

INTEGRATING WORKFORCE DEVELOPMENT INTO BUSINESS ANALYTICS CURRICULUM DESIGN AT A MINORITY-SERVING UNIVERSITY

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ABSTRACT

In today's fast-paced technology pervasive workplaces, employers have an immediate demand for analytical and problem-solving skills from new college graduates. Faculty members who develop their curriculum using traditional teaching pedagogy and foundational disciplinary knowledge have been challenged by the need to train students in the classroom with skills that are in high demand in the workforce. We implemented a High-Impact Practice (HIP), namely competency-based learning, to better prepare our graduates for the skill-oriented job market. "Learning and Using NVivo to Analyze LinkedIn Job Ads" integrates workforce development into curriculum design. This innovative collaboration between the university's workforce program and computer information systems (CIS) faculty taught students how to use a qualitative analytics tool to balance their quantitative curriculum while bringing to life the skills that they would need in their future jobs and careers. The initial analysis of student students' reflections revealed three benefits of the project-based learning design in students' career readiness: career goal clarity and pathway potential, improved workforce understanding, and increased confidence about acquired skills for future career.

INTRODUCTION

In this workforce integration initiative, we proposed connecting project-based learning and competency-based education with workforce development as a viable strategy to enable our students a smooth transition from college into the workforce. The key objective was to understand student experiences by enlisting reflective practices that asked students about their learning experiences. Project-based learning (PBL) refers to an inquiry-based instructional method that engages learners in knowledge construction by having them accomplish meaningful projects and develop real-world products (Brundiers & Wiek, 2013). Research indicates individuals from lower socioeconomic or with lower parental educational attainment are more likely to have trouble interpreting which skills might be needed in different fields and are less likely to ask questions about the things they do not know (Goldsmith & Coleman, 2022). In fields where some demographic groups have historically been excluded, students do not have the experience or network to help them decipher the language of the workforce (Johnson, Bashay, & Bergson-Shilock, 2019). This text mining task addressed both the language of the business analytics field while illuminating the experience and skills needed to be successful.

METHODS

Each student issued a report with the required sections: summary, data collection and analysis, findings, and a 300-word reflection about lessons learned with the software and about the position of a Business Analyst. This workforce-based project was piloted in a Computer Information Systems course “Data Mining and Business Intelligence” at a minority serving institution in fall 2021. Fourteen students participated in the program; completed the assignment. Students performed data collection and cleaning activities. Each data set included 60 job postings that were a) full-time, b) posted within the last 30 days, and c) in Los Angeles County. Students then uploaded, organized, and coded their documents. They were asked to create a code to analyze “years of experience” needed and if the position was either intern/entry-level or associate level employment. The tool required for the project was NVivo Windows (QSR, 2020). The researchers used NVivo to conduct an analysis of their own study’s effectiveness.

FINDINGS

The coding schema reflected themes that indicate career goal clarity and pathway potential, improved workforce understanding, and increased confidence about acquired skills. Six categories were established to align with the four report sections and two areas which highlight knowledge gained with use of the NVivo tool: ‘language’ and additional ‘interests’. The data collection section showed that in addition to the required code of “experience by skills” students coded for “software or technical skills” (5) and “education” (4). Students used 37 images across the reports to reflect data collection, query outputs, and visualizations in the form of word clouds. Indicative of tool engagement is the use of language associated with the processes required by the assignment.; there were 47 references. Most students interacted positively with the assignment based on the results of the sentiment analysis. Students reported experience, requirements, and skills needed as key findings. The reflection section revealed the most negative comments expressed frustration with the learning curve and led to positive reflections of lessons learned and project to workforce alignment in the coding schema.

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