open book, a respondent had to pass a test to get her payroll processing certificate) but not in many others (a certificate in mechanical vibrations and a leadership class certificate taken by the branch manager of a bank did not have exams).

Certification requires completion of an exam. The rigor of the exams varies but can be quite rigorous with hundreds of questions taking several hours to complete. An information technology administrator taking training through CompTIA reported completing a 90 question test on all aspects of his training. A biotechnologist said his exam was both written and oral. A certified personal trainer reported having to get 70 percent of the answers correct on a

150 question multiple choice test. A building inspector had to pass an exam with 120 questions. A financial planner had to take five 2-hour exams for certification and then a 10 hour comprehensive to be licensed. A project management professional indicated that only 35–40 percent of people taking the Project Management Professional Certification pass the 200 question test.

In some cases of licensing, exams are described as “Boards” and can take multiple days and be extremely rigorous. Several nurses interviewed for the study used this term.

The ability to perform required job tasks is sometimes measured directly or indirectly through case studies. An information technology administrator said he had to complete “technical labs” to demonstrate job task proficiency, which he described as “like biology labs, like dissecting a frog.” An accountant said he had to do “role playing and complete a case study in a group of two.” A warehouse manager said he had to do a mock presentation describing how he would complete a task.

Previous Job Experience and Ability to Perform Job Tasks

The questions of whether previous job experience is required or whether a candidate must be able to perform certain job tasks before enrolling in a program is easy for some to answer but difficult for others. Some are unsure whether previous job experience or the ability to perform job tasks is needed to begin training.

Subbaccalaureate certificates typically do not require previous job experience or ability to perform certain job tasks (e.g., a day care worker with a certificate in early childhood education did not have to have either prior to enrolling).

Occupational certificates may require previous job experience or ability to prove one can perform certain job tasks (one respondent had to pass an experiential test to get into a program on Alzheimer’s Disease).

Certification in many fields has employment prerequisites and/or educational prerequisites. A registered nurse was required to be degreed in the field prior to applying for certification. A candidate to become a Master Plumber was required to work under a certified Master Plumber for 2 years before being eligible for certification himself. A Project Management Professional must have a Bachelor’s degree and 500 hours of project management experience. A Certified Financial Planner must have 2 years experience in the position.

Previous job experience was dropped from the questionnaire.

Time to Complete Training

The question about time required to complete training is easy for most to answer, but difficult for some. Many have to think before they answer and then provide an estimate. If the training was a long time ago, recall may be particularly difficult.

In responding to questions on length of training, some think of the duration it took from beginning to end (e.g., 2 weeks, 6 months, 1 year) and others think of education contact hours (e.g., 40 hours total, 10 days at 8 hours a day).

In the case of some educational certificates or certifications, respondents will spend an equal (or lesser) amount of time in a practicum, internship or shadowing situation as in class. For example, an assisted living worker receiving a certificate in Alzheimer's disease had a delegating nurse review the work she did on the job. A personal trainer shadowed a certified professional at a YMCA before she herself could be certified.

Educational certificates discussed in the interviews were typically completed in anywhere from 3 months to 18 months. A nail technician said her program took "9 months, going to class 3 times a week for 3-4 hours."

Occupational certificates or certificates of completion are usually completed over several days or weeks, not months.

Certification programs may take 3-4 months to complete and be ready to take the certification exam.

The duration questions were rewritten to ask about weeks or months and those whose certification is from a formal degree program are skipped out of these questions.

Class Setting

Whether training is classroom based, self-study or online is easy to answer.

Regardless of whether for a certificate, certification or other training, most in the interviews took classroom-based training courses.

Certification is the area where someone would be most likely to take an online course. A certified personal trainer said she could have gone to a website to train for her exam. A certified website developer did all his training online. A systems administrator completed his A+ training online. Most certification training providers have developed online courses as well as traditional courses. In some companies, instruction is only available online.

In some certification examples, formal courses are not specifically required before demonstrating proficiency. Therefore, someone with job experience, in theory, could pass a proficiency exam without taking any classroom or online courses.

Maintaining Credentials

Respondents can easily answer yes or no as to whether they need to do anything to maintain their credential. However, when additional training is required, many provide an estimate of the hours required since they are unsure of the exact requirement.

Most certifications need to be renewed based on a continuing education requirement. Coursework for recertification must be submitted every 1, 2, 3, 4 or 5 years. A certified personal trainer said she is required to get ten continuing education credits every 2 years. A Project Management Professional must earn 35 "professional development units" in 4 years or he will lose his certification. A school psychologist must complete 30 credit hours every 5 years. However, a systems administrator says he does not need to do anything to maintain his A+ Certification: "You get it, you keep it."

Continuing education credits may be earned through colleges and universities, training providers, or professional associations, depending on the field. In some cases, the courses may be just 1 day seminars. A school psychologist, for example, must take a series of seminars lasting 1–2 days provided by her school system or another state agency like a mental health agency.

True subbaccalaureate certificates typically do not need to be renewed and don't require continuing education. A respondent with a certificate in Early Childhood Education said no additional testing is required. A social worker who took two leadership certificates also says no additional training is necessary to maintain the certificates.

In some industries, as technology or product lines change, workers are required to take additional coursework or on the job training to master the new technology and get recertified. A plumber certified as a Cross Connection Technician must take a 32-hour course every year to stay current. This is not required for his other certifications as a Master Plumber and Master Gas Fitter. An inspector for a gas company says he is “certified in like 134 covered tasks and has to retrain every 3 years to keep the certificate valid.” An automotive technician has to take additional classes any time a new model is introduced or there is a major technological innovation. Most of the five to ten classes taken by the automotive technician a year are online.

Revocation

The question of whether a credential can be revoked is difficult for some to answer, and easy for most. Some just do not know if their certificate, certification or license can be revoked. For example, a school psychologist does not know if her license could be revoked. An automotive service technician is not sure if his certification could be terminated. When asked if his certification could be revoked, an A+ certified systems administrator responded, “Not that I know of.”

Certificates cannot typically be revoked. Certifications or licenses in some fields can be revoked.

Reasons a certificate or license could be revoked include malpractice, fraud, unethical practices or after being reported by a supervisor for poor quality work. A legal assistant certified as a Notary said, “Her certification could be revoked if she notarized a signature if the person wasn't there or if she notarized something she knew was a fraud or for anything unethical.” A registered nurse replied that her license “could be revoked if she was caught with drugs or took drugs from a hospital.” A nail technician said her license could be revoked “if an inspector came in and saw unsanitary conditions.”

Failure to submit continuing educational requirements can also result in loss of certification or licensure.

Ability to Use Training at another Employer

This question about value of training if changing employers is easy to answer.

Educational certificates are often the key to entering into a field. They are respected within the industry and are valuable to another employer. A warehouse manager referred to his certificate as “the gold standard.”

Certifications are typically industry recognized and are respected by all employers in the field. An information technology specialist said, “A colleague without certification left and tried to get another job. He was not certified. He had to prove his experience and skills. I would just show them my certification.” In many instances, certifications are required to practice in a field or to do a certain type of task. An inspector for a gas company says his certification is required by state and federal law. A construction worker certified as a pipe fitter also says certification is required by the state.

Only “additional training,” that sometimes is offered on the job or as part of a seminar or professional association meeting, may hold little value to other employers. Said an accountant, “That’s because this training isn’t all that formal.” Said a personal trainer, “I use the skill set. But the training wouldn’t be transferable to another employer.” A web developer talking about the business and proposal writing courses he took said, “I suppose it gives me a competitive advantage, but it would be hard to demonstrate I have the skill beyond just stating it.”

Highest Level of Education

Naming one’s highest degree or level of school completed is easy to answer.

Respondents almost never mention their occupational training in discussing their educational achievement. They clearly differentiate between the two. A biotechnician describing his education said, “I just didn’t think of my certification. It is not my primary education. It’s a 2 week certification versus 4 years of college.” A legal assistant indicated, “It’s not part of my education. It’s not the same as college.” A building inspector said, “Certification is not part of my college education. It’s a separate thing done at a community college.” A woman with a subbaccalaureate certificate described her education as “some college” and added that “the certificate is not relevant because when I think about education I think about college.” One exception was a social worker who lists her certificates on her resume under education. She considers them “mini-Bachelor’s.”

When asked why they do not think about their occupational training in naming their highest educational level, most seem confused to be even asked that question.

Occupational training is almost always listed on one’s resume. A personal trainer said, “I would put it on my resume because it shows that I have done extra work, study and time in the field.” Usually it is under a separate heading than education. An assisted living worker said she put her certificate under “Skills and Training” on her resume.

One interview was conducted with someone who had an advanced “Specialist” degree. She said it is higher than a Master’s since it requires more coursework. It was unclear how she would answer a closed-ended highest level of education question using standard categories.

License

The question about whether one has a license is easy to answer. For the most part, those with a license know they have one. However, as indicated in the key findings, some with a license wonder if that means they are also certified.

Licenses are required to perform certain job tasks. For example, a registered nurse interviewed is required to be licensed in her state. A nail technician is required to be licensed by the Cosmetology board of her state.

In some cases, certification (e.g., Medical Assistant Certification) is a required prerequisite to licensure (e.g., Respiratory Therapist license). In other cases, a specific degree qualifies someone to receive a license.

Obtaining licensure often means showing the appropriate credentials to the licensing agency or submitting paperwork to an agency. In other cases (such as nursing), sitting for and passing an additional exam is required.

Licenses in many fields are typically granted by the state. But in the case of operating some types of heavy machinery, a company may license an individual after training. There is no state license involved.

In some cases a license is not portable from state to state. For example, a licensed school psychologist in North Carolina would need to apply for a new license to work in another state. In other cases, there may be reciprocal agreements between a limited number of states (DC honors plumbing licenses from Maryland, for example). Sometimes one state may require licensure to perform a job task and another state may not. For example, a warehouse manager in the dairy industry reported that the state of Wisconsin requires a license to operate some heavy farm machinery whereas Minnesota does not.

In some fields (plumbing is an example) a respondent must be certified by the state, but then be licensed to work in individual counties or cities. This is an example of where coursework is required to become certified but the licensing process is just paperwork.

Licenses usually require fulfillment of continuing education requirements. Those with licenses typically must renew their license every 3 to 5 years.

A unique situation is someone being licensed to operate a specific piece of equipment (like a forklift). This is really an operator's license rather than a professional license. Nevertheless, those with such licenses answered "yes" to the question, "Do you have a state or industry license?"

Other Training

The first two rounds of the cognitive interviews asked about "other training" to ensure that all types of training were explored.

This question about whether they have taken other training besides for a certificate, certification or license is generally easy to answer, although some do say, "What do you mean by additional training?"

In many cases this training is offered by the employer, on the job. A biotechnician says he must "take a course to review the standard operating procedures in the company periodically." A web developer has taken internal training on how to be a better consultant, business writing and

proposal writing. In other cases the employer sends an employee to an outside program offered by a training company. This training is typically short, lasting from a few hours to a few days.

Typical training offered by an employer may be on a specific type of software (e.g., Adobe Captivate) or a piece of office equipment (with training provided by the manufacturer or the company selling the equipment). This training may be required of all people in a common position or could be optional training. In the latter case, those taking the training typically believe it improves their skills, makes them more valuable to their employer and can lead to promotions and pay increases.

Many people also attend seminars offered by professional associations (one respondent has taken several seminars related to operating a family business). They again last typically from a few hours to a few days.

Some, but not most, of this additional training is done online.

Most training of this type does not have a required exam to measure skills proficiency.

Under the heading of “additional training,” some people interviewed discussed the coursework they need for continuing education credit in renewing their license or certification. For example, a school psychologist says she has not taken additional training “except to maintain the license.”

The interviews show that certificates and certifications are the appropriate categories of training to focus on for the interviews. Most other training is employer-specific. A question about continuing education credits was added to the survey to capture those training opportunities.

Proxy for Other Adults

Most individuals would have difficulty answering questions about the occupational training of others in their household.

Some say they could answer whether their spouse or partner in their household has a certificate, certification or license. One respondent said, “My wife is a certified nurse. She passed her Boards.”

Few, however, could describe in detail the training another adult in the household received to achieve the certificate, certification or license or answer other questions about testing, continuing education requirements, expiration or suspension. The respondent whose wife was a nurse said, “That’s about all I know. I couldn’t give you the details.” A building inspector said, “My wife is a certified nursing assistant. But I couldn’t answer any more about her training because she did it before we were married.”

Attachment G-1: Recruitment Screeners

COGNITIVE TELEPHONE RECRUITMENT SCREENER (ROUND 1 – 20 INTERVIEWS) (FINAL 02/25/10)

RESPONDENT NAME: _____

TELEPHONE NUMBER FOR INTERVIEW: _____

DATE RECRUITED: _____

DATE CONFIRMED: _____

RECRUITED BY:

CONFIRMED BY:

Hello, this is _____ from Shugoll Research, an independent research firm. We are conducting a brief, but important survey on education and job training on behalf of the National Center for Education Statistics and other Federal statistical agencies. This is strictly research. Your participation is voluntary and confidential, and you will receive no sales pitch or follow-up calls based on your participation. I'd like to ask you a few questions.

1. First, which of the following categories includes your age? (READ LIST)

		CIRCLE ONE	
	Under 21	1	→(THANK AND TERMINATE)
	21 to 25	2	
	26 to 29	3	
	30 to 35	4	→(CONTINUE. RECRUIT A MIX OF AGES.)
	36 to 40	5	
OR	41 or older	6	
(DO NOT READ)	Refused	7	→(THANK AND TERMINATE)

2. What is the highest degree or level of school you have completed? (DO NOT READ. NOTE VERBATIM AND CIRCLE ONE CATEGORY BELOW)

- | | <u>CIRCLE ONE</u> |
|---|-------------------|
| a. No schooling | 1 |
| b. Nursery school | 2 |
| c. Kindergarten | 3 |
| d. Grades 1–11 | 4 |
| e. 12 th grade NO DIPLOMA | 5 |
| f. Regular high school diploma | 6 |
| g. GED or alternative credential | 7 |
| h. Some college credit, but less than 1 year of college credit | 8 |
| i. 1 or more years of college credit, no degree | 9 |
| j. Associate’s degree (for example: AA, AS) | 10 |
| k. Bachelor’s degree (for example: BA, BS) | 11 |
| l. Master’s degree (for example: MA, MS, MEng, Med, MSW, MBA) | 12 |
| m. Professional degree beyond a bachelor’s degree (for example:
MD, DVS, DDM, LLB, JD) | 13 |
| n. Doctorate degree (for example: PhD, EdD) | 14 |

3. Which of the following do you have: (READ LIST)

- | | <u>CIRCLE</u> | |
|--|---------------|--|
| A professional certification or
license such as a PMP certification,
Registered Nurse, or Certified
Technician? | 1 | →(RECRUIT FOR CERTIFICATION
INTERVIEWS) |
| Other professional training that
required course work lasting from
one week to two years | 2 | →(RECRUIT FOR OTHER
INTERVIEWS) |
| OR Neither | 3 | →(THANK AND TERMINATE) |
| (DO <u>NOT</u> READ) Don’t know | 4 | |

4. In what field is that? (READ LIST)

CIRCLE ONE

Technology (READ ONLY IF NECESSARY: i.e.,
system administrator, network
professional/architect, IT professional,
enterprise developer, etc.)

1

Health care (READ ONLY IF NECESSARY: i.e.,
nursing, case management,
occupational/physical therapy, social work,
counselor, etc.)

2

Business (READ ONLY IF NECESSARY: i.e.,
financial planning, accounting, human
resources, marketing, consulting, etc.)

3

Construction (READ ONLY IF NECESSARY: i.e.,
construction project management,
construction safety, contracting, etc.)

4

→(RECRUIT AT LEAST 5)

OR Something else (Specify)

5

5. Please describe the benefits to you of having this professional training. (PROBE) What motivated you to complete the training? (RECORD ANSWER VERBATIM. PROBE AND CLARIFY FULLY.)

ANY SCREENER WITHOUT A VERBATIM ANSWER DOES NOT QUALIFY.
IF RESPONDENT IS UNABLE OR UNWILLING TO GIVE AN ANSWER IN ENGLISH, THANK & TERMINATE.
IF RESPONDENT HAS A HEAVY ACCENT OR CANNOT MAKE HIM OR HERSELF CLEARLY UNDERSTOOD IN ENGLISH, THANK & TERMINATE.
IF RESPONDENT ONLY GIVES ONE OR TWO WORD ANSWERS AND IS UNWILLING OR UNABLE TO ELABORATE ON MEANING, THANK & TERMINATE.

6. And, are you: (READ LIST)

		<u>CIRCLE ONE</u>	
Employed full-time		1	→(CONTINUE WITH Q.7)
Employed part-time		2	
Not employed		3	→(SKIP TO Q.9)
A full-time student		4	
OR Retired		5	
(DO <u>NOT</u> READ) Refused		6	

7. Do you work in the: (READ LIST)

		<u>CIRCLE ONE</u>	
Private sector		1	→(RECRUIT A MIX OF PUBLIC AND PRIVATE SECTOR)
Public sector/government		2	

8. What is your occupation, that is, what type of work do you do? (RECRUIT A MIX OF JOB TYPES)

_____ (RECORD)

9. Are you of either Hispanic or Latino origin?

		<u>CIRCLE ONE</u>
Yes		1
No		2

10. What is your race? (READ LIST)

		<u>CIRCLE ALL THAT APPLY</u>	
American Indian or Alaska Native		1	→(RECRUIT A MIX)
Asian		2	
Black or African American		3	
Native Hawaiian or Other Pacific Islander		4	
White		5	

RECORD GENDER. DO NOT ASK.

		<u>CIRCLE ONE</u>	
Female		1	→(RECRUIT A MIX)
Male		2	

INVITATION

Based on your answers, we would like to invite you to participate in an additional telephone interview to discuss education and job training. You will receive an honorarium of \$40 for participating in the interview. This is not for sales purposes; it is part of a research study. The interview is 40 minutes in length and can be conducted over the telephone [or in-person at our office located in downtown Bethesda, Maryland].

Phone

We are conducting telephone interviews from _____ to _____. Are you available to participate in this research study?

- Yes 1 → (CONTINUE)
- No 2 → (ASK ABOUT IN-PERSON, IF QUOTAS NOT FILLED)

In-person

We are conducting in-person interviews from _____ to _____. Are you available to participate in this research study?

- Yes 1 → (CONTINUE AND GIVE DIRECTIONS)
- No 2 → (THANK AND TERMINATE)

RECRUITER RECORD

DAY/DATE OF INTERVIEW: _____

TIME OF INTERVIEW: _____ AM/PM

RECORD PHONE NUMBER FOR INTERVIEW AND FOR CONFIRMING IN-PERSON INTERVIEWS: _____

OBTAIN COMPLETE INFORMATION ON PAGE 1 OF SCREENER.

**COGNITIVE TELEPHONE RECRUITMENT SCREENER
(ROUND 2 – 20 INTERVIEWS)
(04/08/10)**

RESPONDENT NAME: _____

TELEPHONE NUMBER FOR INTERVIEW: _____

DATE RECRUITED: _____

DATE CONFIRMED: _____

RECRUITED BY:

CONFIRMED BY:

Hello, this is _____ from Shugoll Research, an independent research firm. We are conducting a brief, but important survey on education and job training on behalf of the National Center for Education Statistics and other Federal statistical agencies. This is strictly research. Your participation is voluntary and confidential, and you will receive no sales pitch or follow-up calls based on your participation. I'd like to ask you a few questions.

1. First, which of the following categories includes your age? (READ LIST)

		<u>CIRCLE ONE</u>	
	Under 21	1	→(THANK AND TERMINATE)
	21 to 25	2	
	26 to 29	3	
	30 to 35	4	→(CONTINUE. RECRUIT A MIX OF AGES.)
	36 to 40	5	
OR	41 or older	6	
(DO <u>NOT</u> READ)	Refused	7	→(THANK AND TERMINATE)

2. What is the highest degree or level of school you have completed? (DO NOT READ. NOTE VERBATIM AND CIRCLE ONE CATEGORY BELOW)

	<u>CIRCLE ONE</u>
a. No schooling	1
b. Nursery school	2
c. Kindergarten	3
d. Grades 1–11	4
e. 12 th grade NO DIPLOMA	5
f. Regular high school diploma	6
g. GED or alternative credential	7
h. Some college credit, but less than 1 year of college credit	8
i. 1 or more years of college credit, no degree	9
j. Associate’s degree (for example: AA, AS)	10
k. Bachelor’s degree (for example: BA, BS)	11
l. Master’s degree (for example: MA, MS, MEng, Med, MSW, MBA)	12
m. Professional degree beyond a bachelor’s degree (for example: MD, DVS, DDM, LLB, JD)	13
n. Doctorate degree (for example: PhD, EdD)	14

3a. And, have you taken education or training to earn a certificate? This does NOT include a professional certification or license such as a PMP certification, Registered Nurse or Certified Technician.

	<u>CIRCLE</u>	
Yes	1	→(RECRUIT FOR CERTIFICATE INTERVIEWS AND GO TO Q.4)
No	2	→(CONTINUE WITH Q.3B)
Don’t know	3	

3b. Other than training that led to a certificate, a certification or a license, have you taken other training that required course work?

	<u>CIRCLE</u>	
Yes	1	→(RECRUIT FOR OTHER INTERVIEWS AND GO TO Q.4)
No	2	→(THANK AND TERMINATE)
Don’t know	3	

4. In what field is that? (READ LIST)

CIRCLE ONE

- | | |
|---|---|
| <u>Technology</u> (READ ONLY IF NECESSARY: i.e., system administrator, network professional/architect, IT professional, enterprise developer, etc.) | 1 |
| <u>Health care</u> (READ ONLY IF NECESSARY: i.e., nursing, case management, occupational/physical therapy, social work, counselor, etc.) | 2 |
| <u>Business</u> (READ ONLY IF NECESSARY: i.e., financial planning, accounting, human resources, marketing, consulting, etc.) | 3 |
| <u>Construction</u> (READ ONLY IF NECESSARY: i.e., construction project management, construction safety, contracting, etc.) | 4 |
| OR Something else (Specify) _____ | 5 |

5. Please describe the benefits to you of having a certificate or other training. (PROBE) What motivated you to obtain a certificate or complete the training? (RECORD ANSWER VERBATIM. PROBE AND CLARIFY FULLY.)

ANY SCREENER WITHOUT A VERBATIM ANSWER DOES NOT QUALIFY.
 IF RESPONDENT IS UNABLE OR UNWILLING TO GIVE AN ANSWER IN ENGLISH, THANK & TERMINATE.
 IF RESPONDENT HAS A HEAVY ACCENT OR CANNOT MAKE HIM OR HERSELF CLEARLY UNDERSTOOD IN ENGLISH, THANK & TERMINATE.
 IF RESPONDENT ONLY GIVES ONE OR TWO WORD ANSWERS AND IS UNWILLING OR UNABLE TO ELABORATE ON MEANING, THANK & TERMINATE.

6. And, are you: (READ LIST)

- | | | |
|-----------------------|-------------------|----------------------|
| | <u>CIRCLE ONE</u> | |
| Employed full-time | 1 | →(CONTINUE WITH Q.7) |
| Employed part-time | 2 | |
| Not employed | 3 | →(SKIP TO Q.9) |
| A full-time student | 4 | |
| OR Retired | 5 | |
| (DO NOT READ) Refused | 6 | |

7. Do you work in the: (READ LIST)

- | | | |
|--------------------------|-------------------|---|
| | <u>CIRCLE ONE</u> | |
| Private sector | 1 | →(RECRUIT A MIX OF PUBLIC AND PRIVATE SECTOR) |
| Public sector/government | 2 | |

8. What is your occupation, that is, what type of work do you do? (RECRUIT A MIX OF JOB TYPES)
_____ (RECORD)

9. Are you of either Hispanic or Latino origin?

CIRCLE ONE

Yes 1
No 2

10. What is your race?

CIRCLE ALL
THAT APPLY

American Indian or Alaska Native	1	→(RECRUIT A MIX)
Asian	2	
Black or African American	3	
Native Hawaiian or Other Pacific Islander	4	
White	5	

RECORD GENDER. DO NOT ASK.

CIRCLE ONE

Female	1	→(RECRUIT A MIX)
Male	2	

INVITATION

Based on your answers, we would like to invite you to participate in an additional telephone interview to discuss education and job training. You will receive an honorarium of \$40 for participating in the interview. This is not for sales purposes; it is part of a research study. The interview is about 40 minutes in length and can be conducted over the telephone.

Phone

We are conducting telephone interviews from _____ to _____. Are you available to participate in this research study?

Yes 1 → (CONTINUE)
No 2 → (THANK AND TERMINATE)

RECRUITER RECORD

DAY/DATE OF INTERVIEW: _____

TIME OF INTERVIEW: _____ AM/PM

RECORD PHONE NUMBER FOR INTERVIEW _____

OBTAIN COMPLETE INFORMATION ON PAGE 1 OF SCREENER.

**COGNITIVE TELEPHONE RECRUITMENT SCREENER
(ROUND 3 – 20 INTERVIEWS)
(05/20/10)**

RESPONDENT NAME: _____

TELEPHONE NUMBER FOR INTERVIEW: _____

DATE RECRUITED: _____

DATE CONFIRMED: _____

RECRUITED BY:

CONFIRMED BY:

Hello, this is _____ from Shugoll Research, an independent research firm. We are conducting a brief, but important survey on education and job training on behalf of the National Center for Education Statistics and other Federal statistical agencies. This is strictly research. Your participation is voluntary and confidential, and you will receive no sales pitch or follow-up calls based on your participation. I'd like to ask you a few questions.

1. First, which of the following categories includes your age? (READ LIST)

		<u>CIRCLE ONE</u>	
	Under 21	1	→(THANK AND TERMINATE)
	21 to 25	2	
	26 to 29	3	
	30 to 35	4	→(CONTINUE. RECRUIT A MIX OF AGES.)
	36 to 40	5	
OR	41 or older	6	
(DO <u>NOT</u> READ)	Refused	7	→(THANK AND TERMINATE)

2. What is the highest degree or level of school you have completed? (DO NOT READ. NOTE VERBATIM AND CIRCLE ONE CATEGORY BELOW)

- | | <u>CIRCLE ONE</u> |
|--|-------------------|
| a. No schooling | 1 |
| b. Nursery school | 2 |
| c. Kindergarten | 3 |
| d. Grades 1–11 | 4 |
| e. 12 th grade NO DIPLOMA | 5 |
| f. Regular high school diploma | 6 |
| g. GED or alternative credential | 7 |
| h. Some college credit, but less than 1 year of college credit | 8 |
| i. 1 or more years of college credit, no degree | 9 |
| j. Associate’s degree (for example: AA, AS) | 10 |
| k. Bachelor’s degree (for example: BA, BS) | 11 |
| l. Master’s degree (for example: MA, MS, MEng, Med, MSW, MBA) | 12 |
| m. Professional degree beyond a bachelor’s degree (for example: MD, DVS, DDM, LLB, JD) | 13 |
| n. Doctorate degree (for example: PhD, EdD) | 14 |

3. And, have you taken education or training to earn a certificate or professional certification?

- | | <u>CIRCLE</u> | |
|------------|---------------|---|
| Yes | 1 | →(RECRUIT FOR INTERVIEWS AND GO TO Q.4) |
| No | 2 | →(CONTINUE WITH Q6) |
| Don’t know | 3 | |

4. In what field is that? (READ LIST)

- | | <u>CIRCLE ONE</u> |
|---|-------------------|
| <u>Technology</u> (READ ONLY IF NECESSARY: i.e., system administrator, network professional/architect, IT professional, enterprise developer, etc.) | 1 |
| <u>Health care</u> (READ ONLY IF NECESSARY: i.e., nursing, case management, occupational/physical therapy, social work, counselor, etc.) | 2 |
| <u>Business</u> (READ ONLY IF NECESSARY: i.e., financial planning, accounting, human resources, marketing, consulting, etc.) | 3 |
| <u>Construction</u> (READ ONLY IF NECESSARY: i.e., construction project management, construction safety, contracting, etc.) | 4 |
| OR Something else (Specify) _____ | 5 |

5. Please describe the benefits to you of having a certificate or other training. (PROBE) What motivated you to obtain a certificate or complete the training? (RECORD ANSWER VERBATIM. PROBE AND CLARIFY FULLY.)
-
-

ANY SCREENER WITHOUT A VERBATIM ANSWER DOES NOT QUALIFY.
 IF RESPONDENT IS UNABLE OR UNWILLING TO GIVE AN ANSWER IN ENGLISH, THANK & TERMINATE.
 IF RESPONDENT HAS A HEAVY ACCENT OR CANNOT MAKE HIM OR HERSELF CLEARLY UNDERSTOOD IN ENGLISH, THANK & TERMINATE.
 IF RESPONDENT ONLY GIVES ONE OR TWO WORD ANSWERS AND IS UNWILLING OR UNABLE TO ELABORATE ON MEANING, THANK & TERMINATE.

6. And, are you: (READ LIST)

		<u>CIRCLE ONE</u>	
	Employed full-time	1	→(CONTINUE WITH Q.7)
	Employed part-time	2	
		<u>CIRCLE ONE</u>	
	Not employed	3	→(SKIP TO Q.9)
	A full-time student	4	
OR	Retired	5	
(DO NOT READ)	Refused	6	

7. Do you work in the: (READ LIST)

		<u>CIRCLE ONE</u>	
	Private sector	1	→(RECRUIT A MIX OF PUBLIC AND PRIVATE SECTOR)
	Public sector/government	2	

8. What is your occupation, that is, what type of work do you do? (RECRUIT A MIX OF JOB TYPES)
- _____ (RECORD)

9. Are you of either Hispanic or Latino origin?

		<u>CIRCLE ONE</u>
Yes		1
No		2

10. What is your race?

	CIRCLE ALL THAT APPLY	
American Indian or Alaska Native	1	→(RECRUIT A MIX)
Asian	2	
Black or African American	3	
Native Hawaiian or Other Pacific Islander	4	
White	5	

RECORD GENDER. DO NOT ASK.

	CIRCLE ONE	
Female	1	→(RECRUIT A MIX)
Male	2	

INVITATION

Based on your answers, we would like to invite you to participate in an additional telephone interview to discuss education and job training. You will receive an honorarium of \$40 for participating in the interview. This is not for sales purposes; it is part of a research study. The interview is about 40 minutes in length and can be conducted over the telephone.

Phone

We are conducting telephone interviews from _____ to _____. Are you available to participate in this research study?

Yes	1	→ (CONTINUE)
No	2	→ (THANK AND TERMINATE)

RECRUITER RECORD

DAY/DATE OF INTERVIEW: _____

TIME OF INTERVIEW: _____ AM/PM

RECORD PHONE NUMBER FOR INTERVIEW _____

OBTAIN COMPLETE INFORMATION ON PAGE 1 OF SCREENER.

Attachment G-2: Interviewer's Guides

CERTIFICATION COGNITIVE INTERVIEW GUIDE (03/01/10)

PROJECT: AIR0901
DATES: March, 2010
TOPIC: Certification

Introduction and Warm-Up (1 minute)

- Who I am
- What I do
- Length – 40 minutes
- Purpose of interview: To discuss career training as part of national research study
- (IN PERSON ONLY) Taping and why
- Identity and individual comments will remain strictly confidential
- Be candid; no right or wrong answers
- Gratuity for your time and opinions
- Colleagues listening in on the interview (if any)
- As you are answering questions, “think out loud” when responding. That is, if a question is unclear, tell me and tell me why it is unclear. Tell me what is going through your mind as you answer a question

Before we begin, could you tell me what kind of work you do? [It is not necessary to probe on this item. We just want to know what the respondent does so there is context for the interview]

Okay. Let's get started.

INTERVIEWER: Ask numbered items verbatim as they are written.

Certifications

1. Do you have a professional certification?

- PROBE: A professional certification shows you are qualified to perform a specific job and include PMP Certification, Certified Medical Assistant, Certified Construction Manager, Linux+ certification. If NO, have you ever had one? (IF NO, GO TO STATE LICENSURE SECTION)
- Is the term "professional certification" clear to you? Do you use another word/s to describe this training?
- Tell me what certifications you have. Let's discuss the most recent certification you have.

2. What is the name of this certification? _____

[Note if R has difficulty with the name, if they use and acronym, and how difficult it is to capture the verbatim response]

3. Were you certified by your state, industry, a company, a professional association, or some other organization?

1=State

2=Industry

3=Company

4=Professional association

5=Other_____

- What is the name of the organization that certified you?_____

4. Did you have to pass a test or exam to obtain this certification?

- Tell me more about the test.

5. Did you have to demonstrate you could perform certain job tasks to obtain this certification?

- How do you do this?
- Do you need a certain level of on-the-job experience to get the certification?

6. How long did it take you to obtain this certification?

- Walk me through how you came up with your answer. [Note or probe the unit of time R uses, e.g. per day, week, or month over what period of time?] Were classes required, or could you just study a book, a manual, or online?
- Can you tell me how many course hours or credit hours the instruction took?
- How many hours did you spend in a classroom or receiving other instruction to earn this certification?
- What other activities did you have to do to get the certification? How many hours did you spend on that?

Additional probes if needed:

- Did you study on your own? If yes, about how many hours?
- Did you need on-the-job experience to qualify for certification? If yes, how much experience?

7. What is the main reason you decided to get this certification?

- Are you using this certification in your current job?
- Is this certification useful in your current job: help you get the job done, make you more valuable to your employer, put you in a better position for promotions and salary increases?

8. Do you have to take periodic tests or continuing education classes or both in order to maintain this certification?

- Tell me more about that.

Additional probes if needed:

- When was the last time you took a periodic test? Do you have to renew it regularly? How often?
- When was the last time you took continuing education classes?
- Tell me more about those classes.(how many, how long, where); How many credit hours did you take? How did you earn them?
- Is there anything else you needed to do to get this certification that we didn't talk about?

9. Would you be able to use this certification if you took the same job with another employer?

- Can you give me an example of a company you could go work for?
- Could you work for that company without this certification?
- Can anyone with this certification do that?

10. Can this certification be revoked or suspended for any reason?

- For what reason could it be revoked or suspended?
- If you changed your occupation, would the certification expire?
- Let's talk about those other certifications you have? Tell me more about what they are and when you got them.
- How did you decide which certification to answer about?

License

11. Do you have a state or industry license?

- What is the name of the license?

If R does not have a certification:

- How is that different from a professional certification?
- Go back through certification questions asking about license and using the term license instead of certification.

If R has a certification:

- Is this the same as your certification or something different?

12. What is the highest degree or level of school you have completed?

[For in-person interview—Hand response show card]

- No schooling*
 - Nursery school*
 - Kindergarten*
 - Grades 1–11*
 - 12th grade NO DIPLOMA*
 - Regular high school diploma*
 - GED or alternative credential*
 - Some college credit, but less than 1 year of college credit*
 - 1 or more years of college credit, no degree*
 - Associate's degree (for example: AA, AS)*
 - Bachelor's degree (for example: BA, BS)*
 - Master's degree (for example: MA, MS, MEng, Med, MSW, MBA)*
 - Professional degree beyond a bachelor's degree (for example: MD, DVS, DDM, LLB, JD)*
 - Doctorate degree (for example: PhD, EdD)*
- Did you think about your certification when you answered?
 - When you think about certification, how would you talk about it compared to your traditional educational background?
 - In Person: Where do you think your certification fits on this list?

Other training

13. Did you take any other training to improve your employment opportunities? [If yes, continue.

If no go to Proxy questions]

14. What was the name of this training? _____

[If can't provide a name, ask what was the topic or purpose?] If more than one, talk about most recent.

- Did the training lead to a degree, certification, certificate, or license?
- Where did you get this training?
- When did you complete the training?

15. What did you have to do to complete the training?

- Tell me more about what you had to do.
- Did you have to take classes or courses to complete the training?
- Can you tell me how many credits or hours of instruction you had?

16. How long did it take you to complete the training?

- Walk me through how you came up with your answer.
[Note and probe on unit and period of time.]

17. What is the main reason you decided to get this training?

- Is this training useful in your current job: help you get the job done, make you more valuable to your employer, put you in a better position for promotions and salary increases?

18. Do you have to take periodic tests or continuing education classes in order to stay up-to date with your training?

- Tell me more about that.
- Is there anything else you needed to do to get this certification that we didn't talk about?

19. Would you be able to use this training if you took the same job with another employer?

- Can you give me an example of a company you could go work for?
- Can anyone with this training do that?

20. Thinking again about the question, “what is the highest degree or level of school you have completed?”

- Did you think about your training when you answered?
- In Person: Where do you think your training fits on this list?

Proxy for Other Adults in Household

- Does any adult in your household have a certification or licensure? Who?
- Do you feel you could answer a similar battery of questions about their certification/licensure?
- What organization certified this other adult (state, industry, a company, a professional association, or another organization)? What is the name of the organization that certified them?
- Return to question battery if respondent is knowledgeable and time remains.

CERTIFICATES
COGNITIVE INTERVIEW GUIDE
(04/01/10)

PROJECT: AIR0901
DATES: April, 2010
TOPIC: Certificates

Introduction and Warm-Up

- Who I am
- What I do
- Length
- Purpose of interview
- Read confidentiality statement:

“Shugoll Research and the American Institutes for Research are conducting this study for the National Center for Education Statistics of the U.S. Department of Education. This study is authorized by law under the Education Sciences Reform Act (Public Law 107-279). Your participation is voluntary. Your responses are protected from disclosure by federal statute (P.L. 107-279, Title 1, Part E, Sec. 183). All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, unless otherwise compelled by law.”

- Be candid; no right or wrong answers
- Gratuity for your time and opinions
- Colleagues listening in on the interview (if any)
- As you are answering questions, “think out loud” when responding. That is, if a question is unclear, tell me and tell me why it is unclear. Tell me what is going through your mind as you answer a question

Before we begin, could you tell me what kind of work you do? [It is not necessary to probe on this item. We just want to know what the respondent does so there is context for the interview]

Okay. Let’s get started.

1. Have you taken education or training to earn a certificate?

PROBE: A certificate is a credential awarded by an education provider for completion of a course of study. [USE ONLY if the respondent asks for a definition]

- If NO CERTIFICATE ask the following then go to Q13. Tell me in your own words what you think we are asking about here.
- Do you use another word/s to describe this training?

- Do you have any other certificates?
- Let's talk first about the most recent certificate.

2. What is the name of this certificate? _____

3. Did you complete the certificate training?

If yes,

- When was that? _____

If No,

- Do you intend to complete the training?
- Are you currently enrolled in a certificate training program?

4. What is the major subject or field of study for your certificate?

5. Why did you decided to get this certificate?

If more than one reason given ask: What was the primary reason you decided to get this certificate?

- If not clear ask: Did you take the certificate training mainly for work-related reasons or mainly for personal interest?
- Are you using the certificate in your current job?

IF CERTIFICATE IS FOR PERSONAL REASONS AND THE RESPONDENT HAS OTHER CERTIFICATES, GO BACK AND ASK Q1–5 ABOUT THE OTHER CERTIFICATES [UP TO 4 additional certificates]. Continue with Q6 about the MOST RECENT work-related certificate.

IF RESPONDENT HAS ONLY ONE CERTIFICATE, PERSONAL OR WORK-RELATED, CONTINUE.

6. What type of organization or business provided your certificate training?

If needed, examples are: A university or college, a commercial organization, a nonprofit organization such as a professional association, voluntary organization, or trade union, an employer, a state or local government.

- What is the name of that [PROVIDER]? (e.g. What is the name of that commercial organization?)
- Was the training primarily self-study or did you take classes or courses with an instructor?

7. Did you have to pass a test or exam to obtain this certificate?

8. Did you have to demonstrate you could perform certain job tasks to obtain this certificate?

- Tell me what “perform certain job tasks” means to you.
- Tell me more about what you had to do.

9. How long did it take you to obtain this certificate?

- Walk me through how you came up with your answer. [Note or probe the unit of time R uses, e.g. per day, week, or month over what period of time?]
- Can you tell me how many course hours or credit hours the instruction took?
- How many weeks did it take you to earn the certificate? How many hours per week was that?
- What other activities did you have to do to get the certificate? How many hours did you spend on that?

Additional probes if needed:

- Did you study on your own? If yes, about how many hours?

Did you need on-the-job experience to qualify for this certificate? If yes, how much experience?

10. Do you have to take periodic tests or continuing education classes or both in order to maintain this certificate?

- Tell me more about that.

11. Would you be able to use this certificate if you took your same job with another employer?

- If self-employed, ask, Would you be able to use this certificate if took your same job as an employee of another company?
- Can you give me an example of a company you could go work for?
- Could you work for that company without this certificate?
- How much more (per whatever unit) do you make because you have this certificate compared to a similarly qualified person without one?
- Can anyone with this certificate do that?

12. Did you take the education or training for the certificate in order to obtain a professional certification or license?

- Do you currently have that professional certification?

13. What is the highest degree or level of school you have completed?

[For in-person interview—Hand response show card]

- o. No schooling*
- p. Nursery school*
- q. Kindergarten*
- r. Grades 1–11*
- s. 12th grade NO DIPLOMA*
- t. Regular high school diploma*
- u. GED or alternative credential*
- v. Some college credit, but less than 1 year of college credit*

- w. 1 or more years of college credit, no degree
- x. Associate's degree (for example: AA, AS)
- y. Bachelor's degree (for example: BA, BS)
- z. Master's degree (for example: MA, MS, MEng, Med, MSW, MBA)
- aa. Professional degree beyond a bachelor's degree (for example: MD, DVS, DDM, LLB, JD)
- bb. Doctorate degree (for example: PhD, EdD)

IF R HAS A CERTIFICATE ASK:

- Did you think about your certificate when you answered?
- Do you think this question applies to your certificate? If no, how do you think about your certificate compared to a diploma or college degree?
- In Person: Where do you think your certificate fits on this list?

Certifications

14. A. If Q1=No (no certificate), ask: Do you have a professional certification?

B. If Q12=Yes (certificate led to a certification), go to first probe.

C. If Q12=No (certificate did not lead to a certification) ask: Do you have any professional certification?

PROBE: A professional certification shows you are qualified to perform a specific job and include PMP Certification, Certified Medical Assistant, Certified Construction Manager, Linux+ certification. If NO, have you ever had one?

- Is the term "professional certification" clear to you? If no certification ask, in your own words, what do you think we are asking about here? (IF NO Certification, GO TO STATE LICENSURE SECTION, Q24)
- Do you use another word/s to describe this training?
- Tell me what certifications you have. Let's discuss the most recent certification you have.

15. What is the name of this certification? _____

[Note if R has difficulty with the name, if they use and acronym, and how difficult it is to capture the verbatim response]

16. Were you certified by your state, industry, a company, a professional association, or some other organization?

1=State

2=Industry

3=Company

4=Professional association

5=Other _____

- What is the name of the organization that certified you? _____

IF THE RESPONDENT HAD CERTIFICATE TRAINING THAT LED TO THEIR CERTIFICATION (Q12=Yes), SKIP TO “Licensure” SECTION, Q24. ELSE CONTINUE. [The reason for this skip is these questions would have already been asked about the certificate course that led to the certification, thus making repetition of the questions redundant].

17. Did you have to pass a test or exam to obtain this certification?

- Tell me more about the test.

18. Did you have to demonstrate you could perform certain job tasks to obtain this certification?

- Tell me more about what you had to do.

19. How long did it take you to obtain this certification?

- Walk me through how you came up with your answer. [Note or probe the unit of time R uses, e.g. per day, week, or month over what period of time?]
- Was the training primarily self-study or did you take classes or courses with an instructor?
- Can you tell me how many course hours or credit hours the instruction took?
- How many hours did you spend in a classroom or receiving other instruction to earn this certification?
- What other activities did you have to do to get the certification? How many hours did you spend on that?

Additional probes if needed:

- Did you study on your own? If yes, about how many hours?
- Did you need on-the-job experience to qualify for certification? If yes, how much experience?

20. What is the main reason you decided to get this certification?

- Are you using this certification in your current job?

21. Do you have to take periodic tests or continuing education classes or both in order to maintain this certification?

- Tell me more about that.

Additional probes if needed:

- When was the last time you took a periodic test? Do you have to renew it regularly? How often?
- When was the last time you took continuing education classes?
- Tell me more about those classes.(how many, how long, where); How many credit hours did you take? How did you earn them?
- Is there anything else you needed to do to get this certification that we didn't talk about?

22. Would you be able to use this certification if you took the same job with another employer?

- Can you give me an example of a company you could go work for?
- Could you work for that company without this certification?
- Can anyone with this certification do that?

23. Can this certification be revoked or suspended for any reason?

- For what reason could it be revoked or suspended?
- If you changed your occupation, would the certification expire?

Let's talk about those other certifications you have. Tell me more about what they are and when you got them.

- How did you decide which certification to answer about?

License

24. Do you have a state or industry license? [If no, GO TO other training Q25]

- What is the name of the license?

If R does not have a certification:

- How is that different from a professional certification?
- Go back through certification questions asking about license and using the term license instead of certification.

If R has a certification:

- Is this the same as your certification or something different?

Other training

25. Have you taken other education or training for work-related reasons? [If NO, go to PROXY questions]

- What training was that? Any others? Let's talk first about the most recent training.

26. Did you complete the training?

If yes, When was that? _____

If No, Do you intend to complete the training? Are you currently enrolled in the training program?

27. What is the topic of this training? _____

28. What is the main reason you decided to take this training?

- If not clear ask: Did you take the training mainly for work-related reasons or mainly for personal interest?
- Are you using the training in your current job?

29. Was this training provided by...

- a. A university or college?
 - b. A commercial organization?
 - c. A nonprofit organization such as a professional association, voluntary organization, or trade union?
 - d. An employer?
 - e. A state or local government?
 - f. Someplace else?
- What is the name of that [PROVIDER]? (e.g. What is the name of that commercial organization?)

30. How long did it/will it take you to complete the training?

- Tell me how you came up with your answer.
- Is that based on what you actually completed or what is required for completion?
- Did you have to take a certain number of classroom or credit hours?

31. Tell me about what you had to do during the training. Did you have to take classes? Did you need to study on your own? Did you have to purchase books or materials?

- Did you have to take an exam?

32. Would you be able to use this training if you took the same job with another employer?

- Can you give me an example of a company you could go work for?
- Could you work for that company without this training?
- Can anyone with this training do that?

33. Did you take the training to obtain a professional certification or license?

- Do you currently have that professional certification?
- What is the name of the certification/license? _____

34. I'd like you to think again about the question I asked you earlier, "What is the highest degree or level of school you have completed?"

- Did you think about this training when you answered?
- Do you think this question applies to this training? If no, how do you think about this training compared to a diploma or college degree?
- In Person: Where do you think your training fits on this list?

Proxy for other adults in household

- Has any adult in your household completed education or training for a certificate? Who? If no other adults in household, terminate.
- Do you feel you could answer a similar battery of questions about their certificate?
- What is the name of their certificate? Where did they get it?

Return to question battery if respondent is knowledgeable

COMBINED
COGNITIVE INTERVIEW GUIDE
(05/20/10)

Introduction and Warm-Up

Who I am

What I do

Length

Purpose of interview

Read confidentiality statement:

“The American Institutes for Research is conducting this study for the National Center for Education Statistics of the U.S. Department of Education. This study is authorized by law under the Education Sciences Reform Act (Public Law 107-279). Your participation is voluntary. Your responses are protected from disclosure by federal statute (P.L. 107-279, Title 1, Part E, Sec. 183). All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, unless otherwise compelled by law.”

Be candid; no right or wrong answers.

Gratuity for your time and opinions.

Colleagues listening in on the interview (if any).

As you are answering questions, “think out loud” when responding. That is, if a question is unclear, tell me and tell me why it is unclear. Tell me what is going through your mind as you answer a question.

INTERVIEWER INSTRUCTIONS:

Round 3 interviews will consist of concurrent think-aloud and follow-up probes and retrospective probing after the certification section and again after the certificate section. The purpose is to let the interview flow naturally unless the respondent has a problem answering a question. At the end of each section, retrospective probing will be used to follow-up on other possible problem areas.

We will also ask questions about the screener and cover letter which will be mailed to participants in advance.

Cover letter and mail survey instructions

First, I'd like to talk to you about the letter and short survey we sent you in the mail. Did you receive those?

Do you have them with you? Could you get them out?

Let's look at the letter first.

In your own words, what is this letter asking you to do?

Is it clear who sponsoring this survey?

Was anything in the letter confusing to you?

Did you have any other comments about the letter?

Now, let's look at the short survey we sent.

Did you fill it out?

How easy or difficult was it for you to fill it out?

Was anything in the short survey confusing for you?

Let's go over your answers.

What did you put for (Q1, Q2, Q3 etc..)

What do you think is the purpose of the short survey?

Did you look at the FAQs on the back?

What do you think of the cover?

Okay, now I'd like to ask you some additional questions. Stop me and let me know if anything I ask you is confusing, difficult to understand, or just doesn't sound right.

BEGIN PHONE INTERVIEW from Question IN4.

Survey instructions

Concurrent think-aloud

Allow the respondent to proceed through the questions until they make a comment or ask a question. Use nondirective probing to inquire about item problems.

Nondirective probes:

What do you think this question is asking?

What does that mean to you?

Tell me more about that.

Retrospective probes

If you feel there was uncertainty about a respondent's answer, probe retrospectively on those items. Ask all respondents:

Let's go back and review some of the answers you just gave me.

Certifications

CNINTRO, CN1. Was it easy or difficult for you to answer this question?

CN2. How did you come up with your most recent certification?

CN3. [Interviewer instruction] Pay attention to respondent behavior here. Do they hesitate? Ask questions? Make remarks that indicate the question is awkward? If yes, probe.

CN4. Was it easy or difficult for you to answer this question? Probe if respondent says "both" – Which term, license or certification, do you normally use?

CN6. What does the term "work-related" mean to you? Do you feel that accurately describes your situation?

CN7-CN9A. [Interviewer instruction] Pay attention to whether or not their problems with people confusing the application process for a license versus the courses or training.

Were any of these questions about your training and education difficult for you to answer?

CN16. Was it easy or difficult for you to answer this question?

Certificates

CTINTRO, CT1. Was this question easy or difficult for you to answer? In your own words, what is this question asking?

CT2B. How did you come up with your most recent certificate?

CT12. How did you come up with your answer for this question?

CT15. Was it easy or difficult for you to answer this question?

Attachment G-3: Cognitive Interview Respondents

Table G-1. Number of respondents participating in NCES cognitive interviews for measurement of certifications and certificates among adults in the United States, by selected respondent characteristics: 2010

<i>Respondent characteristics</i>	<i>Total</i>
Total respondents	60
Highest level of education	
High school degree or GED or less.....	10
Some college or no degree	18
Associate’s degree (AA, AAS)	6
Bachelor’s degree or higher	26
Field of credential	
Technology	8
Healthcare	14
Business	18
Construction	5
Other (includes unemployed).....	15
Location	
DC-Metro	23
Minneapolis	19
Charlotte	18

NOTE: Respondents were required to be 21 to 40 years old.

SOURCE: U.S. Department of Education, National Center for Education Statistics, “Cognitive Interview Findings for New Items to Measure Subbaccalaureate Credentials among Adults in the United States.”