

Occupational Projections and Educational Requirements

The Bureau of Labor Statistics's Approach

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Outline

The BLS Approach to Long-Term Occupational Projections

The DWS Approach to Long-Term Occupational Projections

Determination of Education Levels by Occupation

Important Points Regarding the BLS Approach

The BLS Projections Methodology

- The BLS produces long-term industry and occupational projections every two years
- The projections extend 10 years into the future
- Perhaps the most essential purpose of these projections is to provide guidance to individuals seeking to choose a career path
- The projections methodology used by the BLS is very sophisticated and the national industry and occupational projections are likely the best estimates available

The BLS Projections Methodology

- The BLS begins by using Census Bureau population projections to estimate the future labor force and its participation rates by age, gender, race and ethnicity
- The labor force data is used as an input in a complete macroeconomic model, which generates estimates of GDP, investment, consumption, and so forth
- Next, the macroeconomic variables are used in conjunction with an input-output model to determine industry employment for roughly 300 distinct industries
- Finally, once industry employment is projected, the distribution of occupations across those industries is determined, which results in occupational projections for 840 distinct occupations

The DWS Projections Methodology

- The Department of Labor's Employment and Training Administration requires states to produce long-term industry and occupational projections at two-year intervals as a condition of the Workforce Information Grant
- The grant specifies that states are to broadly follow the BLS methodology when producing these projections
- In addition, states are required to produce both statewide and substate industry and occupational projections

The DWS Projections Methodology

- States cannot be realistically expected to produce labor force and macroeconomic projections using complete statewide macroeconomic models and statewide input-output models because of cost and time constraints
- Nevertheless, states are expected to project industry employment and they typically choose from a variety of time-series modeling techniques
- Once states have projected their industry employment, the occupational projections follow an approach that is virtually identical to the method used by the BLS
- In the end, states produce industry and occupational estimates that are essentially identical in type to those produced by the BLS, but possibly with less detail

The BLS Education and Training Classification System

- While occupational growth, the number of expected annual openings, and high wages are important criteria, those seeking a career path will also find the educational attainment needed to enter an occupation an important deciding factor
- The BLS recently restructured its education and training classification system, replacing an often-criticized system with a more flexible and easier-to-understand approach

The Old BLS Education and Training Classification System

- The old BLS classification system was criticized as being confusing and difficult to interpret
- Prior to 2010, the system was based on 11 categories that consisted of combinations of education level, work experience, and on-the-job training.
- Due to the confusion among users and the inability to correctly classify occupations within this limited scheme, the BLS restructured its educational and training classification system in 2010

The New BLS Education and Training Classification System

- In an attempt to introduce greater flexibility and clarity, the BLS replaced the old system with one that assigns education, work experience, and on-the-job training independently of each other to every occupation
- This system allows for 192 distinct combinations of education, work experience, and on-the-job training
- For the first time, every occupation is assigned an education level that represents the level of education typically required to enter the occupation

The New BLS Classification System: Eight Education Categories

Code	Education Title
1	Doctoral or Professional Degree
2	Master's Degree
3	Bachelor's Degree
4	Associate's Degree
5	Postsecondary Non-Degree Award
6	Some College, No Degree
7	High School Diploma or Equivalent
8	Less Than High School

The New BLS Classification System: Four Work Experience Categories

Code	Work Experience Title
1	More Than 5 Years
2	1 to 5 Years
3	Less Than 1 Year
4	None

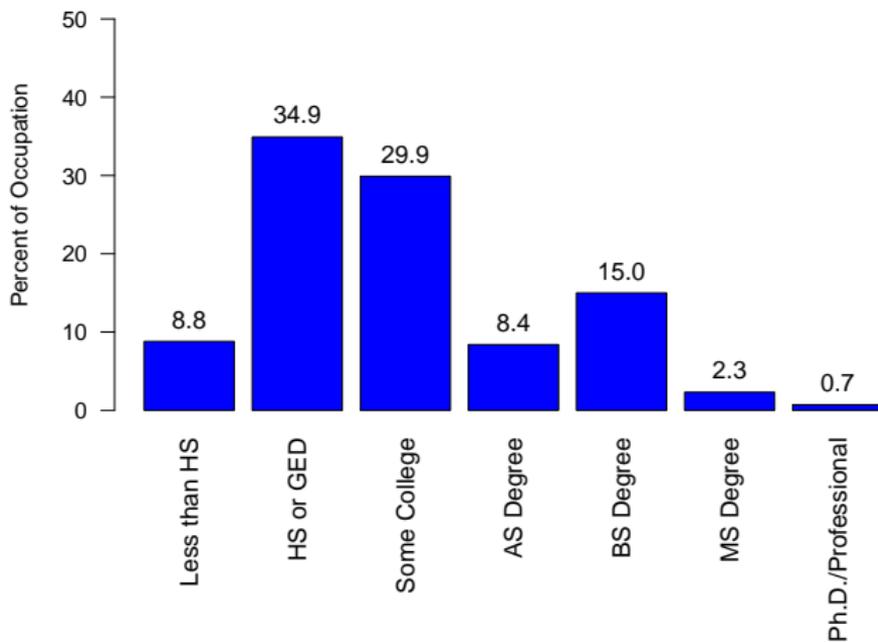
The New BLS Classification System: Six On-The-Job Training Categories

Code	On-The-Job Training Title
1	Internship/Residency
2	Apprenticeship
3	Long-Term On-The-Job Training
4	Moderate-Term On-The-Job Training
5	Short-Term On-The-Job Training
6	None

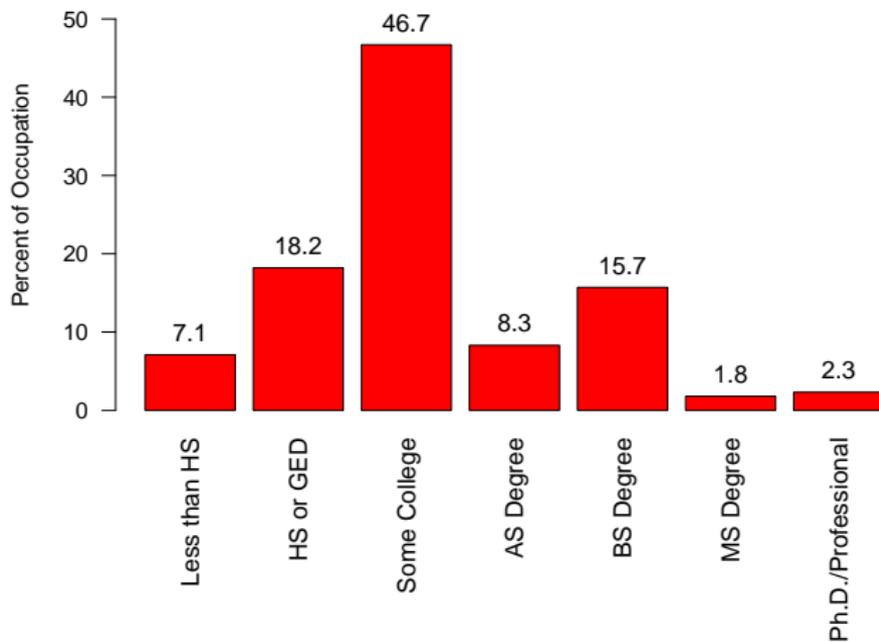
Three Examples of Assigning the Level of Education

- These examples compare the U.S. and Utah educational attainment distributions for three occupations with different BLS entry-level education assignments
- In practice, some education assignments are based on licensing requirements, but for occupations without legal requirements the education level must be inferred
- The distributions include only individuals 25 years or older
- The U.S. and Utah figures are based on 2005-2009 ACS data and 2007-2011 ACS PUMS data, respectively

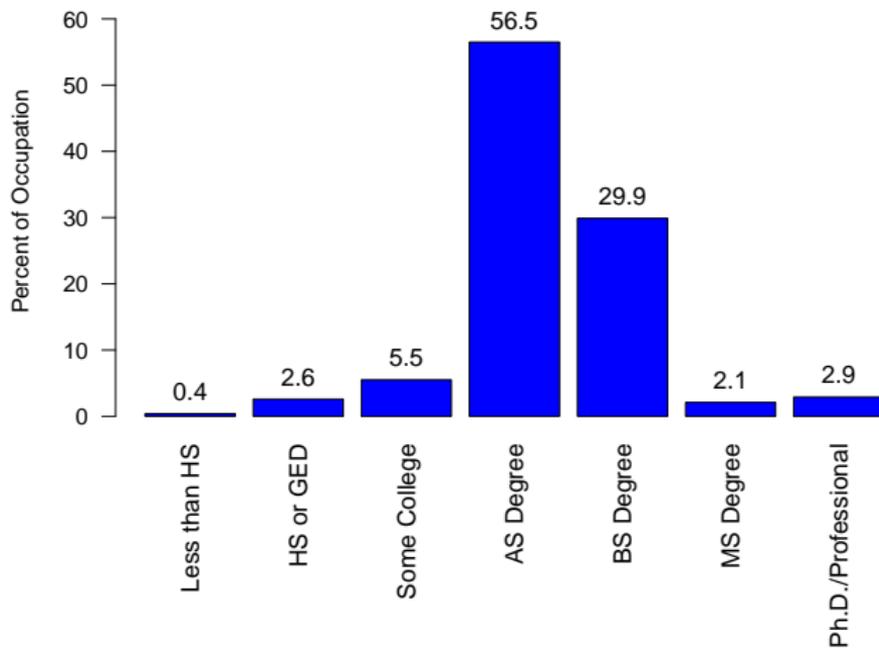
Telemarketers (41-9041) - Distribution for U.S. Education Level: Less than High School



Telemarketers (41-9041) - Distribution for Utah Education Level: Less than High School

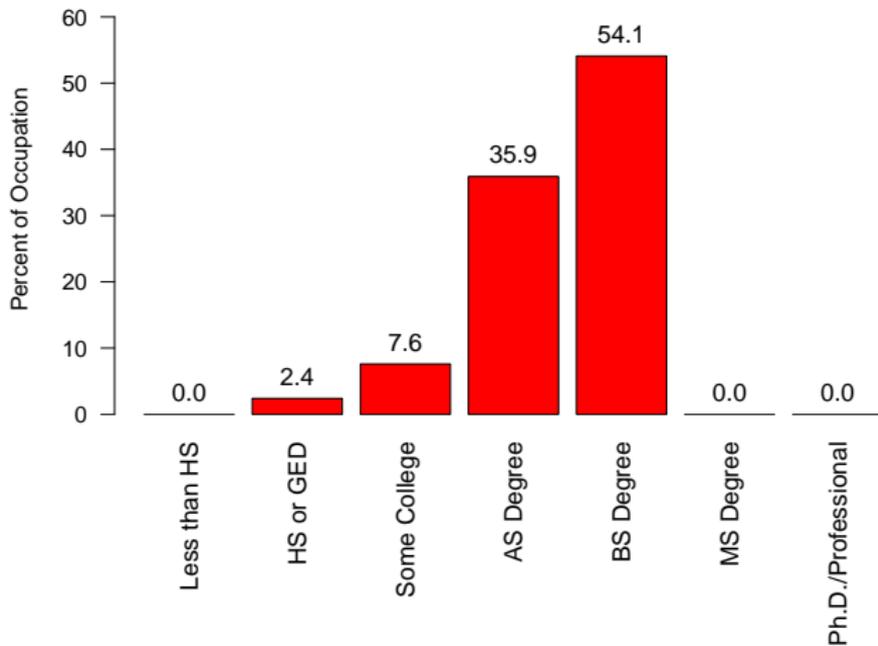


Dental Hygienists (29-2021) - Distribution for U.S. Education Level: AS Degree

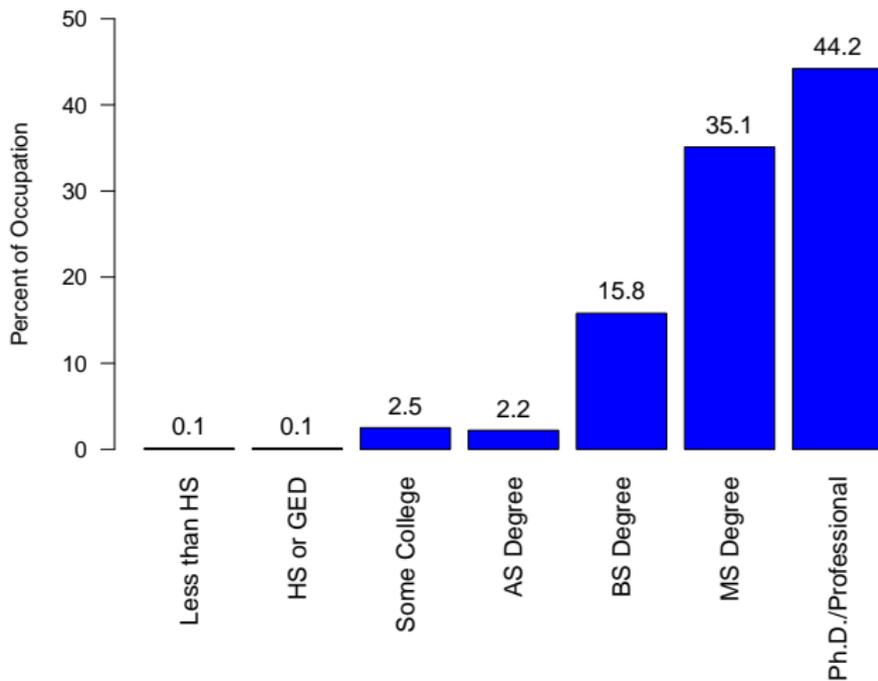


Dental Hygienists (29-2021) - Distribution for Utah

Education Level: AS Degree

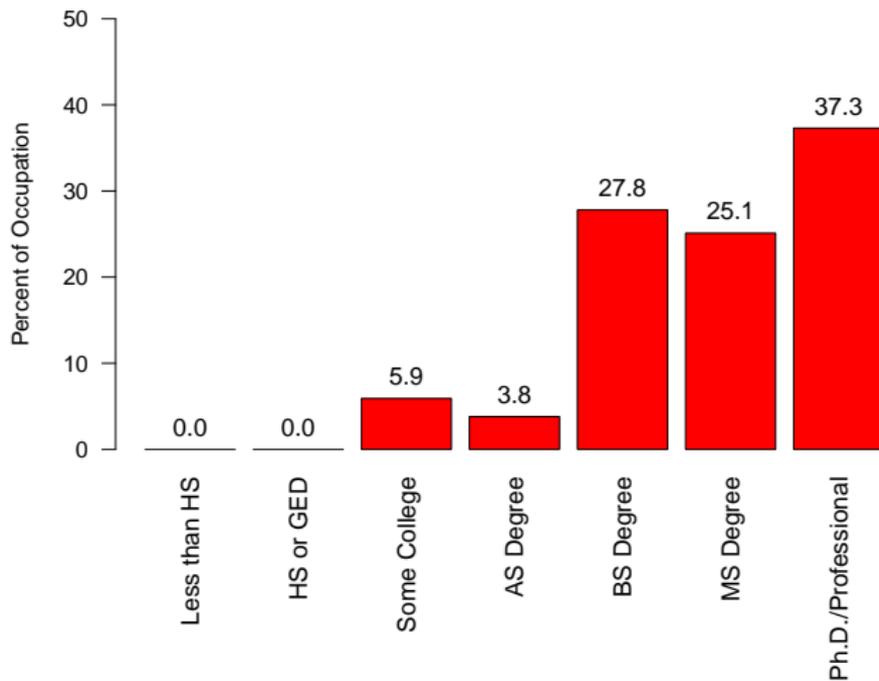


Postsecondary Teachers (25-1000) - Distribution for U.S. Education Level: Ph.D. or Professional Degree



Postsecondary Teachers (25-1000) - Distribution for Utah

Education Level: Ph.D. or Professional Degree



Important Points Regarding the BLS Approach

- The education level assigned to a particular occupation only represents the “typical education level needed to enter an occupation”
- The BLS education and training classification system does not attempt to measure the current or future levels of educational attainment in the workforce
- At the national level, 30.2% of employed individuals were in occupations with educational levels of postsecondary non-degree award or higher in 2010, according to the BLS. This percentage is expected to grow to only 31% by 2020.

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