



AMERICAN INSTITUTES FOR RESEARCH

VOTER MACHINE USER RATE
ASSESSMENT STUDY

TECHNICAL PROPOSAL

AUGUST 11, 2006

Delivered to:

Anna E. Svizzero
Director of Election Operations
New York State Board of Elections
40 Steuben Street
Albany, New York 12207

Electronic Submission

1000 THOMAS JEFFERSON STREET, NW | WASHINGTON, DC 20007-3835

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AMERICAN INSTITUTES FOR RESEARCH®

August 11, 2006

Anna E. Svizzero
Director of Election Operations
New York State Board of Elections
40 Steuben Street
Albany, New York 12207

RE: Request for Vendor to Perform Voting Machine User Rate Assessment Study

Dear Ms. Svizzero:

The American Institutes for Research (AIR) is pleased to present this response to the request for proposals for a vendor to perform a voting machine user rate assessment study for the State of New York. In our proposal, we present a comprehensive plan that takes into account the legal requirements facing the New York State Board of Elections (the Board), AIR's commitment to high-quality, scientific research, and the aggressive timeframe in which the study must be conducted. This study poses significant methodological challenges, but we believe that it is well-aligned with our mission to use our research expertise to improve people's lives and well-being.

For over 60 years, AIR has supported a diverse set of government and private sector clients in performing applied behavioral research studies. Based on our experience, we believe that the success of this study hinges upon our ability to work together collaboratively with the Board and its staff. To that end, AIR would be pleased to attend the upcoming Board meeting on August 15th, if desired. Doing so would enable us to begin our collaboration immediately and increase our chances of being able to perform the study within the required timeframe.

We look forward to your review of the attached proposal. Please direct any technical questions you might have to Dr. Dwayne Norris at (202) 403-5129, dnorris@air.org. Business questions should be directed to Mr. Bruce Russell at (202) 403-5004, brussell@air.org.

Sincerely,

Mark Kutner
Vice President and Director
Workforce Research and Analysis Program

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Understanding of the Problem

The New York State Board of Election's (NYSBOE) primary objective for this study is to determine the Maximum Daily Rate (MDR) of voters for each voting machine that is currently being considered for use in New York state elections. Specifically, the MDR will indicate the maximum number of voters a given machine can accommodate in a 15-hour voting period at any registered polling place. The American Institutes for Research (AIR) is pleased to assist the NYSBOE in conducting this important study and will bring to bear the depth and breadth of our corporate staff, experience, and resources in its execution.

There are several major obstacles that will determine the success of this study and thus the ability of resulting MDR estimates to guide the appropriate allocation of voting machines throughout the state. Furthermore, if these obstacles are not dealt with via a strong study design, the resulting MDR estimates may not withstand legal, political, and public scrutiny. As such, we discuss these issues below along with our specific plans for addressing them in our proposed study work plan.

Legal Considerations

As we understand, the NYSBOE is required by its governing regulations to determine the MDR for all potential voting machines. Clearly, as the number of voting machines to evaluate increases, so too does the complexity of the study and the resources required to conduct it. Therefore, it will be necessary for NYSBOE and AIR to work collaboratively and pool our resources together to execute this study according to the plan and time constraints under which it must be conducted. Within the bounds of what we consider technically appropriate, we have streamlined the study design in such a way that it still allows NYSBOE to achieve its stated objectives, and AIR to adhere to our high technical standards for conducting research. In working together, we intend to have continuous dialogue with NYSBOE and other key stakeholders and to conduct the study with full and open disclosure of any design issues, limitations, or potential problems.

A related issue deals with the current lawsuit against the State of New York recently filed by the Department of Justice (DOJ). To the extent that the proposed study will be impacted by this lawsuit, we strongly urge involving DOJ in the process. AIR has assisted many clients involved in litigation and it is our experience that the most successful projects have been those in which we have worked with DOJ earlier in process, making sure they fully understand our study objectives, research design, work plans, and results as they unfold. And by doing so, we are better able to account for any potential concerns stemming from a lawsuit in the early, critical design phases of a project. At a bear minimum, we have built into our work plan a comprehensive reporting task that will result in a

detailed technical report of procedures, participants, and results. As part of project reporting, we also will deliver an oral briefing of the study and its results to key stakeholders.

Study Participant Considerations

NYSBOE has appropriately identified voters as a “problematic entity” in the document entitled *Voting Machine User Rate Assessment Study*. In developing our work plan, we too regarded the issue of choosing the appropriate sample to participate in this study as the single biggest factor that will determine the success of this study. It is impossible to determine a MDR apart from the sample of voters on which the MDR is calculated. As a concrete example, it would be ill-advised to assume a MDR based on a sample of voters without disabilities generalizes to a sample of voters that includes individuals with disabilities, unless it can be shown that having a disability does not affect the time it takes to vote on a given voting machine. Disability status is only one of the many demographic differences that may affect voting behavior and therefore must be accounted for in choosing an appropriate study sample.

Aside from simply accounting for various demographic characteristics in our sample of study participants, we must also attend to the specific composition of study participants. Thus, it is imperative that the demographic composition of the sample of voters used in the study mirror as much as possible the demographic composition of the population of voters expected to participate in elections. From a study design perspective, this means that some level of strategic sampling must occur; strict reliance on a convenience sample (i.e., whoever volunteers) can be particularly risky in that it may “look” vary different from the voting population. For this reason, we encourage NYSBOE to consider offering some type of incentive to encourage individuals to participate in the study that will allow us to achieve our targeted sample size and composition.

Based on our conversations with NYSBOE staff to date, there is no source of information about the composition of voters expected to vote in NY. This complicates the process of defining the population of interest and leaves open the possibility that any MDR estimate can be regarded as not applicable to the true voting population. In the absence of data to profile voters, we suggest using U.S. Census data to determine the composition of voting-eligible people in New York.

It is important to understand the limitations of this approach. First, there may be dramatic differences between the composition of voting-eligible individuals as defined by Census data and either registered voters or actual voters. Second, the composition of voters may vary as a function of voting district. However, the statutory requirement to calculate a single MDR for each voting machine requires that district level variations, to the extent that they occur, be ignored. Finally, by

using Census level data, this study will in effect be calculating a MDR that is most appropriate for voting-eligible adults. It is certainly arguable that the MDR should be based on all voting-eligible voters; we simply make this point to alert NYSBOE to a potential criticism from those who might argue that it is on registered voters or actual voters on which the MDR should be based.

To address critical sampling issues, we build into our work plan steps to work with NYSBOE to clearly define the population of interest and then use this defined population for specifying the desired composition of our study sample. During execution of the mock elections, we have also built in provisions to continuously monitor the composition of study participants should more targeted recruitment efforts be required to ensure that the final composition of our study participants appropriately reflects the demographic composition of the population of interest.

Time Considerations

The final issue that will undoubtedly affect this study is the timeframe for completion. It is our belief that is not feasible to fully execute this study by October 1, 2006 without considerable resources dedicated to its execution. The biggest potential barrier to completing this study likely will be lining up study participants. Although AIR is prepared to provide suggestions on this process, we have assumed that the NYSBOE will handle this aspect of the study.

AIR has a large staff is prepared to execute the project under multiple scenarios. For example, although the steps in the work plan are presented sequentially, many activities can begin simultaneously (i.e., reviewing voting machines and specifying the population of interest) once a contract is in place. In our attempt to accommodate the desired project timeline, we have budgeted under the assumption that we will need to use multiple teams of staff at various times throughout the projects—for example, we can staff multiple locations for conducting the mock elections on a single day. Still, we note that the time frame for this study is extremely aggressive and in our work plan we have tried to be very explicit in what will be needed from NYSBOE in order to execute the study.

Our Approach

Given the various legal, sample selection, and time considerations bearing on this study, we have developed a comprehensive work plan to determine a MDR for potential voting machines in the state of New York and we look forward to the opportunity to assist NYSBOE in what we regard as a very important study. It is AIR's mission to use our research expertise to improve people's lives and well-being. And helping to improve the voting process is clearly aligned with our mission statement.

The study will primarily draw on the expertise in our Workforce Research and Analysis (WRA) group. WRA has a diverse research staff with backgrounds in usability testing, human factors engineering, industrial/organizational psychology, social and experimental psychology, research methodology, statistics, public policy, computer science, economics, sociology, statistics, and other related disciplines. This breadth of expertise allows WRA to focus on applied research projects that address the critical needs of a diverse set of government and private sector clients.

The AIR approach combines a strong applied orientation that remains grounded in the best theories, methods, and practices available in the behavioral and social sciences. With such a diverse staff, WRA has extraordinary multi-disciplinary problem-solving capability, allowing us to apply approaches that are best suited to the needs of the NYSBOE. This orientation is reflected in the work plan that follows.

Work Plan

As noted above, this study has a number of key legal, sampling, and time constraints that must be fully recognized and accounted for in order to be successfully executed. We have developed our proposed work plan with these issues in mind. The proposed work plan for this effort is comprised of six steps. Exhibit 1 below provides an overview of each of these steps in terms of the objective and anticipated outcomes. Following Exhibit 1 is a description of the specific activities that we will conduct during each research step.

Exhibit 1: Overview of Proposed Work Plan

Research Step	Objective	Anticipated Outcomes
Review Voting Machines	To become familiar with the characteristics of each voting machine, identify potential usability issues that may affect MDR calculations, and provide input to the development of study protocols and materials	<ul style="list-style-type: none"> • Summary of voting machine usability issues • Draft study protocols and materials • Preliminary hypotheses about the expected MDR rate for each voting machine
Determine Population of Interest	To specify the composition of New York State eligible voters using U.S. Census data and guidance from NYSBOE staff	<ul style="list-style-type: none"> • Definition of voter population of interest in terms of their demographic composition
Prepare for Mock Elections	To fully specify the procedures, instructions, locations/schedule, and desired composition of study participants, and to test the mock election procedures	<ul style="list-style-type: none"> • Final protocols and materials for conducting mock elections • Locations, schedule, and staff assignments • Sampling plan • Procedures for monitoring composition of study participants (including plans for targeted recruitment, if necessary)
Conduct Mock Elections	To gather voting time estimates and other evaluative information to use in calculating a MDR for each voting machine	<ul style="list-style-type: none"> • Demographic, time to vote, voting issues, and voter machine and study reaction data
Analyze Mock Election Results	To compile all the information gathered in the mock elections and use it to calculate a MDR for each voting machine	<ul style="list-style-type: none"> • Paper copies of all study data • Database of study data that has been cleaned and evaluated for correctness • MDR calculations • Summary of demographic profile of study participants, as well as their evaluation of voter machines and the study
Prepare Project Reports	To fully document the study objectives, procedures, participants, results, and limitations, as well as how to use the study findings	<ul style="list-style-type: none"> • Technical report • Oral briefing

Step 1: Review Voting Machines

The first step in our proposed work plan is to become familiar with the voting machines for which a MDR estimate is required. To accomplish this, we anticipate two activities to occur. First, the NYSBOE will need to provide our research team with all available background information on each voting machine. This information will likely include vendor related descriptions, results from prior evaluations (formal or informal), and any vendor supported research, websites, or other informational sources. To the extent possible, we would also like to have contact information for key voting machine vendor staff who can answer any questions we have about their voting machines. To ensure we receive timely responses from vendors, it will be necessary for NYSBOE to broker a commitment from its vendors to address our questions in a timely fashion. Upon receipt of background materials, our staff will review them and use the relevant information we extract to develop general guidelines for the mock elections (Step 4) and potential questions for participants in the mock elections.

The second activity to occur in this step involves the conduct of basic usability assessments of each voting machine. While this activity will not include full-scale usability assessment, it will be comprehensive enough to help our team further target our mock election design, protocols, observations, and follow-up questions. In conducting these usability assessments, our staff will interact with each machine, paying particular attention to the usability features of each machine that we anticipate will have a larger impact on the determination of the MDR. We will use the review of our background materials to develop a standard data collection form to evaluate each machine on various factors that we think will impact the MDR. This step will not only provide NYSBOE with usability information about each machine, it will also allow us to generate hypotheses about which machines we would expect to have higher or lower MDR estimates. Thus, it provides a basis for evaluating the MDR calculations once they are completed. We estimate that Step 1 of the work plan will occur over a two-week period.

Step 2: Determine Population of Interest

NYSBOE needs to determine a MDR for each voting machine that is appropriate for the entire voting population of the state. As such, the second step in our proposed work plan is to work with NYSBOE to fully specify the population of interest. This is a critical step in our proposed work plan because the calculation of an appropriate MDR must reflect the types of voters (in terms of demographic profile) that will actually use the machine. Otherwise, the MDR will be viewed as an inappropriate estimate.

In a full-day working meeting with NYSBOE, we will review the New York Census data and discuss the appropriate composition of the study sample. The

goal of this meeting will be to use NYSBOE staff knowledge of voters in conjunction with the Census data to arrive at reasonable profile of New York voters. This profile will describe New York voters on key demographic variables such as sex, race, income status, geographic location, native language, and disability.

Once this profile is complete, it will serve as the population of interest for this study. As such, this profile will be used to identify the sample of participants needed to participate in the mock elections.

Step 3: Prepare for Mock Elections

Once the population of interest is defined, the third step in our proposed work plan is to prepare for the mock elections. This step involves developing a sampling plan, determining the locations and schedule for conducting the mock elections, and pilot testing the mock election process.

For this proposal, we have assumed that a total of 15 different machines will be used in the mock elections¹. It would be easier to have the sample of participants vote on all 15 machines. However, a primary concern in this type of study is practice effects. That is, having a sample of voters vote on all 15 machines is problematic in that the estimates of how long it takes a given voter on one machine may be influenced by them having voted on another similar machine. To the extent that this occurs, it will result in MDR estimates that do not reflect what will occur during actual voting (i.e., the MDR estimates may underestimate the time required to vote if practice effects occur).

The best scenario is to have a *unique* sample of study participants vote on each of the 15 machines during this study. However, we realize that this design is likely not feasible given the time constraints on this project. We also understand the difficulties that will occur in recruiting study participants. Therefore, we propose to use the results of Step 1 to create 3 groups of 5 machines, where each group will contain five voting machines that vary as much as possible in their features. Then, we will have a unique sample vote on all the machines in only 1 of the 3 groups. To further minimize practice effects, we will randomize the order in which individuals vote on the five machines during the mock elections. Note that this scenario essentially requires three unique samples that have the same demographic composition to conduct the study.

In preparing to conduct a mock election with the above noted features, there are three major activities that must occur. The first activity in this step is to develop a sampling plan based on the definition of the population of interest that results

¹ Our budget assumes that a total of 15 voting machines will be used in the study.

from Step 2. While it is difficult to specify the sample size required before defining the population of interest, we anticipate that we will need approximately 150 to 250 individuals to vote on each group of 5 machines. Thus, a total sample size of 450 to 750 voters will be needed.² Furthermore, depending on the composition of demographics in the population of interest, it may be necessary to purposely oversample certain types of individuals (e.g., those with disabilities) in order to ensure their participation in the study. AIR will work with NYSBOE to develop an appropriate sample and to generate ideas on how to obtain study participants; however, it is our expectation that the NYSBOE will provide the sample participants for the study.

The second activity in this step is to determine the locations and schedule for conducting the mock elections. In setting up locations for the mock elections, the most important consideration will be access to individuals that fit our desired sample composition on key demographic characteristics. It also will be important to secure space that allows for five voting machines to be located, for our research staff to observe and debrief participants, and for participants to wait should there be delays in gaining access to machines. Again, AIR will work with NYSBOE to identify appropriate locations; however it is our expectation that NYSBOE will ultimately secure the mock election sites. As for the schedule, we will work with NYSBOE to set up and conduct the mock elections as soon as feasible.

The third activity in this step is to conduct a brief pilot test of the mock elections. This pilot test will occur prior to conducting the mock elections and will serve as a test of our procedures, data collection instruments, timing procedures, instructions, and any other procedural requirements needed to conduct the mock elections. To conduct the pilot, we will have 10 to 15 individuals run through the mock election as we have planned it. After doing so, we will hold a brief focus group with participants to get their reactions to the mock election. Data from this focus group will be used to make any final adjustments to our plan, procedures, instructions, and voting materials prior to conducting the mock elections.

Step 4: Conduct Mock Elections

The fourth step in our work plan is to conduct the mock elections using the procedures and schedule established during Step 3. We will have research staff available during all mock elections to facilitate the process, to gather brief demographic and reaction data from participants, to record voting times, and to debrief participants on the study. As noted above, it is our expectation that the recruitment of participants will be handled by NYSBOE. Similarly, to the extent that any incentives are offered to study participants, it will be necessary to have a

² Without a clear definition of the population of interest, this is our best estimate of the sample size needed to conduct this study. This estimate may need to be revised upward depending on the results of Step 2.

NYSBOE representative present at each mock election to handle the distribution of incentives. We also strongly suggest that a NYSBOE representative be at each mock election to answer questions from study participants that our team may not be able to respond.

For purposes of budgeting, we have assumed that mock elections will occur in 3 locations for each group of 5 machines for a total of 9 total data collection days. Also, to accommodate participant schedules and allow for sufficient participation at any given location, we have assumed that data collection will take a full day. Thus, for each group of 5 machines, we will hold mock elections for a full day in three different locations.

To conduct the mock elections, we will have predetermined the order in which participants will proceed through the machines. Upon arrival, each participant will be given a packet of materials to use in voting, as well as instructions by our research staff on how to proceed in the study. We will have participants complete a demographic questionnaire and study consent form prior to participating. They will then proceed through the voting process on each machine, with our research staff observing their progress, recording their time to vote on each machine, and noting any issues that may arise. Once individuals have completed their voting, we will have them complete a brief survey to gather their reactions to any particular voting machine and the study in general. Finally, we will give participants a brief written debriefing, answer any questions they may have, and thank them for their participation.

Step 5: Analyze Mock Election Results

After the mock elections have been conducted, the fifth step in our proposed work plan is to compile the results and analyze the data. There will be four major sources of information stemming from the mock elections. The first type of information is the demographic profile of participants in the study. The second type of information is the time to vote (per machine) for each study participant. The third type of information is the notes on our observations and issues that arise and may have a bearing on the calculation of the MDR. The final type of information is the survey results.

We will compile all this information into a database, check it for accuracy, and use it to analyze the results. The demographic information will need to be recorded immediately and continuously analyzed to ensure that our participant composition matches our target sample composition. Thus, we will immediately enter demographic information into a database for ongoing monitoring. The other information gathered during the mock elections will be compiled after the mock elections are completed. To the extent that there is down time between mock election days, we will use this time to enter all the data we have to that point and

to begin looking at preliminary results. This also will help us to fine-tune our procedures in subsequent data collection efforts, if necessary.

The individual time estimates for voting will be used to calculate the MDR for each voting machine. Essentially, this process involves determining the total time it takes the sample of study participants to vote on a given voting machine and then extrapolating this estimate up to a 15-hour voting period. Thus, if it takes a study sample of 200 voters 5 hours to vote on Machine A, we would estimate that the MDR for Machine A is 600 voters, assuming the voter composition remains comparable to the sample composition. We will use our observation notes and survey results to make adjustments to estimates of MDR, as appropriate.

Step 6: Prepare Project Reports

The final step in our work plan involves project reporting. Once we have analyzed the results of the mock study, we will prepare a comprehensive technical report that describes the study objectives, design, participants, execution, and findings. This technical report will carefully address any limitations of the study and will provide appropriate guidance on interpreting the study results and using them for decision-making. We will also prepare a comprehensive briefing of the study results to present to the NYSBOE and any other relevant stakeholders.

Proposed Key Staff

The American Institutes for Research (AIR) provides NYSBOE with a team that is uniquely qualified to conduct this study to determine the MDR for potential voting machines in New York elections. As required by our work plan, we have gathered seasoned professionals with broad expertise in usability testing, research methodology, data collection, sampling, and statistics. The senior members of our project team will be Dwayne Norris, Ph.D., who will serve as the project director, and Christine Paulsen, Ph.D., who will be heavily involved in designing and executing the usability assessment of the voting machines. As Project Director, Dr. Norris will handle the administrative aspects of the project including coordinating with the AIR business office, monitoring the budget, securing staff, and ensuring the availability of all resources required to execute the work plan. Both Dr. Norris and Dr. Paulsen will share in providing technical direction to all staff and providing overall quality assurance.

Drs. Norris and Paulsen will rely on technical input from AIR's Chief Methodologist, Dr. Scott Oppler, as well as other senior level staff throughout the organization. Other proposed key project members include Dr. Eric Dunleavy, who will play a critical role in preparing for the mock elections and analyzing the mock election data. In addition, Drs. Norris and Paulsen will draw on the diverse expertise of AIR's staff to provide support for data collection and synthesis,

monitoring mock elections, coding results, coordinating schedules, producing project documentation, and other critical research activities. Upon execution of a contract, we will immediately identify all support staff that will work on this project and can provide their backgrounds and resumes to NYSBOE upon request.

Brief biographical sketches of our key proposed staff are provided below. Resumes for Drs. Norris and Paulsen are included in Appendix B.

Dwayne Norris, Ph.D. (Project Director)

Dr. Norris is a Principal Research Scientist at AIR with extensive experience in test development. He received his M.S. and Ph.D. in Industrial/Organizational Psychology from Virginia Tech. His work deals with job and occupational analysis, personnel assessment, research methodology, performance management, organizational surveys, and statistics/psychometrics.

Dr. Norris has broad applied research experience that includes assisting the FAA to develop performance standards and metrics to gauge the training of Air Traffic Controllers, assisting a school district to implement a progressive teacher compensation program, developing a national certification program for electricians, evaluating the validity of the writing test recently added to the SAT, evaluating new models to use in making disability insurance determinations, and conducting usability assessments of procedures and instructions for submitting tax payments to the IRS.

Dr. Norris is also experienced in conducting research as a result of litigation. For example, he directed the evaluation of Detroit Edison's staffing procedures under consent decree and he directed the development of the current U.S. Marshal Service selection system for Deputy U.S. Marshals. This latter project involved the direct oversight of the Department of Justice. In addition, Dr. Norris serves as a member of AIR's employment equity practice, which provides research and analysis in large scale litigation.

Christine Paulsen, Ph.D. (Technical Lead)

Dr. Paulsen is a Principal Research Scientist at AIR. She holds a Ph.D. in education research, evaluation and measurement from the University of Pennsylvania, an M.A. in applied social psychology from George Washington University, and a B.A. in psychology from Clark University. Dr. Paulsen's research interests include evaluating the effectiveness of educational media and health education programs. She is especially interested in using cross-disciplinary research methods and in efforts that focus on reaching typically underserved populations, including individuals with low health literacy. Her methodological areas of expertise

include: program evaluation, cognitive lab research, survey research and development, assessment validation and development, and usability testing.

At AIR, she directs qualitative and quantitative evaluation research. Her health-related research has evolved into studying how to better design information and health information technology so that patients and healthcare consumers may make informed medical decisions. Her recent contributions include directing an evaluation of the new Medicare Prescription Drug Plan materials, co-authoring the soon-to-be-released results of the health literacy portion of the 2003 National Assessment of Adult Literacy Survey, and evaluating and redesigning 10 websites for the National Network of Libraries of Medicine. Dr. Paulsen also directed a study of the impact of an interactive software application designed to provide patients, including those with low health literacy, with important drug information. In addition, she served as an expert reviewer of an online system designed to help patients manage their diabetes as well as a survey designed to capture health information from breast cancer patients. Both projects were funded by the Walter Reed Army Medical Center. Dr. Paulsen also recently contributed to the evaluation of a senior health website for the NLM, in addition to directing an evaluation of a media-based alcohol education curriculum for high school students. In addition, she recently studied the effectiveness of medical instructions that accompany a heart defibrillator for at-home use.

Dr. Paulsen also has a strong interest in the fields of measurement and assessment, which have led to the following contributions: performing a study comparing the validity of measures used to assess workplace drug use prevalence, developing and refining a cognitive interview methodology to enhance the construct validity of surveys and written exams, contributing to the development of a monitoring instrument for Head Start, directing a study to determine the validity of oral translations provided to non-native English-speaking during test administrations, and co-inventing a metric used for assessing the usability of websites and web applications (patent pending).

Scott Oppler, Ph.D. (Chief Methodologist)

Dr. Scott Oppler, Chief Methodologist for AIR's Division of Health, National Security, and Workforce Productivity, received his Ph.D. in Industrial/Organizational Psychology from the University of Minnesota. As a senior member of AIR's Workforce Research and Analysis (WRA) program, Dr. Oppler works with staff on a variety of projects, providing direction on a wide range of measurement and methodological issues.

Over the past 16 years, he has conducted research on the validity and other psychometric characteristics of such instruments as the Medical College Admissions Test (MCAT) for the Association of American Medical Colleges

(AAMC), the Armed Services Vocational Aptitude Battery (ASVAB) for the Department of Defense, the General Aptitude Test Battery (GATB) for the U.S. Department of Labor, and the SAT I for the College Board, and is currently leading a project with the National Security Agency to develop a test of advanced mathematical knowledge. Dr. Oppler is a member of the National Physical Therapy Examination (NPTE) Technical Advisory Committee for the National Board of State Boards of Physical Therapy, and recently served as the chairperson of the Technical Advisory Panel for AIR's contract with the National Assessment Governing Board to develop an economics assessment framework and specifications for the National Assessment of Educational Progress (NAEP). Dr. Oppler also serves as an expert advisor on research methodology, statistics, and employment practices in AIR's employment equity practice.

Eric Dunleavy, Ph.D. (Research Scientist)

Dr. Dunleavy is a Research Scientist at AIR in Washington D.C. Eric joined AIR from the University of Houston, where he received his doctorate in Industrial/Organizational Psychology with a minor in quantitative data analysis. Eric currently works as an analyst on employment discrimination cases in the equity analysis practice area at AIR, where he has authored expert reports for the Department of Defense and the Association of American Medical Colleges. This work involves the construction and analysis of organizational databases and the submission of technical reports to court. Dr. Dunleavy's recent work involved a combination of applicant flow and constructed pools data analysis. Eric has also been involved in job analytic and structured interview work related to litigation. Dr. Dunleavy also works as a research analyst on the National Assessment of Adult Literacy (NAAL) and the State Assessment of Adult Literacy (SAAL), where he analyzes data, prepares databases for public release, and writes technical reports. Dr. Dunleavy is also an adjunct faculty member of George Mason University, where he has taught a doctoral Multivariate statistics course.

Deborah Goff (Research Assistant)

Deborah Goff is a Research Associate at AIR. Deborah is responsible for planning and administering usability evaluations, compiling both quantitative and qualitative data, performing statistical analyses, running cognitive interview sessions, facilitating focus groups, performing expert reviews, reporting test results, and recommending design refinements. Her recent work has included a usability evaluation of a computer software program, a benchmark test of a medical device, cognitive evaluations of educational assessment tools, and a comparative review of five health related websites. She also has an interest in brand analysis research and implementation, with a special focus on consumer products and websites.

AIR's Corporate Capabilities and Related Experience

Founded in 1946 by Dr. John C. Flanagan, the American Institutes for Research (AIR) is an independent, not-for-profit corporation engaged in research-based consulting in the behavioral and social sciences. Throughout its history, AIR has steadily built on its initial focus in personnel assessment and training to include expertise in workforce analysis and development, human factors, usability testing, health, education, assessment, international development (i.e., education and social programs), computers and statistical sciences, and intelligence and security applications. With a growing staff of more than 1,200, AIR is one of the leading research-based consulting firms in the world.

Our work spans a wide range of domains and products. AIR's program in Workforce Research and Analysis (WRA) has a diverse research staff with backgrounds in industrial/organizational psychology, social and experimental psychology, psychometrics, statistics, computer science, economics, sociology, human factors engineering, and other related disciplines. This breath of expertise allows WRA to focus on applied research projects that address the individual, team, or organizational performance needs of our clients.

We support private and public sector clients. As a result of placing high value on responsiveness, product quality, and timeliness, AIR has established a national reputation for efficiently and effectively conducting work that meets the needs of our clients. We help clients learn from the successes and challenges experienced in other industries. Recent commercial or non-profit clients include: Baxter Healthcare; Becton, Dickinson, and Company; Fannie Mae; Fidelity; Franklin Electronic Publishers; Johnson and Johnson; Kodak; Microsoft; Motorola; Nokia; Samsung Electronics; Tufts Health Plan; the College Board, Detroit Edison, and the Henry Jackson Foundation. Recent government clients include: the U.S. Army, the Federal Aviation Administration, the Centers for Disease Control and Prevention; the Federal Election Commission; the Food and Drug Administration, the National Center for Education Statistics at the Department of Education; the National Heart, Lung, and Blood Institute; the National Institute of Allergy and Infectious Diseases; Joslin Diabetes Center; and the National Library of Medicine.

Our team works diligently to fulfill the client's own objectives. The AIR approach combines a strong applied orientation that remains grounded in the best theories, methods, and practices available in the behavioral and social sciences. With such a diverse staff, WRA has extraordinary multi-disciplinary problem-solving capability, allowing us to apply approaches that are best suited to the particular needs of the client. Key capabilities of WRA include:

- Usability testing/human factors;

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- Job/organizational analysis;
 - Research design;
 - Quantitative and qualitative methodology;
 - Personnel selection and certification;
 - Individual and team performance management;
 - Training;
 - Adult literacy;
 - Employment equity and litigation support;
 - Program evaluation; and
 - Advance statistical and psychometric analysis.

Case Studies

Below, we present a set of projects that we feel speak well of our skills and experience as they relate to the requirements of NYSBOE for successfully executing this project.

Voting System Design, Federal Election Commission

The Federal Election Commission (FEC) provides assistance to state and local officials who are responsible for administering elections. The FEC's assistance comes in many forms, including workshops and standards relating to topics such as ballot construction, setting up a secure polling station, and accurately collecting and reporting the vote. Following the difficulties associated with the 2000 Presidential Election, the FEC took the initiative to improve the usability and accessibility of voting systems.

AIR helped the FEC meet its goal of improving voting system usability and accessibility by developing human factors standards for voting systems. AIR also developed an associated set of booklets that provide tutorial material on the topics of usability and accessibility. AIR's work complemented a parallel effort on the part of the Institute of Electronic and Electromechanical Engineers (IEEE) to develop its own set of human factors standards for voting systems.

To develop the new standards and booklets, AIR drew support from several quarters, including state and local election officials, voting system designers and manufacturers, and colleagues in the human factors profession who participated on a Project Advisory Board. The new standards addressed many voting system design issues including the intuitiveness of software user interfaces, the ease of use of new input devices such as touchscreens, and the availability of audio-only or

visual display-only systems for use by people who have limited or no hearing and vision, respectively. The tutorial booklets are titled *Developing a User-Centered Voting System*, *Usability Testing of Voting Systems*, and *Procuring a User-Centered Voting System*. AIR's products should help to ensure that future voting systems are easy to use by an enormously diverse voting population.



AIR's booklets promote design processes that will help to ensure the usability and accessibility of voting system technologies, such as touchscreen-based systems.

PC Operating System, Microsoft Corporation

Microsoft launched their newest computer operating system, Windows XP, in October 2001. The operating system was redesigned with the goals of improving general usage tasks, set up and configuration tasks, and the management of digital media. Microsoft asked AIR to develop a study that assessed whether Windows XP was easier to use than its predecessors. Before the product's release, AIR conducted a comparative usability test that pitted the new operating system against Windows 2000 Professional and Windows Millennium Edition.

A critical part of the study was to ensure that no aspect of the test, particularly participants, tasks, or equipment, was biased toward any of the products being evaluated. The test involved 72 participants representative of consumers at large. Half of the participants took part in a test of Windows XP Professional and Windows 2000 Professional while the other half participated in a comparative test of Windows XP Home Edition and Windows Millennium Edition. Participants in each test performed up to 30 tasks, such as composing and sending an e-mail and configuring an Internet connection. Our primary performance measures were the participants' ability to complete a task within a pre-determined time frame and the actual time it took for them to complete a task.

The results of the study revealed that Windows XP outperformed both previous versions of the operating system by significant margins. Test participants completed 25 percent more tasks using Windows XP Professional as compared to

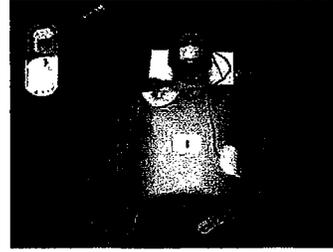
Windows 2000 Professional, and 17 percent more tasks using Windows XP Home Edition than using Windows Millennium Edition. Microsoft has mentioned the results of the study on their website and in advertisements in support of Windows XP's launch.

Automated external Defibrillator and Medical Device Instructions, Client Confidential

Automated external defibrillators (AEDs) analyze the heart's rhythm, and if necessary, deliver an electric shock to victims of sudden cardiac arrest. AEDs enable rescuers to quickly assist in resuscitation, thus increasing chances of survival. The AED contains a main unit with instructions and controls, along with detachable electrodes that are placed on the victim's body and evaluate the heart rhythm. Until recently, the devices could only be used by hospital personnel, formally trained emergency personnel, policemen, and firefighters, or minimally trained laypersons such as flight attendants. However, AEDs are now being manufactured for home use.

AIR has conducted two studies with AEDs. The first study, a comparative usability test of five portable AEDs, utilized a between-subjects design, in which each of the participants used one of the five AEDs. During a simulated emergency situation evaluation, AIR collected data on the timing of each resuscitation task, the ease of device use, the participants' responsiveness to an automated voice, and the likelihood of administering the correct life saving techniques under the direction of each device. We also monitored the depth of CPR chest compressions and the placement of the electrode pads to ensure that the treatment would be given effectively in a real emergency. In addition, AIR provided the client with recommendations for improving the usability of the device drawing from 1) our experiences learning how to use the devices, 2) our observations of participants' actions during test sessions, 3) post-test interviews with the participants, and 4) our knowledge of human factors.

In the second study, AIR conducted an evaluation of the instruction video and written instructions for a leading medical device manufacturer's AED designed for home use. Sixty individuals who had never used an AED before were asked to review the instructions, set-up the device, change its batteries and electrodes, and interpret its status icons. AIR provided the client with data related to the effectiveness of the AED instructions for consumers from diverse backgrounds, as well as a set of recommendations for enhancing the usability of the device itself.



The comparative usability test simulated an emergency situation.

The SAT Written Test Validity Study, College Board

The College Board conducted a validation study to provide colleges and universities with information about the Writing Test that was recently added to the new SAT in March 2005. The objective of this study was to estimate the predictive and incremental validity of scores on the SAT I Writing Test over the then operational SAT I Math and Verbal scores and high school GPA.

A key consideration in this study was identifying an appropriate sample from which to collect the data needed to assess the validity of the written examination. The sample had to closely mirror the population of students that typically take the SAT in order for the results to appropriately generalize. Furthermore, because this was a research study, we had to develop creative incentives to ensure that study participants would give their best effort. As such, we used a sample of incoming freshmen students and collected data *prior* to the start of the school year.

AIR administered an experimental version of the SAT I Writing Test to samples of incoming freshmen at 12 universities and colleges around the United States. These administrations took place either during summer orientations or during the first weeks of the fall 2003 semester. The timing of data collections was critical to ensuring that learning effects associated with taking college courses did not adversely affect the study results. In the 90 minute administration sessions, AIR gathered other background information, as well as informed consent. In addition to test results, AIR obtained high school GPA, operational SAT I Math and Verbal scores, and information regarding academic performance during the freshman year for student participants. This additional information was gathered from the College Board or the participating schools at the end of their 2003-2004 academic school years.

Using the information gathered throughout the study, AIR conducted predictive and incremental validity analyses. The results of this study were presented to the College Board during periodic briefings and in a final technical report. Also presented were discussions of study limitations and appropriate follow-up validity designs.

APPENDIX A: BUDGET

**State of New York Board of Election Study
 Proposal Submitted By: American Institutes for Research
 Period of Performance: August 25, 2006 to November 30, 2006**

Budget

Name	Rate/Hour	Task 1 Review Voting Machines		Task 2 Determine population		Task 3 Prepare for mock election		Task 4 Mock election		Task 5 Analyze data		Task 6 Report		Task 7 Ongoing consultation		Total	
		Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost
Norris Dwayne	198.45	80	\$ 15,876	40	\$ 7,938	40	\$ 7,938	40	\$ 7,938	40	\$ 7,938	80	\$ 15,876	40	\$ 7,938	360	\$ 71,441
Paulsen, Christine	172.27	80	13,782	40	6,891	40	6,891	40	6,891	40	6,891	80	13,782	40	6,891	360	62,019
Dunleavy, Eric	105.78	24	2,539	40	4,231	-	-	40	4,231	40	4,231	40	4,231	40	4,231	224	23,695
Bransfield, Chris	63.23	40	2,529	-	-	40	2,529	80	5,059	-	-	-	-	-	-	160	10,118
Goff, Deborah	69.21	40	2,768	-	-	40	2,768	80	5,537	-	-	-	-	-	-	160	11,073
Chheda, Alpa	70.15	-	-	-	-	40	2,806	80	5,612	-	-	-	-	-	-	120	8,418
Jason, Juliet	59.03	-	-	-	-	40	2,361	80	4,723	-	-	-	-	-	-	120	7,084
Malakoff, Lara	52.21	-	-	-	-	40	2,088	80	4,176	40	2,088	-	-	-	-	160	8,353
Naemi, Bobby	57.69	-	-	-	-	40	2,308	80	4,615	40	2,308	-	-	-	-	160	9,231
Total Personnel		264	\$ 37,494	120	\$ 19,060	320	\$ 29,690	600	\$ 48,762	200	\$ 23,456	200	\$ 33,889	120	\$ 19,060	1,224	\$ 211,432
Other Direct Costs																	
Meetings/Conferences			\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -		\$ -
Printing and Reproduction			-		-		-		258		-		-		-		258
Materials and Supplies			-		-		-		-		-		-		-		-
Facility&Equipment			-		-		-		-		-		-		-		-
Consultants			-		-		-		-		-		-		-		-
Outside Services			-		-		-		-		-		-		-		-
Postage and Delivery			-		-		-		386		-		-		-		386
Communications			64		64		64		64		64		64		64		451
Other Direct Costs			-		-		-		-		-		-		-		-
Travel			1,955		-		-		21,215		-		-		-		23,170
Total ODCs			\$ 2,019		\$ 64		\$ 64		\$ 21,923		\$ 64		\$ 64		\$ 64		\$ 24,264
TOTAL TIME & MATERIAL COSTS			\$ 39,513		\$ 19,125		\$ 29,754		\$ 70,705		\$ 23,520		\$ 33,954		\$ 19,125		\$ 235,696

Budget assumptions:

1. Task 1 includes travel for 2 AIR staff members to visit Albany and review the 15 different machines. We estimate that the in-person visit to Albany will take approximately 2 days. Estimated travel to Albany includes hotel and per diem costs at approximately \$179.75 per person. Airfare = \$379 per person. Local travel = \$200 per person.
2. For Task 4, we assume that the study will take place in 3 different locations around New York. For budget estimation purposes only, we have assumed Manhattan, Albany, and Troy due to the variation in per diem rates for each city. These numbers are estimates only and AIR expects to be reimbursed for all actual travel costs incurred.
3. Travel costs include a single night in 2 hotel rooms for 5 individual staffers, airfare, local travel costs, and 2 days worth of per diem costs (food and incidentals) per city. Other related costs may be incurred during actual travel.
4. Estimated travel to Albany includes hotel and per diem costs at approximately \$179.75 per person. Airfare = \$379 per person. Local travel = \$200 per person.
5. Estimated travel to Manhattan includes hotel and per diem costs at approximately \$338.00 per person. Airfare = \$329 per person. Local travel = \$200 per person.
6. Estimated travel to Troy includes hotel and per diem costs at approximately \$148.25 per person. Airfare = \$379 per person. Local travel = \$200 per person.
7. Communications include long distance telephone charges, assumed to be \$.07 per minute.
8. Shipping and postage includes shipping study materials to field study locations ahead of staff travel, assumed to be \$100 per study site.
9. Please note that our budget does not include a line item for participant incentives. The amount and type of incentive is still undetermined and the total cost will depend on the final sample size.
10. This budget is presented as time and materials.

APPENDIX B: RÉSUMÉS

DWAYNE GORDON NORRIS

Education

- Ph.D. 1996, Virginia Tech, Industrial and Organizational Psychology
- M.S. 1992, Virginia Tech, Industrial and Organizational Psychology
- B.A. 1990, Lafayette College, Psychology

Honors and Awards

- Virginia Tech ABD Summer Fellowship, VA Tech, 1994
- Patricia Roberts Harris Fellowship, VA Tech, 1990-1993

Present Position

Principal Research Scientist

Responsible for designing, directing, contributing to, and/or reviewing applied research and consulting projects for both government agencies and private industry. Areas of expertise include job/organizational analysis and competency modeling, personnel assessment/selection and certification, performance management, employee surveys, and statistics/measurement.

Professional Experience

Project Director, Development of Certification Examinations for the National Cable Splicing Certification Board (2004-present). This project involves the development of written and performance-based assessments for a national certification program being initiated by the National Cable Splicing Certification Board (NCSCB). Specific tasks for this project include conducting a job analysis of cable splicing, developing test specifications, developing written and performance items, pilot and field testing items and forms, setting performance standards, designing administration and implementation plans, and documenting the technical work. Specific responsibilities as Project Director involve overall technical design for all aspects of the project, managing data collections and analysis, technical reviews and reporting, developing program infrastructure, and client relations.

Project Director, Ongoing Development and Psychometric Support for Selection and Certification Tests for Electrical Workers (2000-present). The National Joint Apprenticeship and Training Committee (NJATC), which is jointly funded by the International Brotherhood of Electrical Workers (IBEW) and the National Electrical Contractors Association (NECA), is responsible for selecting and training thousands of electrical worker in there 5 year apprenticeship programs. NJATC is devoted to ensuring the fairness and validity of the selection of apprentices for its training program. With that in mind, NJATC hired AIR to develop and validate assessment instruments for the program. Currently, we are developing a journeyman level, national certification program that will contain both written and performance testing components. Specific responsibilities as Project Director involve overall technical design for the job analysis and certification test and program development, managing data collections and analysis, technical reviews and reporting, developing program infrastructure, and client relations. Other specific responsibilities include leading support duties for the ongoing apprentice selection program such as developing parallel forms, conducting psychometric data analyses, reviewing ADA

requests, briefing/training test and interview administrators, conducting seminars nationwide on testing and interviewing applicants, and documenting the results of the project, as well as designing/conducting special purpose studies (e.g., validation studies, work performance studies, and apprentice attitude surveys).

Project Director, Development and Administration of the MEDCOM Command Climate Survey (2005-present). This project requires developing a web-based organizational climate survey and administering it to 65,000 Army and Civilian medical personnel in both continental U.S. and overseas locations. The survey, which focuses on various climate issues such as adequacy of resources, opportunities for training and development, teamwork, leadership, performance outcomes, and EEO, is to result in actionable recommendations for future performance and quality improvement efforts. Specific responsibilities as Project Director include providing overall technical guidance to project team, as well as leading quality control and project review efforts.

Project Director, Evaluation of the Incremental Validity of a Proposed Writing Test for the College Board's SAT (2003 – 2004). This project involved the assessment of the predictive and incremental validity of a writing test over the current math and verbal tests of the SAT. To conduct this study, an experimental writing test was administered to a representative sample of incoming college students that have already taken the SAT. We then gathered their SAT scores and their freshman GPA, both overall and in writing related courses. These data were analyzed to assess the predictive and incremental validity of the writing tests, using GPA as the criterion. Specific responsibilities as Project Director included designing an overall technical approach, conducting the technical reviews, conducting data analysis, participating in data collection, addressing client concerns, and leading the reporting and briefing duties.

Project Director, Selection-Oriented Job/Task Analysis of the FAA Facilities Maintenance Workforce (2001 – 2003). This project involved conducting a selection-oriented job/task analysis of all Facilities Maintenance positions. Specific tasks included developing a comprehensive list of tasks and KSA requirements, conducting a census survey to gather quantitative information about job requirements, conducting linkage panels to identify the KSA requirements for task performance, and data analysis and reporting. Specific responsibilities as Project Director included designing an overall technical approach, conducting the technical reviews of products, data analysis, participating in interviews, site visits, and focus groups, addressing client concerns, and leading the reporting and briefing duties.

Deputy Project Director, Development of Progress Tests in Reading, Writing, and Math for the College Success Initiative of the College Board (2003). This project involved developing progress tests that are linked to the College Boards standards for college success. These tests will gauge a student's progress from grades 6 to 11 against the process skills students must master in order to perform advance placement or college level work. This project required extensive item development, pilot testing, data analysis, and standards setting. Specific responsibilities as Deputy Project Director included designing an overall technical approach to item development, pilot testing, standards setting, and test form development, conducting technical reviews, conducting data and psychometric analyses, addressing client concerns, and leading the reporting and briefing duties.

Project Director (Subcontractor), Development of an Examination Battery for Deputy U.S. Marshals (DUSM) for the U.S. Marshals Service (2000 – 2002). This project involved developing and administering a written examination and structured interview for selecting entry-level DUSMs. The specific tasks related to test development included conducting a future-oriented job analysis, developing the written examination and structured interview, pilot testing and validating the examination battery, and conducting impact analyses. Specific responsibilities as Project Director included leading a future-oriented job analysis including data collection, analysis, and reporting activities, helping design and execute a criterion-related validity study, and designing and conducting impact analyses. Also conducted client briefings and wrote technical documentation.

Principal Research Scientist, Development of Career Path Models for Air Traffic Controllers and Surface Warfare Officers (2002). In this project for the Navy Air Warfare Center Training Systems Division (NAWCTSD), AIR developed career path models for Air Traffic Controllers (ACs) and Surface Warfare Officers (SWOs). These career path models were designed for use in an intelligent instructional system that will facilitate developmental interactions (e.g., mentoring) among Navy personnel. The career path models were organized around task, competency (e.g., knowledge, skills, and abilities), and critical incident information depicting the job requirements along both career tracks. Specific responsibilities as a project team member included providing technical oversight to project design and data collection protocols, conducting interviews, focus groups, and job observations, extracting and organizing competency information from existing job information, developing models, and writing technical documentation.

Project Director, Practice analysis of Certified Public Accountants (CPAs) for the American Institute of Certified Public Accountants (1999 – 2001). This project was to provide a comprehensive description of the competencies needed to practice public accounting in a manner that protects the public, and use this information to develop test specifications for developing the Uniform CPA Examination. The technical component of the project was structured to provide information to guide the transition of the CPA exam from paper-and-pencil to computer-based administration. This project included three phases. Phase 1 involved the gathering of background information via document reviews and interviews with various stakeholders and practitioners. Phase 2 involved the bulk of the data collection, including focus groups and a large-scale survey of CPAs throughout the country. Phase 3 involved the development of test specifications (the “blueprint”) for creating the exam. Specific responsibilities as Project Director included technical design and oversight, leading data collection efforts (e.g., focus groups and survey), and providing data analysis support. Also, handled client relations and briefings, staffing and budgeting, and technical reporting.

Project Director, Evaluation of the Recruitment, Selection, and Hiring Practices at Detroit Edison (1999 – 2000). This project involved the review and evaluation of the employee recruitment and selection practices at Detroit Edison. The primary objective was to provide actionable recommendations for process improvement. As such, detailed information about the recruitment and selection process was compared against professional and industry standards, legal guidelines, and the existing knowledge/research base. The approach to conducting this review involved documentation review, individual interviews, focus groups, literature reviews, and data analysis. Specific responsibilities as Project Director included designing an overall technical approach, conducting the technical

reviews and analyses, participating in interviews and site visits, addressing client concerns, and leading the reporting and briefing duties.

Principal Research Scientist, Review the Methodology and Results of 1996 Study to Design and Validate Physical Fitness Standards for Criminal Investigators in the U.S. Marshals Service, for the U.S. Marshals Service (1999-2000). The purpose of this project was to review the methodology of a 1996 study designed to develop and validate physical fitness standards for the criminal investigator position in the United States Marshals Service (USMS). Specific responsibilities as a project team member included meeting with USMS representatives at the beginning of the project to gather relevant information regarding the standards under review; reviewing the final report documenting the 1996 effort, as well as other relevant information that the USMS could provide regarding subgroup performance on existing or proposed standards; and providing written and oral summaries of the strengths and weaknesses of the 1996 study, the ramifications of the study with respect to adverse impact, and possible avenues of future research.

Project Director, Job Analysis of the Foreign Service Officers Generalist and Administrative Specialists Positions at the U.S. Information Agency (1998 – 1999). This project paralleled a job analysis conducted for the Department of State (see below). It involved a comprehensive description of all FSO Generalist and Administrative specialists positions in terms of general work activities and tasks performed, and knowledge, skills, abilities, and work styles needed for effective performance. Specific responsibilities as Project Director included managing and leading the technical and administrative aspects of the project, including development and administration of surveys, designing and conducting interviews and focus groups, analyzing survey data, reporting, client relations, and staffing and budgeting.

Project Director, Job Analysis of the Foreign Service Officers Generalist Positions at the Department of State (1997 – 1999). This project involved a comprehensive description of all FSO Generalist positions in terms of general work activities and tasks performed, and knowledge, skills, abilities, and work styles needed for effective performance. The job analysis was designed to provide data for addressing multiple human resource applications, particularly selection, performance management, and training. Specific responsibilities as Project Director included managing and leading the technical and administrative aspects of the project, including development and administration of surveys, designing and conducting interviews and focus groups, analyzing survey data, briefing and technical reporting, client relations, and staffing and budgeting.

Senior Research Scientist, Development of a New Disability Determination Process for the Social Security Administration (1997 – 1999). This project involved a multi-year, multi-disciplinary research and design effort to develop a new methodology for making a disability determination. A key aspect of this project was to develop a model that gives more emphasis to the functional abilities of those applying for disability compensation. Specifically, the goal was to develop a model for using individual functional information vis-à-vis the occupational demands of work to determine whether or not an applicant for disability compensation can perform the essential functions of jobs in the US economy. Specific responsibilities as a project team member included developing methodologies for identifying the minimum level of functional ability needed to perform work functions and

evaluating different algorithms for using this information in the prototype disability determination model.

Research Scientist, Development and Implementation of Job/Skills Analysis Systems for Department of Defense Agencies (1996-1997). Multi-purpose job analysis is an expensive and time-consuming activity, especially in large organizations with substantial selection, training, and career development needs. The goals of these projects included the development of cost and time efficient, computer-aided systems for identifying occupational structures and occupation-specific tasks, skills, knowledge, and tools. Specific responsibilities as a project team member included conducting analyses on resulting job analysis data and leading a task in the "high-level" design (i.e., Concept of Operation) of the selection and staffing component of a new HR system.

Research Scientist, Development of the Occupational Classification Network (O*NET) Job Information System for the Department of Labor (1996-1997). This project involved the development of a theoretically based taxonomy for comprehensively describing occupations in the US economy. This project resulted in the Occupational Classification Network (O*NET) system, which includes reliable and valid measures of job descriptors, databases of occupational information, software for viewing and using the databases, and extensive research on various aspects of the system. O*NET was developed to replace the well-known Dictionary of Occupational Titles (DOT). Specific responsibilities as a project team member included conducting a study to determine the utility of methodologies for using general occupational descriptors (e.g., general work activities) for occupational classification purposes (i.e., constructing occupational families). Also co-authored occupation clustering chapter of the O*NET technical report and book.

Research Associate, Development and Validation of Training Certification Exams for Lead Abatement Jobs for the Environmental Protection Agency (EPA) (1995 - 1996). This project involved the development of certification exams for select managerial and non-managerial jobs dealing with lead abatement. Specific responsibilities as a project team member included assisting in the design and execution of job analysis and test development activities, analyzing job analysis data to identify important KSAs, and developing the item-analysis protocol for the certification exam.

Research Associate, Reanalysis of Data from Surveys of Officers and Enlisted Personnel for the Defense Manpower Data Center (DMDC) (1995 - 1996). This project required the reanalysis of the 1985 and 1992 DoD surveys containing information on the characteristics, attitudes, and concerns of active-duty and reserve personnel and their spouses. Specific responsibilities as a task leader included leading the preparation of a longitudinal report on the attitudes about the military way of life for service members first surveyed in 1985. Specific tasks included creating a longitudinal database, developing an analysis plan centered on specific research questions, conducting multivariate analyses, and writing a final research report.

Research Analyst, Modeling the Enlistment Decision with Army Communications Objectives Measurement System (ACOMS) Data for the U.S. Army Research Institute (1994 -1996). The purpose of this project was to develop a theoretical model of the enlistment decision-making process of youth and apply the model to archival data. Specific responsibilities as a project team member included conducting a literature review, contributing to the model

development and specification activities, conducting statistical analyses to test the model, and writing sections of final report.

Research Analyst, Usability Assessment of IRS Tax Forms for the Bureau of Labor Statistics and Internal Revenue Service (1993 - 1994). This project involved a mixed method assessment of taxpayer and tax preparers reactions to revised tax forms. Specific responsibilities as a project team member included assisting in the development of a survey and survey sampling plan, supervising data receipt, processing, and quality control processes, analyzing quantitative data, and conducting think-aloud laboratory sessions and focus groups.

Relevant Related Experience

Adjunct Professor (Multivariate Statistics), George Mason University (Spring, 1998). Taught graduate level course in multivariate statistics for the Behavioral Sciences.

Adjunct Professor, in Virginia Tech's ABD Summer Fellowship Program (Summer, 1994). Taught upper-level industrial-organizational psychology course and conducted independent research.

Graduate Teaching Assistant, Virginia Tech (Fall, 1990). Taught introductory to psychology discussion sections.

Employment History

2000 – present	Principal Research Scientist; American Institutes for Research, Washington, DC
1998 – 1999	Senior Research Scientist; American Institutes for Research, Washington, DC
1997	Research Scientist; American Institutes for Research, Washington, DC
1996	Associate Research Scientist; American Institutes for Research, Washington, DC
1998 (Spring)	Adjunct Professor (Multivariate Statistics), George Mason University, Fairfax, VA
1993-1996	Research Analyst/Research Associate; Westat, Inc., Rockville, MD
1994 (Summer)	Assistant Professor (ABD Summer Fellow), Virginia Tech, Blacksburg, VA

Professional Affiliations

American Psychological Association (APA)
Society for Industrial and Organizational Psychology (SIOP)

Personnel Testing Council of Metropolitan Washington (PTC/MW)
Society for Human Resource Management

Papers/Presentations

- Norris, D. G. & Carson, J. D. (2005, April). Putting Credentialing in Context. In G. O'Shea (Chair), *The Credentialing Process: What I/O Psychologists Need to Know*. Symposium presented at the annual meeting of the Society of Industrial and Organizational Psychology, Los Angeles, CA.
- Kuang, D. & Norris, D. G. (2005, April). *Satisfaction with supervisor: An investigation of the influence of realistic job preview and tenure using Item Response Theory*. Paper presented at the annual meeting of the Society of Industrial and Organizational Psychology, Los Angeles, CA.
- Davies, S., Norris, D. G., Turner, J., & Wadlington, P. (2005, April). Cheating, Guessing, Faking, and Self-Presentation in Assessment Responses. In M. Zickar (Chair), *Faking Research: New Methods, New Samples, and New Questions*. Symposium presented at the annual meeting of the Society of Industrial and Organizational Psychology, Los Angeles, CA.
- Norris, D. G. (2005, August). *Administering the NJATC apprentice selection test and structured interview: Validity and other key concepts to remember*. Presentation at the Annual IBEW/NECA/NJATC National Training Institute, Knoxville, TN.
- Norris, D. G., & Goldman, A. (2000, August). Conducting a practice analysis: Key methodological considerations in the practice analysis of CPAs. In D.G. Norris & A. Goldman (Co-Chairs), *Building a solid foundation for credentialing: The practice analysis*. Symposium presented at the 108th Annual Conference of the American Psychological Association, Washington, DC.
- Russell, T. L., Biskin, B. H., & Norris, D. G. (2000, August). Developing specifications for a computer-based CPA licensure examination. In D.G. Norris & A. Goldman (Co-Chairs), *Building a solid foundation for credentialing: The practice analysis*. Symposium presented at the 108th Annual Conference of the American Psychological Association, Washington, DC.
- Mumford, M. D., & Norris, D. G. (1999). Heuristics. In M. A. Runco & S. Pritzker (Eds.), *Encyclopedia of Creativity*. San Diego, CA: Academic Press.
- Norris, D.G., Searcy, C. A., & Dorsey, D. W. (1999, November). An investigation of the role of skill and knowledge information in multi-purpose job analyses. In B. J. O'Connell (Chair), *The development of a knowledge and skill management system: From theory to application*. Symposium presented at the annual meeting of the International Military Testing Association, Monterey, CA.
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Technical/Research Reports

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CHRISTINE ANDREWS PAULSEN

Education

- Ph.D. 1999, University of Pennsylvania, Graduate School of Education, Policy Research, Evaluation and Measurement (Dean's Fellow)
- M.A. 1992, The George Washington University, Applied Social Psychology
- B.A. 1990, Clark University, Psychology (*magna cum laude*)

Honors, Awards, Patents, and Boards

- New England Business and Technology Association, Health Advisory Board Member, 2005
- Human Subjects Institutional Review Board Member (AIR), 2005–present
- Patent Pending: AIR Usability Metric (Web site Evaluation Metric), 2003
- Phi Delta Kappa Award for Outstanding Dissertation, Tau Chapter, 1999
- American Educational Research Association/Office of Education Research and Improvement (US Department of Education) Statistical Fellowship, 1997
- Dean's Fellowship, University of Pennsylvania, appointed 1995–1996 and 1996–1997
- Fiat Lux Honor Society, Clark University, 1988–1990
- Volunteer of the Year, Worcester Crisis Center, Inc., 1988
- Academic Honors, Clark University, 1987–1990

Present Position

Principal Research Scientist, American Institutes for Research (AIR), Workforce Research and Analysis

Responsible for providing research and evaluation consulting services to public and private sector clients interested in evaluating the effectiveness of health information technology initiatives. Interested in using cross-disciplinary research methods that focus on reaching typically underserved populations, especially individuals with low health literacy. Methodological expertise includes: program evaluation, qualitative research methods (e.g., cognitive interviewing, usability testing, focus groups), survey research and development, and assessment validation and development. Substantive expertise includes mental health, substance abuse, and women's health. Routinely direct evaluation research studies at AIR. Also routinely serve as a senior technical advisor to projects that require cognitive lab expertise. Over the past eight years at AIR, have conducted research with hundreds of consumers to help clients develop technologies/products that are understandable, engaging, and that lead to positive educational and health outcomes.

Professional Experience

Principal Investigator, Government Accountability Office, Readability, Heuristic, and Usability Evaluation of Medicare Prescription Drug Plan Materials, AIR (2006)

Responsible for directing a study in which AIR supported the U.S. Government Accountability

Office (GAO) to evaluate the clarity, readability and usability of a set of printed materials developed by the Centers for Medicare and Medicaid Services (CMS). Congress requested this study. AIR supported GAO by providing a three-pronged approach to the study. First, we performed a readability assessment of the six documents using three standard readability formulae. Second, AIR performed a review of the six documents using a set of 60 document design heuristics (principles) that are generally accepted as standards within the fields of document design, human factors psychology, and health communications. Third, we performed a usability study in which we observed a small sample of Medicare beneficiaries and caregivers using the documents to find specific pieces of information and gathered their feedback on the comprehensibility of the documents.

Principal Research Scientist, Office of Technology of the Surgeon General and the Telemedicine and Advanced Technology Research Center (TATRC), Integration of an Electronic Medical Record into Emergency Departments, AIR (2005-2006)

AIR evaluated the usability, human factors and workflow issues associated with integrating an electronic medical record on a tablet PC into Army hospital emergency departments. Performed an expert review of the tool and collaborated with other team members on the scope of work.

Principal Investigator, National Networks of Libraries of Medicine (NN/LM), Usability Evaluation and Redesign of the NN/LM Websites and Intranet, AIR (2005-2006)

Responsible for directing an evaluation of the design, user interface and content of ten NN/LM websites. Also responsible for overseeing the redesign of the public and internal websites and development of a new logo design. Conducted a heuristic evaluation with AIR experts, focus group sessions with NN/LM staff members and usability evaluations with health professionals, community-based organization representatives and librarians. Supervised all staff, managed budget, communicated regularly with the client, analyzed data, prepared extensive reports, and iteratively presented findings to the client team (based in 11 different centers across the country) through conference calls and presentations.

Principal Research Scientist, National Center for Education Statistics (U.S. Department of Education), National Assessment of Adult Literacy, AIR (2005)

The 2003 National Assessment of Adult Literacy (NAAL) is a nationally representative assessment of literacy among adults (age 16 and older) residing in households and prisons in the United States. NCES, which is part of the U.S. Department of Education's Institute of Education Sciences, conducted the assessment in both 1992 and 2003. NAAL uses three categories to define English-language literacy: prose, document and quantitative. Prose literacy includes the skills needed to understand continuous text, such as newspaper articles. Document literacy is the ability to understand the content and structure of documents such as prescription drug labels. Quantitative literacy involves using numbers in text, such as computing and comparing the cost per ounce of food items. Analyzed data and co-authored the chapter that reports health literacy findings.

Principal Investigator, ZOLL Medical Corporation, Evaluation of Defibrillator Instructions, AIR (2005)

Responsible for directing two studies that evaluated the instructions that accompanied a heart defibrillator. The first study included 60 health consumers and was designed to determine the extent to which consumers understood the proper way to set up and maintain the device. The second study was designed to compare the effectiveness of the audio instructions in a noisy environment as well as the value of the visual diagrams which instruct users where to place the electrode pads. Responsible for study design and implementation. Supervised all staff, managed budget, and communicated regularly with the client.

Principal Research Scientist, National Heart, Lung, and Blood Institute (NHLBI), Evaluation of the NHLBI Publications Website, AIR (2005)

Responsible for directing a usability evaluation of the redesigned NHLBI publications web pages. The study included five health consumers and three clinicians and was designed to determine user reactions to a more visible process for ordering publications.

Principal Investigator, National Institute on Alcoholism and Alcohol Abuse, Evaluation of the Effectiveness of a Multi-Media Alcohol Awareness Tool, AIR (2004–2006)

Responsible for directing an evaluation of a multi-media toolkit designed to inform high school students about the effects of alcohol use on the brain. The study will take place in 60 schools nationally and will collect data from several hundred students.

Senior Research Scientist, Walter Reed Army Medical Center and Joslin Diabetes Center, Evaluation of a Web-Based Comprehensive Diabetes Management Program, AIR (2005–2006)

AIR is providing an expert heuristic review and usability test of a Web-based tool designed to integrate health data for diabetic patients. Responsible for performing expert review of the tool and directing a small-scale usability study with health providers.

Senior Research Scientist, Agency for Healthcare Quality and Research and the Centers for Medicare and Medicaid Services, Consumer Assessment of Health Plans Survey (CAHPS II), AIR (2004)

Provided expertise on cognitive interviewing methods to this project. The overall goal of CAHPS II is to provide an integrated set of carefully tested and standardized surveys and accompanying report formats that can be used to collect and report meaningful and reliable information from consumers plan enrollees about their health care and plan experiences. Responsibilities include providing expertise related to conducting cognitive interviews and focus groups with health consumers to assist in the development and refinement of the CAHPS II survey.

Senior Advisor, U.S. Food and Drug Administration (FDA) Center for Devices and Radiological Health (CDRH), Online Medical Device Information for Consumers, AIR (2004)

The FDA's CDRH contracted with AIR to develop an online tool that teaches consumers how to interact with medical devices in the safest manner. The online tool addressed common safety issues associated with products such as glucose meters, at-home dialysis machines, and contact lenses. AIR designed an online interactive tutorial that educates consumers about the safe use of medical devices. Responsible for conceptualizing and reviewing online content.

Senior Advisor, Walter Reed Army Medical Center and the Henry Jackson Foundation, Evaluation of Health Background Survey for Breast Cancer Patients, AIR (2004)

AIR ensured the validity and reliability of a questionnaire that the Walter Reed Clinic administers to breast patients as part of its Clinical Breast Care Project. Reviewed the content of the background questionnaire, which all CBCP patients completed through individual interviews; recommended questionnaire revisions. Trained staff to apply cognitive interview methodology to develop a standardized protocol for administering the background questionnaire.

Director of Cognitive Validation Studies, U.S. Department of Education, National Assessment of Educational Progress, National Center for Education Statistics, AIR (2002–2004)

Evaluated the readability and usability of exam documents, in addition to evaluating the comprehensibility and validity of exam content. The goal of these studies was to ensure that examination questions were measuring the constructs they purported to measure, and that the examination documents were legible, understandable, and usable for students. Directed staff responsible for conducting student focus groups, cognitive interviews, and analysis activities. Supervised junior and mid-level staff across several sites, oversaw budget and schedule, conducted training sessions, developed study instruments, analyzed results, and prepared reports.

Principal Investigator, National Institutes of Health, Evaluation of "MedlinePlus" and "MedlinePlus en español," National Library of Medicine, AIR (2003)

Conducted a usability evaluation of two health Web sites designed for consumer and health professionals. Interviews for the evaluation of MedlinePlus en español were conducted in Spanish. Responsible for study design and implementation. Supervised all staff, managed budget, communicated regularly with the client, analyzed data, prepared an interactive report, and presented findings to the client in a briefing.

Principal Investigator, National Institutes of Health, Evaluation of "Go Local," National Library of Medicine, AIR (2003)

Conducted a usability evaluation of several prototypes of a health Web site designed to provide localized/regional information about health for consumers. Responsible for study design and implementation. Supervised all staff, managed budget, communicated regularly with the client, analyzed data, prepared an interactive report, and presented findings to the client in a briefing.

Principal Investigator, WGBH Educational Foundation, Evaluation of K-12 Social Studies Teacher Professional Development Media, AIR (2003)

Conducted a study to evaluate the effectiveness of a video library series and Web site designed to help social studies teachers in K-12 improve and enhance their pedagogical skills. AIR used a case study approach to study the influence of the materials on teachers' attitudes, satisfaction, and pedagogy.

Principal Investigator, Evaluation of the Effectiveness of Digital Patient Information for a Pharmaceutical Product, AIR (2003)

Conducted a study to evaluate the effectiveness of a CD-ROM designed to convey medical information to patients. The study sample contained both high and low literacy populations to ensure that the information and user interface of the product was comprehensible to all types of users. Developed and administered a comprehension assessment in a pre- and post-test study design to measure changes in product knowledge after using the digital information.

Expert Reviewer, New York Stock Exchange, Expert Review of a Corporate Training Web Site, AIR (2003)

Responsible for leading an expert review of a Web site designed for the NYSE in its efforts to train NYSE staff in a number of different content areas. Collaborated with other experts to review the Web site and provide design recommendations to the NYSE.

Task Director, U.S. Department of Education, Evaluation of the ERIC Search Engine and Web Site Educational Resources Information Center (ERIC), AIR (2001-2003)

Supervised an iterative usability study of the ERIC search engine and Web site for the U.S. Department of Education. Tasks included conducting an expert review, providing recommendations to the team responsible for developing a prototype search engine, and conducting cognitive interviews of the new prototype with a group of ERIC users: parents, teachers, school administrators, and education researchers.

Senior Technical Advisor, Schwab Learning Foundation, Evaluation of a Web Site for Children With Learning Disabilities, AIR (2002-2003)

Senior technical advisor for two usability studies conducted on behalf of Schwab Learning. One study tested the Web site Sparktop.org and included school-aged children with specific learning disabilities, such as dyslexia and problems with auditory processing. The second study tested the Web site SchwabLearning.org and included parents of children with specific learning disabilities and/or Attention Deficit/Hyperactivity Disorder (AD/HD). The purpose of the usability tests was two-fold: (1) to determine the Web sites' usability (that is, the ease with which users can navigate the sites and use their various features), and (2) to make recommendations for design improvements. Participants provided anecdotal and qualitative feedback. In addition, parents

provided ratings related to Web site usability. Also collected data on and made recommendations related to navigational issues, informational presentation, readability of the content, and aesthetics. Responsible for conceptual design and quality assurance.

Principal Investigator, Microsoft Corporation, Comparison of Online Text Formats for Optimal Reading, Experience, AIR (2002)

Designed and supervised a study intended to determine optimal text format for online reading of health-related material. Tested user comprehension, fatigue, reading speed, and information retrieval after reading several online passages. Developed comprehension tool and all testing materials, trained research associates, collected and analyzed data, and provided a written report and a client briefing.

Senior Research Scientist, WGBH-Boston, Usability Evaluation of Assistive Technology Device, AIR (2002)

Evaluated the usability of audio navigation technology designed to assist visually impaired consumers in using DVDs (digital video disks). Conducted a usability test with several sighted and visually impaired users to make recommendations to WGBH's Media Access Group for improving the technology's interface, organizational structure, and content.

Principal Investigator, Massachusetts Education Reform Review Commission, Reporting on Multiple Measures for Student Assessment, AIR (2002)

Supported the Massachusetts Education Reform Review Commission (MERRC) in exploring several different policies for assessing student performance in the state. The Commission sought to determine the most valid and fair way to measure how much students know upon exiting high school in Massachusetts. This project included interviews with national assessment and reform policy experts, collecting current information on promising student assessment practices across the nation and the world, and convening a panel to make recommendations to the Commission and state policymakers for revising the current student accountability system. Produced a report outlining three potential policies and the implications of each policy for students, the state department of education, teachers, and schools.

Director of Usability and Expert Review Research, National Center for Education Statistics (U.S. Department of Education), National Assessment of Educational Progress: Foreign Language Test, AIR (2001–2002)

Evaluated the usability of a PDA- and Web-based questionnaire designed for use by students and teachers nationwide. Conceptualized and directed the study. Supervised junior and mid-level staff, oversaw budget and schedule, conducted training sessions, developed study instruments, analyzed results, and prepared reports.

Task Director, Development of a Metric for Evaluating Web Sites and Web Applications, AIR (2001–2002)

AIR has developed a metric that will be used to evaluate the usability of Web sites and Web applications (patent pending). Performed pilot tests and validation studies of the metric tool, including subjecting the instrument to cognitive validity testing, small-scale tryouts, and statistical tests of concurrent validity, inter-rater reliability, and internal consistency.

Senior Research Scientist, Office of Special Education Programs (U.S. Department of Education), Evaluation of the Elementary and Middle Schools Technical Assistance Center (EMSTAC), AIR (1999–2002)

Senior member of evaluation team responsible for studying the impact of the EMSTAC Web site for school districts across the country. Responsible for summative and formative evaluation design, data collection, qualitative and quantitative analyses, and report writing.

Task Leader, Office of Special Education Programs (U.S. Department of Education), Analyzing Alternative Management Strategies for Supporting the Translation of Research Into Practice, AIR (2000–2001)

Provided support to the Office of Special Education Policy (OSEP) in the management of its Individuals With Disabilities Education Act (IDEA '97) discretionary program investments, including, specifically, identifying alternative management strategies and tactics for OSEP to consider, based on the experience of other federal agencies. The bulk of activities centered on supporting the implementation of a standing panel, required by IDEA '97, to improve the quality and perceived fairness of OSEP's review of grant applications. Responsibilities included managing project staff that collect, organize, and enter data regarding potential reviewers of grant applications. Managed and maintained budget.

Director of Cognitive Validation Study, National Center for Education Statistics (U.S. Department of Education), Evaluation and Validation of a Background Survey for the National Assessment of Adult Literacy, AIR (2000)

Directed cognitive interviews to support development of a questionnaire to accompany the National Assessment of Adult Literacy. Supervised junior and mid-level staff, conducted training and quality control, and assisted in the development of study instruments.

Senior Research Scientist, Office of Special Education Programs (U.S. Department of Education), Support for the Division of Research to Practice's Planning Process for the Government Performance and Results Act, AIR (1999–2000)

Responsible for designing a methodology for data collection of baseline indicators that will be used to measure OSEP's performance over time. These data were reported directly to Congress. Also responsible for data collection, statistical analyses, and report writing.

Senior Research Scientist, Office of Special Education Programs (U.S. Department of Education), Technology Research Support, AIR (1999–2000)

Responsible for researching and writing a synthesis paper on assistive technology for students with disabilities. Also responsible for conducting telephone interviews with grantees and communicating with expert panel members.

Director of Cognitive Validity Studies, National Assessment Governing Board (U.S. Department of Education), Validity Testing of the Voluntary National Tests in Reading and Mathematics, AIR (1998, 2000)

Responsible for directing cognitive validity studies involving over 200 students each year. Managed budgets in excess of \$500K. Conceptualized research designs, developed interview protocols and procedures, analyzed data, trained and supervised over 40 staff members at five sites around the country. Presented several briefings and public presentations to policymakers, stakeholders, and professional education association members.

Project Director, Assistant Secretary for Planning and Evaluation (U.S. Department of Health and Human Services), Improving the Connection between Evaluation Practice and Policy Making, AIR (1999)

The purpose of this Task Order was to assist the Office of the Assistant Secretary for Planning and Evaluation at the U.S. Department of Health and Human Services to develop a strategic research and communication plan meant to facilitate the relationship between evaluators and policy makers. The objective was to identify ways to improve the matching of evaluation methods to the answering of important policy questions, and to advance the acceptance of a range of evaluation methods in policy making. Responsible for communicating with experts and policy makers, facilitating expert panel meetings, and writing reports.

Research Scientist, National Assessment Governing Board (U.S. Department of Education), Evaluating Score Report Formats for the Voluntary National Tests in Reading and Mathematics, AIR (1997–1999)

Participated in the design of documents (student examination score reports) to ensure the documents are legible, comprehensible, and usable. Conducted focus groups with parents and teachers, participated in research, and managed the development of informational materials.

Task Leader, Minnesota Department of Education, Research and Design of Assessment Programs Related to High School Level Statewide Testing in Minnesota, AIR (1997)

Worked with state assessment director of Minnesota to analyze the state's new high standards, the Profile of Learning. Evaluated assessment options and co-authored recommendations for an assessment system to measure school level accountability.

Research Scientist, Head Start Bureau, Evaluation of the Head Start Monitoring Instrument, AIR (1997)

Developed instruments for observation and interviews. Conducted a site visit to field test the new instrument, and wrote reports. Also participated in regular briefings for federal Head Start Bureau.

Graduate Teaching Assistant, Graduate School of Education, University of Pennsylvania, (1996–1997)

Assistant for graduate-level basic statistics course for the behavioral sciences. Tutored students in descriptive and inferential statistics, lectured students in the use of statistical software, and graded exams and assignments.

Graduate Research Assistant, University of Pennsylvania Medical Center, Department of Psychiatry, Center for Mental Health Policy and Services Research (1996–1997)

Directed the data collection and analysis activities for a federally-funded drug and alcohol prevention program in Berks County, PA. Analyzed school and community surveys in addition to collecting and analyzing archival data. Managed evaluation activities, supervised data entry staff, conducted data analyses, wrote reports, and presented findings at conferences.

Graduate Research Assistant, Center for Research in Evaluation and Social Policy, University of Pennsylvania (1995–1997)

Under the direction of Dr. Erling Boe, analyzed data from the National Center for Education Statistics' national Schools and Staffing Survey. Prepared presentations, graphics, and tables of results for reports on national teacher supply and demand studies. Wrote articles and technical reports for publication.

Statistics Tutor, University of Pennsylvania (1995–1996)

Tutored graduate-level statistics in areas of probability theory; descriptive, univariate, and multivariate methods; and analysis of variance, regression, and factor analysis.

Senior Research Analyst, Walcoff & Associates, Inc. (1994–1995)

Developed and evaluated an objective proposal review process implemented by the Environmental Security Technology Certification Program (U.S. Department of Defense). Also, evaluated distance learning technologies used by the U.S. Defense Acquisition University. Collected and analyzed data, wrote reports, assisted in managing the contract budget, supervised junior-level staff, participated in proposal writing, and coordinated several conferences.

Research Associate, Institute for Social Analysis and ISA Associates, Inc. (1990–1994)

Evaluated community and public health programs with a special emphasis on youth, workplace, and minority populations. Assisted in the development of survey instruments. Managed databases and supervised data entry. Performed site visits and collected data (interview, telephone, archival

and survey data). Administered surveys to several hundred students and community members. Analyzed qualitative and quantitative data using multivariate and descriptive statistics. Wrote reports for publication and presentation at professional meetings.

Teaching Assistant, The George Washington University (1990–1991)

Coordinated several undergraduate psychology courses, including two Introduction to Social Psychology courses and an Introduction to General Psychology course. Developed and graded exams, papers, and other assignments. Prepared and taught at least one lecture per semester.

Peer Tutor, Clark University (1989–1990)

Tutored general psychology and introductory statistics for undergraduate students.

Reproductive Health Counselor, Planned Parenthood League of Massachusetts, Inc., Worcester, MA (1989)

Provided counseling services to women from primarily low-income and low health literacy backgrounds.

Research Assistant, Study of the Relationship Between Head Injury and Spousal Abuse, University of Massachusetts Medical Center (1988, 1990)

Under the direction of Dr. Alan Rosenbaum, coordinated research schedule and activities, interviewed participants, collected and analyzed medical records, conducted statistical analyses, and wrote reports.

Assistant Program Director, Crisis Center, Inc. (1987–1988)

Conducted training workshops in crisis intervention and telephone counseling techniques. Provided monthly supervision to counselors, and supervised telephone counseling sessions. Developed a study to improve the effectiveness of the training program for hotline counselors. The study utilized questionnaire, interview, and observational data to assess process and outcomes of the new program. Coordinated analyses and presented recommendations to Center staff. Recommendations led to revision of several key aspects of counselor training.

Employment History

- 1997–Present** Senior Research Scientist, American Institutes for Research (Associate Director, Concord office, 2003–2004)
- 1996–1997** Graduate Teaching Assistant, University of Pennsylvania
- 1996–1997** Graduate Research Assistant, University of Pennsylvania Medical Center, Department of Psychiatry, Center for Mental Health Policy & Services Research
- 1995–1996** Graduate Research Assistant, Center for Evaluation and Social Policy, University of Pennsylvania
- 1995–1996** Statistics Tutor, University of Pennsylvania
- 1994–1995** Senior Research Analyst, Walcoff & Associates, Inc.
- 1990–1994** Research Associate, ISA Group, Inc.
- 1990–1991** Teaching Assistant, The George Washington University
- 1989–1990** Peer Tutor, Clark University
- 1989** Reproductive Health Counselor, Planned Parenthood League of Massachusetts
- 1988, 1990** Research Assistant, University of Massachusetts Medical School
- 1987–1988** Assistant Program Director, Crisis Center, Inc.

Professional Affiliations

American Psychological Association, Student Affiliate

Association for Women in Psychology, Member

American Educational Research Association, Voting Member

American Educational Research Association, Measurement and Research Methodology Division, Member

American Evaluation Association, Member

National Council on Measurement in Education, Voting Member

SIGCHI (Special Interest Group in Computer-Human Interaction of the Association for Computing Machinery), Greater Boston Chapter, Member

Usability Professional's Association, Professional Member

Northeast Regional Evaluation Association, Member

Publications

Peer-reviewed journals

Cook, R., Bernstein, A., Arrington, T., & Andrews, C. (1995). Methods for assessing drug use prevalence in the workplace: A comparison of self-report, urinalysis and hair analysis. *International Journal of the Addictions*, 30(4), 403–426.

Books, book chapters, & monographs

Cook, R., Bernstein, A., & Andrews, C. (1997). Assessing drug use prevalence in the workplace: A comparison of self-report, urinalysis and hair analysis. In L. Harrison & A. Hughes (Eds.) *The validity of self-reported drug use: Improving the accuracy of survey estimates* (NIDA Research Monograph 167: 247–272). Rockville, MD: U.S. Department of Health and Human Services.

Paulsen, C.A. & Dailey, D. (2002, September). *A guide for education personnel: Evaluating a program or intervention*. Washington, DC: American Institutes for Research. Available online at <http://www.emstag.org/resources/eval.pdf>

Technical & project reports

American Institutes for Research. (2004, September). *Ohio translation validity study findings* (Contract No. 0A03031). Sponsored by the Ohio Department of Education. Washington, DC: American Institutes for Research.

Andrews, C. (1992). *The prediction of high-risk AIDS-related behavior using the theories of reasoned action and self-efficacy*. Unpublished Master's thesis, The George Washington University, Washington, DC.

Andrews, C. & Cook, R. (1993). *An evaluation of a handbook on employee assistance programs*. Alexandria, VA: ISA Associates, Inc.

Baker, M., Leclerc, K.J., & Paulsen, C.A. (2002, August). *Usability evaluation of Fannie Mae's Desktop Underwriter Prototype 2.0*. Concord, MA: American Institutes for Research.

Boe, E.E., Cook, L.H., Bobbitt, S.A., & Paulsen, C.A. (1998). *The yield of degree graduates from teacher preparation programs for the teaching force* (Grant No.: R308F70031). Sponsored by the

National Institute on Educational Governance, Finance, Policymaking, and Management, US Department of Education. Philadelphia: Center for Research and Evaluation in Social Policy, University of Pennsylvania.

- Boe, E.E., Cook, L.H., Paulsen, C.A., Barkanic, G., & Leow, C.S. (1999). *Productivity of teacher preparation programs: Surplus or shortage in quantity and quality of degree graduates* (Data Analysis Report No. 1999-DAR2 Grant No.: R308F70031). Sponsored by the National Institute on Educational Governance, Finance, Policymaking, and Management, US Department of Education. Philadelphia: Center for Research and Evaluation in Social Policy.
- Bohrnstedt, G., Cohen, J., Lapointe, A., Levine, R., & Paulsen, C.A. (1997). *Redesign plan for a more useful National Assessment of Educational Progress* (Contract No. R902A70012). Sponsored by the National Center for Education Statistics. Washington, DC: American Institutes for Research.
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APPENDIX C: SAMPLE DEMOGRAPHICS SURVEYS

Included in this Appendix are sample demographic questionnaires. Note that they vary considerably in both the type of demographic information that is collected and the quantity of demographic information that collected. Each of these sample demographic questionnaires were developed to address the specific concerns of various projects and are NOT meant to represent how we propose to collect demographic information for the voter machine usage rate study.

Sample 1: Institute of Education Science – Teacher Preparation Study

Sample 2: Army Research Institute – Officer Retention STAY Project

Sample 3: National Center for Education Statistics – National Assessment Adult Literacy

Background Questionnaire

bmc_10

What is your gender?

- Male
- Female

bmc_11

How old are you?

- Less than 25 years of age
- Between 26-35 years of age
- Between 36-45 years of age
- Between 46-55 years of age
- Between 56-65 years of age
- Between 66-75 years of age
- Greater than 75 years of age

bmc_12

How would you best describe your racial/ethnic background? Check all that apply.

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Hispanic
- Other (Please specify)

bsa_21_01

What is the name of the school where you teach? _____

bsa_21_02

What is the name of school district where you teach? _____

bsa_21_03

Where is your school located? Please provide the city and state where your school is located. Please enter the city in the first blank and the state in the second blank.

bmc_18

Do you own or have access to a personal computer?

- Yes
- No

bmc_19

Are you connected to the Internet either at home or at school?

- Yes
- No

bmc_20

How often do you use email?

- Many times a day
- Once daily
- A few times a week
- A few times a month
- A few times a year
- Not at all

bmc_01

What academic degrees do you hold? Select all that apply.

- No degree
- Associate degree
- Bachelor's
- Master's
- Education specialist (Ed. Spec.)
- Doctorate (e.g., Ph.D. or Ed.D.)
- First professional degree (J.D., M.D.)
- Other (Please specify)

bmc_02

What were your major/minor fields of study for each of your academic degree(s)? Select all that apply.

- Elementary Education
- Early Childhood
- Special Education
- Reading Specialization
- ESOL/ESL or ELL/LEP
- Foreign Language
- Language Arts, or Literacy Education
- Other Language Arts-related education
- Other (Please specify)
- No degree

bmc_03

What was your college GPA for your undergraduate degree?

- Less than 2.00
- 2.00—2.50
- 2.51—3.00
- 3.01—3.50
- 3.51—4.00
- Greater than 4.00
- I did not have a GPA.
- I cannot recall my GPA.

bmc_04

What was your combined verbal and mathematics SAT score?

- Less than 400
- 400-699
- 700-999
- 1000-1299
- 1300-1600
- I did not take the SAT.
- I cannot recall my score.

bmc_05

What was your ACT score?

- Less than 10
- 10-19
- 20-29
- 30 or higher
- I did not take the ACT.
- I cannot recall my score.

bmc_06

Are you endorsed or certified in any of the areas below? Select all that apply.

- Elementary Education
- Early Childhood Education
- Special Education
- English
- Language arts
- Reading specialist
- Foreign Language
- Language Therapy
- Speech Therapy
- English-as-a-second-language (ESL) or English for Speakers of Other Languages (ESOL) or English Language Learners (ELL) or Limited English Proficiency (LEP)
- Other (please specify): _____

bmc_14

Which of the following describes the teaching certificate you currently hold? Select all that apply.

- Regular or standard certificate or advanced professional certificate
- Probationary certificate (issued after satisfying all requirements except the completion of a probationary period)
- Provisional or other type of certificate given to persons who are still participating in what the state calls an "alternative certification program"
- Temporary certificate (requires some additional college coursework, student teaching, and/or passage of a test before regular certification can be obtained)
- Waiver or emergency certificate (issued to persons with insufficient teacher preparation who must complete a regular certification program in order to continue teaching)
- I have received National Board Certification
- I am currently working toward National Board Certification
- I do not have any of the above certifications

bmc_09

Counting this year, how many years have you taught as an elementary or secondary teacher? Include any full-time teaching assignments, part-time teaching assignments, and long-term substitute assignments.

- Never
- Less than 4 months
- 4 months—1 year
- 1 year—3 years
- 4 years—6 years
- 7 years—9 years
- 10 or more years

bmc_15

How many students are in your class?

- Less than 10 students
- 10 to 15 students
- 16 to 20 students
- 21 to 25 students
- 26 to 30 students
- More than 30 students

bmc_17

Which of the following best describes the mixture of students in your current class?

- Only Kindergarteners
- Only 1st graders
- Only 2nd graders
- A mixture of students in various grades
- Other (Please specify)

bch_18

How often do/did children in your most recent full-year class do each of the following **READING and LANGUAGE ARTS** activities? Select one category for each line.

Activities	Never	Once a month or less	Two or three times a month	Once or twice a week	Three or four times a week	Daily
1. Work on learning the names of the letters						
2. Practice writing the letters of the alphabet						
3. Discuss new or difficult vocabulary						
4. Dictate stories to a teacher, aide, or volunteer						
5. Work on phonics						
6. Listen to you read stories where they see the print (e.g., Big Books)						
7. Listen to you read stories but they don't see the print						
8. Retell stories						
9. Read aloud						
10. Read from basal reading texts						
11. Read silently						
12. Work in a reading workbook or on a worksheet						
13. Write words from dictation, to improve spelling						
14. Write with encouragement to use invented spellings, if needed						
15. Read books they have chosen for themselves						
16. Compose and write stories or reports						
17. Do an activity or project related to a book or story						
18. Publish their own writing						
19. Perform plays and skits						
20. Write stories in a journal						
21. See/hear stories from story tellers or other artists						
22. Work in mixed-achievement groups on language arts activities						
23. Peer tutoring						

bch_19

For your most recent completed school year as a K-2nd grade teacher, please indicate how each of the following **READING** and **LANGUAGE ARTS** skills are or were taught in your class(es)? Select one category for each line.

Activities	Not Taught		Taught				
	Taught at a higher grade level	Children should already know	Once a month or less	2-3 times a month	1-2 times a week	3-4 times a week	Daily
1. Conventions of print (left to right orientation, book holding)							
2. Alphabet and letter recognition							
3. Matching letters to sounds							
4. Writing own name (first and last)							
5. Rhyming words and word families							
6. Reading multi-syllable words, like adventure							
7. Common prepositions such as over and under, up and down							
8. Identifying the main idea and parts of a story							
9. Making predictions based on text							
10. Using context cues for comprehension							
11. Communicating complete ideas orally							
12. Remembering and following directions that include a series of actions							
13. Using capitalization and punctuation							
14. Composing and writing complete sentences							
15. Composing and writing stories with an understandable beginning, middle, and end							
16. Conventional spelling							
17. Vocabulary							
18. Alphabetizing							
19. Reading aloud fluently							

CAREER CONTINUANCE OFFICER (TRADOC) SURVEY
Participant Information Sheet

NAME: _____

AKO EMAIL (OR ALTERNATE EMAIL): _____

ID NUMBER _____

DEMOGRAPHICS

1. What is your current age?

- Under 21 35-39
 21-24 40-44
 25-29 45-49
 30-34 50 or over

2. Are you male or female?

- Male
 Female

3. Are you of Hispanic, Latino, or Spanish origin or ancestry (of any race)?

- No, not Hispanic/Latino/Spanish
 Yes, Chicano, Cuban, Mexican, Mexican American, Puerto Rican, or other
Hispanic/Latino/Spanish

4. What is your race? MARK ALL THAT APPLY.

- American Indian or Alaska Native (e.g., Eskimo, Aleut)
 Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)
 Black or African American
 Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian, Chamorro)
 White

5. What is the highest level of education you have completed?

- Some college
 Bachelor's degree
 Some graduate school credits
 Master's degree or equivalent
 Doctorate or professional degree, such as MD, DDS, or JD

6. What is your current status?

- Active duty
 Reserves
 National Guard

7. How many years have you served in the military?

- 0 – 1 year 4 – 5 years
 1 – 2 years 5 – 6 years
 2 – 3 years Greater than 6 years
 3 – 4 years

8. What was the source of your commission?

- ROTC scholarship (1-3 years)
- ROTC scholarship (4 years)
- ROTC non-scholarship
- USMA
- OCS
- Direct
- Other, please specify _____

YOUR BRANCH/FUNCTIONAL AREA

9. At commissioning, what was your Branch?

- 11 – Infantry
- 13 – Field Artillery
- 14 – Air Defense Artillery
- 15 – Aviation
- 19 – Armor
- 21 – Engineer
- 25 – Signal
- 31 – Military Police
- 35 – Military Intelligence
- 42 – Adjutant General
- 44 – Finance
- 74 – Chemical
- 88 – Transportation
- 91 – Ordnance
- 92 – Quartermaster
- Other – please specify _____

10. Was this Branch your preferred choice?

- This branch was my first choice
- This branch was my second or third choice
- No, this branch was not my preferred choice

If “no”, what was your first choice? _____

11. At this time, what is your intention regarding continuing in the Army past your initial service obligation?

- Intend to stay
- Leaning toward staying
- Not sure
- Leaning toward leaving
- Intend to leave
- Not applicable, I am already beyond my initial service obligation

FAMILY MATTERS

12. What is your current marital status?

- Married
- Legally separated or filing for divorce
- Single, never married
- Divorced
- Widowed

13. How many dependent children do you have (for whom you provide over half of their support)?

- None
- 1
- 2
- 3 or more

14. Are you now engaged or significantly involved in a relationship with someone? (In other words, is there an important girlfriend/boyfriend in your life right now?)

- Does not apply; I am currently married.
- Yes
- No (Proceed to **Military Influences** on next page)

15. Is your spouse/girlfriend/boyfriend currently serving on active duty or in the Reserves in the U.S. Armed Forces?

- No
- Yes, on active duty in the Army
- Yes, on active duty with another U.S. service
- Yes, currently mobilized to the AC from the Reserve Component
- Yes, currently in the Reserve Component

16. Is your spouse/girlfriend/boyfriend currently working in a civilian job (including a job with the U.S. Army/Department of Defense)?

- Does not apply; my spouse/girlfriend/boyfriend is on active duty.
- Yes, full-time
- Yes, part-time
- No, but is currently looking for work
- No, not looking for work but would like to work
- No, does not want to work now

MILITARY INFLUENCES

17. Were any of the following members of the Army or US Armed Forces?

	Army	Other US Armed Forces	No
Father	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stepparent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grandparent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brother or sister	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative 1 (uncle/aunt/cousin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative 2 (uncle/aunt/cousin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative 3 (uncle/aunt/cousin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative 4 (uncle/aunt/cousin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative 5 (uncle/aunt/cousin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative 6 (uncle/aunt/cousin)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. When did you first plan to join the Army?

- prior to high school
- during high school
- after high school prior to entering college
- upon entering college
- during college
- after college

19. What alternative career paths for this year had you seriously considered?

- none
- joining another US military service
- beginning civilian work
- graduate or professional schooling

20. How much of an influence were the following people on your decision to become an officer?

	Very Strong Influence	Strong Influence	Moderate Influence	Slight Influence	No Influence	Not Applicable
Father	<input type="checkbox"/>					
Mother	<input type="checkbox"/>					
Stepparent	<input type="checkbox"/>					
Grandparent	<input type="checkbox"/>					
Brother or sister	<input type="checkbox"/>					
Other relative (uncle/aunt/cousin)	<input type="checkbox"/>					
Teacher, guidance counselor, or principal	<input type="checkbox"/>					
Athletic coach	<input type="checkbox"/>					
Spiritual leader	<input type="checkbox"/>					
Friend	<input type="checkbox"/>					
Friend of parents or family	<input type="checkbox"/>					
Spouse or significant other	<input type="checkbox"/>					
Army recruiter/liasion or current Army officer	<input type="checkbox"/>					
Other _____	<input type="checkbox"/>					

21. How important were the following factors in your decision to become an officer?

	Very Important	Important	Moderately Important	Slightly Important	Not Important
I needed financial aid for college	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wanted training in a specific career area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It was a family tradition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to express feelings of patriotism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt pressure from family or friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to develop leadership skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to grow or mature personally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to expand my horizons and see the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I wanted to be an Army officer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. In what week of officer school are you? _____

23. Do you know what your next assignment will be?

- Yes
- No

If "yes", what is your next assignment? _____

24. Please use the space provided below to comment on the issue of officer retention and any factors you believe play a role in the decision to stay with the Army.

**National Assessment of
Adult Literacy:
English Background
Questionnaire**

Instructions for Reading NAAL English Background Questionnaire

The NAAL background questionnaire is designed to be administered using a Computer Assisted Personal Interviewing (CAPI) system. Interviewers read the questions aloud to respondents from the screens of laptop computers, and they record respondents' answers directly on the computers. The interviewers read aloud response options that are written in lower-case letters, but do not read aloud the response options that are written in upper-case letters.

Administering the background questionnaire using a CAPI system allows for the inclusion of complex skip patterns that target questions only at respondents in a particular subgroup. However, these complex skip patterns make the background questionnaire difficult to follow on paper. Skip patterns are indicated on the paper version of the background questionnaire in two different ways.

For some items where a respondent's choice indicates that he or she should skip to a particular item, the skip pattern is indicated in parenthesis following the response item. For example, if a respondent answers "No" to question A-9, "Have you ever taken a class in the United States to learn English-as-a-second-language, sometimes called an ESL class?," the respondent skips to question A-11, since the question is about how long ago he or she took the class is not relevant for this respondent. If the respondent answers "Yes" to question A-9, the respondent continues to question A-10.

When skip patterns are based on responses to one or more earlier questions in the survey, the skip patterns are indicated in a box that appears before the item that some respondents may skip. For example, question A-4 is skipped by some respondents based on their answer to A-1. The box inserted before question A-4 describes the skip pattern.

For all questions, interviewers had the option to code responses "Don't Know" or "Refused" when appropriate.

National Study Of America's Adults

BACKGROUND QUESTIONNAIRE

IF R IS NOT SCREENER R:

Hello, I am (NAME) from Westat. My organization is helping the United States Department of Education with a very important survey about how adults use printed materials. Recently, another member of your household told me who lives here. Based on this information, you were selected at random to take part in the survey.

IF R IS SCREENER R:

You have been selected to participate in the survey.

I will ask you a short set of questions about your background, education, and work experiences. Then, I will give you a booklet containing exercises based on printed materials, such as newspapers, maps, stories, brochures, forms, and advertisements. Others who have completed these exercises found them interesting and fun. The entire survey will take approximately 90 minutes to complete, and you will be paid \$30 for your participation.

Your participation in this survey is voluntary and very important. All of your answers will be kept strictly confidential. All information will be reported for a group as a whole and your responses will not be linked to your name. You do not have to answer any questions you do not want to answer.

IF R REQUESTS MORE INFORMATION ABOUT PURPOSE OF SURVEY:

Today, adults increasingly are expected to use printed information in our society, but there is very little information available on whether or not they are well prepared. This survey will provide information about the reading and writing experiences, activities, and skills of adults in the United States. Information will be used by educators, policymakers, and business leaders to design programs in order to improve the literacy skills of adults.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1850-0654 and will expire on **06/30/04**. The time required to complete these forms is estimated to average .45 hours per respondent, including the time to review instructions and complete the survey. **If you have any comments concerning the accuracy of the time estimate or suggestions for improving this form, please write to:** U.S Department of Education, Washington, DC 20202-4651. **If you have any comments or concerns regarding the status of your individual submission of this form, write directly to:** NCES, U.S. Department of Education, 1990 K Street, NW, Washington, DC 20006.

Section A. General and Language Background

Interviewer: Code gender of respondent. 1 = Male; 2 = Female

A-1. In what country were you born?

Look up table

If answered U.S.A. for A-1, go to A-3; otherwise continue.

A-1A. How old were you when you moved to the United States?

_____ Age

A-2. How many years have you lived in the United States?

- | | |
|---------------------|---|
| A. 1 TO 5..... | 1 |
| B. 6 TO 10..... | 2 |
| C. 11 TO 15..... | 3 |
| D. 16 TO 20..... | 4 |
| E. 21 TO 30..... | 5 |
| F. 31 TO 40..... | 6 |
| G. 41 TO 50..... | 7 |
| H. 51 OR MORE | 8 |

A-3. What is your date of birth?

_____ / _____ / _____
 Month Day Year

If answered U.S.A. for A-1, go to A-5; otherwise continue.

A-4. What was the highest level of education you completed before coming to the United States?
 (If response does not fit categories, probe for equivalent.)

- | | |
|---|-----|
| A. DID NOT ATTEND SCHOOL BEFORE COMING TO U.S. | 1 |
| B. PRIMARY (GRADES K-3)..... | 2 |
| C. ELEMENTARY (GRADES 4-8)..... | 3 |
| D. SECONDARY (GRADES 9-12)..... | 4 |
| E. VOCATIONAL (POSTSECONDARY)..... | 5 |
| F. COLLEGE/UNIVERSITY | 6 |
| G. OTHER (SPECIFY) | 910 |

A-5. When you were growing up, what language or languages were usually spoken in your home?
 (Select all that apply.)

Look up table

A-6. What language or languages did you learn to speak before you started school?
(Select all that apply.)

Look up table

If English only for both A-5 and A-6, go to A-11; otherwise continue.

A-7. What language did you first learn to read and write?

Look up table

A-8. How old were you when you learned to speak English?

- | | |
|---------------------------------|----|
| A. 1-4 YEARS OLD | 1 |
| B. 5-10 YEARS OLD | 2 |
| C. 11-15 YEARS OLD | 3 |
| D. 16-20 YEARS OLD | 4 |
| E. 21 YEARS OR OLDER | 5 |
| F. DOES NOT SPEAK ENGLISH | 95 |

If English only in A-6, go to A-11; otherwise continue.

A-9. Have you ever taken a class in the United States to learn English-as-a-second-language, sometimes called an ESL class?

- | | | |
|--------------|---|--------|
| A. YES | 1 | (A-10) |
| B. NO | 2 | (A-11) |

A-10. How long ago did you last take an English-as-a-second-language or ESL class in the United States? Was it...

- | | |
|---|---|
| A. Within the last two years, | 1 |
| B. 2 to 5 years ago, | 2 |
| C. More than 5 years ago, or | 3 |
| D. Are you taking an ESL class now? | 4 |

A-11. Which language do you usually speak now?

Look up table

A-12. What other language do you often speak now?

- | | |
|-----------------------------------|----|
| A. Look up table | |
| B. No other language spoken | 95 |

A-13. Other than English, what language do you speak best?

- | | |
|------------------------|---|
| A. None | 1 |
| B. Look up table | |

If English only in A-6, A-11, A-12, and A-13, go to A-15; otherwise, repeat item A-14 for each non-English language identified in questions A-6, A-11, A-12, and A-13.

A-14. With regard to (non-English language in A-6, A-11, A-12, and A-13), how well do you...

	Would you say...				
	Very well	Well	Not well	or	Not at all
A. Understand it when it is spoken to you?	1	2	3		4
B. Speak it?.....	1	2	3		4
C. Read it?	1	2	3		4
D. Write it?	1	2	3		4

A-15. With regard to the English language, how well do you...

	Would you say...				
	Very well	Well	Not well	or	Not at all
A. Understand it when it is spoken to you?	1	2	3		4
B. Speak it?.....	1	2	3		4
C. Read it?	1	2	3		4
D. Write it?	1	2	3		4

If English only for A-6, go to B-1; otherwise continue.

A-16. **[HAND CARD.]** How difficult is it for you to (item) in English?

**HAND
CARD
1**

	Would you say you have...					
	No difficulty	Some difficulty	Moderate difficulty	or a	Great deal of difficulty	NEVER TRIED
A. Understand people having a conversation with you?	1	2	3		4	5
B. Understand television, movies, or videos?	1	2	3		4	5
C. Understand a telephone conversation?.....	1	2	3		4	5

If answered 1 to A-15C and A-15D, go to B-1. If answered 1 to A-15C, but A-15D was not answered 1, go to A-18; otherwise continue.

A-17. **[HAND CARD.]** How difficult is it for you to **(item)** written in English?

Would you say you have...

		No difficulty	Some difficulty	Moderate difficulty	or a	Great deal of difficulty	NEVER TRIED
HAND CARD 1	A. Understand a utility bill, such as telephone or electric?	1	2	3		4	5
	B. Understand the dosage information on over-the-counter medicines?	1	2	3		4	5
	C. Look up information in dictionaries, encyclopedias, phone books, or other reference books?	1	2	3		4	5

A-18. **[HAND CARD.]** How difficult is it for you to fill out forms in English, such as at the doctor's office or at school? Would you say you have...

HAND CARD 1	A. No difficulty,	1
	B. Some difficulty,	2
	C. Moderate difficulty, or a.....	3
	D. Great deal of difficulty?	4
	E. NEVER TRIED	5

Section B. Educational Background and Experiences

B-1. **[HAND CARD.]** I'd like to ask you about your educational background and experiences. What is the highest level of public or private education you completed? [If respondent went to school outside United States, probe for equivalent.]

**HAND
CARD
2**

- | | | |
|--|----|-------|
| A. STILL IN HIGH SCHOOL | 1 | (B-9) |
| B. LESS THAN HIGH SCHOOL (0-8 YEARS) (SPECIFY GRADE) | 2 | (B-2) |
| C. SOME HIGH SCHOOL (9-12 YEARS BUT DID NOT GRADUATE)
(SPECIFY GRADE) | 3 | (B-2) |
| D. GED OR HIGH SCHOOL EQUIVALENCY | 4 | (B-2) |
| E. HIGH SCHOOL GRADUATE (12 YEARS; ACCELERATED OR EARLY
GRADUATE PROGRAM) | 5 | (B-2) |
| F. ATTENDED A VOCATIONAL, TRADE, OR BUSINESS SCHOOL AFTER
HIGH SCHOOL | 6 | (B-2) |
| G. COLLEGE: LESS THAN TWO YEARS | 7 | (B-2) |
| H. COLLEGE: ASSOCIATE'S DEGREE (A.A.) | 8 | (B-2) |
| I. COLLEGE: TWO YEARS OR MORE, NO DEGREE | 9 | (B-2) |
| J. COLLEGE GRADUATE (B.S. OR B.A.) | 10 | (B-2) |
| K. POSTGRADUATE/NO DEGREE | 11 | (B-2) |
| L. POSTGRADUATE/DEGREE (M.S., M.A., PH.D., M.D., ETC.) | 12 | (B-2) |

B-2. What year did you (graduate from high school/receive your GED/attend your last year of school)?
Year _____

If answered 2, 3 or 4 for B-1, go to B-4; otherwise continue.

B-3. What type of high school diploma did you receive? Was it a regular high school diploma from a school in the United States; a regular high school diploma from a school outside the United States run by the United States government, such as a Department of Defense school; a regular high school diploma from a school outside the United States, not run by the United States government; a GED or high school equivalency degree; a certificate of completion that was different from a regular high school diploma; or something else?

- | | |
|---|-----|
| A. REGULAR HIGH SCHOOL DIPLOMA FROM A SCHOOL IN THE
UNITED STATES | 1 |
| B. REGULAR HIGH SCHOOL DIPLOMA FROM A SCHOOL OUTSIDE
THE UNITED STATES RUN BY THE UNITED STATES
GOVERNMENT, SUCH AS A DEPARTMENT OF DEFENSE SCHOOL. | 2 |
| C. REGULAR HIGH SCHOOL DIPLOMA FROM A SCHOOL OUTSIDE
THE UNITED STATES, NOT RUN BY THE UNITED STATES
GOVERNMENT | 3 |
| D. GED | 4 |
| E. CERTIFICATE OF COMPLETION | 5 |
| F. DID NOT RECEIVE HIGH SCHOOL DIPLOMA | 6 |
| G. OTHER (SPECIFY) | 910 |

If answered 10, 11, or 12 for B-1, go to box before B-5; otherwise continue.

B-4. What was the main reason you stopped your public or private schooling when you did? Please listen to me read all the answer categories, and then tell me which one best describes the reason you stopped your schooling. Was it...

- | | |
|--|----|
| A. You are currently in school, | 1 |
| B. Financial problems, | 2 |
| C. Did not do well in school, | 3 |
| D. Did not like school or was bored in school, | 4 |
| E. Expelled from school or asked to leave, | 5 |
| F. Wanted to work, | 6 |
| G. Wanted to go into the military, | 7 |
| H. Personal illness, disability, or pregnancy, | 8 |
| I. Family reasons such as the illness or death of one of your parents, | 9 |
| J. School not available or not accessible, | 10 |
| K. Did not feel safe in school, or | 11 |
| L. Other? | 12 |

If answered 2 or 3 for B-3, go to box before B-6; otherwise continue. If answered 2 or 3 for B-1, read "attended your last year of school" for B-5; if answered 4 for B-1 or 4 for B-3 read "received your GED" for B-5; otherwise read "graduated from high school" for B-5.

B-5. When you (graduated from high school/received your GED/attended your last year of school), what state did you live in?

Look up table

If answered 1, 2, 3, 4, 5, or 6 for B-1, go to B-9; otherwise continue. If answered 7 or 9 for B-1, read "attend your last year of college" for B-6. If answered 11 or 12 for B-1, read "receive your undergraduate degree" for B-6. If answered 8 for B-1, read "receive your associate's degree" for B-6. If answered 10 for B-1, read "graduate from college" for B-6.

B-6. What year did you (attend your last year of college/receive your undergraduate degree/receive your associate's degree/graduate from college)?

Year _____

If answered 7 or 9 to B-1, go to B-9; otherwise continue.

B-7. Did you receive your degree from a college in the United States?

- | | | |
|--------------|---|-------|
| A. YES | 1 | (B-8) |
| B. NO | 2 | (B-9) |

B-8. In what state was the college where you received your college degree located?

Look up table

- B-9. How long have you lived in **(this state)**? Would you say...
- | | |
|-----------------------------|---|
| A. Since birth..... | 1 |
| B. Less than one year | 2 |
| C. 1 to 5 years..... | 3 |
| D. 6 to 10 years | 4 |
| E. 11 to 15 years..... | 5 |
| F. 16 to 20 years..... | 6 |
| G. More than 20 years..... | 7 |

If answered 1 for B-1, go to B-11; otherwise continue.

- B-10. Are you currently enrolled in school or college, either full-time or part-time?
- | | |
|--------------|---|
| A. YES | 1 |
| B. NO | 2 |

- B-11. Are you currently enrolled in or have you ever taken part in a program other than in regular school in order to improve your *basic skills*, that is, basic reading, writing and arithmetic skills?
- | | | |
|--------------|---|--------|
| A. YES | 1 | (B-12) |
| B. NO | 2 | (B-14) |

- B-12. How long ago did you last take a class to improve your basic skills? Was it...
- | | |
|--|---|
| A. Within the last two years,..... | 1 |
| B. 2 to 5 years ago, | 2 |
| C. More than 5 years ago, or | 3 |
| D. Are you currently taking a basic skills class?..... | 4 |

If answered 2 to A-9, go to B-14; otherwise continue.

- B-13. Was the basic skills class part of the English-as-a-second-language or ESL class you took, or was it a separate class?
- | | |
|---------------------------|---|
| A. PART OF ESL CLASS..... | 1 |
| B. SEPARATE CLASS..... | 2 |

- B-14. Have you received any type of information technology skill certification sponsored by a hardware or software manufacturer or an industry or professional association?
- | | | |
|--------------|---|--------|
| A. YES | 1 | (B-15) |
| B. NO | 2 | (B-17) |

- B-15. Did you have to pass a test to get the certification?
- | | | |
|--------------|---|--------|
| A. YES | 1 | (B-16) |
| B. NO | 2 | (B-17) |

B-16. How did you prepare for the test? Was it...

	YES	NO
A. A class offered by a four-year college or university?	1	2
B. A class offered by a community college?	1	2
C. A class offered by a technical school or private vendor?	1	2
D. A class offered by a high school or vocational secondary school?	1	2
E. A class offered directly by a hardware or software manufacturer, such as Microsoft, Oracle, Novell, or Cisco?	1	2
F. On the job training or apprenticeship?	1	2
G. Independent study?	1	2
H. Other? (Specify)	1	2

B-17. Other than information technology, have you ever received any type of job-related skill certification recognized by a licensing board or an industry or professional association?

A. YES	1	(B-18)
B. NO	2	(C-1)

B-18. Did you have to pass a test to get the certification?

A. YES	1	(B-19)
B. NO	2	(C-1)

B-19. How did you prepare for the test? Was it...

	YES	NO
A. A class offered by a four-year college or university?	1	2
B. A class offered by a community college?	1	2
C. A class offered by a technical school or private vendor?	1	2
D. A class offered by a high school or vocational secondary school?	1	2
E. On the job training or apprenticeship?	1	2
F. Independent study?	1	2
G. Other? (Specify)	1	2

Section C. Political and Social Participation

C-1. **[HAND CARD.]** I'd like to find out how you usually get information about current events, public affairs, and the government. How much information about current events, public affairs and the government do you get from...

**HAND
CARD
3**

	Would you say...			
	A lot	Some	A little	or None
A. Newspapers?.....	1	2	3	4
B. Magazines?	1	2	3	4
C. Internet?	1	2	3	4
D. Radio and television?	1	2	3	4
E. Books or brochures?	1	2	3	4
F. Family members, friends, or co-workers?	1	2	3	4

If English only for A-6, go to C-3; otherwise continue.

C-2. How much of the information you get about current events, public affairs, and the government is presented in (non-English language in A-6, A-11, A-12, or A-13)? Would you say...

- A. All,..... 1
- B. Most,..... 2
- C. Some, or 3
- D. None? 4

C-3. During the past year, did you give any **UNPAID** time as a volunteer to a group or organization?

- A. YES 1 (C-4)
- B. NO 2 (C-5)

C-4. How often do you volunteer? Would you say...

- A. Most days, 1
- B. A few days a week,..... 2
- C. About once a week, or 3
- D. Less than once a week? 4

C-5. How many hours do you usually watch television, videotapes, or DVDs each day?

- | | |
|-------------------------|---|
| A. NONE | 0 |
| B. 1 HOUR OR LESS | 1 |
| C. 2 HOURS..... | 2 |
| D. 3 HOURS..... | 3 |
| E. 4 HOURS..... | 4 |
| F. 5 HOURS..... | 5 |
| G. 6 OR MORE HOURS..... | 6 |

C-6. How often do you use the services of a library for any reason? Would you say...

- | | | |
|----------------------------------|---|------------------|
| A. Daily..... | 1 | (C-7) |
| B. Weekly, | 2 | (C-7) |
| C. Monthly, | 3 | (C-7) |
| D. Once or twice a year, or..... | 4 | (C-7) |
| E. Never?..... | 5 | (Box before C-8) |

C-7. During the past month, did you borrow any materials from a library?

- | | |
|--------------|---|
| A. YES | 1 |
| B. NO..... | 2 |

If answered (born in U.S.A.) or (U.S. territory) to A-1, go to C-9; otherwise continue.

C-8. Are you a citizen of the United States?

- | | |
|--------------|---|
| A. YES | 1 |
| B. NO..... | 2 |

C-9. Did you ever serve on active duty in the U.S. Armed Forces?

- | | |
|--------------|---|
| A. YES | 1 |
| B. NO..... | 2 |

If answered 2 to C-8, go to D-1; otherwise continue.

C-10. In 2000, Al Gore ran on the Democratic ticket against George W. Bush for the Republicans. Do you remember for sure whether or not you voted in that election?

- | | | |
|--------------------------------------|---|--------|
| A. YES, I REMEMBER FOR SURE | 1 | (C-11) |
| B. NO, DON'T REMEMBER FOR SURE | 2 | (C-12) |
| C. YES, I VOTED | 3 | (C-12) |
| D. NO, I DIDN'T VOTE..... | 4 | (C-12) |

C-11. Did you vote in that election?

- A. YES

1
2
- B. NO.....

C-12. Are you currently registered to vote?

- A. YES

1
2
- B. NO.....

Section D. Labor Force Participation

D-1. **[HAND CARD.]** Now I'd like to ask you some questions about what you were doing last week. Last week were you...(Select all that apply.)

**HAND
CARD
4**

- | | |
|--|-----|
| A. Working a full-time job for pay or profit, that is, 35 hours or more? | 1 |
| B. Working for pay or profit part-time, that is, 1 to 34 hours? | 2 |
| C. Working two or more part-time jobs for pay, totaling 35 or more hours? .. | 3 |
| D. Unemployed, laid off, or looking for work? | 4 |
| E. With a job but not at work because of temporary illness, vacation,
or work stoppage? | 5 |
| F. With a job but on family leave (maternity or paternity leave)?..... | 6 |
| G. In school? | 7 |
| H. Keeping house? | 8 |
| I. Retired? | 9 |
| J. Doing volunteer work? | 10 |
| K. OTHER (SPECIFY) | 910 |

If answered 1, 5 or 6 to D-1, go to D-3; otherwise continue.

D-2. Have you looked for a job at any time during the past four weeks?

- | | |
|--------------|---|
| A. YES | 1 |
| B. NO | 2 |

If answered 4, 7, 8, 9, 10 or 910 only to D-1, go to D-5; otherwise continue.

D-3. Last week, what was your total weekly wage or salary from all jobs *before* any deductions? Include tips and commissions. (Write in dollar amount *and* select appropriate code.)

- \$ _____
- | | |
|-----------------------------|-----|
| A. PER HOUR..... | 1 |
| B. PER DAY | 2 |
| C. PER WEEK | 3 |
| D. PER TWO-WEEK PERIOD..... | 4 |
| E. PER MONTH | 5 |
| F. PER YEAR | 6 |
| G. OTHER (SPECIFY) | 910 |

If answered "\$0" for D-3, go to D-4; otherwise continue.

D-3A. Was that take-home pay or gross pay?

- | | |
|------------------------|---|
| A. TAKE-HOME PAY | 1 |
| B. GROSS PAY | 2 |

D-4. How many hours or days did you work last week?

HOURS: _____
DAYS: _____

D-5. Now I'd like to ask you some questions about your work during the past 12 months. Including weeks of paid leave, such as vacation and sick leave, how many weeks did you work for pay or for profit during the past 12 months?

- A. NONE (0)..... 1 (D-6)
- B. LESS THAN 52 WEEKS (SPECIFY NUMBER OF WEEKS):..... 2 (D-6)
- C. 52 WEEKS (FOR THE LAST 12 MONTHS)..... 3 (D-7)

D-6. Of the weeks you were not employed, what were you doing? Were you...
(Select all that apply.)

- A. Ill, or disabled and unable to work, 1
- B. Retired,..... 2
- C. Taking care of home or family, 3
- D. Going to school, 4
- E. Could not find work, or 5
- F. Doing something else? (Specify) 6

If answered 1 to D-5, go to D-9; otherwise continue.

D-7. For the past 12 months, what was your average weekly wage or salary *before* any deductions? Include tips and commissions. (Write in dollar amount *and* select appropriate code.)

- \$ _____ . _____
- A. PER HOUR..... 1
 - B. PER DAY..... 2
 - C. PER WEEK..... 3
 - D. PER TWO-WEEK PERIOD..... 4
 - E. PER MONTH..... 5
 - F. PER YEAR..... 6
 - G. OTHER (SPECIFY)..... 910

If answered 3 for D-5, go to D-8; otherwise continue.

D-7A. Is that your average wage or salary for the entire year, or just for the weeks you worked?

- A. ENTIRE YEAR..... 1
- B. JUST WEEKS WORKED 2

D-8. On average, how many hours or days did you work each week during the past 12 months?

HOURS: _____
DAYS: _____

If answered 3 for D5, go to D9; otherwise continue.

D-8A. Is that your average for the entire year or just for the weeks you worked?

- A. ENTIRE YEAR..... 1
- B. JUST WEEKS WORKED 2

D-9. Which of the following describes your work history? Have you...

- | | | |
|--|---|------------------|
| A. Held a paying job within the last three years, | 1 | (D-10) |
| B. Held a paying job, but not within the last three years, or..... | 2 | (Box before E-1) |
| C. Never been employed for pay full-time or part-time?..... | 3 | (Box before E-1) |

D-10. Now I'd like to ask you some questions about your current full-time or part-time job or your most recent full-time or part-time job. For what kind of business or industry (do/did) you work? (For example, television and radio manufacturing, retail shoe store, state labor department, farm, etc.) (If R is working two or more jobs, probe: Tell me about the job you work the most hours or the job you consider your primary employment.)

BUSINESS OR INDUSTRY: _____

D-11. What (is/was) your occupation, that is, what (is/was) your job called? (For example, electrical engineer, stock clerk, typist, farmer, etc.)

OCCUPATION: _____

D-12. What (are/were) the most important activities or duties at this job? (For example, typing, keeping account books, filing, selling cars, operating a printing press, finishing concrete, etc.)

ACTIVITIES OR DUTIES: _____

D-13. (Are/were) you employed by government, by a **PRIVATE** employer, or (are/were) you self-employed or working in a family business?

- | | |
|---------------------------------------|---|
| A. GOVERNMENT | 1 |
| B. PRIVATE EMPLOYER..... | 2 |
| C. SELF-EMPLOYED..... | 3 |
| D. WORKING IN A FAMILY BUSINESS | 4 |

If answered 1 to D-5, go to box before E-1. Otherwise, if answered 3 to D-13, continue to D-14; if answered 1, 2, or 4 to D-13, go to D-15.

D-14. Were you self-employed for all of the past 12 months or did you have any other jobs?

- | | | |
|---------------------------------|---|------------------|
| A. SELF-EMPLOYED ALL YEAR | 1 | (Box before E-1) |
| B. HAD OTHER JOBS | 2 | (D-15) |

D-15. For how many employers did you work during the past 12 months?

- | | |
|--------------------------------|---|
| A. ONE EMPLOYER..... | 1 |
| B. TWO EMPLOYERS..... | 2 |
| C. THREE EMPLOYERS..... | 3 |
| D. FOUR EMPLOYERS..... | 4 |
| E. FIVE OR MORE EMPLOYERS..... | 5 |

Section E. Literacy Practices

If answered 1, 2, or 3 to C-1C, go to E-2; otherwise continue.

E-1. Do you ever use a computer?

- A. YES 1
 B. NO 2

E-2. **[HAND CARD.]** Now I'd like to talk to you about what you read in English. How often do you read (item) in English?

Would you say...

**HAND
CARD**
5

	Every day	A few times a week	Once a week	Less than once a week	or	Never
A. Newspapers or magazines ...	1	2	3	4		5
B. Books.....	1	2	3	4		5
C. Letters and notes.....	1	2	3	4		5

If English only in A-6, go to E-4A; otherwise continue.

E-3. **[HAND CARD.]** How often do you read (item) in (non-English language in A-6, A-11, A-12, or A-13)?

Would you say...

**HAND
CARD**
5

	Every day	A few times a week	Once a week	Less than once a week	or	Never
A. Newspapers or magazines ...	1	2	3	4		5
B. Books.....	1	2	3	4		5
C. Letters and notes.....	1	2	3	4		5

E-4A. How often do you read the nutritional information on food labels written in English? Would you say...

- A. Every time I buy a food I never bought before, 1
 B. Most of the time when I buy a food I never bought before, 2
 C. Sometimes when I buy a food I never bought before, or 3
 D. Never? 4

E-4B. **[HAND CARD.]** How often do you look up a schedule in a movie or TV guide written in English? Would you say...

HAND CARD 5	A. Every day,	1
	B. A few times a week,	2
	C. Once a week,	3
	D. Less than once a week, or	4
	E. Never?	5

If answered 2 or 3 to D-9, go to box before E-6; otherwise continue.

If answered 1 to E-1, display "other than email" for E-5A.

E-5. **[HAND CARD.]** Now, I'd like to ask you some questions about what you read at work. How often (do/did) you read or use information from (Item) as part of your (current/most recent) job?

Would you say...

HAND CARD 5		Every day	A few times a week	Once a week	Less than once a week	or	Never
		A. Letters or memos (other than e-mail).....	1	2	3	4	
B. Reports, articles, magazines, or journals.....	1	2	3	4		5	
C. Manuals or reference books, including catalogs or parts lists	1	2	3	4		5	
D. Directions or instructions for medicines, recipes, or other products.....	1	2	3	4		5	
E. Diagrams or schematics	1	2	3	4		5	
F. Bills, invoices, spreadsheets, or budget tables.....	1	2	3	4		5	
G. Health and safety information in postings or booklets	1	2	3	4		5	

If answered 2 to E-1, go to E-7; otherwise continue.

E-6. [HAND CARD.] Now I'd like to ask you about how you use the computer. How often do you (item)?

Would you say...

**HAND
CARD
5**

	Every day	A few times a week	Once a week	Less than once a week	or	Never
A. Send or receive an e-mail message?	1	2	3	4		5
B. Write using a word processing program?	1	2	3	4		5
C. Use a spreadsheet program or use a financial program, such as an electronic check-book, money management, or tax program?	1	2	3	4		5
D. Look up information on a CD-ROM?	1	2	3	4		5
E. Find information on the Internet?	1	2	3	4		5
F. Talk in chat groups or with other people who are logged onto the Internet at the same time you are?	1	2	3	4		5

If answered 1 to E-1, display "and email" for E-7C.

E-7. [HAND CARD.] How much help do you get from family members or friends with...

Would you say...

**HAND
CARD
3**

	A lot	Some	A little	or	None
A. Filling out forms?	1	2	3		4
B. Reading or explaining newspaper articles or other written information?	1	2	3		4
C. Writing notes, letters (and email?)	1	2	3		4
D. Using basic arithmetic, that is, adding, subtracting, multiplying, or dividing, such as filling out order forms or balancing a checkbook?	1	2	3		4

If answered 1 to D5, go to F1-C; otherwise continue.

Section F. Job Training and Skills

F-1. During the past year, did you participate in any training or education, including courses, workshops, formal on-the-job training or apprenticeships to:

	YES	NO
A. [Employed within past year only.] Help you do your job better?	1	2
B. [Employed within past year only.] Help you get a promotion or a new job?	1	2
C. [Not employed for entire past year only.] Help you get a job?	1	2

If answered 2 to all parts of F-1, go to box before F-7; otherwise continue.

F-2. Did this training or education include instruction intended to:

	YES	NO
A. Improve your English reading skills?	1	2
B. Improve your English writing skills?	1	2
C. Improve your arithmetic or mathematics skills?	1	2
D. Improve your computer skills?	1	2
E. Help you communicate or work better with co-workers?	1	2

If answered 1 to D-5, go to box before F-7; otherwise continue.

F-3. Did your employer require you to participate in this training or education?

A. YES	1
B. NO	2

F-4. Did your employer pay at least part of the cost of this training or education?

A. YES	1
B. NO	2

F-5. Did your employer pay for any of your time when you participated in this training or education?

A. YES	1
B. NO	2

F-6. Was any of this training or education provided through a union or trade association agreement?

A. YES	1
B. NO	2

If age 66 or older (based on A-3) and answered 9 to D-1, go to G-1; otherwise continue.

F-7. How much do you think your reading skills limit your job opportunities—for example, to get a promotion or a (different) job you would like to have? Would you say a lot, some, a little, or not at all?

- | | |
|---------------------|---|
| A. A LOT | 1 |
| B. SOME | 2 |
| C. A LITTLE | 3 |
| D. NOT AT ALL | 4 |

F-8. How much do you think your writing skills limit your job opportunities—for example, to get a promotion or a (different) job you would like to have? Would you say a lot, some, a little, or not at all?

- | | |
|---------------------|---|
| A. A LOT | 1 |
| B. SOME | 2 |
| C. A LITTLE | 3 |
| D. NOT AT ALL | 4 |

F-9. How much do you think your math skills limit your job opportunities—for example, to get a promotion or a (different) job you would like to have? Would you say a lot, some, a little, or not at all?

- | | |
|---------------------|---|
| A. A LOT | 1 |
| B. SOME | 2 |
| C. A LITTLE | 3 |
| D. NOT AT ALL | 4 |

F-10. How much do you think your computer skills limit your job opportunities—for example, to get a promotion or a (different) job you would like to have? Would you say a lot, some, a little, or not at all?

- | | |
|---------------------|---|
| A. A LOT | 1 |
| B. SOME | 2 |
| C. A LITTLE | 3 |
| D. NOT AT ALL | 4 |

Section G. Demographic Information

Now I'm going to ask you some questions about your family.

G-1. In what country was your mother (stepmother or female guardian) born?

A. Look up table

G-2. What was the highest level of education your mother (stepmother or female guardian) completed?
(If went to school outside U.S., probe for equivalent)

- | | |
|--|----|
| A. LESS THAN HIGH SCHOOL (0-8 YEARS) (SPECIFY GRADE) | 1 |
| B. SOME HIGH SCHOOL (9-12 YEARS BUT DID NOT GRADUATE)
(SPECIFY GRADE) | 2 |
| C. GED OR HIGH SCHOOL EQUIVALENCY | 3 |
| D. HIGH SCHOOL GRADUATE (12 YEARS; ACCELERATED OR EARLY
GRADUATE PROGRAM) | 4 |
| E. ATTENDED A VOCATIONAL, TRADE, OR BUSINESS SCHOOL AFTER
HIGH SCHOOL | 5 |
| F. COLLEGE: LESS THAN TWO YEARS | 6 |
| G. COLLEGE: ASSOCIATE'S DEGREE (A.A.) | 7 |
| H. COLLEGE: TWO YEARS OR MORE, NO DEGREE | 8 |
| I. COLLEGE GRADUATE (B.S. OR B.A.) | 9 |
| J. POSTGRADUATE/NO DEGREE | 10 |
| K. POSTGRADUATE/DEGREE (M.S., M.A., Ph.D., M.D., ETC.) | 11 |

G-3. In what country was your father (stepfather or male guardian) born?

A. Look up table

G-4. What was the highest level of education your father (stepfather or male guardian) completed?
(If went to school outside U.S., probe for equivalent.)

- | | |
|--|----|
| A. LESS THAN HIGH SCHOOL (0-8 YEARS) (SPECIFY GRADE) | 1 |
| B. SOME HIGH SCHOOL (9-12 YEARS BUT DID NOT GRADUATE)
(SPECIFY GRADE) | 2 |
| C. GED OR HIGH SCHOOL EQUIVALENCY | 3 |
| D. HIGH SCHOOL GRADUATE (12 YEARS; ACCELERATED OR EARLY
GRADUATE PROGRAM) | 4 |
| E. ATTENDED A VOCATIONAL, TRADE, OR BUSINESS SCHOOL AFTER
HIGH SCHOOL | 5 |
| F. COLLEGE: LESS THAN TWO YEARS | 6 |
| G. COLLEGE: ASSOCIATE'S DEGREE (A.A.) | 7 |
| H. COLLEGE: TWO YEARS OR MORE, NO DEGREE | 8 |
| I. COLLEGE GRADUATE (B.S. OR B.A.) | 9 |
| J. POSTGRADUATE/NO DEGREE | 10 |
| K. POSTGRADUATE/DEGREE (M.S., M.A., Ph.D., M.D., ETC.) | 11 |

Section H. Family Literacy

If respondent is under age 18, add parentheses to H-1.

H-1. During the past month, how many children (other than you) under 18 lived in this household for 10 or more days?

Number of children _____

If answered "0" or "none" go to H-13; otherwise continue.

H-2. What are their ages? _____

Repeat H-3 for every child under 18.

H-3. How are you related to the [age of child] year old?

- | | |
|---|---|
| A. PARENT/GUARDIAN/STEP-PARENT | 1 |
| B. GRANDPARENT/STEP-GRANDPARENT/GREAT GRANDPARENT | 2 |
| C. SIBLING/STEP-SIBLING/HALF SIBLING | 3 |
| D. OTHER RELATIVE | 4 |
| E. NOT RELATED | 5 |

If answered 3, 4 or 5 for H-3, go to H-13, otherwise continue.

H-4. During the past year, have you participated in any parenting groups or classes?

- | | |
|--------------|---|
| A. YES | 1 |
| B. NO | 2 |

If no children under age 8, go to instructions before H-10.

Now I'd like to ask you some questions with regard to your child (children/grandchild/grandchildren) who is (are) under 8. [Please answer these questions only with regard to that (these) child (children/grandchild/grandchildren) not your older child (children/grandchild/grandchildren.)]

H-5. Since last [insert the current day of the week], have you read to or with your child (children/grandchild/grandchildren)?

- | | | |
|--------------|---|-------|
| A. YES | 1 | (H-6) |
| B. NO | 2 | (H-7) |

H-6. Since last [insert the current day of the week], on how many different days did you read to or with your child (children/grandchild/grandchildren)? Would you say it was...

- | | |
|-------------------------|---|
| A. Every day,..... | 1 |
| B. 5 or 6 days,..... | 2 |
| C. 3 or 4 days, or..... | 3 |
| D. 1 or 2 days?..... | 4 |

H-7. **[HAND CARD.]** During the past month, about how often did you try to teach your child (children/grandchild/grandchildren) the letters of the alphabet? Would you say every day, a few times a week, once a week, less than once a week, never, or does (do) your child (children/grandchild/grandchildren) already know the letters of the alphabet?

**HAND
CARD
5**

- | | |
|--|---|
| A. EVERY DAY | 1 |
| B. A FEW TIMES A WEEK | 2 |
| C. ONCE A WEEK | 3 |
| D. LESS THAN ONCE A WEEK | 4 |
| E. NEVER | 5 |
| F. CHILD (CHILD/GRANDCHILD/GRANDCHILDREN) ALREADY KNOWS
THE LETTERS OF THE ALPHABET | 6 |

H-8. **[HAND CARD.]** During the past month, how often did you point out words to your child (children/grandchild/grandchildren) and ask him (her/them) what they say? Would you say every day, a few times a week, once a week, less than once a week, never, or does (do) your child (children/grandchild/grandchildren) already read well?

**HAND
CARD
5**

- | | |
|--|---|
| A. EVERY DAY | 1 |
| B. A FEW TIMES A WEEK | 2 |
| C. ONCE A WEEK | 3 |
| D. LESS THAN ONCE A WEEK | 4 |
| E. NEVER | 5 |
| F. CHILD (CHILD/GRANDCHILD/GRANDCHILDREN) ALREADY READS
WELL..... | 6 |

H-9. **[HAND CARD.]** During the past month, about how often did you sing songs, recite poems or nursery rhymes, or engage in other activities that included rhyming words with your child (children/grandchild/grandchildren)? Would you say...

**HAND
CARD
5**

- | | |
|------------------------------------|---|
| A. Every day,..... | 1 |
| B. A few times a week,..... | 2 |
| C. Once a week,..... | 3 |
| D. Less than once a week, or | 4 |
| E. Never? | 5 |

[If no child age 5 or older, go to H-13.] Now I'd like to ask you some questions about your school-age child (children/grandchild/grandchildren).

H-10. [HAND CARD.] During a typical school month, how often do you talk to your school-age child (children/grandchild/grandchildren) about things they have studied in school? Would you say...

HAND
CARD
5

- | | |
|------------------------------------|---|
| A. Every day,..... | 1 |
| B. A few times a week,..... | 2 |
| C. Once a week,..... | 3 |
| D. Less than once a week, or | 4 |
| E. Never? | 5 |

H-11. [HAND CARD.] During a typical school month, how often do you help or work with your school-age child (children/grandchild/grandchildren) on homework? Would you say...

HAND
CARD
5

- | | |
|------------------------------------|---|
| A. Every day,..... | 1 |
| B. A few times a week,..... | 2 |
| C. Once a week,..... | 3 |
| D. Less than once a week, or | 4 |
| E. Never? | 5 |

H-12. During the past year, have you (item)

	YES	NO
A. Volunteered to help out at your child's (one of your children's/ grandchildren/grandchild) school(s), including in the classroom, on a field trip, or at a school event such as a party or school fair?	1	2
B. Gone to a PTA or other type of parent meeting at your child's (one of your children's/grandchildren/grandchild) school(s)?	1	2
C. Spoken individually with your child's (one of your children's/ grandchildren/grandchild) teacher(s) to see how he or she was doing in school?	1	2
D. Sent food, or other items to share in your child's (one of your children's/grandchildren/grandchild) classroom(s)?.....	1	2

H-13. Now I'm going to read you a series of statements. Please tell me if each of the following statements is true or false.

	TRUE	FALSE
A. There are 25 or more books in your home right now	1	2
B. There is a variety of magazines and other reading materials in your home.....	1	2
C. [Read only if there are children over age 2 in the household]. The child (children/grandchild/grandchildren) living in your home often see you reading.	1	2
D. [Read only if there are children over age 2 in the household]. The child (children/grandchild/grandchildren) living in your home have their own books.....	1	2

H-14. How many computers do you have in your household that can be used for word processing, that is, writing letters or other documents?

Computers

H-15. How many computers do you have in your household that can access the Internet or World Wide Web?

Computers

Section I. Household Income and Welfare Participation

I would like to ask you some questions about your household.

I-1. **[HAND CARD.]** First, which letter on this card describes your current marital status?

**HAND
CARD
6**

- | | |
|--|---|
| A. NEVER MARRIED..... | 1 |
| B. MARRIED, LIVING WITH SPOUSE..... | 2 |
| C. MARRIED, SPOUSE LIVING ELSEWHERE..... | 3 |
| D. LIVING AS MARRIED..... | 4 |
| E. SEPARATED OR DIVORCED..... | 5 |
| F. WIDOWED..... | 6 |

I-2. Including yourself, how many people in your household are employed or work for pay or wages?

- | | |
|-----------------------|---|
| A. NONE..... | 0 |
| B. ONE..... | 1 |
| C. TWO..... | 2 |
| D. THREE OR MORE..... | 3 |

I-3. Did you or anyone in your household receive any of the following during the past 12 months? [Do not read the words in parentheses. They are there for clarification if the respondents ask. For each question to which a respondent answers "Yes," ask, "Is that you, someone else, or both you and someone else in your household?"]

	Yes, me	Yes, someone else	Yes, someone else and me	No
A. Social Security or Railroad Retirement payments	1	2	3	4
B. Supplemental Security Income (SSI).....	1	2	3	4
C. Other retirement, survivor, or disability payments (other than Social Security or Railroad Retirement)	1	2	3	4
D. Food stamps.....	1	2	3	4
E. WIC supplemental nutrition benefits (Women, infants, and children supplemental nutrition benefits).....	1	2	3	4
F. Rent subsidy, such as Section 8 or public housing.....	1	2	3	4
G. Temporary Assistance for Needy Families (TANF), public assistance, or public welfare payments from the state or local welfare office.....	1	2	3	4
H. Interest from savings or other bank accounts (other than dividends).....	1	2	3	4
I. Dividend income from stocks or mutual funds or income from rental property, royalty, estates, or trusts.....	1	2	3	4

If answered 1 or 3 to I-3G, go to I-4. If answered 1 or 3 to I-3B, go to I-8B; otherwise, go to I-8.

- I-4. In the past 12 months, was there a time when you did not receive welfare payments?
- | | | |
|--------------|---|-------|
| A. YES | 1 | (I-5) |
| B. NO..... | 2 | (I-6) |

- I-5. In the past 12 months, how long were you off welfare?
- _____ WEEKS
- _____ MONTHS

- I-6. About how long, in total, have you received welfare payments in your lifetime?
- | | |
|--|---|
| A. Less than 6 months, | 1 |
| B. 6 months to one year, | 2 |
| C. More than 1 year but less than 2 years, | 3 |
| D. 2 to 3 years, or..... | 4 |
| E. More than 3 years?..... | 5 |

- I-7. During the past year, did you take any classes sponsored by a program to help you get a job and get off welfare?
- | | |
|--------------|---|
| A. YES | 1 |
| B. NO..... | 2 |

If answered 4 to I-3B, go to I-8A. If answered 4 to I-3D, go to I-8B. If answered 4 to I-3E, go to I-8C. If answered 4 to I-3G, go to I-8D.

- I-8. Have you ever received...
- | | YES | NO |
|---|-----|----|
| A. Supplemental Security Income (SSI)?..... | 1 | 2 |
| B. Food stamps? | 1 | 2 |
| C. WIC supplemental nutrition benefits? | 1 | 2 |
| D. Temporary Assistance to Needy Families (TANF), Aid to Families with Dependent Children (AFDC), public assistance or public welfare payments? | 1 | 2 |

If answered 2 to I-8D go to J-1; otherwise continue.

- I-9. How long has it been since you last received welfare payments?
- | | |
|--|---|
| A. More than 1 year but less than 2 years, | 1 |
| B. 2 to 3 years, or..... | 2 |
| C. More than 3 years?..... | 3 |

- I-10. About how long, in total, have you received welfare payments in your lifetime?
- | | |
|--|---|
| A. Less than 6 months, | 1 |
| B. 6 months to one year, | 2 |
| C. More than 1 year but less than 2 years, | 3 |
| D. 2 to 3 years, or..... | 4 |
| E. More than 3 years?..... | 5 |

I-11. Why did you stop getting welfare payments? Was it because you...

	YES	NO
A. Reached the time limit set by welfare?	1	2
B. Were discontinued for non-compliance?	1	2
C. Got a job?	1	2
D. Got a raise and earned too much money?	1	2
E. Got married?.....	1	2
F. Got child support?	1	2
G. Received too much income from a source other than a job or child support?	1	2
H. Moved?.....	1	2

If answered 2 for I-11A through I-11H, go to I-12; otherwise, go to J-1.

I-12. Was there some other reason you stopped receiving welfare? _____

Section J. Health Questions

- J-1. In general, how would you rate your overall health? Would you say it is...
- | | | |
|---------------------|---|--|
| A. Excellent, | 1 | |
| B. Very Good, | 2 | |
| C. Good, | 3 | |
| D. Fair, or | 4 | |
| E. Poor? | 5 | |
- J-2. Do you have any difficulty seeing the words and letters in ordinary newspaper print even when wearing glasses or contact lenses, if you usually wear them?
- | | | |
|--------------|---|--|
| A. YES | 1 | |
| B. NO | 2 | |
- J-3. Do you have any difficulty hearing what is said in a normal conversation with another person even when using a hearing aid, if you usually wear one?
- | | | |
|--------------|---|--|
| A. YES | 1 | |
| B. NO | 2 | |
- J-4. Have you ever been diagnosed or identified as having a learning disability?
- | | | |
|--------------|---|--|
| A. YES | 1 | |
| B. NO | 2 | |
- J-5. Do you have any other health problem, impairment, or disability now that keeps you from participating fully in work, school, housework, or other activities?
- | | | |
|--------------|---|--|
| A. YES | 1 | |
| B. NO | 2 | |
- J-6. Do you have any kind of medical insurance or are you enrolled in any kind of program that helps to pay for your health care?
- | | | |
|--------------|---|-------|
| A. YES | 1 | (J-7) |
| B. NO | 2 | (J-8) |

If answered 1 for B-10, display "school" in J-7A.

J-7. Is your program...

	YES	NO
A. Health insurance through your work (school) or a family member's work?	1	2
B. Medicare (Medicare is the health insurance for people 65 or older or people with disabilities)?.....	1	2
C. Health insurance you or someone else in your family purchased directly from an insurance company or other organization that is not related to past or current employment?.....	1	2
D. Health insurance provided as part of military service?	1	2
E. Medicaid or [if applicable, fill in state name]?	1	2
F. Other? (Specify)	1	2

State names for Medicaid:

Alaska	Medical Assistance Program
Arizona	AHCCCS, Acute Care Program or Long Term Care System (ALTCS)
California	Medi-Cal
Connecticut	Connecticut Access (CONNECT CARD)
D.C.	Medical Assistance
Florida	MediPass
Georgia	Better Health Care Program or Medical Assistance
Hawaii	Med-QUEST, Maluhia or Medical Assistance
Idaho	Healthy Connections or Medical Assistance
Illinois	MediPlan
Indiana	Hoosier Healthwise
Iowa	MediPAS (Medical Assistance)
Kansas	PrimeCare, Community Care Kansas (CCK) or HealthConnect
Kentucky	Kentucky Patient Access and Care System (KenPAC) or Medical Assistance
Louisiana	CommunityCARE Program
Maine	PrimeCare
Maryland	Maryland Access to Care (MAC) or Medical Assistance
Massachusetts	MassHealth
Minnesota	Prepaid Medical Assistance Program (PMAP) or Health Care Programs
Mississippi	HealthMACS
Missouri	MC Plus
Montana	Passport to Health
Nebraska	Primary Care Plus (+) or Health Connection
Nevada	MAPnet
New Jersey	New Jersey Care 2000
New Mexico	Primary Care Network
New York	MAX
North Carolina	Carolina Access
North Dakota	North Dakota Access to Care (No DAC)
Ohio	Accessing Better Care (ABC) Program
Oklahoma	SoonerCare
Oregon	Oregon Health Plan (OHP), Kaiser-S/HMO or Medical Assistance
Pennsylvania	HealthPASS, Family Care Network (FCN), Lancaster Community Health Plan, Blue Card or Green Card or ACCESS
Rhode Island	Rite Care or Medical Assistance
South Carolina	South Carolina Health Access Plan (SCHAP)
South Dakota	Primary Care Provider Program
Tennessee	TennCare
Texas	LoneSTAR (State of Texas Access Reform)
Vermont	Dr. Dynosaur, Vermont Health Access Program (VHAP) or AIM
Virginia	Medallion, Options or Medical Assistance
Washington	Health Access Spokane, Kaiser-S/HMO or Healthy Options
West Virginia	West Virginia Physician Assured Access System (PAAS)
Wisconsin	Medical Assistance Program

J-8. [Ask only of people with children other than the respondent under age 18 living in the home.] Do the children living in this household have any type of medical insurance or health care coverage?

- | | |
|--|---|
| A. YES | 1 |
| B. NO | 2 |
| C. AT LEAST ONE CHILD (BUT NOT ALL THE CHILDREN) HAS MEDICAL INSURANCE | 3 |

J-9. **[HAND CARD.]** Now I'd like to find out how you usually get information about health issues, such as diet, exercise, disease prevention, or a specific disease or health condition. How much information about health issues do you get from...

**HAND
CARD
3**

Would you say...

	A lot	Some	A little	or	None
A. Newspapers.....	1	2	3		4
B. Magazines	1	2	3		4
C. Internet	1	2	3		4
D. Radio and television	1	2	3		4
E. Books or brochures	1	2	3		4
F. Family members, friends, or co-workers	1	2	3		4
G. Talking to health care professionals, such as doctors, nurses, therapists, or psychologists	1	2	3		4

J-10. I would like to ask you about some topics related to maintaining health. In the past year, have you...

	YES	NO
A. Gotten a flu shot?	1	2
B. [If female age 40 or older] Had a mammogram?	1	2
C. [If female between 18 and 65] Had a pap smear?	1	2
D. [If age 50 or older] Been screened for colon cancer?	1	2
E. Had your vision checked?.....	1	2
F. [If male] Been screened for prostate cancer?	1	2
G. [If age 50 or older] Been screened for osteoporosis?	1	2
H. [If age 65 or older] Had the pneumonia shot or pneumonia vaccine?	1	2
I. Visited a dentist?	1	2

Section K. Additional Demographics

K-1. [HAND CARD.] Which number on this card corresponds to your approximate total *personal* income for the past 12 months? Please include all your personal income, including income from your job, investments, Social Security or retirement, and welfare.

HAND
CARD
7

A. LESS THAN \$5,000.....	1
B. \$5,000 to \$ 7,499	2
C. \$7,500 to \$9,999	3
D. \$10,000 to \$12,499.....	4
E. \$12,500 to \$14,999.....	5
F. \$15,000 to \$19,999.....	6
G. \$20,000 to \$29,999.....	7
H. \$30,000 to \$39,999.....	8
I. \$40,000 to \$49,999.....	9
J. \$50,000 to \$59,999.....	10
K. \$60,000 to \$74,999.....	11
L. \$75,000 to \$99,999.....	12
M. \$100,000 OR MORE	13
N. NO PERSONAL INCOME	95

K-2. [HAND CARD.] Which letter on this card corresponds to your approximate *total household* income for the past 12 months? Please include all income for people living in your household, including income from jobs, investments, Social Security or retirement, and welfare. (If undergraduate college student living away from family home, please provide household income for your permanent residence.)

HAND
CARD
8

A. LESS THAN \$5,000.....	1
B. \$5,000 to \$ 7,499	2
C. \$7,500 to \$9,999	3
D. \$10,000 to \$12,499.....	4
E. \$12,500 to \$14,999.....	5
F. \$15,000 to \$19,999.....	6
G. \$20,000 to \$29,999.....	7
H. \$30,000 to \$39,999.....	8
I. \$40,000 to \$49,999.....	9
J. \$50,000 to \$59,999.....	10
K. \$60,000 to \$74,999.....	11
L. \$75,000 to \$99,999.....	12
M. \$100,000 to \$149,999	13
N. \$150,000 or more.....	14
O. NO HOUSEHOLD INCOME	95

Note: Follow-up probes were asked of respondents who refused to answer K-1 and/or K-2. These probes were designed to get a broad range for the respondent's income.

K-3. Are you Hispanic or Latino?

A. YES	1	(K-4)
B. NO	2	(K-5)

K-4. **[HAND CARD.]** Which of the groups on this card describes your Hispanic or Latino origin? Choose one or more.

HAND
CARD
9

- | | |
|--|---|
| A. MEXICAN, MEXICAN AMERICAN, OR CHICANO | 1 |
| B. PUERTO RICAN OR PUERTO RICAN AMERICAN | 2 |
| C. CUBAN OR CUBAN AMERICAN | 3 |
| D. CENTRAL OR SOUTH AMERICAN..... | 4 |
| E. OTHER HISPANIC OR LATINO BACKGROUND | 5 |

K-5. **[HAND CARD.]** Which of the groups on this card best describes you? Choose one or more.

HAND
CARD
10

- | | |
|---|---|
| A. WHITE..... | 1 |
| B. BLACK OR AFRICAN AMERICAN..... | 2 |
| C. ASIAN..... | 3 |
| D. AMERICAN INDIAN OR ALASKA NATIVE | 4 |
| E. NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER..... | 5 |

Interviewer: Code language in which interview was conducted. 1 = English; 2 = Spanish.

HAND CARD #1

No difficulty

Some difficulty

Moderate difficulty

Great deal of difficulty

HAND CARD #2

Still in high school

Less than high school (0-8 years)

Some high school (9-12 years but did not graduate)

GED or high school equivalency

High school graduate (12 years; accelerated or early graduate program)

Attended a vocational, trade, or business school after high school

College: less than two years

College: Associate's degree (A.A.)

College: two years or more, no degree

College graduate (B.S. or B.A.)

Postgraduate/No degree

Postgraduate/degree (M.S., M.A., Ph.D., M.D., etc.)

HAND CARD #3

A lot

Some

A little

None

HAND CARD #4

Working a full-time job for pay or profit, that is, 35 hours or more?

Working for pay or profit part-time, that is, 1 to 34 hours?

Working two or more part-time jobs for pay, totaling 35 or more hours?

Unemployed, laid off, or looking for work?

With a job but not at work because of temporary illness, vacation, or work stoppage?

With a job but on family leave (maternity or paternity leave)?

In school?

Keeping house?

Retired?

Doing volunteer work?

HAND CARD #6

- A. Never married
- B. Married, living with spouse
- C. Married, spouse living elsewhere
- D. Living as married
- E. Separated or divorced
- F. Widowed

HAND CARD #7

- A. Less than \$5,000
- B. \$5,000 to \$ 7,499
- C. \$7,500 to \$9,999
- D. \$10,000 to \$12,499
- E. \$12,500 to \$14,999
- F. \$15,000 to \$19,999
- G. \$20,000 to \$29,999
- H. \$30,000 to \$39,999
- I. \$40,000 to \$49,999
- J. \$50,000 to \$59,999
- K. \$60,000 to \$74,999
- L. \$75,000 to \$99,000
- M. \$100,000 or more

HAND CARD #9

Mexican, Mexican American, or Chicano

Puerto Rican or Puerto Rican American

Cuban or Cuban American

Central or South American

Other Hispanic or Latino background

HAND CARD #10

White

Black or African American

Asian

American Indian or Alaska Native

Native Hawaiian or other Pacific Islander