

Education, Employment, and Earnings Expectations of 2009 Ninth-Graders in 2016

STATS IN BRIEF

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Statistics in Brief publications present descriptive data in tabular formats to provide useful information to a broad audience, including members of the general public. They address simple and topical issues and questions. They do not investigate more complex hypotheses, account for interrelationships among variables, or support causal inferences.

We encourage readers who are interested in more complex questions and in-depth analysis to explore other National Center for Education Statistics (NCES) resources,

including publications, online data tools, and public- and restricted-use datasets. See nces.ed.gov and references noted in the body of this document for more information. For readers interested in additional information about the survey from which the findings were drawn and the analyses underlying the findings including more detailed data tables and related standard errors, please see the “View Technical Notes” link at <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021056tn>.

When students make decisions

about their future occupations, they may consider many factors including their general interests, the amount of education and types of skills needed, work culture, potential salary, and other benefits. This Statistics in Brief report provides basic descriptive statistics on young adults’ expectations about their future education, employment, and earnings. The Brief begins by examining the highest level of education young adults expected to attain and what job these young adults expected to have at age 30. It then presents data on young adults’ expected yearly earnings at age 30, both overall and by their education and employment expectations. Finally, the Brief provides information on how young adults valued the importance of certain job factors compared to salary.

Research shows that higher levels of education are generally associated with higher employment rates and higher earnings (McFarland et al. 2018). Among 25- to 34-year olds in 2017, those with a bachelor’s

or higher degree had the highest employment rate at 86 percent compared to all other levels of educational attainment (McFarland et al. 2018). Among 25- to 34-year-olds who worked full year and full time in 2016, median annual earnings were \$25,400 for those who did not complete high school, \$31,800 for those whose highest educational attainment was a high school credential, \$50,000 for those whose highest education was a bachelor’s degree, and \$64,100 for those with a master’s degree or higher (McFarland et al. 2018).

While education level is associated with higher earnings and higher rates of employment, the occupation workers pursue is also related to earnings (Carnevale and Cheah 2018). Regardless of educational attainment, earnings vary widely across occupational fields (Carnevale, Rose, and Cheah 2013). For example, among 2007-08 bachelor’s degree recipients who were employed full-time in 2012, the yearly median salary was \$45,000; however, this salary varied

by occupational field. Bachelor’s degree recipients employed in science, technology, engineering, and mathematics (STEM) fields had the highest median yearly earnings at \$61,000, while bachelor’s degree recipients employed in business support or administrative assistance had the lowest median yearly earnings at \$34,500 (Cataldi, Staklis, and Woo 2018).

Research suggests that work values and the importance of different work styles are tied to the current economic environment, family economic resources, and life stage. For example, an uncertain economic climate may accompany preferences for greater job security and a preference for high income may accompany a life stage with significant family responsibilities (Kalleberg and Marsden 2019). Individual preferences for work styles and non-material benefits also can vary by occupation and industry. When asked to rate the importance of achievement, independence, relationships, and support at work, STEM and healthcare workers valued

achievement and independence equally, but healthcare workers valued relationships and support more than STEM workers (Carnevale et al. 2012).

The analyses presented in this Brief fill a gap in the literature by providing information on young adults' expectations about their future earnings and work values. Understanding young adults' expectations for salary, the highest level of education they expect to complete, and their work-style preferences (on a team, as a leader, autonomy, work-life balance) by expected job industry can help high school and college counselors and educators prepare students for the workforce and can help employers better attract and recruit their employees of the future.

Data, Methods, and Structure of the Report

This Statistics in Brief presents data from the High School Longitudinal Study of 2009 (HSL:09) Second Follow-up, which was conducted in 2016. HSL:09 is a nationally representative, longitudinal study of high school freshmen in the U.S. in 2009. Sample members participated in data collection activities in 2009, 2012, 2013, and 2016.¹ The data collection in 2016 included a sample member survey and was followed in 2017-18 by an administrative collection of information from student financial aid records and postsecondary transcripts.

¹ Data collection continued until January 31, 2017, but the majority of responses was collected in 2016.

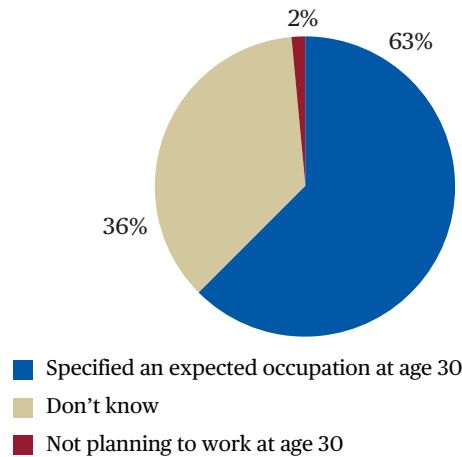
The Second Follow-up conducted in 2016 emphasized the transition of the cohort to postsecondary education—both baccalaureate and subbaccalaureate—and the workforce. At that point in time, most sample members were around 21 or 22 years old. Sample members responded to questions about their educational attainment expectations, what job they expected to have at age 30, their expected yearly earnings at age 30, and the importance of factors other than salary when considering a job. Most sample members will be 30 years old in or around 2025.

The analyses presented in this report are limited to the 98 percent of sample members in 2016 who planned to work at age 30, whether

or not they reported an occupation they expected to have at that age. Figure 1 shows the percentages of the cohort that planned to be working at age 30 and if they had a planned occupation. Excluding those not planning to be working at age 30 did not change the results presented in this report.

The comparisons highlighted in the text are statistically significant at the $p < .05$ level to ensure that the differences were larger than might be expected due to sampling variation. No adjustments were made for multiple comparisons. For additional information about the variables, data, or methods used in this study, see the [Methodology and Technical Notes](#) at the end of the report.

FIGURE 1. Percentage distribution of 2009 ninth-graders, by 2016 expected occupation at age 30



SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSL:09) Second Follow-Up.

STUDY QUESTIONS

1 *For the 2009 ninth-grade cohort, what were their highest educational attainment expectations in 2016? What were their occupational and earning expectations for when they turn 30?*

2 *How did 2009 ninth-graders in 2016 rate the importance of various aspects of a job compared to earnings when choosing a job?*

Key Findings

- Some 60 percent of 2009 ninth-graders in 2016 expected to earn a bachelor's degree or higher (figure 2).
- In 2016, the majority of 2009 ninth-graders (64 percent) specified a job they planned to have at age 30. The most common industries for planned jobs were healthcare (16 percent) and business and management (11 percent) (figure 3).
- Overall, the median expected yearly earnings at age 30 for 2009 ninth-graders in 2016 was \$60,000. Expected yearly earnings at age 30 were higher among those who expected to complete higher levels of education. Those who thought they would obtain a high school diploma or less education expected their yearly earnings to be \$40,000, while those who thought they would earn more than a bachelor's degree expected their yearly earnings to be \$70,000 (figure 4).
- In 2016, 2009 ninth-graders who planned to work in a STEM career field expected to make \$75,000 a year at age 30 and those who planned to work in the service industry expected to make \$40,000 a year at age 30 (figure 5).
- Approximately half of 2009 ninth-graders in 2016 rated aspects of a job such as job security, contributing to society, and working with a team, among others, as equally important to salary (figure 6).
- The two aspects of a job with the greatest percentages of cohort members rating them as more important than salary were job security and balancing work and personal life (figure 6).
- Approximately half of cohort members said job security is more important than salary, with the exception of those who planned to go into arts and entertainment (35 percent), service (43 percent), other occupations (42 percent), and those who did not know their expected occupation (38 percent) (figure 7).
- Approximately 40 percent or more of 2009 ninth-graders who planned in 2016 to have a job in education, the military or protective services, the service industry, or healthcare industries rated contributing to society as more important than salary (figure 8).
- There were differences in responses of 2009 ninth-graders around valuing teamwork as more or less important than salary based on their expected career field: 32 percent of those planning to go into military or protective services rated teamwork as more important than salary compared to 13 percent of those planning to go into a STEM field (figure 9).

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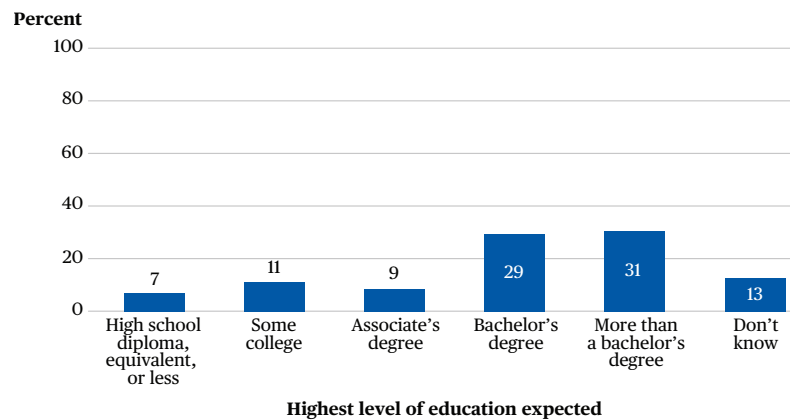
For the 2009 ninth-grade cohort, what were their highest educational attainment expectations in 2016? What were their occupational and earning expectations for when they turn 30?

Ninth graders in fall of 2009 were typically 21 or 22 years old by 2016. In 2016, about 69 percent of the cohort expected to complete a postsecondary credential, including 60 percent who expected to earn a bachelor's or higher degree. Another 7 percent did not think their education would extend past high school and 13 percent were not sure what their highest level of education would ultimately be (figure 2).

Cohort members were also asked, "As things stand now, what is the job or occupation that you expect or plan to have at age 30?" The jobs that they reported were classified into different career fields using a standard occupational classification system (see the Technical notes for more information on this classification). The percentage reporting "don't know" (36 percent) was twice as high as the next largest reported career field, healthcare, at 16 percent followed by business and management at 11 percent (figure 3).

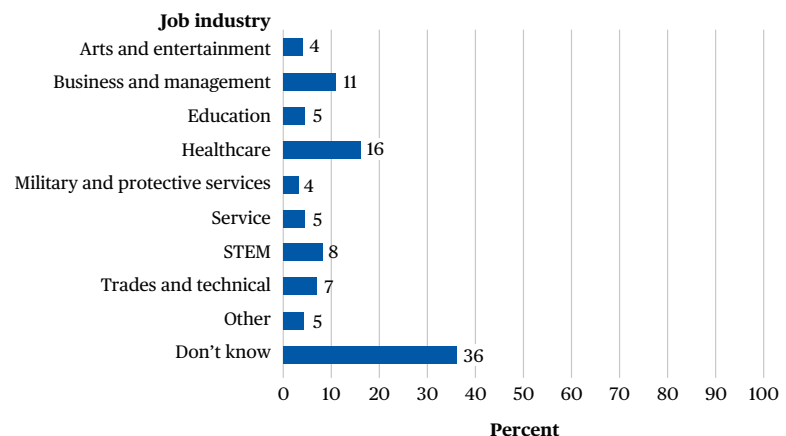
Eight percent of cohort members planned to have a job in a STEM field, 7 percent in the trades or technical industry, and 5 percent planned to have a job in each of the following industries: service, education, and other industries. Four percent planned to have a job in military and protective services and 4 percent in arts and entertainment.

FIGURE 2. Percentage distribution of 2009 ninth-graders, by 2016 highest level of education expected



SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSL:09) Second Follow-Up.

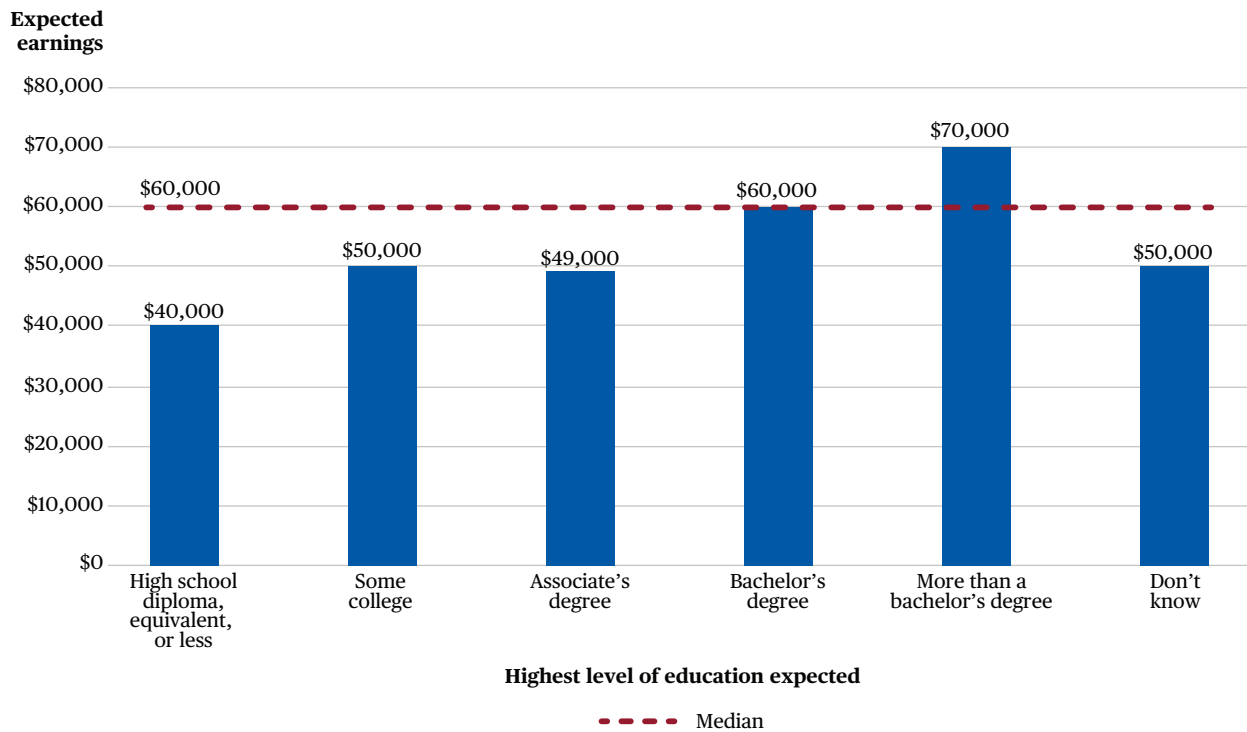
FIGURE 3. Percentage distribution of 2009 ninth-graders, by 2016 planned job industry at age 30



NOTE: Arts and entertainment includes arts, design, entertainment, sports, and media occupations. Education includes teaching, education, training, and library occupations. Healthcare includes healthcare practitioners and technical and healthcare support. Service includes food preparation and serving-related occupations, personal care and service, and community and social services. STEM refers to science, technology, engineering, and mathematics and includes computer and mathematical architecture and engineering, and life/physical/social science occupations. Trades and technical includes installation, maintenance, and repair; production; transportation and material moving; farming, fishing, and forestry; and construction and extraction. Other includes legal occupations, building/grounds cleaning and maintenance, sales and related occupations, and office and administrative support occupations.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSL:09) Second Follow-Up.

FIGURE 4. Median expected yearly earnings at age 30 of 2009 ninth-graders, by 2016 highest level of education expected



SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSL:09) Second Follow-Up.

According to data from the Census Bureau, the actual median yearly earnings of young adults ages 25 to 34 was \$40,000 in 2016² (McFarland et al. 2018). Members of the ninth-grade cohort of 2009 were asked in 2016 what they expected their yearly earnings were going to be by the time they were 30.

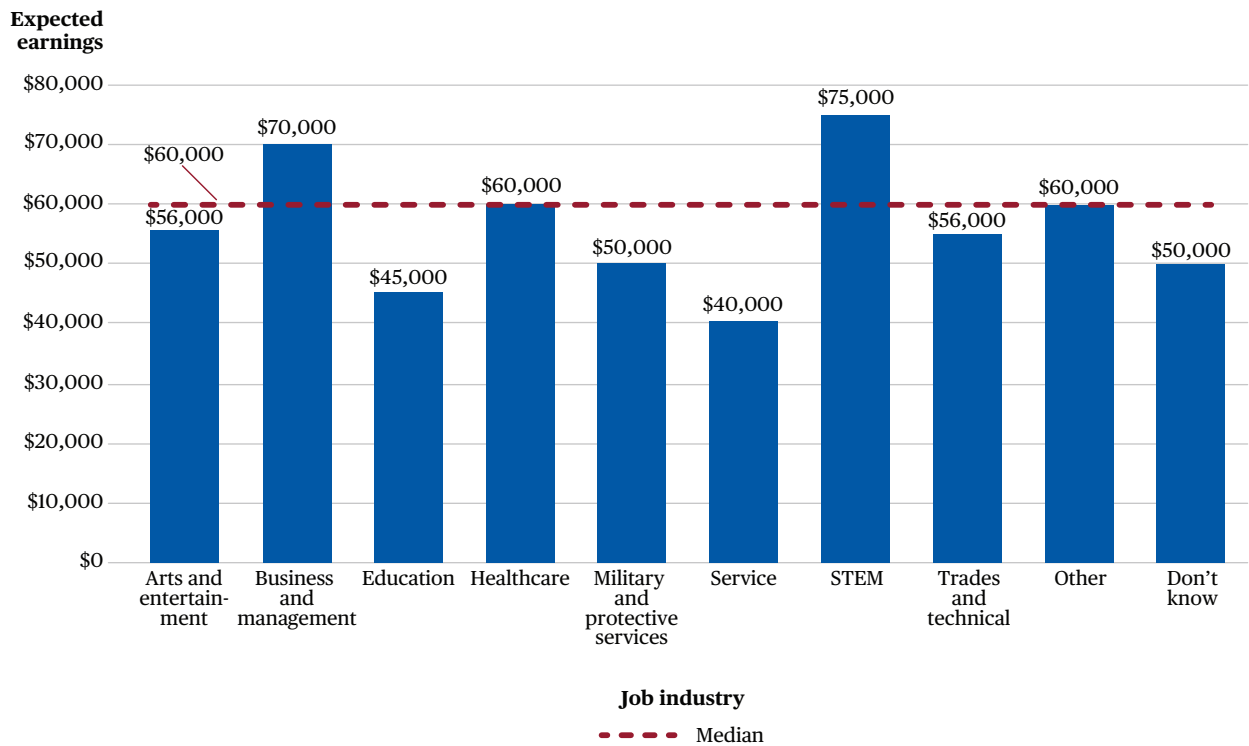
² Assuming a constant inflation rate of 2.5 percent, \$40,000 in 2016 will be approximately \$50,000 in 2025 or 2026.

For most of the cohort, this would be in 2025 or 2026. The median expected yearly earnings were \$60,000 (figure 4).

Earnings expectations varied by educational and occupational expectations. For the most part, those expecting to earn a high school diploma or less had the lowest annual earning expectations for when they were 30, with a

median of \$40,000. This was lower than expected earnings for cohort members who did not know how much education they would ultimately obtain, and was 57 percent of the expected earnings of those planning on obtaining postbaccalaureate degrees (whose median expected earnings at age 30 were \$70,000).

FIGURE 5. Median expected yearly earnings at age 30 of 2009 ninth-graders, by 2016 planned job industry at age 30



NOTE: Arts and entertainment includes arts, design, entertainment, sports, and media occupations. Education includes teaching, education, training, and library occupations. Healthcare includes healthcare practitioners and technical and healthcare support. Service includes food preparation and serving-related occupations, personal care and service, and community and social services. STEM refers to science, technology, engineering, and mathematics and includes computer and mathematical architecture and engineering, and life/physical/social science occupations. Trades and technical includes installation, maintenance, and repair; production; transportation and material moving; farming, fishing, and forestry; and construction and extraction. Other includes legal occupations, building/grounds cleaning and maintenance, sales and related occupations, and office and administrative support occupations.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSL:09) Second Follow-Up.

Cohort expectations for annual income at age 30 had similar variation by expected career field as for educational attainment, ranging from a low of \$40,000 to a high of \$75,000. Those expecting to work in the service industry and education

had the lowest income expectations at \$40,000 and \$45,000, respectively, approximately half of the salary expected by those planning to go into STEM careers (\$75,000). The other career field where expectations were higher

than the median was among cohort members planning to go into business and management fields where median annual earnings were expected to be \$70,000 (figure 5).

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How did 2009 ninth-graders in 2016 rate the importance of various aspects of a job compared to earnings when choosing a job?

The high school freshman class of 2009-10 were 21 or 22 years old in 2016. At this point, they were asked to rate the importance of six aspects of a job compared to salary when choosing an occupation: contributing to society, autonomy in deciding how to get work done, geographic location, job security, work/personal life balance, and working with a team.

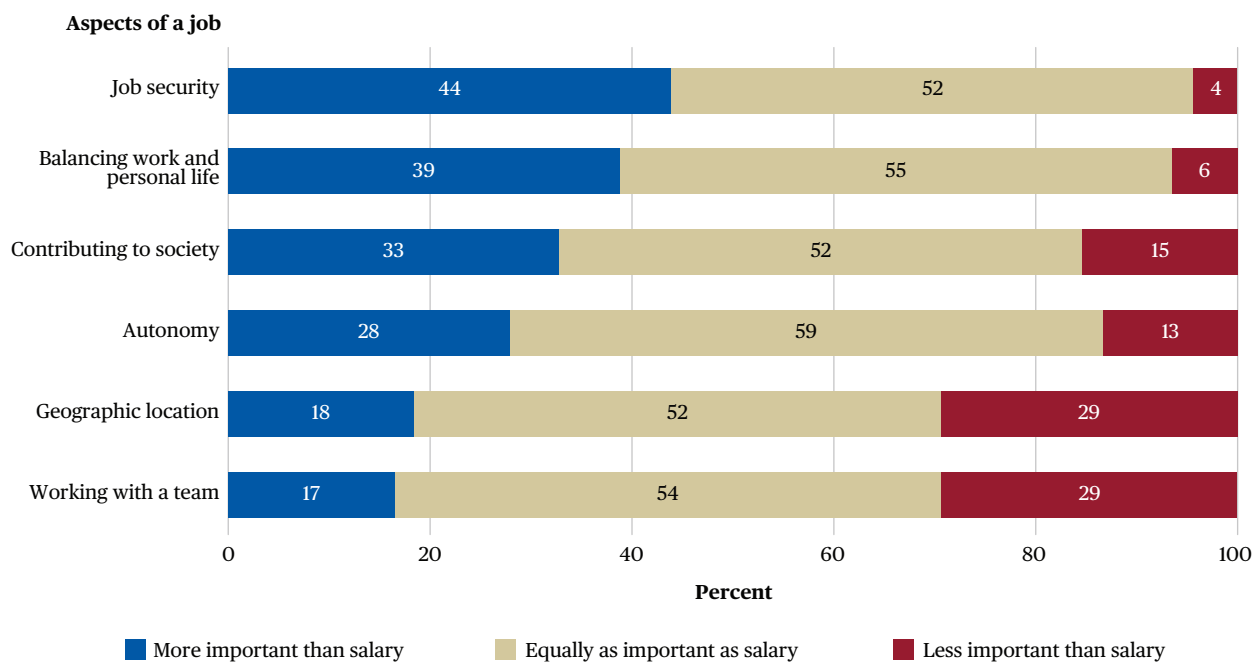
Over half of 2009 ninth-graders (between 52 and 59 percent) rated

each aspect of a job as equally as important as salary (figure 6) in 2016.

More than twice as many cohort members in 2016 rated job security and balancing work and personal life as more important than salary compared to those who rated geographic location or working on a team as more important than salary (44 percent and 39 percent, respectively, versus 18 and 17 percent, respectively).

Three aspects of future jobs were selected for additional consideration by expected career field and comparable importance of salary: job security, contributing to society, and working with a team. These three considerations of aspects of a job were selected because they include a range of values on the importance of salary (figure 6).

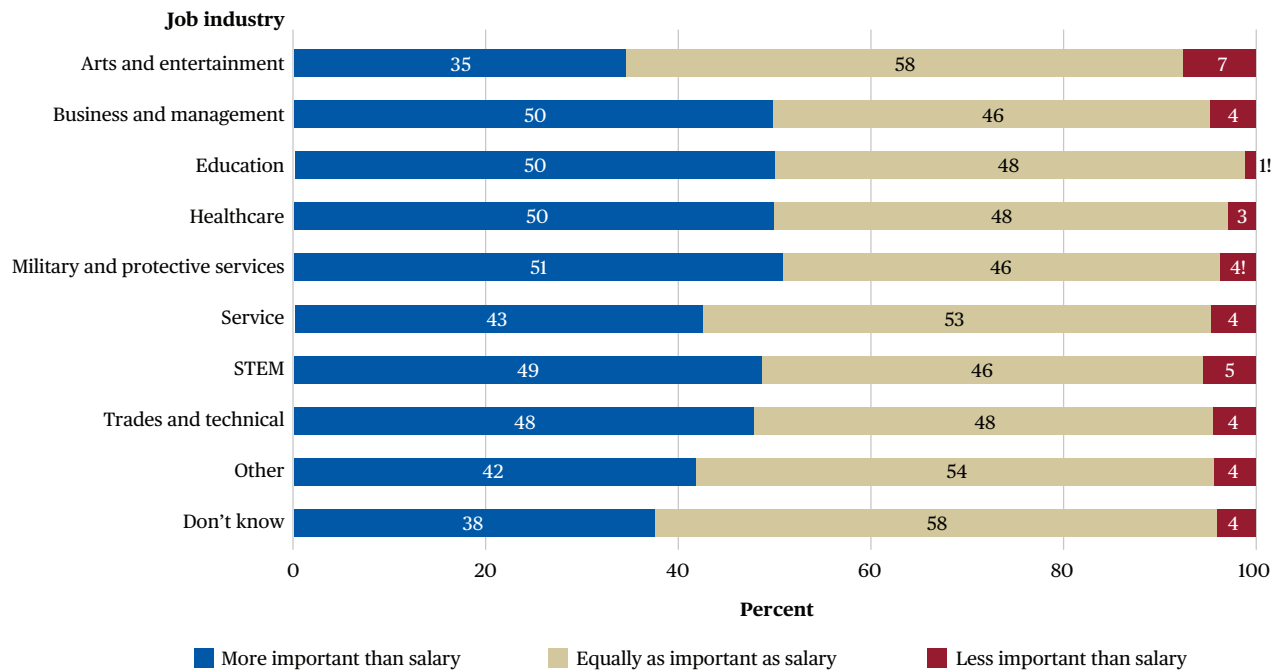
FIGURE 6. Ratings of importance of selected aspects of a job compared to salary among 2009 ninth-graders in 2016



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

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSL:09) Second Follow-Up.

FIGURE 7. Importance of job security compared to salary, by 2016 planned job industry at age 30 of 2009 ninth-graders



! Interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.
 NOTE: Arts and entertainment includes arts, design, entertainment, sports, and media occupations. Education includes teaching, education, training, and library occupations. Healthcare includes healthcare practitioners and technical and healthcare support. Service includes food preparation and serving-related occupations, personal care and service, and community and social services. STEM refers to science, technology, engineering, and mathematics and includes computer and mathematical architecture and engineering, and life/physical/social science occupations. Trades and technical includes installation, maintenance, and repair; production; transportation and material moving; farming, fishing, and forestry; and construction and extraction. Other includes legal occupations; building/grounds cleaning and maintenance; sales and related occupations; and office and administrative support occupations. Detail may not sum to totals due to rounding.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSLs:09) Second Follow-Up.

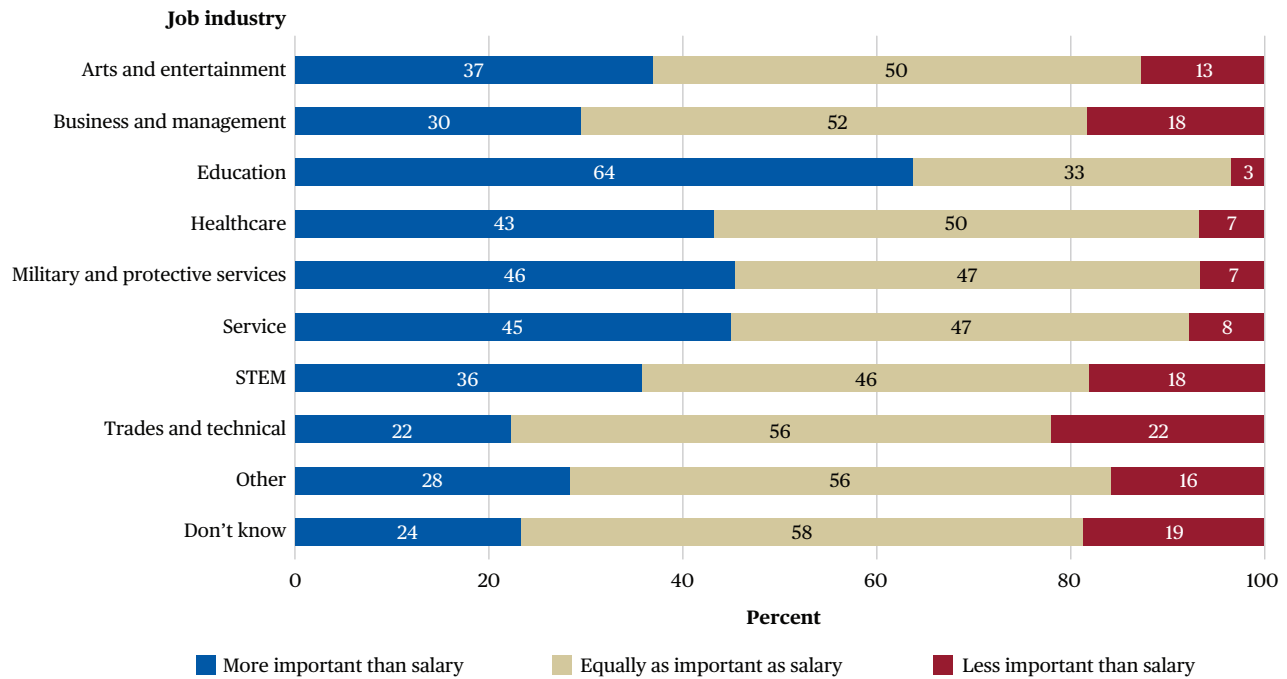
Across all occupational categories, at least 93 percent of young adults who were ninth-graders in 2009 said job security was equally or more important than salary (figure 7) when asked about this in 2016.

Approximately half of 2009 ninth-graders in 2016 who planned to pursue a job in business and

management (50 percent), education (50 percent), healthcare (50 percent), military and protective services (51 percent), STEM fields (49 percent), or trades and technical occupations (48 percent) rated job security as more important than salary (figure 7).

Among all career fields considered, those planning on going into arts and entertainment by age 30 had the lowest percentage prioritizing job security over salary (35 percent).

FIGURE 8. Importance of contributing to society compared to salary, by 2016 planned job industry at age 30 of 2009 ninth-graders



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 SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HLS:09) Second Follow-Up.

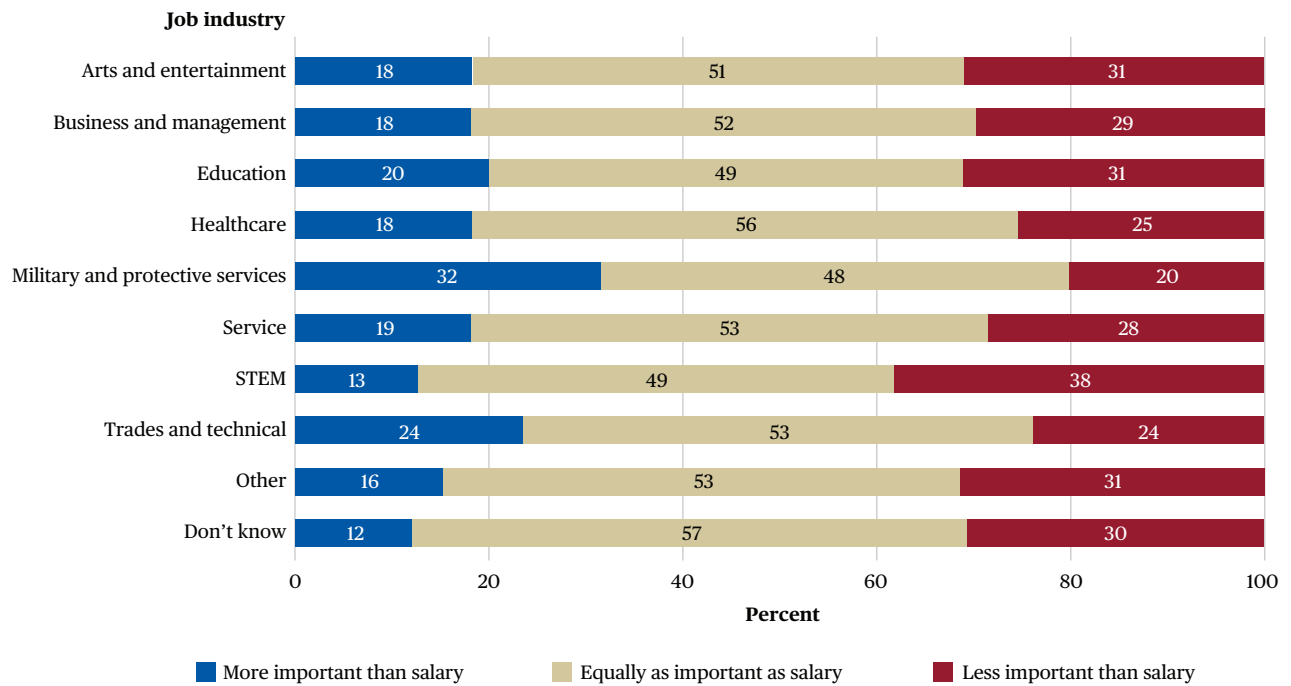
Overall, one-third of 2009 ninth-graders in 2016 (33 percent) said that contributing to society was more important than salary (figure 6). The percentage of 2009 ninth-graders in 2016 who rated contributing to society as more important than salary ranged from a low of 22 percent for young adults who expected to work in trades and technical occupations to a high of

64 percent for young adults who expected to work in education (figure 8).

Cohort members planning on going into education at age 30 were the only group where more than half of the respondents prioritized contributing to society over salary. Cohort members planning on going into healthcare, military and

protective services, and service careers prioritized contributing to society over salary at rates of 43 to 46 percent. Young adults from the cohort considering business, trades and technical, or other job industries prioritized contributing to society over salary at rates below 40 percent.

FIGURE 9. Importance of working with a team compared to salary, by 2016 planned job industry at age 30 of 2009 ninth-graders



NOTE: Arts and entertainment includes arts, design, entertainment, sports, and media occupations. Education includes teaching, education, training, and library occupations. Healthcare includes healthcare practitioners and technical and healthcare support. Service includes food preparation and serving-related occupations, personal care and service, and community and social services. STEM refers to science, technology, engineering, and mathematics and includes computer and mathematical architecture and engineering, and life/physical/social science technicians. Trades and technical includes installation, maintenance, and repair; production; transportation and material moving; farming, fishing, and forestry; and construction and extraction. Other includes legal occupations, building/grounds cleaning and maintenance, sales and related occupations, and office and administrative support occupations. Detail may not sum to totals due to rounding.
 SOURCE: U.S. Department of Education, National Center for Education Statistics, High School Longitudinal Study of 2009 (HSLs:09) Second Follow-Up.

Recall from figure 6 that 17 percent of cohort members in 2016 said working with a team was more important than salary, and 29 percent said it was less important than salary.

About a third (32 percent) of cohort members who planned to have a career in military or protective services at age 30 prioritized working with a team over salary considerations. Those planning

on working in education or in the trades and technical fields at age 30 prioritized working on teams over salary considerations at 20 and 24 percent rates, respectively (figure 9).

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For questions about content, to download this Statistics in Brief, or to view it online, go to

<https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2021056>

More detailed information on 2009 ninth-graders produced by the National Center for Education Statistics (NCES) using the High School Longitudinal Study of 2009 can be found in the following publications:

Data Point—*Parent and Student Expectations of Highest Education Level* (NCES 2019-015).
<https://nces.ed.gov/pubs2019/2019015.pdf>

First Look—*High School Longitudinal Study of 2009 (HLS:09) Second Follow-Up: A First Look at Fall 2009 Ninth-Graders in 2016* (NCES 2018-139).
<https://nces.ed.gov/pubs2018/2018139.pdf>

Stats in Brief—*Ninth-Graders' Mathematics Coursetaking, Motivations, and Educational Plans* (NCES 2015-990).
<https://nces.ed.gov/pubs2015/2015990.pdf>

Stats in Brief—*What High Schoolers and Their Parents Know About Public 4-Year Tuition and Fees in Their State* (NCES 2019-404).
<https://nces.ed.gov/pubs2019/2019404.pdf>

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