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Participation in and the Choice of Providers of Adult Education Activities

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1. Introduction

The purpose of this study is to examine data from the 1991 and 1995 National Household Education Surveys concerning training providers. It should be noted at the outset that the two surveys were intended to collect information about the participation of adults in formal education and training activities. Participants in most types of adult education and training were asked to respond to survey items about providers, so it is possible to construct and analyze data about providers. However, since the intent of the surveys was to measure adult education participation, the information about providers may be inconsistent or incomplete across surveys and respondents.

The surveys collected information from individuals about their participation in adult education activities during the 12 months prior to the survey. If the individuals did participate in an adult education activity, the surveys collected information about individual courses or programs of study. One specific item of information was provider of the education or training. However, the information on provider type is confounded by the fact that the survey design requested the respondent to provide information about a sample of courses or programs of study for individuals who had participated in many activities. Furthermore, individuals who reported information about multiple courses may or may not have had multiple providers.

Finally, the term provider is somewhat ambiguous and subject to respondent interpretation. The 1991 NHES used the following phrasing:

> "We are interested in knowing who offered the instruction for [name of course], as opposed to who sponsored or taught the class. In particular, what school, organization, business, or person provided the instruction for [name of course]?"

The 1995 NHES used slightly different wording for different types of adult education activities, but all of the questions began with the following phrase:

"What school, organization, or business provided the instruction..."[1]

It is not clear how a participant in a formal job-training class would respond if his/her employer had contracted with a community college or adult education department of a local school district to provide the training. Similarly, it is ambiguous how an individual would respond if they had participated in an adult education class at a religious institution that was taught on a volunteer basis by a professor. Many such potential ambiguities could be listed.

The issues of data inconsistency or ambiguity were addressed by imposing assumptions on the data. Much of this report documents those assumptions. If these assumptions are unbiased and reasonable, then the analyses point to the following major findings: between 1991 and 1995, there were substantial decreases in the share of training provided by 2-year community colleges and by professional associations/unions and there were substantial increases in the share of training done by private, community-based organizations and elementary schools, secondary schools, and adult education departments of local school districts. Of course, with only two points in time, we have no idea if these changes constitute a trend nor do we know how sensitive the survey results were to structural differences in questionnaire approach and wording.

The Adult Education (AE) component of the 1991 National Household Education Survey (NHES) was designed to determine whether respondents had participated in AE within the past 12 months, and, if so, to gather information about the number of courses taken and details of these courses. Full-time students and part-time students who were seeking degrees were asked about their degree plans, programs of study, and numbers of courses taken. All respondents were asked about

[1]Note that the 1995 survey dropped the word "person" from the stem of the question.

their participation in the past 12 months in other adult education activities besides formal degree-bearing education, and the number of such activities undertaken. Respondents who had participated in AE activities or who were seeking degrees on a part-time basis were asked for details about their most recent courses (up to four): including course content, reason for participation, employer involvement, and activity schedule and completion.

The adult education component of the 1995 NHES was also designed to measure the level of enrollment activity and details of that activity for the adult population. This survey followed a slightly different organization in collecting information on AE activities from the earlier NHES. Adult education activities were grouped into six categories, as follows:

- English as a Second Language (ESL)
- Basic skills education or GED preparation
- Courses taken for credential programs, such as college degrees or vocational/technical diplomas
- Formal apprenticeship
- Courses taken for career- or job-related purposes
- Other formal structured courses where there was an instructor, also called personal interest or personal development courses

Detailed information was collected about individual courses in three of these areas–courses taken for credential programs, *if the respondent took these courses on a part-time basis*; career- or work-related courses; and other formal structured courses.

In order to determine consistencies or changes in providers between 1991 and 1995, we grouped AE activities into five categories–ESL, basic skills, part-time formal education toward a credential, job- or career-related education or training, and other structured educational activities.

Note that this grouping combined formal apprenticeships with career- or job-related education or training in the 1995 data. The precise wording about the types of providers differed slightly in the two surveys, so we grouped these responses into the following ten categories:

- Elementary, junior high, high school, adult learning center
- 2-year community college, technical institute, public vo-tech school
- 4-year college/university
- Private vocational, trade, business, hospital, or flight school
- Business, industry
- Professional association, labor union
- Governmental agency (including libraries)
- Tutor, private instructor
- Private community organization, church
- Other providers

Analyses of the survey data show that the major provider of ESL and basic skills training was elementary, junior high, high school, and adult learning centers. This category of institutions provided over half of the ESL and basic skills training to 1995 NHES respondents and about one-quarter of the training to 1991 NHES respondents. The 1991 NHES data show a high percentage of ESL and basic skills training provided by two-year community colleges, technical institutes, or public vo-tech institutes. However, this percentage dropped precipitously in the 1995 data. The major providers of courses offered as part of formal, credential programs were four-year colleges/universities and two-year community colleges, technical institutes, and public vocational-

technical institutes. In the 1995 NHES, these two categories accounted for about 85 percent of such courses; whereas they accounted for about 50 percent of training providers in the 1991 NHES.

According to both the 1991 and 1995 NHES respondents, just under half of courses taken for work-related training purposes were provided by business and industry. Other providers that offered substantial shares of the courses (between 10 percent and 20 percent) were governmental agencies (including libraries); professional associations and labor unions; four-year colleges/ universities; and private vocational, trade, business, hospital, or flight schools.

The distributions of providers of structured adult education activities for both years of data had their modal points at the category of private community organizations and churches. However virtually all provider types were identified by respondents as institutions that offered this type of educational activity. In particular, business and industry and government agencies were providers for a substantial share of structured activity courses in 1995.

The next section of this paper will focus on ESL and basic skills training and their providers. That section is followed by sections on part-time formal credentialed education, job- or career-related education or training, and structured adult education activities and their providers. Section six of the paper presents results from estimating choice models for particular training providers, presents results from models of the economic returns to particular training providers, and provides recommendations for policy makers to consider as they administer the scarce resources that society has allocated to AE.

2. English as Second Language and Basic Skills Adult Education Activities

English as Second Language trainees are adults who are non-native English speakers. They enroll in ESL classes to improve their English skills for work-related or social assimilative reasons. ESL participants were identified on the 1991 NHES survey if they answered yes to any of the following questions:

- A1A. (Type of educational program in which R. is enrolled on a full-time basis.)
  f. An English as a Second Language (ESL) program
- A8. (Other kinds of adult education activity besides being a part-time degree-seeking student at a college or university in which R. has been involved in the past 12 months.)
  f. Instruction in English as a Second Language?
- A16. Did you take any course in the past 12 months that involved instruction in English as a Second Language?

A single item from the 1995 NHES was used to determine whether a respondent had participated in ESL adult education during the past 12 months. *Individuals who responded that a language different than English is now spoken most at home* were asked the following question:[2]

B1. These first questions are about English as a Second Language only. Please do not include other classes here. During the past 12 months, did you have a tutor or take any classes to learn English as a Second Language?

[2]It appears that there may have been a slight decline in ESL participation between 1991 and 1995, but note that the 1995 survey excluded respondents who reported that English was currently the language that was used most often at home. It may be the case that ESL participants had a primary language or first language that was not English and therefore pursued ESL training, but were now speaking English most often in the home. Indeed, 2.3 percent of the 169 million respondents (or about 3.8 million individuals) who reported that English was spoken most at home currently on the survey also reported a different language background, defined as the first language learned to speak.

Table 1 presents summary data about ESL participants from the two surveys. The table shows that in 1991 just over 1.5 million individuals answered yes to at least one of the qualifying questions. About 56 percent were female, and 60 percent indicated that their race/ethnicity was Hispanic. A plurality of about 42 percent were between the ages of 25-34 and over 80 percent were between 20 - 44. The educational attainment of these individuals was reasonably high; almost 80 percent reported that they had graduated from high school, and about 20 percent reported that they had some college education or were college graduates.

In 1995, approximately 1.3 million participated in ESL training. In that year, just under 50 percent were female and over two-thirds reported that their ethnicity was Hispanic. The educational attainment of the participants was approximately the same as in 1991; about three-quarters of the sample were high school graduates, and just over 20 percent reported completing a college education. The mean age of participants in both samples was around 32, although about 70 percent of the 1991 sample was under the age of 35 and only about 60 percent of the 1995 sample were under 35.

The labor market and earnings experience of the ESL trainees exhibited significant duress relative to the total population. The unemployment rates in 1991 and 1995 for individuals who reported ESL training were about 19 percent and 22 percent, respectively, which were much higher than the national averages of 8 and 6 percent.[3] A substantial share of ESL participants were not members of the labor force, particularly as reported in the 1995 NHES. In that year, 43 percent of the respondents were not in the labor force, which was 10 percentage points higher than the total

[3]The unemployment rate is the percentage of the population unemployed divided by the percentage of the population in the labor force.

U.S. adult population (which included a significant number of retirees.) Also in 1995, about 44 percent of the ESL participants were employed–two-thirds the national employment rate. Annual earnings for ESL participants who did work averaged about $16, 400 in 1991 and $19,000 in 1995 (current year $). These averages were about 70 percent of the national average for working individuals. About 60 percent of the ESL trainees had household incomes of less that $25,000 in both years of the data, compared to about 35-40 percent for the national population. Finally, ESL participants were disproportionately employed in blue collar and service occupations.

The 1991 survey asked for detailed information about training providers from individuals who gave information about their four most recent adult education activities or courses (question A10). The only respondents who were asked to provide this information were those who (1) were part-time students in a degree program at a college or university (question A4) or (2) had been involved in an adult education activity other than being a part-time degree-seeking student (question A8). But even for survey respondents who provided course data, we could only pinpoint the courses as ESL if the only adult education activity in which the respondent had been involved was ESL. It turned out that we could so identify courses for about a quarter of the ESL participants. Table 2 provides data about these courses.[4]

The 1995 survey collected detailed information about the ESL training provider for respondents who indicated that their training was *not* part of a college program. Data about the providers of the training for this population of about 750,000 (or about 60 percent of the participants)

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[4]Respondents were only asked detailed information about their four most recent activities or courses. In question A9, respondents were asked to indicate the number of separate adult education activities in which they had participated in the past 12 months. If the respondent answered more than four, then we only have detailed information on provider and course type for a subset of courses. None of the observations where all of the courses had to be ESL had more than 4 total courses, however. Consequently, we have included all of the information about ESL courses in table 2.

are given in table 2.[5] The survey did not ask respondents to provide a course title, so the table does not have that information about specific courses.

Entries in table 2 represent the percentage of respondents who named a particular provider type. Respondents who reported multiple courses may have multiple providers, so the percentages in the table sum to greater than 100. The three types of providers of ESL training most often identified by respondents to the 1991 survey for the subset of observations where we could identify provider were (1) 2-year community college, technical institutes, or public vocation-technical institutes; (2) elementary, junior high, high school, or adult learning centers; and (3) governmental agencies, including libraries. About 32 percent, 26 percent, and 23 percent of the participants in ESL courses from whom detailed information was gathered indicated that the courses were offered by these provider types, respectively. Over three-quarters of the courses were categorized as being basic education. A little over an eighth of them were categorized as liberal arts courses, and about 6 percent were categorized as education courses.

The data in the table suggest a shift in the types of providers between 1991 and 1995. Elementary, junior high, high school, or adult learning centers were a provider for over half of the ESL participants (not in a college program) in 1995. Government agencies and 2-year postsecondary institutions apparently were the provider for much smaller shares of ESL training participants in 1995 than in 1991. On the other hand, private community organizations or churches had the second highest percentage of any of the provider types in 1995; they accounted for 13.8 percent as opposed to 0.0 percent in 1991.

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[5]Respondents who indicated that they had participated in ESL training but were not asked about their provider had taken the ESL courses "as part of a college program." We do analyses later in the paper in which we assume that the provider is either a 2-year or 4-year college or university.

The differences in providers between 1991 and 1995 may not be as great as they appear in table 2 if we assume that (1) the 1991 data are representative of all of the ESL training participants and (2) the providers of training to the individuals who reported that they were receiving ESL training as part of a college program were 2-year or 4-year postsecondary institutions. The latter assumption means that elementary, junior high, high school, or adult learning centers were a provider for 31.7 percent of the ESL participants, and that 2-year or 4-year postsecondary institutions were providers for 46.5 percent. These percentages compare to 25.7 and 40.8 in the 1991 survey. However, this assumption results in an even greater decline for government agencies in 1995; they would be a provider for 4.8 percent of the participants as opposed to almost 23 percent in 1991.

Basic skills training. Education and training whose purpose is to impart basic academic skills to adults is referred to as basic skills training. Adult basic education and preparation for the General Education Development (GED) test comprise a large share of basic skills training. But, in addition, some adults may be participating in formal education to ameliorate low literacy or they may be "brushing up" on basic academic skills to accommodate technological changes in their employment situation or for other reasons. Respondents to the 1991 NHES were categorized as participants in basic skills training if they answered yes to any of the following questions:

A1A. (Type of educational program in which R. is enrolled on a full-time basis.)
- e. An adult literacy or basic skills program?
- h. GED?

(If A60. Have you earned a high school diploma or GED? is ***No***), then

A1A. (Type of educational program in which R. is enrolled on a full-time basis.)
- d. A vocational or occupational training program after completing or leaving high school?

A8. (Other kinds of adult education activity besides being a part-time degree-seeking student at a college or university in which R. has been involved in the past 12 months.)

e. Instruction in basic skills such as math, or reading and writing English?

h. GED?

A15. Did you take any course in the past 12 months that involved training in basic skills such as math, and reading and writing English?

Respondents to the 1995 NHES who answered yes to any of the following questions were classified as basic skills education and training participants:

C1. Not including regular day-time high school classes, during the past 12 months, did you have a tutor or take any classes:

a. To improve your basic reading, writing, and math skills?

b. To prepare to take the General Educational Development, or GED?

c. In some other high school equivalency program or adult high school program?

As table 3 indicates, about 5.25 million individuals were classified as being basic skills participants in 1991. Less than half that number, 2.24 million were so classified in 1995. In the former year, the participants were disproportionately female, of prime age (20 - 44), and, surprisingly, college-educated. Almost 85 percent of the participants reported having their high school diplomas. Almost half of the participants reported that they had some college training beyond high school, of whom one-quarter (or about 14 percent of the total participants) reported having a bachelor's degree or higher. Almost three-quarters percent of the participants were employed and almost 60 percent had household incomes that exceeded $25,000 (1991 $). Clearly some of the participants got classified in this category although they had substantial educational backgrounds.[6]

[6]In prior work, Hollenbeck (1993) examined the names of the classes given by all of the basic skills training participants in the 1991 NHES and found a number of "advanced" academic courses (to the extent that one can identify the level of skill from a course name). A number of adult education participants took courses with names like "Calculus,"

The 1995 data presented in the table seemed to accord more closely with *a priori* expectations about who would have participated in basic skills education in terms of their educational attainment. Over 60 percent had less than a high school diploma, and none of the participants had a bachelor's degree. In terms of the other characteristics, the gender split was closer to 50-50 than in 1991; although there were still more females than males. The percentage of participants who were of a minority race/ethnicity was substantially higher than in 1991 when about 60 percent of the respondents reported being of white nonhispanic racial ethnicity. In 1995, this percentage was just over 45. In 1995, the participants were younger. Only 57 percent of the participants were employed, and the unemployment rate was 23 percent, which was almost four times the national level. About half of the participants had household incomes that were less than $15,000 (1995$).

As described above with English as Second Language, it was difficult to identify providers of basic skills training in the 1991 survey because the provider data were reported on a course-by-course basis, and individuals may have taken courses of more than one training type. We could unambiguously identify a course as being a basic skills course only if that were the only form of adult education that the participant had reported being engaged in. In fact, provider type could be determined for only 19 percent of the basic skills education and training participants in 1991. As can be seen in table 4, the distribution of provider types is dispersed across virtually all of the categories. The largest percentage is for 2-year community colleges, technical institutes, or public vo-tech institutes, a provider for almost 30 percent of the participants. But four other categories were

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"Business correspondence," or "Statistical Process Control" and indicated that they were doing so "as instruction in basic skills such as math, or reading and writing English" or "to improve their basic reading, writing, and math skills."

reported to be the provider for more than 10 percent of the basic skills participants for whom we could identify basic skills classwork (elementary, junior high, high school, adult learning center; 4-year college/university; governmental agency (including libraries); and private vocational, trade, business, hospital, or flight school.) The particular courses that were taken fell mainly into the categories of "basic education," "science and math," and "liberal arts."

The 1995 data showed that over half of the participants in basic skills education and training reported a provider in the category "elementary, junior high, high school, adult learning center." Just over 20 percent reported 2-year "community colleges, technical institutes, or public voc-tech institutes" as a provider, and about 11 percent mentioned "governmental agencies (including libraries)."

3. Part-time Attendance in Postsecondary Education

It is customary to include part-time attendance in higher education or postsecondary technical education as an adult education activity. Respondents to the 1991 NHES were categorized as participants in part-time postsecondary education if they answered yes to the following question:

> A4. [In addition to your full-time studies], Have you been enrolled as a part-time student at a college or university in an associate's, bachelor's, or graduate degree program, in the past 12 months?

A single question from the 1995 NHES was also used to classify respondents as individuals who attended postsecondary education on a part-time basis. Anyone who gave a non-zero response to the following question was so categorized:

> D9. How many of these courses [leading to a credential] did you take as a part-time student in the past 12 months?[7]

Table 5 provides data about the individuals who were classified as part-time postsecondary students. They totaled about 15.6 million individuals in 1991 and about 11.6 million in 1995 (8.1 percent and 6.2 percent of the total adult population, respectively.) A small fraction of the respondents indicated that they had not completed high school yet (about 4 percent and 1 percent in 1991 and 1995, respectively). About two-thirds of the participants in both years had completed high school but had not earned a bachelor's degree; they were presumably working on an associate's or

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[7]The universe for this question was anyone who answered yes to the following question:

D1. (Not including the classes you told us about earlier,) During the past 12 months, did you take any courses that are part of a program, or a series of courses associated with a program leading toward ...
  a. A college or university degree, such as an associate's, bachelor's, or graduate degree?
  b. A diploma or certificate from a vocational or technical school after high school or a formal training program?

bachelor's degree. About 5 percent of the 1991 participants and 10 percent of the 1995 participants indicated that they had earned an associate's degree. A little under one-third of the participants indicated that they had earned a bachelor's degree. Most of these individuals were pursuing graduate or professional degrees, but a small share of them were pursuing an associate's degree (reverse transfer).

The demographic data about part-time postsecondary students show that they were over-represented by females and never married individuals relative to the total adult population. They tended to be in the 25-44 year old age categories (mean of around 34 years) and they tended to be fairly well off economically. Around 85 percent of the students were employed, and the average annual earnings (for those with earnings) was around $24,000 in 1991 and $27,000 in 1995 (current year $). (This was higher than the national average of earnings in 1991 and was slightly lower than the average for the total population in 1995, but much larger than the average earnings of employed ESL or basic skills participants.)

Table 6 exhibits data on courses in which the part-time postsecondary students were enrolled and providers of those courses. The 1991 data were based on courses listed by the respondent for which could be unambiguously determined to be part of a formal, postsecondary program. The data from 1995 were derived from questions concerning a "degree, diploma, or certificate ***program***" (emphasis added) and courses taken "as a part-time student" toward a credential. The information in the table about the provider of the education pertain to the program or credential. Respondents reported up to three unique programs, so a single respondent may have listed three distinct provider types. Therefore the percentages sum to greater than 100. The information in the table about courses refer to the courses listed by the respondent. The question asks for all courses taken in the

past 12 months for each program/credential. The maximum number of courses listed by a respondent for a program was 14.

The percentage of individuals who participated in part-time formal education and training for whom courses could be unambiguously identified as part of higher education programs in the 1991 survey was 92.5. All of the provider information from the 1995 survey could be used. It was anticipated that most of the providers named by respondents would be in the categories of "2-year community colleges, technical institutes, or public vo-tech institutes," "4-year colleges/ universities," or "private vocational, trade, business, hospital, or flight schools." Indeed, these three provider categories were named by over 90 percent of the respondents in 1995. The 1991 data did not conform to this expectation, however. These three provider categories were listed by less than two-thirds of the respondents. It appears as if many of the respondents to the earlier survey gave the name of their employer or professional association/union as their training provider. Almost 20 percent of the respondents listed their education provider as a "business or industry," and almost 10 percent indicated that their education provider was a "professional association/union" or a "government agency."

In 1991, the average number of courses taken as a part-time student in a degree program was about 2.5, whereas in 1995, the average number of courses taken by students was just under 3.[8] In both years, part-time students took a wide variety of courses. In 1991, over 20 percent of the students reported taking courses in business and in social science (which includes communications,

[8]The mean reported in the table for 1991 was computed by using a course weight that adjusts for respondents having more than 4 courses in their program. In particular, for observations that had provided information about 4 postsecondary courses, the course weight was computed as the number of courses taken as a part-time student for credit toward a degree (Question A6) divided by 4. Course weights were not necessary for part-time formal education and training in 1995 because respondents were allowed to list all courses.

law, and public administration). Over 10 percent of the students reported courses in health, vocational /personal services, science and math, and liberal arts. Business was the modal response with just over 25 percent of the students listing courses in that area.

In 1995, course taking patterns had shifted somewhat. Business courses were listed by over 25 percent of the students, but that category was surpassed by social science as the mode. There were substantial increases in the incidence of courses in liberal arts (from about 11 percent of the students to about 17 percent), computer science (7 to 13 percent), science and math (from 13 to 24 percent), and education (from 9 to 11 percent). Decreases occurred in vocational/personal services (from 15 percent to 12 percent) and health (from 16 to 11 percent).

4. Job- or Career-Related Education or Training and Formal Apprenticeships

A substantial share of adult education can be classified as job- or career-related education or training. This activity is referred to by economists as formal on-the-job training. In general, employers (and in some cases, organized labor) invest in the training in order to increase the productivity of workers. Some specific examples of formal on-the-job training (OJT) would be training given to employees in order to operate new equipment or processes that have been introduced into the workplace. Sales and marketing staff might take formal classes to learn about new product lines. In many establishments, workers receive mandatory safety training. Workers may take formal classes to learn how to use new software systems.

Two quite different strategies were used to collect information about incidents of job- or career-related training on the two surveys, but the resulting data on courses and participant characteristics ended up being quite similar. As mentioned previously, the 1991 survey collected detailed information about a number of courses (up to 4) from each respondent who reported that he or she had participated in part-time classes for credit toward a postsecondary degree or a separate adult education activity. These courses were coded as being job- or career-related education or training if the respondent answered yes to any of the following questions:

A13. Was your main reason for taking ___(name of course)___:
--To improve, advance, or keep up to date on your current job?
--To train for a new job or a new career?

A14. (Asked if answers to above were no), did you also have any employment- or career-related reasons for taking ___(name of course)___.

In 1995, the following question was used to identify individuals who had participated in job- or career-related education or training:

> F1. Now, I'd like to ask about courses related to a job or career, whether or not you had a job when you took the courses. (Please don't include courses you already told me about.) Some examples are courses taken at your job, courses taken somewhere else that relate to your job or a new career, or courses for a license or certification you need for your job. Have you taken any of these in the past 12 months?

The 1995 survey also had a separate section on formal apprenticeships, although very little information was collected about apprenticeship programs. The question that the survey asked was as follows:

> E1. During the past 12 months, were you in a formal apprenticeship program leading to journeyman status in a skilled trade or craft?

Table 7 provides data about the characteristics of the participants in job- or career-related education or training. About 20 percent of the adult population in each of the two years reported participating in this kind of adult education (about 34 million individuals in 1991 and 40 million in 1995.) The participants were evenly divided by sex, and they were disproportionately of white nonhispanic ethnicity. Much has been written in the economics literature about how on-the-job training tends to be given to the most capable and highly educated workers. The 1991 and 1995 survey data seemed to confirm this phenomenon. In both years, over 40 percent of the participants in training had college degrees, compared to over about 20 percent in the general adult population. The mean age of job- or career-related education and training participants was close to 39 in both surveys, and over 80 percent of them were between 25 and 54 years old. This compares to about 60 percent in the overall adult population.

Not surprisingly, participants in job- or career-related education or training had excellent employment and earnings backgrounds. In both years, over 90 percent were employed, and in both years, the average annual earnings of participants exceeded the national average for working adults. The industries that participants tended to work in, or at least worked in at a rate higher than the overall adult population average were Finance, Insurance, and Real Estate (FIRE), health services, and public administration. These training participants had lower than average employment rates in manufacturing, retail trade, and construction.

The distributions of providers of job- or career-related training were quite similar in 1991 and in 1995 as can be seen in table 8. The providers of job- or career-related training were reported to be mainly business and industry, professional organizations/labor unions, and government agencies. Almost three-quarters of trainees in the 1991 survey reported that their training was provided by one of these types of providers, and over 80 percent of the trainees in 1995 reported one of these three types of providers. About one-fifth of the respondents indicated that they had been provided their job- or career- related education or training in a college setting.

The participants in job- or career-related training reported courses that ranged across a wide variety of subject matter. The modal response for course type in both surveys was business. But substantial shares of courses were in the areas of health; vocational/personal services; computer science/systems; and social science, communications, law, and public administration. The respondents to the 1995 survey reported more formal courses taken–almost 2.5 compared to about 2.3 in the 1991 survey. The biggest increase occurred in computer science/systems courses. The percentage of individuals who said that they had taken such courses increased by almost 50 percent over the 1991 - 1995 time period.

Formal Apprenticeships. The 1995 survey had a section of questions about formal apprenticeships. However, the survey only asked for a limited amount of information about apprenticeship programs. In particular, it did **not** request information on coursework or provider types. Table 9 shows summary data about the characteristics of individuals who were participating in a formal apprenticeship program. Note that the survey enumerated over 2 million participants in formal apprenticeships, making them numerically more important than ESL training and almost the same size as basic skills.

Almost three-quarters of the apprentices were male, and the percentage of apprentices who were single far exceeded the percentage in the population. Their average age was about 30, and over 60 percent were between the ages of 20 - 34. There was a slightly larger proportion of racial/ethnic minorities among the apprentices (just over 40 percent) than in the general population (not quite 25 percent). The educational levels of apprentices were slightly lower than in the general population. The mean years of education was 12.4, and just over 80 percent of the apprentices had at most a high school diploma. For the general population, the mean was 12.9 and about 70 percent had at most a high school diploma. Not surprisingly, a very high proportion of apprentices were employed, although their average earnings were only about 75 percent of the average earnings in the population. About 90 percent of apprentices were in the labor force, but the formal apprentice's unemployment rate of 9.0 percent was relatively high. The industrial sectors that apprentices tend to be employed in were construction trades, manufacturing, and services.

5. Participants in Structured Education Activities

The last category of education and training considered here is referred to as structured education activities. It is a residual or "catch-all" category that comprises any formal adult education activities that don't fit in any of the other categories. Respondents to the 1991 NHES were classified as participants in structured education activities if they answered affirmatively to any of the following questions (and were not classified as participants in any of the other categories):

A1A. (Type of educational program in which R. is enrolled on a full-time basis.)
g. Some other program (specify) _____

A8. (Other kinds of adult education activity besides being a part-time degree-seeking student at a college or university in which R. has been involved in the past 12 months.)
a.. Continuing education courses or noncredit courses?
b. Courses by mail, television, radio or newspaper?
c. Private instruction or tutoring?
d. Educational or training activities given by an employer, labor organization, neighborhood center, church, or community group?
g. Or, any other organized educational activity?
Please describe: _____
i. *Computers (unspecified)*

The 1995 survey was more straightforward. It asked the following:

G1. Now, I am going to ask about any other courses where there was an instructor. (Please don't repeat any courses (and programs) you have already told us about.) These might include things like arts and crafts, sports or recreation, first aid or childbirth, Bible study, or any other types of courses we haven't talked about yet. Did you take any of these or other courses in the past 12 months?

As seen in the 1995 question, this type of adult education activity spans a broad variety of activities from avocational sports and recreation to arts and crafts to Bible study at a church. Table 10 provides summary statistics about the individuals who were classified as having participated in structured educational activities. Despite the fact that the total numbers of participants in the two surveys were quite different, the characteristics of the individuals were similar. Approximately 12.6 million participants in structured activities (approximately 7 percent of the adult population in 1991), whereas in 1995, the number tripled to about 37.6 million (20 percent of the population). The participants tended to be female, relatively well-educated, and older. About two-thirds of the participants were female (slightly lower in 1995). They were disproportionately of white nonhispanic ethnicity. Their years of education averaged 14, compared to about 13 for the adult population; about a third of the participants had their bachelor's degree.

Apparently, many of the participants in structured activities were retired. Their average age was almost 45 in 1991 and 42 in 1995. Their labor force participation rate was about 60 percent in 1991 and 69 percent in 1995. The annual earnings for participants who were employed were almost exactly equal to the average earnings for the adult population; and the participants tended to be in white collar, professional occupations. Almost 50 percent of the participants had household incomes that exceeded $40,000 compared to the national average for adults of 33 percent in 1991 and 40 percent in 1995.

Table 11 shows provider data as reported by the participants in structured educational activities. The modal response for provider type was private community organization or church, but virtually every provider type was named by a substantial share of respondents. Business and industry was named by about 20 percent of the respondents in 1995, although it was only listed by

about 8 percent of the 1991 participants. Interestingly, the second largest response in 1991 was for 2-year community colleges, technical institutes, and public vo-techs, but that category decreased in quantitative importance in the 1995 survey.

As might be expected, a large share of the respondents listed courses that were in the area of religion and philosophy (suggesting that this category was capturing a lot of educational activities occurring in religious institutions.) These types of courses were named by about a third of the respondents. Also a significant share of the courses were in the area of self-help/interpretation, arts, or phys. ed. These also accounted for about a third of the respondents' course titles. Over a quarter of the participants in 1995 named courses that were in the health field, which was a huge increase over the 11 percent in 1991. On the other hand, there was an apparent decrease in vocational/ personal services (from over 13 percent to under 10 percent).

6. Analyses of the Choice of and Economic Returns to Providers

The previous chapters provided considerable information about participants in various forms of adult education, and information about the providers of and the courses that comprised the adult education activities. This section presents economic models of how individuals choose particular providers and the economic consequences of those choices. It starts out with summary statistics about the two samples of data, however. Then the chapter discusses provider choice models, and concludes with models of earnings and wage returns to provider type.

Table 12 provides summary data from the 1991 and 1995 NHES about participation, courses, and providers of adult education by type. The entries in the table are weighted counts of individuals, courses, or providers. The first row in the table, for both years, recapitulates the number of participants in each type of adult education from the first 11 tables. The particular questions in the surveys that were used to define a type of participation are given in the text of this paper. The column labeled 'Unknown' in the 1991 panel of data is for courses and providers of courses that could not be unambiguously classified into one the five types of adult education. There are no participants in that column because all of the individual cases were classified by their participation in type of adult education activity. The final column provides an unduplicated count of participants, their courses, and provider types. Dividing the sum of the participants in the specific types of adult education (which totals about 70 million in 1991 and 94 million in 1995) by the unduplicated counts of participants results in a ratio of about 1.17 and 1.24 in 1991 and 1995, respectively. This represents the average number of types of adult education that were engaged in by participants. The largest shares of multiple types of participation were for part-time postsecondary students who also

received job- or career-related training (in 1991) and for job- or career-related training participants who also participated in structured activities (in 1995).

Not all of the AE participants were asked to provide the name/description of the courses in which they participated. The second row provides the number of individuals(on a weighted basis) who provided the name of at least one course. All together, more than 93 percent of the participants in 1991 provided some information about at least one course, and more than 98 percent of the participants in 1995 did (the only exception were individuals engaged in formal apprenticeships and ESL participants in college programs.)

The next three rows of each panel (rows 3-5) of the table refer to courses rather than individual participants. For 1991, row 3 provides weighted counts of courses that could be identified by type of adult education (column headings) plus the courses that couldn't be unambiguously determined (in the unknown column). These courses are weighted by the sampling weights and by course weights to reflect that individuals only provided information on four courses.[9] All together, the 56 million participants in AE provided course title or descriptive information about 137 million courses; an average of about 2.5 courses per participant. The 1995 survey collected specific course titles from participants in part-time postsecondary education,[10] job- or career-related education or training, and structured activities only. Course weights were used to tabulate the latter two types of

[9]The course weights were equal to 1 if the respondent reported three or fewer course titles and were equal to the ratio of the number of adult education activities (from question A9) to four if the respondent reported 4 course titles.

[10]Note that for part-time college students, the survey asked respondents how many programs they were enrolled (question D2) and to list all course titles for each program. Provider information was given at the program level and courses were classified into instructional programs at the course level. The data resulted in a maximum of three programs and 34 courses.

AE because the survey randomly sampled courses in these two categories. Participants in the 1995 survey provided course title information for an average of about 2.7 courses.

As might be expected, individuals who participated in multiple courses during the previous 12 months may have taken more than one course in the same discipline or with the same name. The fourth row eliminates duplicate course codes and provides aggregate counts of unique courses in which individuals engaged. The fifth row of each panel in the table provides a count of individuals who provided at least one valid course code. This row differs from row two of the table because some courses were not identifiable by AE type (in 1991) and because of missing or non-reported course titles (in 1991 and 1995).

The last three rows of each panel of the table (rows 6 - 8) deal with information about providers. Row 6 provides a count of the total number of courses (or programs for 1995 part-time postsecondary students) that have valid information about the provider type. The only differences between row 6 and row 3 in the 1991 panel of data are cases where provider type is unknown or not mentioned. The discrepancies are rather minor, and they reflect the fact that item nonresponse was higher for provider type than for course name. The seventh row eliminates duplicated provider types for an individual and thus reports an unduplicated count of providers. The empirical analyses of provider types in the remainder of this study are based on the providers enumerated in row 7, i.e, about 73 million unique providers in 1991 and 110 million in 1995. The last row provides a count of individuals who provided at least one provider type.

The underlying reasons for examining the NHES data on providers are to measure "market share" and to analyze the relative effectiveness of different provider types. The former will allow educational policymakers, providers themselves, and other interested parties to know what trends

are occurring in the provision of AE. The provision of adult education is totally decentralized, so "the market" is the mechanism that matches individuals who want to participate with providers who offer various courses or programs. Market arrangements have resulted in traditional patterns of delivery such as formal postsecondary education occurring mainly at two-year and four-year colleges and universities; and job and career-based training activities at workplaces. Unexpected increases or decreases in the market share of a provider type for a particular form of adult education may signal access issues, may signal the strategic entry or exit of particular agencies into or from the market, or may be coincidental. The relative effectiveness issue gets at the question of whether the type of institution that provides the AE influences the outcomes that trainees experience. This study relies on an analysis of economic outcomes to examine effectiveness because the NHES's do not measure learning outcomes. The underlying hypothesis is that economic returns from training are correlated with its effectiveness.

A major issue that must be addressed in the attempt to measure market share is to distinguish between the providers of training episodes and the provision of training. The former abstracts from the length and amount of time involved in the training, whereas the latter measures the intensity of the training. For example, an individual may have two incidents of adult education in a given year: The individual may enroll for a full load of courses for a semester at a postsecondary institution and a one-time, two-hour lecture on an avocational subject at a local museum. In this case, the postsecondary institution and the museum each provided 50 percent of the training episodes; but the postsecondary institution provided over 98 percent of the training.

Table 13 presents the distributions of provider type for each of the types of adult education and for adult education participants overall. This table examines providers of training episodes as

its "concept" of market share. Each entry in the table has two values–one for 1991 and one for 1995. For example, the first entry indicates that 24.4 percent of the 393,200 separate providers of ESL training identified in the 1991 survey were in the category 'Elementary, junior high, high school, or adult learning center.' In 1995, 54.6 percent of the approximately 1.3 million unique providers of ESL training were in that category.

Examining the provider distributions for each of the adult education types suggests that job- or career-related education and training is the only type of adult education for which the 1991 and 1995 distributions closely resemble each other. For incidents of ESL and basic skills adult education activities, over half of the providers in 1995 were in the category, "elementary, junior high, high school, or adult learning center," whereas in 1991, the modal response for both types of adult education was in the category, "2-year community college, technical institution, or public vo-tech school." The differences in these percentage distributions can be partially explained by the fact that the 1995 NHES did not ask for information about particular courses from respondents who indicated that they were taking ESL as part of a college program. The 1991 NHES may have provider information if the respondent was a part-time college student. The differences in the distribution for providers of basic skills training may arise because of differences in characteristics of the participants. The coding scheme that we used to identify basic skills participants included many relatively well-educated individuals in 1991, whereas the questions in the 1995 survey were more targeted to individuals who pursued adult basic education, individuals who are generally less well-educated by definition.

The 1991 data on providers of part-time college courses differs from the 1995 data in that almost a third of the providers identified by respondents were in the categories of

"business/industry," "professional associations, labor unions," and "government agencies." In the latter year, only about 10 percent of the identified providers were in these categories. Conversely, the 1995 distribution has about 85 percent of the providers in the categories of "2-year community college, technical institute, or public vo-tech school," "4-year college/university," or "private vocational, trade, business, hospital, or flight schools." The 1991 data show about 60 percent in these categories. It may be the case that a larger share of respondents to the earlier survey interpreted the question about training sponsors as the organizations that financed the training than did respondents to the 1995 survey.

As noted above, the distributions of providers of job- or career-related education and training were very similar for both years. In each case, about two-thirds of providers of training episodes were in the categories of "business/industry," "professional organizations/labor unions," or "government agency." The remaining one-third was evenly spread across the other seven categories of providers.

The distributions of providers of episodes of structured activities are also not too dissimilar for the two years. Both distributions have their modal points of between 35 - 40 percent for the category "private community organization, church." The 1991 NHES has a much higher percentage of providers in the category of "2-year community college, technical institute, or public vo-tech school" than does the 1995 NHES, however. But the latter has a much higher percentage in the category of "business/industry." The most significant difference between the two surveys, however, is the difference in the number of participants, and therefore, the number of providers of adult education episodes in the structured educational activity category. The 1991 survey had about one-

third the number of participants and one-fifth the number of total providers as the 1995 survey, which makes any comparison of these distributions tenuous.

The total column in the table shows substantial increases in the percentage of courses provided by "elementary, junior high, high school, or adult learning center" and "private community organizations, churches" and substantial decreases in the percentage of courses provided by "2-year community college, technical institute, and public vo-tech schools," "business/industry," "professional associations, labor unions," and "tutors, private individuals."

Models of provider choice. Every type of adult education activity had some courses provided by each different category of provider. To try to gain some understanding of the process of how different providers are chosen by individuals, we devised a choice model and estimated it with data from both years' surveys. For analytical ease, we aggregated the provider categories into five groups: public schools (comprised of the category, "elementary, junior high school, high school, and adult learning center"); postsecondary institutions (comprised of the categories of "2-year community college, technical institute, public vo-tech school," "4-year college/university," and "private vocational, trade, business, hospital, or flight schools"); business/industry/labor (comprised of "business/industry" and "professional associations, labor unions"); government (comprised of "government agencies (including libraries)"); and other (comprised of the categories of "tutor, private instructor," "private community organization, church" and "other").

The model suggests that individuals first decide to participate in an adult education activity, and then conditional on that participation decision, they select a provider. Thus, we estimated the following models:

$$(1) \qquad (PRO_j \mid AE)_i = \begin{cases} 1, \text{ if } p_i^* > 0 \\ 0, \text{ otherwise} \end{cases} \qquad j = 1, \ldots, 5$$

$$p_i^* = a_j + B_j X_i + u_i$$

where,

$(PRO_j \mid AE)_i$ = 1, if individual i reported participating in an adult education course provided by provider type j; 0 otherwise

p_i^* = (unobserved) indicator variable or probit for individual i

X_i = vector of characteristics describing individual i that are thought to be related to provider choice

a_j, B_j = parameters to be estimated

u_j = standard error term

Tables 14 and 15 provide the results from estimating (1) by probit. The characteristics used to explain provider choice included demographic variables (gender, age, and race), years of education, family variables (marital status and presence of children), location variables (residence in an MSA, residence in the South Census region), and income and earnings descriptors (employed, usual hours worked per week, wage rate, and household income class). Table 14 shows that females were more likely to choose public schools, postsecondary institutions, or other providers and were less likely to choose business/industry.[11] Minorities were more likely to choose government providers and less likely to choose business/industry. Years of education was positively related to the tendency of choosing a postsecondary provider, and, inexplicably, negatively related to the tendency to choose business/industry as a provider. Not surprisingly, the income and earnings variables were all positively related to an increased likelihood of choosing business/industry as a provider.

[11]Of course, individual's choices when they are employed may be made jointly with, or indeed, entirely by their employer.

The results for 1995 shown in table 15 are quite similar to those in table 14. Noteworthy differences occurred for gender and family characteristics variables. The likelihood that females would choose postsecondary institutions fell to zero in 1995 from being significantly positive in 1991. The likelihood that married individuals and individuals with children would choose elementary or secondary school providers also decreased. These results probably emanate from the basic skills training differences in the two surveys. The plurality of basic skills training episodes were provided by elementary and secondary schools, and our analyses of the 1991 survey included individuals who had higher levels of education and work experience than the 1995 survey.

The likelihood that employed individuals would choose postsecondary institutions increased from 1991 to 1995. It may be the case that more episodes of job-training occurred in those institutions or that there was an increase in the likelihood that postsecondary students would be employed.

To test whether or not there is any economic payoff to participating in adult education and to the choice of provider, we estimated the standard human capital model presented in equation (2).

(2) $\ln E_i = a + B'X_i + c\, AE_i + d\, PRO_i + e_i$

where,

E_i =	annual earnings of individual i
X_i =	vector of characteristics describing i that are related to earnings
AE_i =	1 if individual i participated in adult education; 0 otherwise
PRO_i =	1 if individual i participated in an adult education course provided by provider type PRO
a,B,c,d =	parameters to be estimated
e_i =	standard error term

Tables 16 and 17 present OLS estimates of the c and d coefficients from (2) estimated with the 1995 data.[12] Several specifications were used to test different configurations of adult education activities. In particular, we tested five specifications as follows: (1) participation in any postsecondary education (adult education or higher education); (2) participation in higher education, postsecondary technical education, or adult education; (3) participation in higher education, postsecondary technical education, work-related adult education, and adult education that is not work-related; (4) participation in higher education, postsecondary technical education, and each of the types of adult education separately; and (5) participation in higher education, postsecondary technical education, each of the types of work-related adult education, and adult education that is not work-related. In all of the specifications, dummy variables were included indicating whether the individual had participated in adult education courses provided by the five types of providers. Under the assumption that there are structural differences between the labor markets for men and women, the models were estimated separately. The first table provides the estimates for males, and the second table provides the estimates for females.

The results for both gender groups and for virtually all of the specifications show that participation in work-related adult education activities has a significant payoff on an individual's earnings, and that participating in courses provided by business/industry/labor have a positive impact on earnings, whereas the other provider types all dampen earnings.

[12] The results from estimating the model with 1991 data were qualitatively similar. These results are available from the author by request.

Table 1
Characteristics of Participants in ESL Education, 1991 and 1995

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Sex								
Male	43.7%	5.82	45.2%	0.98	50.7%	5.13	47.6%	0.05
Female	56.3	5.32	54.8	0.98	49.3	5.13	52.4	0.05
Race/Ethnicity								
White nonhispanic	17.6%	3.18	78.3%	0.35	12.6%	3.17	76.3%	0.18
Black nonhispanic	8.0	3.02	11.1	0.11	1.9	0.78	11.0	0.03
Hispanic	60.3	4.67	7.6	0.09	68.6	4.38	8.3	0.03
Other	14.1	3.40	2.6	0.35	16.9	3.75	4.5	0.18
Highest Education Obtained								
< High School	23.9%	3.80	15.7%	0.88	28.9%	3.85	15.7%	0.34
HS diploma/equivalent	57.1	4.22	60.7	1.06	49.4	4.51	54.5	0.42
Associate degree	4.2	1.82	2.8	0.28	1.3	0.73	5.3	0.10
Bachelor degree +	14.8	4.30	20.9	0.77	20.3	3.20	24.5	0.29
Years of Education								
Mean	12.5	0.39	12.9	0.06	11.1	0.42	12.9	0.02
Marital Status								
Ever married	60.1%	4.89	79.8%	0.76	66.3%	4.89	79.6%	0.29
Never married	39.9	4.89	20.2	0.76	33.7	4.89	20.4	0.29
Census Region								
Northeast	21.1%	4.25	20.9%	0.08	27.8%	4.64	20.4%	0.03
North Central	16.7	2.81	24.1	0.09	14.8	4.15	24.0	0.04
South	21.1	4.21	34.2	0.12	18.7	3.12	34.3	0.05
West	41.1	4.93	20.8	0.10	38.7	4.21	21.2	0.03
Urban Status								
MSA	85.0%	3.79	75.6%	1.31	96.4%	1.83	75.2%	0.06
Non-MSA	15.0	3.79	24.4	1.31	3.6	1.83	24.8	0.06
Age								
16 - 19	9.2%	2.76	3.4%	0.27	4.8%	1.31	2.3%	0.09
20 - 24	18.5	3.22	8.6	0.44	20.2	3.85	9.5	0.10
25 - 34	42.2	4.55	26.0	0.90	33.4	4.49	21.3	0.29
35 - 44	20.4	3.52	21.2	0.67	30.5	5.65	22.3	0.29
45 - 54	7.6	3.07	13.9	1.04	7.4	2.48	16.8	0.51
55 - 64	1.3	0.79	11.0	0.62	3.6	1.95	11.5	0.24
65 +	0.8	0.62	15.9	0.81	0.2	0.19	16.3	0.36
Mean	31.0	1.03	43.5	0.18	32.5	0.96	44.6	0.08
Employment Status								
Employed	61.3%	5.12	63.6%	1.20	44.2%	4.07	62.2%	0.41
Unemployed	14.7	3.24	5.4	0.56	12.6	2.76	4.0	0.19
Not in labor force	24.0	4.09	31.0	1.14	43.2	4.00	33.8	0.39
Annual Earnings								
Mean	$16,397	1257.89	$21,459	342.67	$19,069	3006.31	$28,110	185.14

Table 1
(Continued)

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Industry of Employment[a]	(81.3%)		(93.9%)		(51.9%)		(69.6%)	
Agriculture, farming, fishing	1.4%	1.12	3.1%	0.53	2.0%	1.08	2.5%	0.15
Mining	0.4	0.42	0.7	0.15	0.0	0.00	0.4	0.06
Construction	5.1	1.77	5.1	0.47	8.7	4.92	5.5	0.27
Manufacturing	19.3	3.69	17.3	0.82	25.0	5.59	15.0	0.43
TCPU[a]	2.5	1.51	6.5	0.72	3.1	1.75	6.4	0.20
Wholesale trade	4.0	3.05	2.0	0.30	0.6	0.43	1.8	0.14
Retail trade	14.6	3.94	14.3	0.75	22.7	6.38	15.3	0.38
FIRE[a]	1.2	0.57	6.0	0.53	2.2	1.04	5.7	0.24
Services, exc. health & education	25.4	5.26	17.9	0.70	20.7	5.76	19.1	0.42
Health services	11.0	2.55	9.2	0.51	3.7	1.81	8.4	0.29
Education	10.5	2.86	9.5	0.60	3.3	1.69	8.8	0.28
Public administration	3.8	1.76	6.3	0.57	0.0	0.00	5.9	0.24
Non-classifiable	0.9	0.55	2.3	0.34	8.0	3.80	5.0	0.21
Occupation of Employment[b]	(80.6%)		(93.9%)		(51.9%)		(69.6%)	
Business, Management	2.4%	1.37	8.2%	0.53	0.0%	0.00	9.9%	0.30
Teacher	7.0	2.43	5.8	0.41	0.8	0.62	5.1	0.21
Engineer	0.9	0.68	1.7	0.24	2.5	2.53	1.3	0.12
Health professional	4.4	1.79	3.4	0.28	0.3	0.25	2.4	0.13
Other professionals	1.3	0.76	5.1	0.38	2.6	1.74	4.7	0.20
Non-computer technicians	4.5	2.31	2.5	0.24	1.9	1.46	4.0	0.19
Administrative support	11.6	3.27	19.0	0.80	10.8	3.98	17.4	0.36
Mechanical operator/laborer	36.4	5.84	27.2	1.15	38.6	6.05	24.5	0.46
Sales	9.4	4.20	11.0	0.66	9.5	2.79	13.8	0.32
Services	21.8	3.77	14.9	0.82	28.0	4.98	15.2	0.42
Miscellaneous occupations	0.4	0.39	1.3	0.29	5.0	2.55	1.8	0.13
Household Income								
$5,000 or less	13.7%	4.30	5.6%	0.56	16.7%	4.17	6.7%	0.25
$5,001 - $10,000	9.2	2.98	9.5	0.56	20.7	3.61	9.3	0.25
$10,001 - $15,000	11.4	3.04	8.6	0.69	8.2	2.50	7.1	0.23
$15,001 - $20,000	13.1	3.04	8.9	0.55	11.4	3.51	6.9	0.22
$20,001 - $25,000	13.0	3.14	8.8	0.60	8.7	2.65	7.3	0.24
$25,001 - $30,000	13.1	3.72	9.9	0.58	5.1	2.16	8.6	0.24
$30,001 - $40,000	9.6	2.35	14.4	0.57	9.7	2.92	15.1	0.32
$40,001 - $50,000	9.6	3.27	11.7	0.56	6.6	2.04	10.8	0.26
$50,001 - $75,000	4.4	0.98	13.5	0.64	7.2	2.53	15.4	0.34
$75,000 or more	2.9	1.12	9.2	0.49	5.7	1.87	12.8	0.27
Population (in 000s)	1,517	123.35	182,000	449.98	1,301	111.54	189,600	153.04

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weight. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Industry of most recent employment in last 12 months for 1995 NHES. Industry of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data. TCPU -- Transportation, communications, and public utilities. FIRE -- Finance, insurance, and real estate.

[b] Occupation of most recent employment in last 12 months for 1995 NHES. Occupation of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data.

Table 2

Providers of and Courses Taken in ESL Education, 1991 and 1995[a]

Provider/Course	1991		1995	
	Participants	S.E.	Participants	S.E.
Percent Receiving Education from Following Type of Provider:	(24.6%)[b]		(58.1%)[b]	
Elementary, junior high, high school, adult learning center	25.7%	6.87	54.6%	6.48
2-year community college, technical institute, public vo-tech	31.5%	7.02	7.2%	3.47
4-year college/university	9.3%	4.40	0.8%	0.62
Private vocational, trade, business, hospital, or flight school	2.0%	1.48	3.4%	2.29
Business, industry	1.5%	1.06	3.4%	1.75
Professional association, labor union	2.2%	2.26	0.1%	0.13
Governmental agency (incl. libraries)	22.6%	7.15	8.2%	4.44
Tutor, private instructor	3.5%	3.58	6.8%	3.75
Private community organization, church	0.0%	0.00	13.8%	5.00
Other	7.0%	6.30	1.8%	1.79
Percentage of Participants Reporting at least One Course in:	(26.1%)[b]		NA	
Agriculture	0.0%	0.00		
Liberal arts	13.3%	5.18		
Social science, communications, law, public administration	3.3%	3.37		
Business	0.8%	0.83		
Computer science/systems	1.8%	1.44		
Education	6.5%	3.65		
Engineering	0.0%	0.00		
Vocational/personal services	2.6%	1.88		
Science and math	0.0%	0.00		
Self-help/interpretation, arts, phys. ed.	0.0%	0.00		
Health	1.8%	1.82		
Religion and philosophy	0.0%	0.00		
Basic education	76.4%	6.48		
Interdisciplinary	0.0%	0.00		
Indeterminable	3.0%	3.66		
Mean Number of Courses Taken:	1.10	0.04	NA	
Percentage of Courses Taken by Participants:				
Agriculture	0.0%		NA	
Liberal arts	12.1	4.45		
Social science, communications, law, public administration	3.0	3.06		
Business	0.7	0.75		
Computer science/systems	1.6	1.30		
Education	5.9	3.35		
Engineering	0.0	0.00		
Vocational/personal services	2.3	1.70		
Science and math	0.0	0.00		
Self-help/interpretation, arts, phys. ed.	0.0	0.00		
Health	1.6	1.65		
Religion and philosophy	0.0	0.00		
Basic education	69.4	7.48		
Interdisciplinary	0.0	0.00		
Indeterminable	3.3	3.33		

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weights. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Columns with all entries followed by % sign indicate that respondent may have had multiple responses. Therefore, column sums to number > 100.0.

[b] Entries in ( ) represent percent of responses for which course could be identified as ESL.

Table 3
Characteristics of Participants in Basic Skills Education, 1991 and 1995

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Sex								
Male	41.5%	2.68	45.2%	0.98	47.9%	3.64	47.6%	0.05
Female	58.5	2.68	54.8	0.98	52.1	3.64	52.4	0.05
Race/Ethnicity								
White nonhispanic	62.9%	2.48	78.7%	0.35	45.5%	3.21	76.3%	0.18
Black nonhispanic	18.3	2.16	11.1	0.11	21.3	2.61	11.0	0.03
Hispanic	15.3	1.55	7.6	0.09	25.5	3.26	8.3	0.03
Other	3.4	0.74	2.6	0.35	7.7	1.82	4.5	0.18
Highest Education Obtained								
< High School	16.1%	2.13	15.7%	0.88	60.8%	2.94	15.7%	0.34
HS diploma/equivalent	66.5	2.58	60.7	1.06	37.6	3.00	54.5	0.42
Associate degree	3.6	0.82	2.8	0.28	1.6	0.70	5.3	0.20
Bachelor degree +	13.8	1.57	20.9	0.77	0.0	0.00	24.5	0.29
Years of Education								
Mean	12.8	0.13	12.9	0.06	10.4	0.17	12.9	0.02
Marital Status								
Ever married	59.1%	2.46	79.8%	0.76	50.5%	3.28	79.6%	0.29
Never married	40.9	2.46	20.2	0.76	49.5	3.28	20.4	0.29
Census Region								
Northeast	20.7%	2.24	20.9%	0.08	21.3%	2.53	20.4%	0.03
North Central	23.9	2.83	24.1	0.09	19.4	2.95	24.0	0.04
South	29.0	2.39	34.2	0.12	37.8	3.31	34.3	0.05
West	26.4	2.03	20.8	0.10	21.5	2.78	21.2	0.03
Urban Status								
MSA	80.4%	1.90	75.6%	1.31	78.2%	3.11	75.2%	0.06
Non-MSA	19.6	1.90	24.4	1.31	21.8	3.11	24.8	0.06
Age								
16 - 19	13.0%	1.97	3.4%	0.27	20.4%	2.37	2.3%	0.09
20 - 24	20.2	1.81	8.6	0.44	26.3	2.85	9.5	0.20
25 - 34	31.4	2.06	26.0	0.90	22.0	2.46	21.3	0.29
35 - 44	20.7	2.21	21.2	0.67	20.8	3.11	22.3	0.29
45 - 54	8.9	1.09	13.9	1.04	8.1	1.61	16.8	0.51
55 - 64	4.2	0.87	11.0	0.62	2.1	1.02	11.5	0.24
65 +	1.6	0.40	15.9	0.81	0.4	0.22	16.3	0.36
Mean	31.9	0.56	43.5	0.18	29.4	0.74	44.6	0.08
Employment Status								
Employed	74.7%	2.18	63.6%	1.20	57.4%	3.07	62.2%	0.41
Unemployed	9.6	1.83	5.4	0.56	16.9	2.25	4.0	0.19
Not in labor force	15.7	1.67	31.0	1.14	25.7	2.99	33.8	0.39
Annual Earnings								
Mean	$18,759	778.20	$21,459	342.67	$14,155	679.69	$28,110	185.14

Table 3
(Continued)

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Industry of Employment[a]	(95.3%)		(93.9%)		(69.4%)		(69.6%)	
Agriculture, farming, fishing	0.5%	0.26	3.1%	0.53	2.3%	0.97	2.5%	0.15
Mining	0.1	0.10	0.7	0.15	0.1	0.13	0.4	0.06
Construction	5.5	1.09	5.1	0.47	6.3	2.11	5.5	0.27
Manufacturing	19.5	2.26	17.3	0.82	18.8	2.65	15.0	0.43
TCPU[a]	5.6	0.86	6.5	0.72	4.7	1.68	6.4	0.20
Wholesale trade	1.9	0.83	2.0	0.30	2.3	1.24	1.8	0.14
Retail trade	18.3	2.57	14.2	0.75	26.8	3.61	15.3	0.38
FIRE[a]	6.7	1.06	6.0	0.53	1.4	0.90	5.7	0.24
Services, exc. health & education	13.4	1.45	17.9	0.70	19.9	2.90	19.1	0.42
Health services	10.3	1.16	9.2	0.51	7.7	2.49	8.4	0.29
Education	12.7	1.40	9.5	0.60	4.0	2.19	8.8	0.28
Public administration	4.2	0.83	6.3	0.56	3.2	1.35	5.9	0.24
Non-classifiable	1.4	0.57	2.3	0.34	2.5	0.84	5.0	0.21
Occupation of Employment[b]	(95.3%)		(93.9%)		(69.4%)		(69.6%)	
Business, Management	6.7%	1.37	8.2%	0.53	0.0%	0.00	9.9%	0.29
Teacher	8.4	1.15	5.8	0.41	0.0	0.00	5.1	0.21
Engineer	1.8	0.60	1.7	0.24	0.0	0.00	1.3	0.12
Health professional	2.7	0.69	3.4	0.28	0.1	0.12	2.4	0.13
Other professionals	2.1	0.47	5.1	0.38	0.2	0.18	4.7	0.20
Non-computer technicians	5.0	0.88	2.5	0.24	0.7	0.49	4.0	0.19
Administrative support	16.8	1.67	19.0	0.80	14.6	3.12	17.4	0.36
Mechanical operator/laborer	26.1	2.54	27.2	1.15	39.4	3.86	24.5	0.46
Sales	9.4	1.61	11.0	0.66	13.0	2.33	13.8	0.32
Services	20.4	2.25	14.9	0.82	31.2	3.87	15.2	0.42
Miscellaneous occupations	0.7	0.34	1.3	0.29	0.8	0.40	1.8	0.13
Household Income								
$5,000 or less	7.6%	1.19	5.6%	0.56	17.5%	2.38	6.7%	0.25
$5,001 - $10,000	9.3	1.71	9.5	0.56	19.4	3.33	9.3	0.25
$10,001 - $15,000	7.3	0.97	8.6	0.69	12.3	1.93	7.1	0.23
$15,001 - $20,000	8.5	1.34	8.9	0.55	7.7	1.61	6.9	0.22
$20,001 - $25,000	7.6	1.17	8.9	0.60	6.9	1.54	7.3	0.24
$25,001 - $30,000	12.0	1.30	9.9	0.58	9.1	2.03	8.6	0.24
$30,001 - $40,000	14.8	2.07	14.4	0.57	10.7	2.00	15.1	0.32
$40,001 - $50,000	12.4	1.68	11.7	0.56	6.1	1.63	10.8	0.26
$50,001 - $75,000	14.3	2.06	13.5	0.64	4.6	0.98	15.4	0.34
$75,000 or more	6.2	0.93	9.2	0.49	5.6	1.47	12.8	0.27
Population (in 000s)	5,244	299.66	182,000	499.98	2,240	149.73	189,600	153.04

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weight. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Industry of most recent employment in last 12 months for 1995 NHES. Industry of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data. TCPU -- Transportation, communications, and public utilities. FIRE -- Finance, insurance, and real estate.

[b] Occupation of most recent employment in last 12 months for 1995 NHES. Occupation of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data.

Table 4

Providers of and Courses Taken in Basic Skills Education, 1991 and 1995[a]

Provider/Course	1991		1995	
	Participants	S.E.	Participants	S.E.
Percent Receiving Education from Following Type of Provider:	(19.0%)[b]			
Elementary, junior high, high school, adult learning center	17.3%	3.60	50.7%	2.93
2-year community college, technical institute, public vo-tech	29.5%	4.73	21.1%	2.93
4-year college/university	12.7%	4.40	6.1%	1.23
Private vocational, trade, business, hospital, or flight school	10.6%	3.35	1.8%	0.51
Business, industry	6.6%	2.04	1.5%	0.52
Professional association, labor union	0.4%	0.43	0.5%	0.28
Governmental agency (incl. libraries)	11.4%	3.33	11.2%	2.06
Tutor, private instructor	4.9%	2.03	1.8%	0.95
Private community organization, church	8.1%	5.99	2.5%	0.63
Other	0.8%	0.58	2.9%	1.28
Percentage of Participants Reporting at least One Course in:	(19.5%)[b]		NA	
Agriculture	0.0%	0.00		
Liberal arts	18.3%	4.16		
Social science, communications, law, public administration	3.7%	1.28		
Business	7.2%	3.22		
Computer science/systems	1.1%	0.61		
Education	1.5%	0.77		
Engineering	1.1%	0.79		
Vocational/personal services	2.9%	2.45		
Science and math	31.2%	5.18		
Self-help/interpretation, arts, phys. ed.	0.0%	0.00		
Health	0.6%	0.56		
Religion and philosophy	0.0%	0.00		
Basic education	45.6%	6.88		
Interdisciplinary	1.2%	0.73		
Indeterminable	2.3%	1.43		
Mean Number of Courses Taken:	1.30	0.07	NA	
Percentage of Courses Taken by Participants:			NA	
Agriculture	0.0%	0.00		
Liberal arts	17.8	4.10		
Social science, communications, law, public administration	3.4	1.18		
Business	5.6	2.52		
Computer science/systems	0.8	0.47		
Education	1.2	0.59		
Engineering	1.3	0.93		
Vocational/personal services	2.2	1.87		
Science and math	26.5	3.93		
Self-help/interpretation, arts, phys. ed.	0.0	0.00		
Health	0.4	0.43		
Religion and philosophy	0.0	0.00		
Basic education	38.1	5.57		
Interdisciplinary	1.0	0.57		
Indeterminable	1.9	1.17		

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weights. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Columns with all entries followed by % sign indicate that respondent may have had multiple responses. Therefore, column sums to number > 100.0.

[b] Entries in ( ) represent percent of responses for which course could be identified as basic skills.

Table 5

Characteristics of Participants in Part-Time Higher Education, 1991 and 1995

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Sex								
Male	43.9%	1.60	45.2%	0.98	43.8%	1.31	47.6%	0.05
Female	56.1	1.60	54.8	0.98	56.2	1.31	52.4	0.05
Race/Ethnicity								
White nonhispanic	79.9%	1.60	78.7%	0.35	75.3%	1.48	76.3%	0.18
Black nonhispanic	9.1	1.00	11.1	0.11	13.1	1.07	11.0	0.03
Hispanic	8.0	1.22	7.6	0.09	6.5	0.63	8.3	0.03
Other	3.0	0.57	2.6	0.35	5.1	0.59	4.5	0.18
Highest Education Obtained								
< High School	4.2%	0.60	15.8%	0.88	1.3%	0.32	15.7%	0.34
HS diploma/equivalent	62.1	1.43	60.7	1.06	58.3	1.55	54.5	0.42
Associate degree	4.8	0.61	2.8	0.28	9.4	0.79	5.3	0.20
Bachelor degree +	28.9	1.40	20.9	0.77	31.0	1.27	24.5	0.29
Years of Education								
Mean	14.1	0.07	12.9	0.06	14.0	0.06	12.9	0.02
Marital Status								
Ever married	70.9%	1.60	79.8%	0.76	63.9%	1.37	79.6%	0.29
Never married	29.1	1.60	20.2	0.76	36.1	1.37	20.4	0.29
Census Region								
Northeast	19.5%	1.43	20.9%	0.08	20.6%	1.13	20.4%	0.03
North Central	24.1	1.33	24.1	0.09	24.6	1.00	24.0	0.04
South	32.1	1.95	34.2	0.12	32.4	1.69	34.3	0.05
West	24.3	1.69	20.8	0.10	22.4	1.21	21.2	0.03
Urban Status								
MSA	80.6%	1.47	75.6%	1.31	80.2%	1.59	75.2%	0.06
Non-MSA	19.4	1.47	24.4	1.31	19.8	1.59	24.8	0.06
Age								
16 - 19	4.5%	0.78	3.4%	0.27	3.6%	0.52	2.3%	0.09
20 - 24	15.3	1.12	8.6	0.44	20.9	1.00	9.5	0.20
25 - 34	35.9	1.50	26.0	0.90	32.7	1.41	21.3	0.29
35 - 44	28.3	1.41	21.2	0.67	26.8	1.24	22.3	0.29
45 - 54	10.4	0.81	13.9	1.04	13.5	0.96	16.8	0.51
55 - 64	4.2	0.78	11.0	0.62	2.1	0.46	11.5	0.24
65 +	1.5	0.29	15.9	0.81	0.4	0.16	16.3	0.36
Mean	34.4	0.43	43.5	0.18	33.4	0.29	44.6	0.08
Employment Status								
Employed	86.5%	1.10	63.6%	1.20	84.1%	1.11	62.2%	0.41
Unemployed	4.6	0.78	5.4	0.56	3.6	0.56	4.0	0.19
Not in labor force	8.9	0.69	31.0	1.14	12.3	0.96	33.8	0.39
Annual Earnings								
Mean	$23,679	342.67	$21,459	540.64	$26,652	487.24	$28,110	185.14

Table 5
(Continued)

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Industry of Employment[a]	(98.5%)		(93.9%)		(92.3%)		(69.6%)	
Agriculture, farming, fishing	0.7%	0.20	3.1%	0.53	0.5%	0.18	2.5%	0.15
Mining	0.3	0.11	0.7	0.15	0.1	0.09	0.4	0.06
Construction	3.6	0.78	5.1	0.47	2.6	0.50	5.5	0.27
Manufacturing	12.6	0.95	17.3	0.82	12.7	0.93	15.0	0.43
TCPU[a]	5.6	0.62	6.5	0.72	5.6	0.71	6.4	0.20
Wholesale trade	1.5	0.56	2.0	0.30	1.4	0.31	1.8	0.14
Retail trade	13.0	1.31	14.2	0.75	14.0	1.45	15.3	0.38
FIRE[a]	8.8	0.75	6.0	0.53	7.0	0.63	5.7	0.24
Services, exc. health & education	17.4	1.45	17.9	0.70	19.8	1.21	19.1	0.42
Health services	13.0	0.87	9.2	0.51	10.2	0.66	8.4	0.29
Education	14.2	0.83	9.5	0.60	13.8	1.02	8.8	0.28
Public administration	8.0	0.68	6.3	0.56	7.8	0.77	5.9	0.24
Non-classifiable	1.3	0.28	2.3	0.34	4.5	0.60	5.0	0.21
Occupation of Employment[b]	(98.5%)		(93.9%)		(92.3%)		(69.6%)	
Business, Management	11.8%	1.16	8.2%	0.53	9.0%	0.84	9.9%	0.29
Teacher	10.8	0.75	5.8	0.41	8.9	0.74	5.1	0.21
Engineer	2.1	0.30	1.7	0.24	2.3	0.41	1.3	0.12
Health professional	6.7	0.51	3.4	0.28	2.4	0.43	2.4	0.13
Other professionals	6.5	1.21	5.1	0.38	5.7	0.69	4.7	0.20
Non-computer technicians	4.2	0.44	2.5	0.24	6.5	0.70	4.0	0.19
Administrative support	16.7	0.90	19.0	0.80	20.5	1.09	17.4	0.36
Mechanical operator/laborer	17.3	1.57	27.2	1.15	14.5	1.11	24.5	0.46
Sales	9.1	0.63	11.0	0.66	11.5	1.28	13.8	0.32
Services	14.0	1.19	14.9	0.82	16.9	1.14	15.2	0.42
Miscellaneous occupations	0.6	0.23	1.3	0.29	1.7	0.35	1.8	0.13
Household Income								
$5,000 or less	2.3%	0.40	5.6%	0.56	3.6%	0.51	6.7%	0.28
$5,001 - $10,000	5.0	0.63	9.5	0.56	6.1	0.75	9.3	0.28
$10,001 - $15,000	6.6	1.25	8.6	0.69	4.7	0.54	7.1	0.23
$15,001 - $20,000	6.1	0.73	8.9	0.55	6.1	0.61	6.9	0.23
$20,001 - $25,000	7.0	0.77	8.9	0.60	5.7	0.64	7.3	0.24
$25,001 - $30,000	10.3	0.90	9.9	0.58	9.3	0.98	8.6	0.34
$30,001 - $40,000	18.3	1.29	14.4	0.57	17.0	1.31	15.1	0.32
$40,001 - $50,000	16.5	1.32	11.7	0.56	12.1	0.85	10.8	0.26
$50,001 - $75,000	18.1	1.24	13.5	0.64	19.2	1.15	15.4	0.34
$75,000 or more	9.9	0.75	9.2	0.49	16.3	1.12	12.8	0.27
Population (in 000s)	15,590	536.57	182,000	499.98	11,550	305.50	189,600	153.04

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weight. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Industry of most recent employment in last 12 months for 1995 NHES. Industry of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data. TCPU -- Transportation, communications, and public utilities. FIRE -- Finance, insurance, and real estate.

[b] Occupation of most recent employment in last 12 months for 1995 NHES. Occupation of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data.

Table 6

Providers of and Courses Taken in Part-Time Higher Education, 1991 and 1995[a]

Provider/Course	1991		1995	
	Participants	S.E.	Participants	S.E.
Percent Receiving Education from Following Type of Provider:	(92.5%)[b]			
Elementary, junior high, high school, adult learning center	3.8%	0.54	2.3%	0.34
2-year community college, technical institute, public vo-tech	26.3%	1.61	38.0%	1.43
4-year college/university	29.8%	1.07	46.6%	1.48
Private vocational, trade, business, hospital, or flight school	9.8%	0.81	6.2%	0.72
Business, industry	18.9%	1.79	5.3%	0.57
Professional association, labor union	9.1%	1.00	1.9%	0.40
Governmental agency (incl. libraries)	9.4%	0.84	3.5%	0.57
Tutor, private instructor	1.6%	0.60	0.1%	0.08
Private community organization, church	3.9%	0.45	0.9%	0.24
Other	0.3%	0.10	0.8%	0.19
Percentage of Participants Reporting at least One Course in:	(94.3%)[b]			
Agriculture	2.1%	1.17	0.8%	0.21
Liberal arts	11.1%	1.01	17.0%	0.96
Social science, communications, law, public administration	21.2%	1.00	29.7%	1.40
Business	25.9%	1.64	25.5%	1.12
Computer science/systems	7.8%	0.76	13.0%	0.85
Education	9.0%	0.75	10.3%	0.69
Engineering	5.0%	0.56	5.1%	0.56
Vocational/personal services	14.6%	1.47	12.1%	1.02
Science and math	13.1%	0.80	23.9%	1.18
Self-help/interpretation, arts, phys. ed.	8.0%	0.84	6.9%	0.70
Health	16.1%	1.03	10.8%	1.23
Religion and philosophy	2.9%	0.33	4.3%	0.54
Basic education	3.3%	0.53	1.2%	0.31
Interdisciplinary	1.3%	0.27	3.2%	0.44
Indeterminable	2.0%	0.31	5.2%	0.59
Mean Number of Courses Taken:	2.43	0.08	2.82	0.06
Percentage of Courses Taken by Participants:				
Agriculture	1.0%	0.49	0.5%	0.15
Liberal arts	6.1	0.70	7.8	0.51
Social science, communications, law, public administration	17.3	1.85	18.4	1.00
Business	18.6	1.29	18.6	1.17
Computer science/systems	4.9	0.61	6.9	0.60
Education	8.1	0.79	7.8	0.73
Engineering	3.1	0.38	3.0	0.41
Vocational/personal services	9.3	0.83	6.9	0.67
Science and math	7.5	0.51	13.5	0.77
Self-help/interpretation, arts, phys. ed.	4.4	0.61	3.4	0.42
Health	14.5	1.40	6.4	1.19
Religion and philosophy	1.8	0.34	2.2	0.28
Basic education	1.5	0.23	0.4	0.11
Interdisciplinary	0.8	0.26	1.2	0.17
Indeterminable	1.0	0.15	2.6	0.42

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weights. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Columns with all entries followed by % sign indicate that respondent may have had multiple responses. Therefore, column sums to number > 100.0.

[b] Entries in ( ) represent percent of responses for which course could be identified as higher education.

Table 7

Characteristics of Participants in Job- or Career-Related Education or Training, 1991 and 1995

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Sex								
Male	49.6%	1.32	45.2%	0.98	49.5%	0.83	47.6%	0.05
Female	50.4	1.32	54.8	0.98	50.5	0.83	52.4	0.05
Race/Ethnicity								
White nonhispanic	85.3%	1.01	78.7%	0.35	83.1%	0.57	76.3%	0.18
Black nonhispanic	7.3	0.78	11.1	0.11	8.5	0.37	11.0	0.03
Hispanic	5.6	0.62	7.6	0.09	4.7	0.28	8.3	0.03
Other	1.9	0.26	2.6	0.35	3.7	0.31	4.5	0.18
Highest Education Obtained								
< High School	4.2%	0.84	15.6%	0.88	2.7%	0.29	15.7%	0.34
HS diploma/equivalent	50.3	1.57	60.7	1.06	44.8	0.83	54.5	0.42
Associate degree	5.0	0.48	2.8	0.28	8.1	0.43	5.3	0.20
Bachelor degree +	40.5	1.48	20.9	0.75	44.4	0.83	24.5	0.29
Years of Education								
Mean	14.5	0.09	12.9	0.06	14.5	0.04	12.9	0.02
Marital Status								
Ever married	83.0%	0.98	79.8%	0.76	81.4%	0.58	79.6%	0.29
Never married	17.0	0.98	20.2	0.76	18.6	0.58	20.4	0.29
Census Region								
Northeast	21.1%	1.15	20.9%	0.08	20.4%	0.69	20.4%	0.03
North Central	23.8	1.22	24.1	0.09	24.2	0.67	24.0	0.04
South	31.9	1.56	34.2	0.12	33.8	0.75	34.3	0.05
West	23.2	1.43	20.8	0.10	21.6	0.66	21.2	0.03
Urban Status								
MSA	78.9%	1.66	75.6%	1.31	78.8%	0.75	75.2%	0.06
Non-MSA	21.1	1.66	24.4	1.31	21.2	0.75	24.8	0.06
Age								
16 - 19	1.8%	0.31	3.4%	0.27	1.2%	0.14	2.3%	0.09
20 - 24	7.4	0.57	8.6	0.48	7.1	0.39	9.5	0.20
25 - 34	31.8	1.52	26.0	0.90	26.2	0.73	21.3	0.29
35 - 44	32.1	1.55	21.2	0.67	32.1	0.73	22.3	0.29
45 - 54	16.6	1.07	13.9	1.04	23.8	0.84	16.8	0.51
55 - 64	8.1	1.00	11.0	0.62	7.8	0.43	11.5	0.24
65 +	2.2	0.41	15.9	0.81	1.8	0.20	16.3	0.36
Mean	38.5	0.36	43.5	0.18	39.6	0.18	44.6	0.08
Employment Status								
Employed	90.9%	1.21	63.6%	1.20	92.3%	0.40	62.2%	0.41
Unemployed	2.7	0.74	5.4	0.56	2.1	0.26	4.0	0.19
Not in labor force	6.4	0.92	31.0	1.14	5.6	0.31	33.8	0.39
Annual Earnings								
Mean	$29,130	685.04	$21,459	342.67	$34,871	344.77	$28,110	185.14

Table 7
(Continued)

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Industry of Employment[a]	(99.4%)		(95.9%)		(97.1%)		(69.6%)	
Agriculture, farming, fishing	1.5%	0.62	3.1%	0.53	1.3%	0.16	2.5%	0.15
Mining	0.9	0.43	0.7	0.15	0.4	0.12	0.4	0.06
Construction	3.2	0.48	5.1	0.47	3.4	0.33	5.5	0.27
Manufacturing	15.7	1.16	17.3	0.82	11.5	0.56	15.0	0.43
TCPU[a]	6.8	0.81	6.5	0.72	6.9	0.41	6.4	0.20
Wholesale trade	1.9	0.38	2.0	0.30	0.9	0.14	1.8	0.14
Retail trade	9.3	0.63	14.2	0.75	7.1	0.41	15.3	0.38
FIRE[a]	9.2	0.88	6.0	0.53	9.2	0.52	5.7	0.24
Services, exc. health & education	17.1	1.17	17.9	0.70	19.1	0.58	19.1	0.42
Health services	12.3	0.99	9.2	0.51	13.1	0.55	8.4	0.29
Education	12.1	0.75	9.5	0.60	12.6	0.51	8.8	0.28
Public administration	8.3	0.70	6.3	0.56	9.2	0.40	5.9	0.24
Non-classifiable	1.8	0.45	2.3	0.34	5.2	0.35	5.0	0.21
Occupation of Employment[b]	(99.4%)		(93.9%)		(97.1%)		(69.6%)	
Business, Management	14.1%	1.04	8.2%	0.53	14.3%	0.62	9.9%	0.29
Teacher	9.4	0.65	5.8	0.41	8.7	0.44	5.1	0.21
Engineer	4.1	0.69	1.7	0.24	2.0	0.23	1.3	0.12
Health professional	6.7	0.54	3.4	0.28	5.8	0.35	2.4	0.13
Other professionals	10.0	0.87	5.1	0.38	7.7	0.38	4.7	0.20
Non-computer technicians	4.4	0.40	2.5	0.24	5.9	0.40	4.0	0.19
Administrative support	15.6	1.04	19.0	0.80	17.2	0.78	17.4	0.36
Mechanical operator/laborer	17.3	1.18	27.2	1.15	14.4	0.70	24.5	0.46
Sales	10.0	0.81	11.0	0.66	10.9	0.54	13.8	0.32
Services	7.7	0.90	14.9	0.82	10.9	0.51	15.2	0.42
Miscellaneous occupations	0.7	0.31	1.3	0.29	2.1	0.20	1.8	0.13
Household Income								
$5,000 or less	1.2%	0.22	5.6%	0.56	1.3%	0.21	6.7%	0.25
$5,001 - $10,000	3.6	0.75	9.5	0.56	3.0	0.29	9.3	0.25
$10,001 - $15,000	4.5	0.69	8.6	0.69	3.0	0.28	7.1	0.23
$15,001 - $20,000	4.9	0.55	8.9	0.55	4.3	0.27	6.9	0.22
$20,001 - $25,000	7.1	0.81	8.9	0.60	4.6	0.31	7.3	0.24
$25,001 - $30,000	9.3	0.75	9.9	0.58	7.1	0.40	8.6	0.24
$30,001 - $40,000	16.0	1.21	14.4	0.57	15.9	0.69	15.1	0.32
$40,001 - $50,000	16.7	1.10	11.7	0.56	13.9	0.55	10.8	0.26
$50,001 - $75,000	21.1	1.11	13.5	0.64	24.1	0.67	15.4	0.34
$75,000 or more	15.8	1.36	9.2	0.49	22.8	0.59	12.8	0.27
Population (in 000s)	35,240	1008.54	182,000	499.98	39,700	690.83	189,600	153.04

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weight. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Industry of most recent employment in last 12 months for 1995 NHES. Industry of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data. TCPU -- Transportation, communications, and public utilities. FIRE -- Finance, insurance, and real estate.

[b] Occupation of most recent employment in last 12 months for 1995 NHES. Occupation of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data.

Table 8

Providers of and Courses Taken in Job- or Career-Related Education or Training, 1991 and 1995[a]

Provider/Course	1991		1995[c]	
	Participants	S.E.	Participants	S.E.
Percent Receiving Education or Training from Following Type of Provider:	(98.7%)[b]			
Elementary, junior high, high school, adult learning center	4.8%	0.50	5.5%	0.35
2-year community college, technical institute, public vo-tech	8.8%	0.68	8.6%	0.41
4-year college/university	10.1%	0.86	12.4%	0.51
Private vocational, trade, business, hospital, or flight school	9.0%	0.72	10.0%	0.48
Business, industry	44.7%	1.63	48.0%	0.87
Professional association, labor union	14.4%	1.24	15.5%	0.49
Governmental agency (incl. libraries)	15.4%	1.12	17.3%	0.54
Tutor, private instructor	4.6%	0.63	2.3%	0.37
Private community organization, church	6.2%	0.78	4.5%	0.32
Other	1.1%	0.37	2.5%	0.23
Percentage of Participants Reporting at least One Course in:	(99.4%)[b]			
Agriculture	2.1%	0.77	2.3%	0.27
Liberal arts	3.4%	0.30	3.2%	0.32
Social science, communications, law, public administration	10.2%	0.71	11.5%	0.44
Business	37.1%	1.44	39.4%	0.68
Computer science/systems	13.9%	0.74	22.0%	0.62
Education	6.7%	0.61	7.5%	0.40
Engineering	7.0%	1.03	6.5%	0.36
Vocational/personal services	14.6%	1.14	16.3%	0.70
Science and math	2.3%	0.49	1.9%	0.22
Self-help/interpretation, arts, phys. ed.	7.9%	0.48	7.6%	0.39
Health	15.9%	1.20	20.1%	0.57
Religion and philosophy	2.2%	0.63	1.3%	0.15
Basic education	2.3%	0.56	0.7%	0.14
Interdisciplinary	0.6%	0.10	0.9%	0.13
Indeterminable	2.9%	0.46	4.1%	0.33
Mean Number of Courses Taken:	2.28	0.07	2.45	0.02
Percentage of Courses Taken by Participants:				
Agriculture	1.3%	0.37	1.4%	0.20
Liberal arts	2.0	0.17	1.5	0.01
Social science, communications, law, public administration	8.2	0.67	8.3	0.40
Business	28.9	1.44	28.4	0.56
Computer science/systems	9.1	0.68	13.4	0.46
Education	6.8	1.17	6.8	0.44
Engineering	5.1	0.94	3.6	0.24
Vocational/personal services	11.0	1.09	10.6	0.52
Science and math	1.8	0.60	1.2	0.15
Self-help/interpretation, arts, phys. ed.	4.8	0.42	4.1	0.25
Health	16.8	0.99	17.1	0.62
Religion and philosophy	1.3	0.32	0.9	0.16
Basic education	1.3	0.25	0.3	0.06
Interdisciplinary	0.3	0.06	0.4	0.06
Indeterminable	1.7	0.31	2.0	0.17

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weights. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Columns with all entries followed by % sign indicate that respondent may have had multiple responses. Therefore, column sums to number > 100.0.

[b] Entries in ( ) represent percent of responses for which course could be identified as job- or career-related education or training.

[c] For 1995 NHES, provider information refers to programs leading to credential; course information refers to courses.

Table 9
Characteristics of Participants in Formal Apprenticeships, 1995

Characteristic	1995			
	Participants	S.E.	Total population	S.E.
Sex				
Male	73.7%	3.18	47.6%	0.05
Female	26.3	3.18	52.4	0.05
Race/Ethnicity				
White nonhispanic	59.5%	3.70	76.3%	0.18
Black nonhispanic	16.0	2.23	11.0	0.03
Hispanic	13.6	1.94	8.3	0.03
Other	10.9	2.57	4.5	0.18
Highest Education Obtained				
< High School	11.4%	2.88	15.7%	0.34
HS diploma/equivalent	71.7	3.41	54.5	0.42
Associate degree	6.5	1.70	5.3	0.20
Bachelor degree +	10.4	2.20	24.5	0.29
Years of Education				
Mean	12.4	0.20	12.9	0.02
Marital Status				
Ever married	43.5%	3.55	79.6%	0.29
Never married	56.5	3.55	20.4	0.29
Census Region				
Northeast	15.3%	2.92	20.4%	0.03
North Central	19.1	2.95	24.0	0.04
South	37.2	3.64	34.3	0.05
West	28.4	3.11	21.2	0.03
Urban Status				
MSA	77.0%	3.58	75.2%	0.06
Non-MSA	23.0	3.58	24.8	0.06
Age				
16 - 19	7.4%	1.65	2.3%	0.09
20 - 24	26.6	2.96	9.5	0.20
25 - 34	34.6	3.53	21.3	0.29
35 - 44	21.7	3.03	22.3	0.29
45 - 54	6.6	1.71	16.8	0.51
55 - 64	3.0	0.99	11.5	0.24
65 +	0.1	0.14	16.3	0.36
Mean	30.5	0.62	44.6	0.08
Employment Status				
Employed	82.6%	3.60	62.2%	0.41
Unemployed	8.2	2.97	4.0	0.19
Not in labor force	9.2	2.00	33.8	0.39
Annual Earnings				
Mean	$22,714	1000.12	$28,110	185.14

Table 9
(Continued)

Characteristic	1995			
	Participants	S.E.	Total population	S.E.
Industry of Most Recent Employment in Last 12 Months	(93.7%)[b]		(69.6%)[b]	
Agriculture, farming, fishing	1.6%	1.52	2.5%	0.15
Mining	0.0	0.00	0.4	0.06
Construction	18.3	2.97	5.5	0.27
Manufacturing	17.2	2.28	15.0	0.43
TCPU[a]	6.6	1.75	6.4	0.20
Wholesale trade	1.2	0.76	1.8	0.14
Retail trade	9.4	2.25	15.3	0.38
FIRE[a]	3.4	1.08	5.7	0.24
Services, exc. health & education	21.5	2.70	19.1	0.42
Health services	5.8	1.61	8.4	0.29
Education	1.7	0.78	8.8	0.28
Public administration	7.2	1.82	5.9	0.24
Non-classifiable	6.1	1.94	5.0	0.21
Occupation of Most Recent Employment in Last 12 Months	(93.7%)[b]		(69.6%)[b]	
Business, Management	2.3%	0.82	9.9%	0.29
Teacher	0.6	0.40	5.1	0.21
Engineer	0.9	0.59	1.3	0.12
Health professional	0.6	0.34	2.4	0.13
Other professionals	3.3	1.29	4.7	0.20
Non-computer technicians	1.4	0.71	4.0	0.19
Administrative support	8.5	2.10	17.4	0.36
Mechanical operator/laborer	52.6	3.37	24.5	0.46
Sales	9.3	1.96	13.8	0.32
Services	16.0	2.32	15.2	0.42
Miscellaneous occupations	4.6	1.74	1.8	0.13
Household Income				
$5,000 or less	6.7%	1.84	6.7%	0.25
$5,001 - $10,000	8.1	2.24	9.3	0.25
$10,001 - $15,000	7.0	1.68	7.1	0.23
$15,001 - $20,000	9.4	2.08	6.9	0.22
$20,001 - $25,000	6.8	1.85	7.3	0.24
$25,001 - $30,000	10.2	1.87	8.6	0.24
$30,001 - $40,000	19.4	2.77	15.1	0.32
$40,001 - $50,000	9.5	2.05	10.8	0.26
$50,001 - $75,000	14.0	2.16	15.4	0.34
$75,000 or more	9.0	2.01	12.8	0.21
Population (in 000s)	2,136	173.99	189,600	153.04

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weight. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] TCPU -- Transportation, communications, and public utilities. FIRE -- Finance, insurance, and real estate.

[b] Entries in ( ) represent percent of sample with non-missing data.

Table 10
Characteristics of Participants in Structured Educational Activities, 1991 and 1995

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Sex								
Male	32.8%	2.08	45.2%	0.98	37.9%	0.69	47.6%	0.05
Female	67.2	2.08	54.8	0.98	62.1	0.69	52.4	0.05
Race/Ethnicity								
White nonhispanic	83.5%	2.09	78.7%	0.35	79.9%	0.71	76.3%	0.18
Black nonhispanic	7.9	1.46	11.1	0.11	10.4	0.62	11.0	0.03
Hispanic	5.7	1.34	7.6	0.09	5.7	0.35	8.3	0.03
Other	2.9	0.56	2.6	0.35	3.9	0.33	4.5	0.18
Highest Education Obtained								
< High School	8.5%	1.66	15.7%	0.88	5.9%	0.59	15.7%	0.34
HS diploma/equivalent	56.8	2.51	60.7	1.06	52.4	0.89	54.5	0.42
Associate degree	2.3	0.38	2.8	0.28	7.2	0.37	5.3	0.20
Bachelor degree +	32.4	2.48	20.9	0.77	34.5	0.79	24.5	0.29
Years of Education								
Mean	14.0	0.16	12.9	0.06	13.9	0.05	12.9	0.02
Marital Status								
Ever married	84.8%	1.19	79.8%	0.76	80.4%	0.73	79.6%	0.29
Never married	15.2	1.19	20.2	0.76	19.6	0.73	20.4	0.29
Census Region								
Northeast	20.2%	2.06	20.9%	0.08	18.2%	0.61	20.4%	0.03
North Central	22.6	1.67	24.1	0.09	24.2	0.66	24.0	0.04
South	30.1	2.81	34.2	0.12	32.5	0.84	34.3	0.05
West	27.1	2.19	20.8	0.10	25.1	0.62	21.2	0.03
Urban Status								
MSA	77.0%	2.33	75.6%	1.31	76.9%	0.79	75.2%	0.06
Non-MSA	23.0	2.33	24.4	1.31	23.1	0.79	24.8	0.06
Age								
16 - 19	3.5%	0.55	3.4%	0.27	2.6%	0.26	2.3%	0.09
20 - 24	5.7	0.75	8.6	0.44	10.2	0.57	9.5	0.20
25 - 34	22.1	2.15	26.0	0.90	23.8	0.74	21.3	0.29
35 - 44	26.8	2.57	21.2	0.67	25.6	0.61	22.3	0.29
45 - 54	13.7	1.22	13.9	1.04	17.3	0.70	16.8	0.51
55 - 64	11.1	1.03	11.0	0.62	9.4	0.46	11.5	0.24
65 +	17.1	2.15	15.9	0.81	11.1	0.71	16.3	0.36
Mean	44.7	0.76	43.5	0.18	42.0	0.37	44.6	0.08
Employment Status								
Employed	60.7%	2.57	63.6%	1.20	68.9%	0.81	62.2%	0.41
Unemployed	3.1	0.51	5.4	0.56	3.5	0.39	4.0	0.19
Not in labor force	36.2	2.61	31.0	1.14	27.6	0.74	33.8	0.39
Annual Earnings								
Mean	$21,924	751.32	$21,459	342.67	$28,757	416.63	$28,110	185.14

Table 10
(Continued)

Characteristic	1991				1995			
	Participants	S.E.	Total population	S.E.	Participants	S.E.	Total population	S.E.
Industry of Employment[a]	(98.0%)		(93.9%)		(77.0%)		(69.6%)	
Agriculture, farming, fishing	1.6%	0.38	3.1%	0.53	1.7%	0.25	2.5%	0.15
Mining	0.2	0.10	0.7	0.15	0.4	0.15	0.4	0.06
Construction	2.6	0.40	6.1	0.47	4.0	0.43	5.5	0.27
Manufacturing	15.2	1.89	17.3	0.82	10.7	0.55	15.0	0.43
TCPU[a]	4.5	0.64	6.5	0.72	6.8	0.52	6.4	0.20
Wholesale trade	1.7	0.37	2.0	0.30	1.3	0.22	1.8	0.14
Retail trade	15.9	2.09	14.2	0.75	12.4	0.75	15.3	0.38
FIRE[a]	5.3	0.56	6.0	0.53	6.2	0.51	5.7	0.24
Services, exc. health & education	17.6	1.55	17.9	0.70	21.8	0.83	19.1	0.42
Health services	12.8	1.80	9.2	0.51	11.3	0.56	8.4	0.29
Education	15.6	1.58	9.5	0.60	11.7	0.74	8.8	0.28
Public administration	6.6	0.90	6.3	0.56	7.2	0.48	5.9	0.24
Non-classifiable	0.5	0.14	2.3	0.34	4.6	0.41	5.0	0.21
Occupation of Employment[b]	(97.9%)		(93.9%)		(77.0%)		(69.6%)	
Business, Management	8.8%	1.14	8.2%	0.53	10.5%	0.64	9.9%	0.29
Teacher	9.5	1.10	5.8	0.41	8.0	0.53	5.1	0.21
Engineer	2.3	0.35	1.7	0.24	1.4	0.21	1.3	0.12
Health professional	7.2	1.68	3.4	0.28	3.3	0.29	2.4	0.13
Other professionals	7.2	0.74	5.1	0.38	6.3	0.45	4.7	0.20
Non-computer technicians	4.1	1.27	2.5	0.24	5.4	0.47	4.0	0.19
Administrative support	20.0	1.60	19.0	0.80	19.6	0.62	17.4	0.36
Mechanical operator/laborer	15.7	1.78	27.2	1.15	15.1	0.63	24.5	0.46
Sales	15.1	2.64	11.0	0.66	12.8	0.66	13.8	0.32
Services	9.8	1.05	14.9	0.82	15.8	0.81	15.2	0.42
Miscellaneous occupations	0.2	0.10	1.3	0.29	1.8	0.27	1.8	0.13
Household Income								
$5,000 or less	1.7%	0.41	5.6%	0.56	4.0%	0.47	6.7%	0.25
$5,001 - $10,000	5.3	1.00	9.5	0.56	6.2	0.54	9.3	0.25
$10,001 - $15,000	6.5	1.29	8.6	0.69	5.3	0.47	7.1	0.23
$15,001 - $20,000	6.7	1.05	8.9	0.55	5.5	0.43	6.9	0.22
$20,001 - $25,000	6.0	0.79	8.8	0.60	6.3	0.38	7.3	0.24
$25,001 - $30,000	10.3	0.96	9.9	0.58	8.4	0.47	8.6	0.24
$30,001 - $40,000	14.9	1.41	14.4	0.57	16.7	0.69	15.1	0.32
$40,001 - $50,000	16.5	2.06	11.7	0.56	12.2	0.60	10.8	0.26
$50,001 - $75,000	18.5	2.00	13.5	0.64	18.3	0.88	15.4	0.34
$75,000 or more	13.6	1.76	9.2	0.49	17.3	0.72	12.8	0.27
Population (in 000s)	12,620	535.14	182,000	499.98	37,640	629.28	189,600	153.04

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weight. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Industry of most recent employment in last 12 months for 1995 NHES. Industry of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data. TCPU -- Transportation, communications, and public utilities. FIRE -- Finance, insurance, and real estate.

[b] Occupation of most recent employment in last 12 months for 1995 NHES. Occupation of most recent employment for 1991 NHES. Entries in ( ) represent percent of sample with non-missing data.

Table 11

Providers of and Courses Taken in Structured Educational Activities, 1991 and 1995[a]

Provider/Course	1991		1995	
	Participants	S.E.	Participants	S.E.
Percent Receiving Education from Following Type of Provider:	(63.1%)[b]			
Elementary, junior high, high school, adult learning center	8.8%	1.57	8.1%	0.60
2-year community college, technical institute, public vo-tech	11.7%	1.58	8.0%	0.37
4-year college/university	8.2%	1.44	7.0%	0.42
Private vocational, trade, business, hospital, or flight school	5.7%	0.88	9.3%	0.68
Business, industry	7.2%	1.07	19.5%	0.73
Professional association, labor union	5.5%	2.15	4.2%	0.38
Governmental agency (incl. libraries)	9.4%	1.39	11.5%	0.54
Tutor, private instructor	9.6%	1.72	7.3%	0.52
Private community organization, church	44.6%	3.07	41.6%	1.17
Other	1.5%	0.45	2.5%	0.26
Percentage of Participants Reporting at least One Course in:	(64.0%)[b]			
Agriculture	1.5%	0.37	1.2%	0.18
Liberal arts	6.3%	1.30	2.8%	0.27
Social science, communications, law, public administration	7.8%	1.50	4.1%	0.34
Business	7.5%	1.16	5.3%	0.40
Computer science/systems	5.0%	1.15	3.4%	0.21
Education	2.5%	1.09	1.5%	0.19
Engineering	0.1%	0.08	1.1%	0.19
Vocational/personal services	13.3%	1.44	9.6%	0.58
Science and math	0.9%	0.28	1.0%	0.18
Self-help/interpretation, arts, phys. ed.	28.5%	2.20	36.1%	0.76
Health	11.0%	2.74	26.6%	0.84
Religion and philosophy	32.4%	3.30	32.2%	1.02
Basic education	0.8%	0.32	0.4%	0.10
Interdisciplinary	0.7%	0.22	0.5%	0.11
Indeterminable	1.8%	0.42	1.1%	0.16
Mean Number of Courses Taken:	1.49	0.06	1.77	0.03
Percentage of Courses Taken by Participants:				
Agriculture	1.2%	0.28	1.1%	0.19
Liberal arts	4.7	0.91	2.1	0.21
Social science, communications, law, public administration	6.8	1.24	3.5	0.30
Business	6.4	1.33	4.2	0.35
Computer science/systems	4.5	0.98	2.4	0.17
Education	1.0	0.76	1.3	0.17
Engineering	0.1	0.07	0.8	0.14
Vocational/personal services	11.0	1.17	7.6	0.50
Science and math	0.6	0.19	0.9	0.20
Self-help/interpretation, arts, phys. ed.	25.2	2.05	29.9	0.82
Health	8.8	1.93	19.9	0.64
Religion and philosophy	26.3	3.43	24.8	0.89
Basic education	0.5	0.23	0.3	0.06
Interdisciplinary	0.5	0.16	0.5	0.10
Indeterminable	1.5	0.35	0.9	0.14

Source: Unpublished tabulations of the 1991 and 1995 NHES.

Note: Entries are weighted by sampling weights. Columns may not add to 100.0 due to rounding. Standard errors (S.E.) calculated using replicate weights to account for stratified sample design.

[a] Columns with all entries followed by % sign indicate that respondent may have had multiple responses. Therefore, column sums to number > 100.0.

[b] Entries in ( ) represent percent of responses for which course could be identified as structured activities.

Table 12

Participants in, Courses/Programs Taken by Participants in, and Providers of Adult Education Activities, 1991 and 1995

	ESL	Basic Skills	P-T College	Job- or Career-related	Structured Activity	Unknown	Total Adult Education
			1991				
(1) Participants	1,517,000	5,244,000	15,590,000	35,240,000	12,620,000	NA	59,980,000
(2) Provided info. about courses	1,200,000	4,637,000	15,510,000	35,240,000	12,620,000	NA	56,050,000
(3) Total courses of this type with course code	435,400	1,331,000[a]	35,840,000[a]	80,270,000[a]	12,060,000[a]	7,187,000[a]	137,100,000[a]
(4) Total courses of this type that are (person-course code) unique	435,400	1,189,000	21,170,000	45,560,000	9,705,000	5,358,000	83,420,000
(5) Total participants who had at least one course of this type with a valid course code	395,800	1,021,000	14,770,000	35,240,000	8,073,000	4,572,000	55,410,000
(6) Total courses of this type with provider info.	407,400	1,291,000[a]	35,500,000[a]	79,410,000[a]	11,780,000[a]	6,249,000[a]	134,600,000[a]
(7) Total courses of this type that are (person-provider) unique	393,200	1,022,000	16,370,000	41,660,000	8,934,000	4,587,000	72,970,000
(8) Total participants who had at least one course of this type with valid provider info	373,000	998,300	14,490,000	34,990,000	7,962,000	4,223,000	54,780,000

Table 12
(Continued)

	ESL	Basic Skills	P-T College	Job- or Career-related	Apprenticeship	Structured Activity	Total Adult Ed.
			1995				
(1) Participants	1,301,000	2,240,000	11,550,000	39,700,000	2,136,000	37,640,000	75,930,000
(2) Provided info. about courses/programs	756,400	2,240,000	11,550,000	39,700,000	0	37,640,000	74,970,000
(3) Total courses of this type with course code	0	0	32,580,000 courses	97,450,000[a]	0	66,710,000[a]	196,700,000[a]
(4) Total courses of this type that are (person-code) unique	0	0	19,490,000 courses	57,700,000	0	47,780,000	125,000,000
(5) Total participants with at least one course with a valid course code	0	0	11,450,000	39,700,000	0	37,640,000	72,690,000
(6) Total courses/programs of this type with provider info	756,400	2,240,000	12,860,000 programs	450,000[a]	0	66,700,000[a]	179,700,000[a]
(7) Total courses/programs that are (person-provider) unique	756,400	2,240,000	12,190,000 programs	50,240,000	0	44,790,000	110,200,000
(8) Total participants with at least one course/program of this type with valid provider data	756,400	2,240,000	11,550,000	39,700,000	0	37,640,000	72,760,000

Source: Unpublished tabulations from 1991 and 1995 NHES. Entries are weighted by sampling weights.

[a] Includes course weights in addition to sampling weights.

Table 13
Percentage Distribution of Provider Types by Type of Adult Education Activity, 1991 and 1995
(Upper entry is 1991; lower entry is 1995)

Provider	Type of Training						Total
	ESL	Basic Skills	Part-Time College	Job- or Career-related	Structured Activity	Unknown	
Elementary, junior high, high school, adult learning center	24.4% 54.6%	16.9% 50.7%	3.3% 2.2%	4.0% 4.3%	7.9% 6.8%	9.9% --	5.0% 6.6%
2-yr community college, technical institution, public vo-tech school	29.9 7.2	28.8 21.1	23.2 36.0	7.3 6.8	10.4 6.6	19.4 --	12.5 10.3
4-yr college/university	8.8 0.8	12.4 6.1	26.5 44.1	8.6 9.8	7.3 5.9	10.8 --	12.6 11.8
Private vocational, trade, business, hospital, or flight school	1.9 3.4	10.3 1.8	8.7 5.9	7.6 7.9	5.1 7.8	5.1 --	7.4 7.5
Business/Industry	1.5 3.4	6.5 1.5	16.7 5.0	37.4 38.0	6.5 16.4	9.0 --	26.5 24.5
Professional association, labor union	2.1 0.1	0.4 0.5	8.1 1.8	12.1 12.2	4.9 3.5	3.4 --	9.6 7.2
Government agency (including libraries)	21.4 8.2	11.2 11.2	8.3 3.3	13.1 13.7	8.4 9.6	7.3 --	11.1 10.8
Tutor, private instructor	3.4 6.8	4.8 1.8	1.5 0.1	3.8 1.8	8.5 6.1	6.9 --	4.1 3.4
Private community organization, church	0.0 13.8	7.9 2.5	3.5 0.8	5.2 3.5	39.8 35.0	26.5 --	10.4 16.0
Other	6.7 1.8	0.8 2.9	0.3 0.8	1.0 1.9	1.3 2.1	1.8 --	0.9 1.9
TOTAL UNDUPLICATED COUNT OF PROVIDERS	393,200 756,400	1,022,000 2,240,000	16,370,000 12,190,000	41,660,000 50,240,000	8,934,000 44,790,000	4,587,000 --	72,970,000 110,200,000

Source: Unpublished tabulations from 1991 and 1995 NHES. Entries are weighted by sampling weights.

Table 14
Coefficient Estimates from a Model of Provider Choice, 1991

Characteristic	Provider Type				
	Elementary or secondary school	Postsecondary institution	Business/ industry/labor	Government	Other
Female	0.273***	0.096***	-0.222***	0.003	0.121***
	(0.059)	(0.033)	(0.033)	(0.044)	(0.042)
Minority	0.102	0.015	-0.119***	0.211***	-0.041
	(0.067)	(0.041)	(0.042)	(0.051)	(0.052)
Years of education	0.012	0.025***	-0.031***	0.025***	-0.014*
	(0.011)	(0.006)	(0.006)	(0.008)	(0.007)
Married	-0.035	-0.086**	0.049	0.055	0.037
	(0.064)	(0.038)	(0.039)	(0.051)	(0.048)
Children < 16	-0.181***	0.172***	-0.001	-0.090*	-0.118**
	(0.062)	(0.037)	(0.372)	(0.049)	(0.048)
South	-0.100*	-0.094***	-0.007	0.121***	0.096**
	(0.056)	(0.032)	(0.033)	(0.041)	(0.040)
MSA	0.028	-0.118***	0.141***	0.038	-0.054
	(0.063)	(0.038)	(0.039)	(0.048)	(0.045)
Employed	-0.282**	0.009	0.605***	0.201***	-0.672***
	(0.064)	(0.044)	(0.049)	(0.060)	(0.047)
Hours worked	-0.004*	-0.003**	0.014***	-0.004**	-0.012***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
Wages	-0.001	-0.004**	0.016***	-0.004	-0.016***
	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)
Household income class	-0.168	-0.030***	0.033***	-0.028***	0.019**
	(0.120)	(0.007)	(0.007)	(0.010)	(0.009)
Log-likelihood ratio	-1443	-4794	-4780	-2536	-2911
λ^2	224.7	629.5	638.6	345.4	-- [a]
Dependent variable mean	0.05	0.36	0.36	0.11	0.12

Source: Estimated with probit from 1991 National Household Education Survey observations with AEPARTIC=1. Sample size is 7,814.
Note: Age is entered in model in quartic form.
[a] Not estimated.
*** significant at the .01 level; ** significant at the .05 level; * significant at the .10 level.

Table 15
Coefficient Estimates from a Model of Provider Choice, 1995

Characteristic	Provider Type				
	Elementary or secondary school	Postsecondary institution	Business/ industry/labor	Government	Other
Female	0.237***	-0.013	-0.117***	-0.066*	0.136***
	(0.043)	(0.027)	(0.028)	(0.036)	(0.032)
Minority	0.136*	0.068	-0.245***	0.103*	0.159***
	(0.070)	(0.043)	(0.048)	(0.055)	(0.049)
Years of education	-0.037	0.074***	-0.025***	-0.014**	-0.033***
	(0.008)	(0.005)	(0.005)	(0.007)	(0.006)
Married	0.104**	-0.173***	0.015	0.011	0.199***
	(0.049)	(0.031)	(0.033)	(0.042)	(0.038)
Children < 18	0.042**	-0.047***	-0.023	0.054***	0.035**
	(0.019)	(0.013)	(0.013)	(0.016)	(0.015)
South	-0.159***	-0.017	-0.027	0.180***	0.003
	(0.044)	(0.028)	(0.028)	(0.035)	(0.032)
MSA	0.047	-0.006	0.039	-0.091**	-0.010
	(0.048)	(0.032)	(0.033)	(0.041)	(0.037)
Employed	-0.040	0.164***	0.062	0.067	-0.022
	(0.090)	(0.059)	(0.064)	(0.080)	(0.069)
Hours worked	0.002	-0.010***	0.012***	0.002	-0.007***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)
Wages	-0.007**	-0.004***	0.005***	-0.001	-0.001
	(0.003)	(0.001)	(0.001)	(0.002)	(0.001)
Household income class	-0.020***	-0.018	0.055***	0.004	-0.030***
	(0.007)	(0.005)	(0.005)	(0.007)	(0.006)
Log-likelihood ratio	2362	-6501	-6031	3351	-4424
λ^2	679.2	2145.1	1242.9	187.1	-- [a]
Dependent variable mean	0.07	0.42	0.28	0.09	0.13

Source: Estimated with probit from 1991 National Household Education Survey observations with AEPARTIC=1. Sample size is 11,119.

Note: Age is entered in model in quartic form. Language other than English spoken at home also in model.

[a] Not estimated.

*** significant at the .01 level; ** significant at the .05 level; * significant at the .10 level.

Table 16
Estimates of Annual Earnings Impacts of Participation in Adult Education, Males
(Standard errors in parentheses)

Type of Adult Education Activity	Model (1)	(2)	(3)	(4)	(5)
(1) Participated in any postsecondary education	-0.011 (0.073)				
(2) Participated in higher education		-0.169*** (0.027)	-0.162*** (0.027)	-0.262*** (0.031)	-0.209*** (0.030)
(3) Participated in postsecondary technical education		0.053* (0.031)	0.051 (0.038)	-0.029 (0.035)	0.012 (0.035)
(4) Participated in adult education		0.152*** (0.032)			
(5) Participated in work-related adult education			0.185*** (0.033)		
(6) Participated in adult education, not related to work			0.058 (0.038)		0.023 (0.034)
(7) Participated in ESL				-0.180* (0.094)	
(8) Participated in work-related ESL					-0.243 (0.224)
(9) Participated in basic skills				-0.096 (0.064)	
(10) Participated in work-related basic skills					0.031 (0.102)
(11) Participated in part-time college				0.213*** (0.032)	
(12) Participated in work-related part-time college					0.180*** (0.034)
(13) Participated in formal apprenticeship				0.050 (0.047)	0.058 (0.047)
(14) Participated in job- or career-related training				0.111*** (0.025)	0.139*** (0.034)
(15) Participated in structured activities				0.006 (0.023)	
(16) Participated in work-related structured activities					0.060* (0.034)

Table 16
(Continued)

Type of Adult Education Activity	Model (1)	(2)	(3)	(4)	(5)
Provider					
(17) Public school	0.002	-0.152***	-0.138**	-0.009	-0.081
	(0.084)	(0.055)	(0.055)	(0.052)	(0.053)
(18) Postsecondary institution	-0.066	-0.122***	-0.131***	-0.055*	-0.084**
	(0.074)	(0.038)	(0.038)	(0.032)	(0.035)
(19) Business, labor	0.185**	0.036	0.011	0.086***	0.053
	(0.074)	(0.037)	(0.037)	(0.032)	(0.035)
(20) Government	0.058	-0.085*	-0.098**	-0.014	-0.050
	(0.078)	(0.044)	(0.044)	(0.039)	(0.050)
(21) Other	0.014	-0.130***	-0.100**	-0.019	-0.050
	(0.078)	(0.045)	(0.046)	(0.039)	(0.043)
$\overline{R}^2$	0.337	0.345	0.347	0.351	0.348

Source: Estimated from observations with annual earnings in the 1995 National Household Education Survey. Sample size is 6,415.

Note: Table entries are coefficient estimates from weighted least squares regression of the log of annual earnings. Besides variables in the table, the independent variables included minority status, marital status, presence of children < 18, South Census region, home ownership status, MSA residence, years of education, a quartic in age, full-time student status, and part-time student status.

* significant at the .10 level; **significant at the .05 level; ***significant at the .01 level.

Table 17
Estimates of Annual Earnings Impacts of Participation in Adult Education, Females
(Standard errors in parentheses)

Type of Adult Education Activity	Model (1)	(2)	(3)	(4)	(5)
(1) Participated in any postsecondary education	-0.028 (0.108)				
(2) Participated in higher education		-0.104*** (0.024)	-0.102*** (0.024)	-0.227*** (0.031)	-0.175*** (0.029)
(3) Participated in postsecondary technical education		-0.030 (0.035)	-0.035 (0.035)	-0.112*** (0.039)	-0.074* (0.038)
(4) Participated in adult education		0.262*** (0.035)			
(5) Participated in work-related adult education			0.298*** (0.035)		
(6) Participated in adult education, not related to work			0.166 (0.039)		0.069** (0.033)
(7) Participated in ESL				-0.023 (0.114)	
(8) Participated in work-related ESL					-0.285 (0.284)
(9) Participated in basic skills				0.015 (0.068)	
(10) Participated in work-related basic skills					-0.079 (0.147)
(11) Participated in part-time college				0.241*** (0.031)	
(12) Participated in work-related part-time college					0.237*** (0.033)
(13) Participated in formal apprenticeship				-0.002 (0.075)	0.007 (0.075)
(14) Participated in job- or career-related training				0.154*** (0.023)	0.190*** (0.029)
(15) Participated in structured activities				0.005 (0.020)	
(16) Participated in work-related structured activities					0.025 (0.034)

Table 17
(Continued)

Type of Adult Education Activity	Model (1)	(2)	(3)	(4)	(5)
Provider					
(17) Public school	0.026	-0.248***	-0.245***	-0.091**	-0.125***
	(0.112)	(0.050)	(0.050)	(0.043)	(0.046)
(18) Postsecondary institution	0.047	-0.149***	-0.156***	-0.009	-0.045
	(0.108)	(0.040)	(0.040)	(0.031)	(0.035)
(19) Business, labor	0.265**	-0.006	-0.028	0.118***	0.082***
	(0.109)	(0.041)	(0.041)	(0.032)	(0.036)
(20) Government	0.159	-0.106**	-0.126***	0.025	-0.011
	(0.111)	(0.047)	(0.047)	(0.040)	(0.043)
(21) Other	-0.069	-0.337***	-0.302***	-0.134***	-0.182***
	(0.110)	(0.045)	(0.045)	(0.035)	(0.040)
$\overline{R}^2$	0.294	0.304	0.306	0.308	0.307

Source: Estimated from observations with annual earnings in the 1995 National Household Education Survey. Sample size is 6,415.

Note: Table entries are coefficient estimates from weighted least squares regression of the log of annual earnings. Besides variables in the table, the independent variables included minority status, marital status, presence of children < 18, South Census region, home ownership status, MSA residence, years of education, a quartic in age, full-time student status, and part-time student status.

* significant at the .10 level; **significant at the .05 level; ***significant at the .01 level.