



A Plan, A Partner, and the Payoff: Preparing Process Technology Students for the Workforce

Part of our role as educators is to help students find employment in their field of study. Often, instructors strive to share as much technical content during their course as possible, and it can be a challenge to fit everything in within an academic term. Therefore, it's important to expose students to elements of the hiring process throughout their academic studies. Structured employment preparation can boost the self-confidence and performance of jobseekers (Hansen, Oliphant, Oliphant, and Hansen, 2009), but instructors need not take on this task by themselves. This article describes a process by which students majoring in advanced manufacturing actively learned about the hiring process over several semesters.

Preparing Students Through a Plan of Multiple Interventions

Students seeking a degree in advanced manufacturing with a concentration in process control technology (PCT) were exposed to a holistic approach to the hiring process over several semesters. During their first semester PCT course, students completed an assignment during which they researched resume writing tips and interviewing skills. Students were asked to find five articles from within the last five years on each subject. They then selected five tips they thought were the most valuable and summarized them. A discussion was held in class afterwards to review their findings. Students then created a personal resume and incorporated their research findings.

During the second semester PCT course, students worked to improve their resumes. Best practices for documenting the heading, the education section, and the summary of qualifications areas of resumes were reviewed during class and class time was made available so students could make the necessary changes. In addition, students received a list of skill categories and corresponding action verbs. Students updated their work experience section with these action verbs and quantifiable results where applicable.

Students were also supplied with a list of common interview questions for a manufacturing process technician. From this list of 49 questions, students selected five questions and crafted written responses

to each. This exercise emphasized writing as a form of rehearsal (Gottesman and Mauro, 1999) and is a recommended preparatory activity to enhance student success in mock interviews (Hansen, Oliphant, Oliphant, and Hansen, 2009).

In the third semester, students completed three major tasks: (1) They created and delivered a professional introduction, also known as an elevator pitch; (2) after reviewing examples, they created a cover letter, follow-up letter, and a list of professional and personal references; and (3) students prepared for and participated in mock interviews. Historically, mock interviews were conducted in person with manufacturing industry professionals. However, due to the impacts of COVID-19, the mock interviews were conducted virtually with the institution's career services staff.

Partnering With Career Services

Many instructors likely teach alone. While this single source of leadership and direction has benefits, exposure to various vantage points is important when students learn about hiring practice activities. Personnel from the discipline of study are excellent resources for speaking to classes and participating in mock interviews. Another valuable resource is the career services center. While career centers have bolstered their online presence over the years and provide access to webinars, job portals, career fairs, and more, research shows the majority of students forego participation in these valuable resources (Huss, Jhileek, and Butler, 2017). Therefore, bringing career services into the classroom can help students develop needed skills by broadening their exposure to these resources.

Students in the PCT program were required to schedule mock interviews with the career services center within a six-week window. The institution's work-based learning coordinator conducted an approximately 20-minute interview with each student via Zoom. The interviewer used a rubric that was created by the career services center and used for many years. The rubric assessed seven skill areas at levels of "excellent," "acceptable," or "needs improvement." The skill areas assessed included first impressions, preparation, confidence, speech, work ethic and attitude, skill set demonstration, and closing.

After the interview, students submitted their responses to the following five reflection questions:

1. How did you dress for your virtual interview? Why did you select this attire?
2. Did you find the virtual interview easier or more challenging than a face-to-face interview and why?
3. How did you prepare for the interview, specifically?
4. What do you think you did well during the interview?
5. What do you need to improve on for future interviews?

The Payoff

Analysis of the rubric scores revealed that 100 percent of interviewees were rated “acceptable” or “excellent” in the areas of first impressions, work ethic and attitude, skill set demonstration, and closing. The data showed that 90 percent of interviewees were rated “acceptable” or “excellent” in the areas of preparation and speech. In the area of confidence, 80 percent of interviewees were ranked “acceptable” or “excellent.” The interviewer noted that several participants were dressed professionally, showed enthusiasm, and had good, specific examples of work ethic. Common opportunities for improvement included smiling more, avoiding saying “um” and “you know,” and asking questions of the interviewer at closing.

Five out of ten students considered the virtual interview less challenging than a face-to-face interview. One reason for this was because they were more comfortable and relaxed at home by not having someone physically in front of them. Three out of ten students listed the virtual interview as more challenging than a face-to-face interview, stating they were just not used to it, they felt they could make a better impression in person, and they were worried about technical glitches that could occur. Finally, two out of ten students did not consider the virtual interview any more or less challenging than an in-person interview.

The students were thoughtful and reflective in answering their assigned questions. Some statements included:

“I used plenty of terminology that showed that I am knowledgeable in the process technology field.”

“I believe I had well-thought-out answers and articulated them well. I conveyed a lot of enthusiasm and passion for the field with my answers.”

“I need to work on my composure. During the interview I got nervous, which led to me moving a lot, messing with my hair, and looking around. I also paused and lost my train of thought a couple of times.”

“I must learn to sell myself better. Fine-tuning, editing, and rehearsing my story, my experiences, and my objectives will improve my interviews going forward.”

All of the students were eventually hired by process technology companies as either cooperative education employees (co-op students) or full-time employees.

Conclusion

As educators, we want to see our students gainfully employed in their fields, using the knowledge and skills they learned while pursuing their academic degree. We can help students achieve this goal through planned hiring interventions in sequenced classes. Furthermore, we can expose students to untapped career resources through partnerships with career service centers. The time and effort on our part results in payoffs for students. I received a card from one of my process technology graduates in which he wrote, “You changed my life.” This is the kind of impact we can have on students during our relatively brief time together in the classroom.

Kim Roberts, *Associate Professor, Operations Management*

For more information, contact the author at Calhoun Community College, kim.roberts@calhoun.edu.

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