Student Reasons why Re-entering the University after Co-Op Experience is Difficult

Cathryn G. Sebree.
Undergraduate Research Assistant, Engineering Fundamentals Department, J.B. Speed School of Engineering, University of Louisville.

Introduction

The purpose of this study was to investigate reasons why the transition from an undergraduate co-op to the academic semester is difficult, thus observing the power and effect that leaving the University for this experience has on education. Student transitions from co-op back to the institution are proven a challenge for students[1] and this research helps understand why students have difficulty in depth.

Cooperative education programs (co-ops) are defined as partnerships between industries and universities that grant students hands-on experience in their field. Students are benefitted in many ways from co-op experiences, such as professional experience, mentorship, and development, however, despite these experiential benefits there are some instances where the transition back into an academic semester is difficult.

This study takes place at a large southeast Carnegie-Ranked research institution. The engineering college has mandatory co-op rotations and functions on a three-semester academic year. This research entailed a case study approach to determine the reasons why transitions from co-op to university are difficult, studying three primary questions:

What are the transitional issues from co-op back to the university for students?

What demographic of students are most and least affected?

How can this study be furthered for the benefit of students who experience transitions between working and academic environments?

Methodology & Results

The methodology of this study was focused on exploring the reasons why students' transition from co-op experience to an academic semester is difficult. The data provided and analyzed for this study is from a surveyed group of engineering students who were on a co-op rotation. Through the analyzation of open-ended questions and responses, the reasons for transition difficulty were categorized, and students were grouped by gender and major to further investigation into demographics.

The comparison of gender and experiencing difficulty are shown in Table 1. This table shows that more males struggle in their transition than female.

[1] J. C. McNeil, A. D. Beebe and M. Andrade, "Transitions between cooperative educational experiences to the university," 2017 IEEE Frontiers in Education Conference (FIE), Indianapolis, IN, 2017, pp. 1-5, doi: 10.1109/FIE.2017.8190567.

Gender	Percentage of students who experienced difficulty
Female	37% (11)
Male	63% (19)

Table 1: *Gender and Difficulty.*

Further investigation is provided below regarding major and reasoning.

A comparison of academic major and experiencing difficulty are shown in Table 2. The majors that reported to experience the most difficulty are bioengineering, chemical engineering, and electrical and computer engineering.

Engineering Major	Percentage of students who experienced difficulty
Bioengineering	55% (6)
Civil Engineering	7% (1)
Computer Science and Computer Engineering	20% (4)
Chemical Engineering	30% (6)
Electrical and Computer Engineering	29% (6)
Industrial Engineering	15% (2)
Mechanical Engineering	17% (6)

Table 2: *Academic Major and Difficulty.*

The reasons for difficult transition are shown in Table 3. The most common reasons that contributed to a difficult transition were amount of homework, change in schedule, and difficulty of coursework. Other reasons that are not included in this table are relocation and relationships.

Reason	Percent
Amount of homework	62%
Change in schedule	59%
Difficulty of coursework	52%
Balancing work and school	34%
Time management	30%
Finances	24%
Other	6%

Table 3: *Reasons for Difficulty.*

Conclusions & Discussion

This research implies that the majority of students who experience difficulty are male and the reasons for a difficult transition from co-op to academic semester are amount of homework, change in schedule, and difficulty of coursework, along with other reasons. This research could be further developed to find out how to help students transition back to campus. Some strategies for furthering this topic of study would be impact of relocation, length of transition period between co-op and school, and support systems students may or may not have had during their co-op.

Engineering students are not alone in experiencing a transition between work and academics as many other disciplines incorporate internships, service trips, and study abroad experiences between academic semesters. All these experiences could cause difficulty in the transition due to the environmental factors present. For example, transitioning from a professional, corporate office back to a university lecture hall will prompt changes in habit, behavior, and interaction that students may not be prepared for. Identifying the issues during the transition between any of these environments that vary by culture, expectation, and student responsibilities is a powerful idea - proven to be important to education and worth further investigation.