Improving Career Development in Students by Developing Job Analysis Skills

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ABSTRACT

One of the main goals of business school education is to prepare graduates for employment after graduation. However, many managers complain about the lack of communication skills developed in many graduates seeking employment in the job market (Abraham & Karns, 2009). This paper describes the experiential exercise designed to help students complete the process of job analysis to be used for hiring or other Human Resource functions. Besides learning the process for describing jobs, students discover external resources that can help them develop more effective resumes and interview skills. Results from a student satisfaction survey of this exercise and pre-test/post-test data are provided to indicate learning in the job analysis process.

Strategic human resource management (HRM) practices such as job analysis, recruitment and selection are all important functions for students to learn and, typically, an undergraduate HRM course highlights the best practices in identifying and matching successful candidates with a job's qualifications. However, an additional benefit for students taking a course in HRM is to learn how jobs are defined and selected to help them better prepare for their own job searches in the labor market. The intent of this article is to share an experiential exercise that can be used to teach job analysis techniques in any HRM course. Additionally, the project exposes students to external resources that may help them develop useful resumes and provide useful information to prepare them for employment interviews.

There have been many proponents for developing learning exercises emphasizing practice and theory in the classroom. Adult learning concepts highlighting why a topic is important and why the topic may have immediate value to the student is integral to developing these exercises (Arbaugh, 2005; Roglio & Light, 2009). The purpose of this paper is to advance learning in job analysis for managers and to teach students how to perform a job analysis, to develop effective resumes and to improve interview skills based on a job description.

CAREER DEVELOPMENT SKILLS

Many critics have argued the lack of practical skills developed in business education (Abraham & Karns, 2009; Bennis & O'Toole, 2005; Rubin & Dierdorff, 2009) and managers complain about the lack of job skills developed in many graduates seeking employment (Abraham & Karns, 2009; Johnson, 2011; Sternberg, 2013). Undergraduate students with little work experience need to develop the communication skills to clearly articulate how they may have the work experience and skills needed to perform different jobs. However, many students do not know how to write an effective resume that will garner an interview with an employer (Miller 2012).

Applicants typically use impression management tactics to improve their image in the recruitment process and ultimately to receive a job offer. Self-promotion is an impression management tactic used to create a positive impression (Higgins & Judge, 2004). Self-promotion in an interview or resume can be defined as accurately describing a candidate's work experiences as it relates to job-related qualifications. In other words, how a candidate communicates the similarities between his/her past work experience to the job qualifications creates a positive impression to the employer (Swider, Barrick, Harris, & Stoverink, 2011).

Recently, researchers have found a positive relationship between self-promotion tactics and interview success in job candidates (Swider et al., 2011). Meaning, individuals that communicate how their qualifications and work experience more closely match the needs of the job are more likely to get a job offer. Many undergraduate students lack long-term work experience and need to know how to promote their past work skills and achievements more clearly to become employed after graduation. One way to

improve these communication skills is to teach students about jobs and how they are defined. This active learning exercise emphasizes the practical skill of developing a job description from job analysis which can be used in any organization for hiring purposes, developing performance appraisals and compensation systems. An additional benefit to this exercise is that students learn about external resources such as the O*Net and can use these resources in helping them articulate their work experience in a resume or interview.

The process of job analysis

Organizations and managers are interested in finding the best match between an applicant and a job within the company in order to improve performance and reduce turnover. There are many benefits to conducting a job analysis in organizations. First, a thorough analysis provides a list of the necessary knowledge, skills, and abilities needed to successfully perform a job. This information serves as the foundation for a successful recruiting strategy and selection decisions. Organizations may make fewer mistakes in the hiring process which can be costly if the person hired is not the right 'fit' for the company. This highlights the importance of the relationship between job analysis and validity in the job analysis process. Specifically, predictor and criterion measures are developed in a job analysis to be used in criterion-related validation studies for selection instruments. Job analysis can also demonstrate the relevance of job characteristics for content validity and the equivalence of jobs in validity generalization. Moreover, a formal job analysis may protect companies from costly legal battles against discrimination by showing the selection methods employed are job related to the hiring job (SIOP, 2003; Thompson & Thompson, 1982).

Job analysis gained momentum in practice with the creation of many Equal Employment Opportunity (EEO) laws and regulations (i.e., Civil Rights Act of 1964, Age Discrimination in Employment Act, etc.) as well as the Equal Employment Opportunity Commission (EEOC) developing the Uniform Guidelines on Employee Selection Procedures (1978). Many court cases have discussed the relevance of job analysis in selection decisions and preventing discrimination in the workplace. For instance, the ruling in *Griggs v. Duke Power* (1971) confirmed the need for organizations to show the job relatedness in specific selection requirements. Moreover, the Supreme Court specifically criticized the lack of a job analysis in validation procedures in the case of *Albemarle Paper Company v. Moody* (1975). These examples highlight the importance of job analysis as it relates to performance and selection decisions as well as the legal justification for including these practices in organizations.

Job analysis methods emphasize a systematic process for gathering and analyzing data for a specific job (Harvey, 1991). Typically, there is a preparation stage in which organizations need to be prepared for the process of collecting information. In this stage, organizations decide who will conduct the job analysis, what jobs should be analyzed first and how other organizations may describe the particular job (i.e., external sources such as the O*Net). Collecting job information would follow this stage and can include multiple methods such as conducting informational interviews, collecting questionnaires, and facilitating subject matter expert workshops. Once the data is collected; job analysts would begin the process of synthesizing this information into specific task and KSA statements for the final job description (Brannick, Levine, & Morgeson, 2007; Gatewood, Feild, & Barrick, 2011; Heneman, Judge, & Kammeyer-Mueller, 2012).

Job analysis exercise

This undergraduate course is organized such that the discussion and lecture for job analysis follows lectures on legal issues and measurement/statistical issues for HRM managers. Specifically, students learn a foundation to the importance of job analysis through legal requirements as well as validation procedures and statistical concerns prior to understanding the procedures of job analysis. The lecture on job analysis includes a discussion of the history and a step-by-step process for conducting a job analysis in any organization.

The primary goal of this class project is to enhance student learning related to the process of job analysis and for students to develop an awareness of how to develop their own portfolio of skills in the job market. Students will gain knowledge about how jobs are defined and will highlight what skills are needed for a particular job.

The following steps are required to complete the job analysis project.

1. First, students must choose a job to analyze. The project requirements state that students must choose a job in which they are capable of securing an informational interview with a job incumbent in the data collection process. Students are encouraged to consider jobs in which they would like to have a career or a job that they want to learn more information. Students are expected to conduct background research regarding the job they have chosen to investigate. First, they must print out the job description based on the title of the job chosen in the O*Net database. Also, if available, students are expected to gather a current job description as well

as any other documents such as an organizational chart from the job incumbent and/or organization to be interviewed. This information is used to help students gain general knowledge of the job and to guide students as they develop the interview questions in the data collection process.

2. Students develop the job analysis interview questions to use when collecting data from the job incumbent. These questions can be developed from various sources in our course materials and/or Internet searches helping students write appropriate questions for this informational interview. Next, students are required to conduct the interview with the job incumbent and transcribe the entire interview (i.e., questions and answers) as part of the deliverables in the project.

3. Students are required to write as many task statements as possible based on the data collected from the interview and other sources. Students may use course materials as a guide for developing the task statements and should use the sentence analysis technique for writing task statements (Heneman et al., 2012). These task statements are not filtered and represent all possible tasks that may be included in the job. In other words, the essential task statements needed for day-to-day activities are not clearly identified at this stage of the project.

4. From these task statements, students are required to use subject matter experts in identifying the most frequently used tasks as well as the most important tasks. Subject matter experts may include the job incumbent, supervisor or other employees working in the job being analyzed. This step allows students to identify the most essential tasks necessary to successfully perform the job. Students develop a table allowing the subject matter experts to rate the importance of each task (i.e., extremely important to not important at all) and the frequency of performing each task (i.e., performed several times a day to not performed at all). From this data, students will make a decision as to which task statements will become essential tasks and which ones will be deleted from the job analysis. Students are required to justify their rationale for the cutoff set in eliminating general task statements. This information can be derived from the job analysis and/or subject matter experts. Essential task statements are critical to the

day-to-day activities of the job incumbent and will be the building blocks for identifying KSA statements necessary for the job.

5. Students develop KSA statements based on the essential task statements identified. The information may come from any of the sources used in the process (i.e., data collected from job incumbent or O*Net database). A matrix is developed that includes the list of essential task statements and all of the KSA statements developed. Students must show the link between each task statement and at least one KSA statement developed in the process. This important step ensures that each KSA statement used to collect information in the selection process has a corresponding essential task statement.

6. Lastly, students format the essential task statements and KSA statements into a formal job description. The job description would serve as the foundation for many HRM activities.

The project deliverables for the project are listed in Table 1 and they demonstrate the process of job analysis. Students are required to submit information reflecting each of the steps outlined in this paper.

TABLE 1 PROJECT DELIVERABLES	
Job Analysis Project	
1	Basic information is provided about the job being analyzed such as title, industry, approximate size of company, approximate number of people in this job, and any supervisory responsibilities.
2	Copy of O*Net description for job being analyzed, an existing job description (if available) and/or company brochures, organizational chart.
3	Copy of the informational interview questions and answers transcribed from the job incumbent interview.
4	List of all the task statements generated from the data collected in job incumbent interview. Matrix showing how the job incumbent rated the frequency/importance of tasks. Final list of the essential task statements to be included in the job description based on the ratings of the job incumbent.
5	Matrix matching essential task statements with corresponding KSA statements.
6	Final job description listing essential task statements and KSA statements for the job.

Job Analysis Exercise Evaluation

The job analysis project has been successfully implemented in an undergraduate Human Resource Selection course in a large, public university located in the southeast United States. Most of the students taking this course are management majors in the College of Business. Occasionally, there are students participating in this course from other programs across campus.

Data was collected to determine if the project improved learning in job analysis practices. Prior to our class discussion on job analysis, students were asked to complete a 20-question pretest to determine a base-level of knowledge for job analysis. A posttest was distributed after the submission deadline for the project. Additional survey items were included in the posttest and related to the relevance and satisfaction with the project expectations. The additional questions were linked to the process of job analysis and less emphasis was placed on understanding concepts which were more likely to be tested in the class exams.

Forty students completed both the pretest and posttest for the project. The average score for the pretest is 8.83 out of 20 questions and the average score for the posttest is 13.25 out of 20 questions. A paired sample t-test was used to analyze the difference in scores between the pretest and posttest. A statistically significant increase occurred in learning from the pretest to the posttest (t = -5.947, p = .001).

Students were also asked a series of questions related to their general satisfaction with the assignment and usefulness of the project. Nine questions were added to the posttest that addressed whether the project was a useful learning tool for job analysis as well as the benefits of using the O*Net database. The items were evaluated using a 1 to 7 scale from strongly disagree to strongly agree. The means for each of these additional survey questions are provided in Table 2. Overall, the class appeared highly satisfied with the expectations and objectives of the job analysis project.

Many students provided additional comments regarding what they liked or disliked about the project. Consistently, students commented how they liked applying the course concepts in a "real world" exercise. Further, one student commented, "I enjoyed talking with someone in a job that I am interested in and learning the ins and outs of the job." Another student comment reflected upon learning about new resources such as the O*Net and its usefulness to other aspects in HRM. These comments are consistent with the anecdotal evidence collected about this project prior to collecting data.

Students also provided some aspects of the project that they disliked. Many students felt the process was tedious and time-consuming. Another student commented that it was uncomfortable conducting the informational interview with the job incumbent. Some students disliked transcribing the interviews for the project; however, they often recognized the need for the transcriptions. Nevertheless, students provided more positive comments regarding increased learning by applying course concepts and complained less about the amount of work needed to complete the project.

CONCLUSION

Job analysis continues to be a basic tool used within organizations to increase effectiveness in many aspects of HRM. Many organizations continue to benefit from the process of job analysis and students are able to apply these concepts in a useful exercise.

Additionally, with the implementation of this class project, the unanticipated benefits of career development have emerged. For instance, many students appreciate using the O*Net database as a source for developing their resume. Often students have a difficult time crafting their first resume and the O*Net provides a resource that gives them the language to help them relate their past work experience into task based statements. Further, students have discovered the O*Net as a useful tool in preparing for an interview. Students can learn more about the position they are applying and learn how to translate their work experience into the similar knowledge, skills, and abilities needed for the new job. The O*Net provides a valuable resource that teaches students how to speak the language of the job they are seeking. After the class project is submitted and graded, I discuss with the class how the O*Net can be used to help students write their resume and how to use it as an informational source prior to conducting a job interview. This lecture includes a demonstration of how to look up various jobs in the O*Net and learn about the specific knowledge, skills and abilities needed to perform a job. This information can be translated to writing about past work experience in a resume and prepping for a job interview by learning how to communicate their past work experience as relevant qualifications for a future job.

Many of my students have used this class project as an opportunity to network for a future job. It allows them a unique opportunity to investigate a job they are interested in pursuing as well as talk to someone in the field. Some of my former students have turned this class project into an opportunity to gain employment. Moreover, some students have used this class project as the basis for developing a job description for their current employer. In fact, these students were able to integrate this class project into an opportunity to promote themselves with their own employers and provide useful information for these small business owners. Lastly, some of the more entrepreneurial students were able to develop a new job description which was used to develop structured interviews within their own small businesses.

Another advantage for this project is to show students that the process of job analysis can be done in any size organization. Many of my students have stated their desire to work within a small to mid-sized organization; thus, by teaching them the systematic process that could be used in any organization further illustrates the practicality of conducting job analysis and improving HRM decisions such as recruitment/selection.

As with all research, there are limitations to consider. First, this class project has been implemented for many years; however, the sample size indicating student learning and reactions to the class exercise is small. The learning outcomes and reactions are positive but due to the small sample these results should continue to be evaluated to ensure the value in this exercise. Students enrolled in this HRM Selection elective course may be more motivated than other management majors to be successful as they chose to enroll in this specialized HRM course. Another limitation to this class exercise is the time dedicated to teaching the entire process as well as the amount of time invested by students to collect job information and evaluate a job effectively.

Despite these limitations, the practical nature of this experiential exercise provides many rewards to student learning. First, students are able to master a fundamental component of HRM functions. Job analysis concepts are tested through exams as well as the process of completing a job analysis in the project. Next, students are exposed to resources that will help them beyond the course. The O*Net database is a useful tool for developing resumes, investigating jobs and gaining information about jobs prior to an interview. Many students appreciate this resource at this point in their educational attainment. Most students taking this course are seniors and/or graduating in the semester they take this course and have benefited in the job market with this resource.

Finally, practitioners and organizations continue to see the value in integrating job analysis in their HRM functions (Kelley, 2002). Organizations are able to gather pertinent job information to be used as the basis of selection plans and many other HRM functions. Further, job analysis is the basis for showing the job relatedness in hiring individuals and can protect organizations from potential discrimination cases. Similarly, many students are able to use this information to learn career development skills in writing resumes and prepping for job interviews that have an immediate impact on gaining employment upon graduation.

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TABLE 2
PROJECT EVALUATION QUESTIONS AND AVERAGES

Survey questions	Mean
Q1 – This exercise was relevant to learning about job analysis.	6.33
Q2 – This exercise was interesting.	5.50
Q3 – This activity reinforced and complemented what I learned about job analysis.	6.22
Q4 – Conducting a job analysis interview was very helpful in learning job analysis techniques.	6.50
Q5 – This activity helped bring to life what happens when HR managers analyze jobs.	6.12
Q6 – Using O*Net is a valuable tool to understand jobs.	6.06
Q7 – I could use the O*Net to help me with future job searches.	6.39
Q8 – Please comment on what you liked about this project.	
Q9 – Please comment on what you disliked about this project.	

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