

Keyword Analysis of Job Orders and Resumes

Preface to Research on America's Job Bank

Resumes and job orders are the critical first priorities for the successful pairing of businesses and employees.¹ These documents are the fundamental starting points of labor exchange. Yet, it is rare to see advice for preparing a resume or job order that goes beyond basic principles of grammar, style, honesty and polish. For example, the common advice for resume writing is:

- Choose an organizational style (functional, chronological, etc.).
- Be job relevant and avoid personal information.
- Keep the resume appealing (grammatically correct, concise, typed and neat).
- Maintain a positive focus with active verbs.²

This advice was expanded with the arrival of electronic resume postings. Because electronic scanning software may be used to screen resumes, job seekers are encouraged to emphasize nouns, adverbs and professional jargon in writing a resume.³

Although offering sound advice, career guidance resources seldom give the job seekers advice on content-specific language to use in their resumes for the occupational goals they seek. They are left to their own speculation about what words express the knowledge, skills, experiences and tasks that are relevant to the occupations and potential employers. The best universal tools are the *Occupational Outlook Handbook*⁴ (OOH) and *O*NET Online*⁵. The OOH provides analytical summaries on the nature of work, training, qualifications and description of working conditions for occupations. *O*NET* provides job descriptors and occupational skill levels and their level of importance. A significant addition to *O*NET* is the module called Tools and Technology, where information is provided on the machines, equipment, tools and software that workers may use for optimal functioning in a high performance workplace.

¹ This preface refers to the research report, *Keywords Found on AJB Resumes and Job Orders 2004* (May 2006), by Caldwell Economic Information Services, under contract with the Bureau of Labor Market Information, Office of Workforce Development, Ohio Department of Job and Family Services (see <http://lmi.state.oh.us/Research/Research.htm>). We thank the staff of America's Job Bank and the Employment and Training Administration of the U.S. Department of Labor for their cooperation with this research.

² It is common for electronic Career Information Delivery Systems used in the states to have modules offering such advice on resume writing. In the case of Ohio, this is the Ohio Career Information System.

³ <http://www.rileyguide.com> is a leader and well recognized resource for writing electronic resumes.

⁴ <http://www.bls.gov/oco/home.htm>

⁵ <http://online.onetcenter.org>

All of the above are excellent resources for career guidance. However, they do not provide information on the content of job orders and resumes, and what words operatively express the current characteristics that are pertinent to occupations and employers. We believe that such direct empirical evidence of the labor exchange process, as it is expressed in the words used in electronic job bank job orders and resumes, can be a significant additional resource for job seekers preparing resumes.

This research analyzed 2004 America’s Job Bank (AJB)⁶ resume and job order data. This empirical research identified recommended keywords for resumes by occupational families. These keywords were associated with higher percentages of resumes actually reviewed by employers. The twenty-three 2-digit Standard Occupational Classification (SOC) families listed below were used as the primary categories for the analysis:

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|--|---|
| Management (SOC code 11) | Building and Grounds Cleaning and Maintenance (SOC code 37) |
| Business and Financial Operations (SOC code 13) | Personal Care and Service (SOC code 39) |
| Computer and Mathematical (SOC code 15) | Sales and Related (SOC 41) |
| Architecture and Engineering (SOC code 17) | Office and Administrative Support (SOC code 43) |
| Life, Physical, and Social Sciences (SOC code 19) | Farming, Fishing, and Forestry (SOC code 45) |
| Community and Social Services (SOC code 21) | Construction and Extraction (SOC code 47) |
| Legal (SOC code 23) | Installation, Maintenance, and Repair (SOC code 49) |
| Education, Training, and Library (SOC code 25) | Production (SOC code 51) |
| Arts, Design, Entertainment, Sports, and Media (SOC code 27) | Transportation and Material Moving (SOC code 53) |
| Healthcare Practitioners and Technical (SOC code 29) | Military Specific (SOC code 55) |
| Healthcare Support (SOC code 31) | |
| Protective Service (SOC code 33) | |
| Food Preparation and Serving Related (SOC code 35) | |

For these 2-digit occupational families, primary keywords were identified. For example, for the family of Business and Financial Operations, the primary keywords were:

- | | | |
|------------|-----------|-----------|
| Audit | CPA | Mortgage |
| Auditor | Estate | Officer |
| Commercial | Insurance | Processor |
| Controller | Internal | Real |
| Cost | Loan | Series |

Where significant job order data existed, the primary keywords were related to 6-digit, detailed occupational codes. For instance, further analysis of the 2-digit occupational family of Business and Financial Operations provided keyword information for the following three 6-digit occupational categories:

- Accountants and Auditors (SOC 13-2011)
- Loan Officers (SOC 13-2072)
- Financial specialists, all other (SOC 13-2099)

⁶ America’s Job Bank (AJB) at <http://www.ajb.org>.

Continuing this example, Accountants and Auditors (SOC 13-2011) had the primary keywords of audit, auditor, controller, cost and CPA. Each of these primary keywords was associated with a list of related keywords.

To demonstrate, for the entire occupational family of business and financial operations (SOC 13), the average quarterly percent of resumes viewed by employers was 65.1 percent. For the sub-set of SOC 13 resumes containing the primary keyword of *audit*, the percentage of viewed resumes increased to 77.5 percent. When both the primary keyword of *audit* and the related keyword of *CPA* were found in the same resumes, the percentage rose to 85.0 percent being viewed by employers. These are statistically significant differences at the 90 percent level of confidence.

A word was assigned as a related keyword to a primary keyword, if the combination had a percent of viewed resumes that was higher at a statistically significant level, when compared to the primary keyword alone. The related keywords, with the average quarterly percentages of resumes viewed by employers, are presented below for the keyword, *audit*.

Related Keywords: Accountant 81.3%, Accounting 79.2%, Accounts 78.8%, Analyst 81.0%, Auditor 82.5%, Banking 81.4%, Business 79.9%, CPA 85.0%, Commercial 81.9%, Controller 82.7%, Cost 82.0%, Credit 79.5%, Estate 84.3%, Finance 80.3%, Financial 80.0%, Insurance 80.3%, Internal 81.1%, Loan 80.6%, Management 79.5%, Manager 79.6%, Mortgage 83.1%, Officer 82.2%, Payable 79.2%, Real 84.1%, Sales 80.0%, Series 80.8%, Tax 79.7%

Of particular interest, this research presented educational information about resumes. In the example of the occupational family of Business and Financial Operations, the percent of viewed resumes by educational levels was provided. The table below can assist job seekers in understanding the significance of educational levels in their particular job interests and career goals.

Percent of AJB Resumes by Educational Level in CY 2004
For Business and Financial Operations, Major SOC Occupational Group 13

<u>Educational Level</u>	<u>Percent of Resumes, CY 2004</u>	<u>Percent Viewed by Employers, CY 2004</u>
Less Than High School	0.7	41.1
High School Diploma or GED	11.0	53.9
Some College or Vocational	33.0	63.2
Bachelor's Degree	43.5	68.7
Graduate Degree	11.8	69.3

Ohio's goal is to mine the data from this research to provide a reference guide for use by One-Stop Centers to assist job seekers' resume writing and review. The goal is to give additional empirical information, where it honestly applies to the jobseekers, to improve the content of their resumes in an effort to get more reviews and interviews from employers.

To review the full report, see <http://lmi.state.oh.us/Research/Research.htm>. The report is structured in the following manner:

- **Introduction** – It provides the overview about the report’s information and recommended uses.
- **Major Occupational Group Comparisons** – Tables display percentages of resumes viewed by employers, ratios of job orders to resumes, and educational levels reported on resumes. This allows for quick comparisons between occupational groups for each of those indicators. The narrative is limited to highlighting groups of interest and providing factors that affect all groups.
- **Keyword Analysis by Major Occupational Group** – This section is the core of the report, where the most detailed data and analysis are provided. It is organized by occupational families of 2-digit SOC codes. It displays primary keywords and related keywords associated with higher percentages of electronic resumes viewed by employers.
- **Technical Appendix** – The keyword selection process and other technical topics are discussed in this section.
- **Keyword Glossary** – Covers acronyms, brand names and other keywords found on job orders and resumes.