Vol. 1

JSCEE
JOURNAL FOR THE STUDY OF COOPERATIVE AND EXPERIENTIAL EDUCATION

Journal for the Study of Cooperative and Experiential Education

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Letter from the Editor

Dear Colleagues,

Looking back on when I first started college, I had no idea what I did not know. I could not comprehend the vast array of experiential learning opportunities I could engage in as a college student, and unfortunately, I truly did not realize what was available until I graduated from college.

I believe part of what leads to "missing out" on these opportunities is the field of experiential learning, like the structure of higher education, frequently operates in silos. The people doing phenomenal work with co-ops and internships are separate from those working in service learning, undergraduate research, study abroad, volunteer and community-based practices, etc. All of us become so busy supporting our own initiatives we can miss the opportunity to collaborate with our larger community.

This is where the idea for the Journal for the Study of Cooperative and Experiential Education (JSCEE) originated. We wanted to break down these silos and celebrate the phenomenal interdisciplinary programs and initiatives across all modes of experiential learning. Our goal is to create an environment where submissions are welcome from all academic disciplines, all approaches to experiential learning, and inclusive of our industry and community partners. We aim to highlight scholarship, whether academic articles or examples of practical applications, to better understand how educators can expand the boundaries of the traditional classroom to prepare all learners to strive towards their career aspirations.

As we launch the inaugural issue, my hope for JSCEE is to create, support, and provide open access to resources, ideas, and advice from experiential learning professionals across the world. I genuinely believe the better we can understand the variety of opportunities available to learners the better we can ensure future students don't have to wait until they graduate to learn what they did not know.

Sincerely,

Heather Nester, Editor in Chief

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Cultivating Success: 25 Years of Empowering Black Student Retention Through the Transitions Program

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ABSTRACT

In this article, the author delves into the transformative impact of the Transitions Program on student success, illuminating its effectiveness in cultivating strong cultural foundations and fostering a steadfast commitment to retaining Black first-year students. Through the efforts and resources provided through the African American Cultural & Resource Center (AACRC) at the University of Cincinnati (UC), the Transitions Program emerges as a crucial pillar in equipping Black students for not only a successful collegiate journey but also for thriving in their post-college lives and careers.

Keywords: Transitions, Black, first-year

AIN'T NO STOPPING US NOW

On November 13, 1999, a new initiative was born at the University of Cincinnati's African American Cultural & Research Center, promising to benefit historically underrepresented first-year students navigating the often-challenging waters of higher education. Spearheaded by the visionary Drs. Stacy L. Downing and P. Eric Abercrumbie, the initiative resonated with the spirit of its theme song, "Ain't No Stopping Us Now." In its inaugural year, Transitions, which was and has been intended for first-year Black students to assist with their transition from high school to college during their first year of college, proudly graduated nine tenacious students, a testament to the students' resilience and determination.

The pioneering program introduced a Rites of Passage curriculum that would assist the university in achieving higher retention and graduation rates for Black students. Today, Transitions not only facilitates students' adjustment to college life through peer mentoring, workshops, and study resources, but also fosters vital connections with staff, faculty, administrators, and upper-classmen students, creating a safe and supportive community within the University of Cincinnati.

Three fundamental principles are now the backbone of the program's mission:

- Connecting cultural consciousness
- Emerging creative minds
- Affirming positive attitudes

By the 2001-2002 academic school year, the program wove traditions into its fabric, such as the opening dance that symbolizes unity, the passing of the light ceremony, and the acceptance of the charge at the AACRC's annual leadership formal ball. These rituals not only celebrate students' intellect, talent, and individuality but also instill a resounding affirmation: "Ain't No Stopping Us Now!"

RITES OF PASSAGE

A rite of passage can be defined as a ritual, event, or experience that marks or constitutes a major milestone or change in a person's life, for example transitioning from high school to college (Lebese et al., 2022). Since its inception, Transitions has embraced this model to encourage participating students that they are future leaders of the University of Cincinnati and a broader tomorrow who are capable of effecting change in their communities and beyond.

This is evident in the impressive achievements of alumni, many of whom have become prominent figures on campus, actively engaging in student government and leading various organizations—in fraternities and sororities and in roles as Resident Assistants (RAs), Student Orientation Leaders (SOLs), United Black Student Association (UBSA), and many more. Nearly 70% of students who have completed the program have also volunteered their time and talents back into the program by acting as mentors for incoming students, all while exemplifying a standard of excellence both in and outside the classroom.

One poignant example highlights a student who used the numerous skills and resources from the program and emerged as a future leader who advocated for change within the Black community at UC during the height of the Black Lives Matter movement. This individual used her experience to fuel her activism, demonstrating how the program's curriculum extends beyond the classroom with lasting impacts on social justice initiatives in the greater Cincinnati community and beyond.

CULTIVATING LEADERSHIP SKILLS

On August 24, 2015, a coalition of passionate Black leaders convened to address the University's response—or alarming lack thereof —to the tragic shooting of Samuel DuBose, an event that shook the Black campus community to its core. DuBose was fatally shot by a UC police officer, Ray Tensing, during an off-campus traffic stop on July 19, 2015 (Graves, 2015). The discussion quickly evolved into a critical examination of systematic issues facing Black students and the surrounding community. Thus was born the Irate 8, a group of students dedicated to amplifying the voices of Black students at UC while linking their struggles to the national Black Lives Matter movement. Their mission was clear: reform the institutionalized policies that contributed to an unsafe experience for many (Graves, 2015).

The name "Irate8" reflected the percentage of Black students enrolled at UC during the 2014-15 academic year, highlighting the urgent need for change. The group was co-founded by Ashley Nkadi and Brittany Bibb, a participant in the Transitions Program. This coalition garnered significant attention from social media and the sitting UC President at the time. Nkadi and Bibb's advocacy, along with their coalition of 30 to 40 students, aimed to ensure their beloved campus was a safe and inclusive place for minority students, a characteristic that would later contribute to this population's recruitment and retention (Graves, 2015).

In their pursuit of a secure and equitable campus climate, the Irate 8 presented ten compelling demands to university administration, addressing critical issues ranging from enhanced racial awareness training to the urgent need for increased Black faculty and student representation. Their determined stance not only sparked discussions on campus but also broader movements for change within academic institutions. A few of the ten demands that reflected the adjustments they felt should have been made to the University's policies, budget, procedures, and curriculum include:

> *II. We demand that the University of Cincinnati enforces a fully funded comprehensive racial awareness curriculum that is mandatory for all students, faculty, staff, and police structured by a caucus comprised of students, community members, and administrators of diverse backgrounds to be put in place by the start of the 2017–2018 academic year.*
>
> *VII. We demand the University of Cincinnati doubles the number of Black students on main campus over the next 3 years, starting today, October 14, 2015.*
>
> *VIII. We demand that the University of Cincinnati builds a stand-alone AACRC or renovates for all of 60 W. Charlton to belong to the AACRC by August 1, 2018 (Brennan & Eaton, 2015).*

A NEW TRANSITIONS

After graduating from UC, Bibb continued her impactful leadership, steering the Transitions Program into new territories. In 2018, she established the Early Arrival Program (EAP), designed to prepare incoming Black students for college and beyond, connect them with resources, and build community on campus. This three-day program offers students early move-in and a chance to learn about university expectations for student learning and behavior. During the program, students develop a sense of belonging by cultivating meaningful relationships with peers, faculty, and staff and learn about campus resources such as Counseling & Psychological Services (CAPS), the Center for Community Engagement (CCE), the Student Wellness Center, Enrollment Services, and the Learning Commons. Ninety-four students participated in a survey immediately after the Early Arrival Program. The results support the program's success:

- **Over 90%** of participants felt the program set a positive tone for their first year, providing a strong foundation for their academic journey.
- **Over 90**% agreed that they found a sense of belonging through the program, highlighting its role in community building.
- **Over 90**% of participants felt that the program helped them get acclimated to campus prior to classes, educating students on the resources provided to them.
- **Over 90%** indicated that the EAP sessions were both helpful and informative, equipping students with essential skills for success.

In the fall of 2019, the Abercrumbie Living Learning Community (ALLC) was launched in collaboration with Ethnic Programs & Services (EPS) and Residential Education & Development (RED). The community is dedicated to Dr. P. Eric Abercrumbie, the former director of the AACRC who served as UC's Executive Director for Special Initiatives and Community Relations during his almost 50-year legacy of working at UC. The ALLC is a residence-based learning community in Turner Hall for students accepted into the Darwin T. Turner Scholars Program (a program dedicated to enriching the educational environment for undergraduate students by supporting the recruitment and retention of underrepresented groups with high potential for academic success at UC) and/or the Transitions Program. Participants live in an environment that fosters personal and social identity development, leadership engagement, and academic success. Students participate in a variety of service-learning projects and meet monthly (ALLC, 2019). Members of this community engage in dialogue and reflection that facilitate a sense of pride in one's racial and ethnic identity and their other intersecting identities. The ALLC has positively affected students' academic success, has positively impacted their personal, academic, and professional strengths, and has helped students interact and connect with their peers (ALLC, 2019).

RESHAPING TRANSITIONS

Despite the challenges posed by the COVID-19 pandemic, which brought uncertainty and change to higher education, Transitions has continued to thrive, adapting its approach to provide support and resources to students in innovative ways. Moreover, in the fall of 2024 Jacquelyn Taylor, who is the Assistant Director of Leadership and Engagement, created and introduced a required Transitions First-Year Experience course that focuses on creating a foundation for academic and personal success. This class aims to further bolster the retention of Black students who are in the Transitions Program. The curriculum is focused on retaining these students not only from first year to second year but on highlighting retention practices from first to second semester.

The program's outcomes are impressive, with a clear upward trend of retention for Black students compared to the general population, emphasizing the effectiveness of the program:

FIGURE 1.

Number of first time degree seeking Black students

COHORT YEAR	UC PERCENTAGE	TRANSITIONS PERCENTAGE
2017	85.9% (82.5% Black)	95%
2018	88.2% (85.2% Black)	98%
2019	88.2% (86.8% Black)	83%
2020	86.5% (84.1% Black)	95%
2021	86.2% (78.2% Black)	97%
2022	85.7% (75.9% Black)	97%
2023	85.3% (77.1% Black)	95%

Note: Percentages based on an estimated 800 Black first-year students

The Transitions First-Year Experience course, which emulates the framework from the early days of the Transitions Program, continues to assist students in cultivating a sense of belonging at the University of Cincinnati. Through the curriculum, students establish support networks within the university and the broader Cincinnati community and develop skills to support overall success during their first year of college (academic, leadership, personal, professional, and social).

Through weekly classes, students develop an affinity for the AACRC and UC, nurture and develop cultural foundations, participate in AACRC signature events, and engage in community service opportunities to empower them to be change agents in their local and greater communities.

As a result of actively engaging in this course, students will be able to (Taylor, 2024):

1. Identify strategies and resources that will enhance their academic, personal, social, and leadership development.
2. Expand their success network of faculty, staff, and peers that can support their campus engagement and belonging.
3. Examine how their background and experiences shape their value, wellness, and social change to utilize campus resources as a student of color.
4. Describe how they plan to engage and contribute to the community and culture of the University of Cincinnati and the AACRC.
5. Define the importance of diversity and inclusion policies and practices in work environments in the U.S. and globally.

The course emphasizes the following UC baccalaureate competencies:

- Effective Communication
- Critical Thinking
- Knowledge Integration
- Social Responsibility

During class, students engage in large and small-group discussions and hands-on activities facilitated by peer leaders to meet course outcomes that build a sense of belonging and culture of community. Students' participation and engagement play a vital role in their learning. They are expected to openly share their ideas and express their opinions in class, respect the opinions, values, and identities of their classmates, instructors, and guests, and honor the open environment of the class by respecting confidentiality when appropriate. In addition, students will engage in community service opportunities at their own pace, completing a total of ten community service hours by the end of the school year. Students are also required to complete weekly one- to two-hour sign-ins in the AACRC, complete three academic coaching appointments through UC's Learning Commons during their first semester, and participate in AACRC signature events.

TRANSITIONS IN ACTION

This course helps students develop effective communication, critical thinking skills, knowledge integration, and social responsibility through in-class activities and out-of-class reflection pieces. Throughout the semester, students engage in opportunities and receive regular feedback which challenges them to improve in these areas and think more broadly about their impact, using these skills as tools. At the end of the semester, these competencies are assessed through the completion of a survey to determine which skills they have advanced or improved from the start to the end of their first semester (Taylor, 2024).

Experiential Learning Examples

1. One specific AACRC signature event that students are required to participate in is Kuamka which means "in the beginning" in Swahili. Kuamka is a co-ed leadership pageant and celebrates a week of exciting events highlighting Black excellence (Kuamka, 2012). Ending the week with a Red, Black, Green, and Gold Ball, which symbolizes Pan-Africanism, Transitions students are recognized during the Ball as the next campus leaders, and they participate in a traditional cohort dance performed in front of guests at the Ball. This cohort dance is one that builds camaraderie and sense of community and focuses on nurturing and developing cultural foundations.
2. To give students insight into being a part of an effective leadership team, students were required to create a program for a registered student organization. Through this assignment, students were placed in groups and submit a program proposal that outlines in full detail what the program entails (description, target audience, purpose, materials needed, budget, etc.). This assignment gave students the opportunity to engage in and develop leadership skills that are important in the professional world.
3. Community service is a core value at the University of Cincinnati and enhances students' personal development. As students are required to complete at least ten hours of community service while in the program, our students are dedicated to being involved in the greater-Cincinnati community through service. Our students can often be found involved with Bearcat Buddies. Bearcat Buddies is a tutoring program offered through the Center for Community Engagement (CCE). Students who are interested in serving as volunteers, tutoring and helping Cincinnati Public Schools' students achieve academic success (Bearcat Buddies, 2010).

These examples highlight just a few of the experiential components of the program that enhance students' knowledge, help them gain a broader view of the world, and integrate learning beyond the classroom environment.

25 YEARS AND BEYOND: RECOMMENDATIONS MOVING FORWARD

The year 2024 marks the 25th anniversary of the Transitions program. The Transitions Program has consistently demonstrated its ability to improve student retention and graduation rates, fostering an environment where students not only survive but thrive.

Participants of the program echo this sentiment, saying:

> *"The program has helped me successfully transition from high school to college by surrounding me with people of similar backgrounds who uplift my endeavors. The AACRC staff has been incredibly supportive, providing resources that foster my growth and cultural understanding. I'm grateful to find community as a Black woman in a predominantly white institution."*
>
> ***Transitions 2021 participant***

> *"I can't pinpoint a specific moment, but the first three months of Transitions really was imperative for me. Without it, I don't know what my college life would look like. In those three months, I met my best friends, gained mentors that I know I can go to for further support, and being in this program provided me with a sense of community."*
>
> ***Transitions 2023 participant***

Coupled with six-year graduation data of Black students from the University of Cincinnati (see Figure 2 below), student participant testimony provides additional proof of the program's efficacy and necessity.

With close to 1,000 students who have participated in the program since 1999, the program has been guided by dedicated leaders who have helped Transitions evolve into its current form.

However, financial limitations have forced the Transitions Program to turn away over 100 potential participants this year alone, significantly impacting the vital skill development of this community. With over 53,000 students enrolled at the University of Cincinnati (Ricks, 2024), of which 9.3% are Black, the demand for support within this demographic has never been greater. As the university continues to grow and evolve, it is imperative that the needs of the Transitions Program are met with urgency and commitment. The success of the Transitions Program is not merely a statistic; it is reflected in the transformed lives of students who go on to pursue fulfilling careers and contribute positively to their communities.

FIGURE 2.

Number of first time degree seeking Black students

COHORT YEAR	UC PERCENTAGE	TRANSITIONS PERCENTAGE
2012	68% (59.8% Black)	58%
2013	71.3% (62.9% Black)	79%
2014	72.8% (67.5% Black)	58%
2015	73% (63.7% Black)	70%
2016	72% (63.5% Black)	68%
2017	71.5% (55.4% Black	72%
2018	TBD	73%

Note: Data includes first-time, full-time Bachelor's degree seeking undergraduates at the UC Clifton campus.

As we look ahead to the next 25 years, we aspire to deepen our impact and broaden our reach. We hope that we can fulfill our promise to create a nurturing environment that champions academic excellence, personal growth, and community engagement. In addition, we want to foster a new generation of leaders who are well-equipped to navigate the complexities of the modern world. The program has aspirations of adding a scholarship fund to the program, cultivating a culture of philanthropy that empowers our students to live, learn, give, and earn in ways that enrich not just their lives, but the lives of those around them. Lastly, support will allow us to expand our outreach and serve a greater number of students who are eager to engage in a transformative educational journey.

CONCLUSION

The Transitions Program at the University of Cincinnati stands as a powerful testament to the importance of intentional support for Black students navigating the complexities of higher education. Since its inception in 1999, this transformative initiative has not only fostered a sense of community but has also significantly impacted retention and graduation rates among Black students at the University of Cincinnati. Through its comprehensive approach, which includes mentorship, cultural consciousness, and leadership development, the program equips students with the tools necessary for academic success and personal growth.

Key highlights from the article underscore the program"s foundational principles—connecting cultural consciousness, nurturing emerging creative minds, and affirming positive attitudes—each contributing to an environment where students feel valued and empowered. The introduction of innovative initiatives like the Early Arrival Program and the Abercrumbie Living Learning Community further enhance the support network available to students, ensuring they are well-prepared for the challenges of college life.

The success stories of Transitions alumni exemplify the program"s profound impact, as many graduates have gone on to become leaders within the university and their communities, advocating for change and equity. The formation of groups like the Irate8 illustrates the program's role in fostering civic engagement and social justice among students, showcasing how academic experiences can intersect with broader societal movements.

As the Transitions Program celebrates its 25th anniversary, the commitment to nurturing future leaders remains steadfast. Looking ahead, the aspiration to expand outreach and deepen impact reflects a dedication to creating a thriving, inclusive academic environment. With the potential addition of scholarship funds, the program aims to cultivate a culture of philanthropy that not only enriches the lives of individual students but also enhances the collective experience of the entire UC community.

In conclusion, the Transitions Program is more than just a support initiative; it is a lifeline for Black students, a catalyst for change, and a beacon of hope for a more equitable future in higher education. As it moves forward, the program will undoubtedly continue to inspire and empower generations of students, proving that indeed, "Ain't No Stopping Us Now!"

ACKNOWLEDGEMENTS

A special thank you to the pilot class of the Transitions Program:

- Edwin Adom, Entrepreneur in Health and Wellness
- Kim Adams, Wife and Mother
- Erin Ray, Entrepreneur
- Ron Ricks, Spoken Word Artist, MetLife representative, and former Student Government President
- Darren Tolliver, Bank Manager, Fifth Third Bank
- Latoya Everett, Global League, Client Services Manager
- Hunter Turner, Spoken Word Artist
- Medinah Abernathy, Fashion Designer, JCPenney
- Karol White, Doctorate in Pharmacy student, Howard University

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Sydney's Story: Experiencing Disconnection

Using Relational Cultural Theory and the Listening Guide to explore the experience of a woman engineering student

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INTRODUCTION

The field of engineering has been labeled the "last gender-equitable" profession in the United States (Pierrakos, Beam, Constantz, Johri, & Anderson, 2009, p. 1). Although women in engineering have been a research hot topic for decades, the field overall has made little progress in recruiting and retaining women since the mid-1990s (National Center for Science and Engineering Statistics, 2023). This single case study explores the co-op experience of a single woman undergraduate engineering student to better understand how relationships and connections impact women's experiences in engineering. The Listening Guide is utilized as the method of analysis through the lens of Relational Cultural Theory.

RELATIONAL CULTURAL THEORY LITERATURE

In many developmental models, self-sufficiency and independence are seen as the hallmarks of maturity, stating that development is based on separation and individualization (Miller & Stiver, 1997). However, recent research indicates that individuals grow through relationships with others (Jordan, 2014; Walker, 2020), placing relationships and connection at the center of human development. Modern neuroscience research supports the notion that the pain associated with disconnection is recorded in the brain the same way as physical pain (Banks, 2011). Theories such as Relational Cultural Theory (RCT) state that growth and development happen through relationships, not separation and independence (Banks, 2011; Walker, 2020). As stated by West (2005), RCT "is really speaking to a different paradigm entirely, one that appreciates and investigates a relatedness, an interconnectedness-one" (p. 101). The theory's ability to "focus on the interaction between macro issues and micro problems" (Adams, 2004, p. 151) makes it an ideal theory when exploring the experiences of women in engineering.

Jean Baker Miller, Alexandra Kaplan, Judith Jordan, Irene Stiver, and Janet Surrey developed Relational Cultural Theory (RCT) to fill in the gaps in our previous understanding around development, emphasizing connection and capturing the unique experiences of women. RCT highlights that growth and development do not occur independently or in a silo, but rather through "growth-fostering relationships" with others (Miller & Stiver, 1997, p. 16). RCT holds that only through "participating in growth-fostering relationships" (Miller & Stiver, 1997, p. 16) can growth and development occur, and challenges us to look at how connections with others play into our development. Connection is not merely just having an exchange with another person that makes you feel good, however; it is the act of being "heard and understood" (West, 2005). This helps us to create a sense of worthiness, where we believe our thoughts and feelings matter and are valid (West, 2005).

For women, experiencing a sense of connection with others is the central feature of development, as "women's sense of self and of worth is most often grounded in the ability to make and maintain relationships" (Miller & Stiver, 1997, p. 16). Although it is central to their development, women may find it extremely difficult to develop mutual growth-fostering relationships in a culture that views empathy as a weakness.

Patriarchal ideologies cause us to privilege masculine characteristics over those seen as feminine; however, "such priorities and preferences explicitly devalue core elements of our humanity and contribute to a decline in a familial and communal bonds and disconnection from oneself and others" (Way, Gilligan, Noguera, & Ali, 2018, p. 4). Chu (2018) reminds us that as long as having close connections and relationships is associated with femininity, boys' and men's desire to be in relationships will be seen as a weakness. In *The Crisis of Connection*, Way et al. (2018) refer to the disconnection many are experiencing—an inability to be in meaningful relationships and connection—as a crisis. Jordan (2004) suggests that it is more important to change the systems that prevent us from being in deep relationships with others rather than putting the responsibility onto individuals. According to hooks (1989), we must remain mindful not to disempower other people, but rather to be critical of disempowering ideologies and values. Recognizing that relationships cannot exist separately from the larger culture, relationships reproduce and represent the "cultures they are embedded" (Jordan & Walker, 2004).

RCT helps us understand how detrimental experiencing disconnection can be. Although disconnection can occur in daily interactions, chronic disconnection that occurs over an extended period of time without change can contribute to a sense of feeling small. When others cannot respond with empathy and mutuality, one can begin to believe that one's feelings and difficulties are all their own (Miller & Stiver, 1997; Walker, 2020). Additionally, when we begin to stereotype ourselves and each other, we begin to disconnect from ourselves and our common humanity (Way et al., 2018, p. 24.). Fedele (2004) observes that we all experience a basic paradox, where we are all yearning for connection while also developing strategies for disconnection. We often move away from connection in an attempt to protect ourselves, especially if we fear we may be met with a non-empathic response or if we sense we do not matter to the other person (Jordan & Walker, 2004).

Way et al. (2018) highlights the difficult choice that many women in engineering experience: "The choice they faced between having a voice and having relationships is psychologically incoherent, in that without a voice, there is no one present, there is no relationship, and without relationship or resonance, voices recede into silence" (p. 9). Women in engineering frequently experience disconnection from themselves and colleagues due to the masculine nature of engineering culture. Most significantly due to "the individualistic and meritocratic values of the profession" (Seron, Silbey, Cech, and Rubineau, 2018, p. 157), which are often adopted and go unquestioned. As such, I chose RCT as a theoretical lens for this study to examine the experiences of connection and disconnection in the engineering space.

METHOD

Sydney was interviewed using Josselson's (2013) relational approach to qualitative interviewing. Josselson (2013) highlights this relational approach to interviewing by suggesting that interviewing should be "moving *with* the participant" throughout the process (p. 8). Additionally, she states, "If we want to understand our participants' experiences in their own terms, we have to invite their narratives and get out of the way as much as possible" (p. 11). Josselson (2013) holds that "an interview is a shared product of what two people … talk about and how they talk together" (p. 1). She reminds researchers that "reality is socially constructed" and that as the interviewer we play a part in that construction.

During the interview, Sydney was asked a series of open-ended questions designed to understand her experiences as a woman in engineering. One initial question was asked from the interview protocol, and then the interviewer followed Sydney's thinking by asking thoughtful questions based on her answers. The initial question was, "Tell me a little bit about your co-op experience." Relational interviewing is often referred to as a dance, where the participant leads and the interviewer follows (Josselson, 2013). In the case of Sydney, that is exactly what happened.

Analysis Method—The Listening Guide

The Listening Guide was implemented to analyze Sydney's interview transcript. The Listening Guide provides a humanistic approach to analyzing and interpreting interviews by paying close attention to the voice and "exploring the interplay of inner and outer worlds" (Gilligan, 2015, p. 69). A voice-centered approach can be especially useful when working with marginalized populations who have historically been disenfranchised to have a voice. Gilligan (2015) explains, "Knowing that people often and for a variety of reasons do not say what they really feel and think, or don't know what they're feeling or thinking…The Listening Guide responds to this challenge as a relational problem" (p. 73).

The Listening Guide guides the researcher through three "listenings" or reviews of the data, where each of these listenings answers specific questions: "(a) What are the psychological features of this particular terrain? (b) How does

the 'I' or first-person voice move across this terrain? (c) What voices within the transcript or text speak to or inform the researcher's question?" (Gilligan, 2015, p. 69). In this study, the three listenings guided the development of the overall themes. Within the findings you will see the use of direct quotes and examples of the 'I' poems to assist with clearly communicating the themes from Sydney's perspective by using her own words.

TABLE 1: THEME CHART

THEME	SUB-THEME	REPRESENTATIVE QUOTE
The Battle of Multiple Identities	Female Identity	*I'm very confident in myself as a woman and as a person but I'm not confident in myself as an engineer.*
	Engineering Identity	*Already those things didn't fit together, being a woman and an engineer.*
The Challenge of Finding Balance	Finding a Balance Between Her Competing Identities (Female and Engineer)	*At first, they [coping strategies] weren't healthy. I would just ignore it because I felt like that was the only option I had.*
	Finding a Balance Between Being True to Herself and Combating Sexism Versus the Fear of Alienating Herself From Her Peers	*When I'm at work and I feel like I have to be professional and have to maintain a good image I don't want to just be the girl that calls everyone sexist.*
Discouragement Versus Assurance	Voice of Discouragement	*All the girls were like you're overreacting … You can't be the girl that's going to go around and call out harassment about everything.'*
	Voice of Assurance	*In some ways it makes me want to stay even more for reasons I mentioned earlier so I can be another percent in engineering field and another woman to help inspire more girls to go into it.*

The first listening involves listening for the plot as it "maps the psychological terrain" (Gilligan, 2015, p. 71). The first listening answers the question, "How does one establish where one is psychologically?" (Gilligan, 2015, p. 71). During the first listening one should pay attention to the landscape of the interview, who is involved, metaphors, repeated words, emotional triggers, gaps, and stories. **The second listening** requires the researcher to listen for the "I," or first-person voice, throughout the interview. The second listening helps us to understand how the individual acts or exists within the world. The second listening requires that we go through a transcript and review "I" statements (the "I" and the verb directly following it). These "I" statements can be combined to create I-poems; doing so can "evoke a voice that is speaking under a surface of dissociation" (Gilligan, 2015, p. 72). **The third (and fourth) listening** are listening for contrapuntal voices; as described by Gilligan (2015), "listening for contrapuntal voices thus picks up the tensions, the harmonies and dissonances between different voices, and underscores the musical aspect of listening where the goal is to listen for nuance, for modulations and silences (such as where 'I' turns to 'you' or drops out completely), to

resist binary categories, and to hear complexity rather than flatten the data" (p. 72). Together these listenings provide an analysis that allows for the research to stay closely aligned to the voice and words of the participant.

Limitations

This research study was designed as a single case study.

Therefore, as a single case study it is not possible to generalize the experiences of all women in engineering based on the experiences of one. Sydney is an able-bodied white woman in her early twenties. Future research needs to be conducted to explore the voices of women of color in engineering who are almost always lost in a sea of white women's experiences.

FINDINGS

Three overall themes were developed from the listenings. Each of the three overarching themes contains two subthemes, which are shown below in Table 1. The main themes include: (1) the battle of multiple identities, (2) the challenge of finding balance, and (3) discouragement versus assurance. In addition to including direct quotations from Sydney's interview, I-poems are also shared that were developed as part of the second listening process.

The Battle of the Multiple Identities

Sydney talks openly about her two separate identities of being a woman and being an engineer. She explains that these identities are not only misaligned, but they are in fact contradictory; she speaks about how they have to exist separately for her. Throughout the interview she provides examples of how the process of trying to bring her identities together is difficult and something she is still trying to navigate. She discusses in detail how this is a struggle for her, as she is confident in who she is as a person; however, she is not confident in herself as an engineer. She explains:

> *I think I tried to separate. Like I'm very confident in myself as a woman and as a person but I'm not confident in myself as an engineer. Already those things didn't fit together, being a woman and an engineer … it was really hard because I've never been one to struggle with confidence.*

Sydney attempts to make sense of what she is feeling and experiencing. She goes back and forth between being confident, doubting herself, and trying to reconcile those two things. She makes it clear here and in other areas of the interview that bringing together her identities is difficult and still a struggle. Through her response, we can hear that the culture of engineering has led Sydney to feel less confident in her abilities. Her response to these feelings was to separate her two identities, attempting to alleviate some of the difficulty and pain associated with being a woman in engineering. In another area of the interview she reflects: "So I definitely just turned down my personality, watered down myself. Which I got better about towards the end. It was kind of frustrating. It was something I didn't even really realize I was doing."

Sydney has an impressive ability to reflect on situations, even though it is still very real and fresh to her. She is able to articulate the inner dialogue that she has with herself, as she tries to understand herself and the situation better, continuously acknowledging it is something she is still trying to negotiate. Sydney's attempt at negotiating leads us to the theme, the challenge of finding a balance.

The Challenge of Finding a Balance

For Sydney, finding a balance means two different things: (1) finding a balance for herself between her two competing identities (female identity and engineer identity), and (2) finding a balance of being true to herself and combating sexism while also trying not to alienate herself from her male peers. She speaks candidly about how the concept of finding balance has been a journey for her and is still something with which she struggles very much.

When asked about the strategies she used to deal with sexist comments she received, she responded:

> *At first they weren't healthy. I would just ignore it because I felt like that was the only option I had. I either had to completely ignore it so that it wasn't not only hurting me but that way my guy friends would still talk to me because if I dare say anything about it I would lose literally everyone because everyone there would be offended … when I'm at work and I feel like I have to be professional and have to maintain a good image I don't want to just be the girl that calls everyone sexist. I feel like that doesn't get me anywhere a lot of times.*

In the above quote, Sydney describes a daily struggle. Sydney fears the consequences of speaking up against sexism in engineering and this often silences her. In reality she would like to speak up and confront those who make

inappropriate comments or gestures;, however, she acknowledges that her professional reputation could suffer if she confronts others. In other areas of the interview Sydney recounts instances when she did speak up and the consequence was that others disregarded her or brushed her off. She realized from this that even in situations when she has the confidence to be true to herself and speak up, using her voice, she is disregarded by her peers, rendering her once again voiceless and making her feel alone.

When asked, "What is it like to have both of these identities at play at the same time?", Sydney responds, "It's hard, I don't know if I've found that yet." She is honest in her struggle to find a "balance." She states, "so that's still definitely something I'm still working on, trying to find a balance between letting them get away with it and not screaming at them." Here she is expressing her frustration with the sexist comments that her male co-workers make, but also acknowledging she is unable to yell at everyone (even if everyone is making inappropriate comments).

Sydney is a positive, upbeat young woman. However, she notes numerous times in the interview that she has felt as if she has to "water down" her personality so that she can fit into her engineering role. Yet through all her struggles and negative experiences, Sydney remains optimistic about her ability to find a balance:

> *I think that it is important to try to build those friendships with guys, which is something I struggle with because half of the guys I become decent friends with then make a horrible sexist comment and I'm like 'Well, I can't be friends with you anymore.' (laughing) Or more often than not they're so awkward to even talk to me. Which in some ways is almost an even worse form of sexism because I'm just another person, just speak to me, the fact that I'm a girl doesn't change anything.*

Although in most of the interview, Sydney expresses frustration and confusion, she still manages to sprinkle in comments about her purpose within engineering and why she refuses to give up. In one instance she says, "It kind of inspires me more to really succeed because I saw that we really do need more women out there. I need to graduate and I need to get out in the field to help fix that, to help encourage women younger than me to pursue engineering." Later in the interview she reiterates her thoughts about her purpose: "In some ways it makes me want to stay even more for reasons I mentioned earlier so I can be another percent in the engineering field and another woman to help inspire more girls to go into it." However, immediately following this comment she states, "But in some ways it makes me want to be, like, okay, I'll just get this degree and get out of engineering, just so I can go do things I'm better at. Which is not true. But it feels like that." This contradictory set of emotions expressed by Sydney helps us to see that she teeters back and forth between being a confident woman and being a woman disenfranchised by the engineering culture.

Discouragement Versus Assurance

Sydney is consistently in environments where she is one of the only women, both in classes and while on co-op. Sydney is an intelligent and confident young woman; however, many of her experiences have caused her to feel frustrated and discouraged. Sydney's voice of discouragement is often seen battling or in competition with her own internal voice of assurance. The I-poem below shows Sydney's feelings of discouragement and inadequacy.

> *I was really discouraged*
> *I didn't*
> *I remember*
> *I didn't*
> *I felt like*
> *I didn't fit in*
> *Nothing I could do*
> *I couldn't do enough*
> *No matter how hard I tried*
> *I wasn't qualified*

From the above poem we hear a deep sense of sadness in Sydney's tone as she struggles with various emotions, especially feelings of rejection and inadequacy. Sydney often feels as if she doesn't belong in engineering and that she isn't "enough." These feelings of inadequacy stem from feeling that her skills are misaligned with the male dominated culture of engineering that she has come to know. Although these feelings are expressed in various places throughout the interview, we often hear these feelings of inadequacy followed by a statement of empowerment or assurance. For example, "Sometimes I feel like those things aren't valued as much or aren't typical engineer (skills)." Here she is explaining how she believes her skills go against the stereotypical mold of what makes a good engineer. Following the above statement, she articulates, "But they are just as valued and just as important if not more important because that is

what is going to revolutionize the field and help us accomplish new things." Here we can hear her trying to validate herself and her feelings, especially her reason for staying in the field of engineering. At one point Sydney and I discussed her level of self-awareness, and I asked her to describe what it was like being a confident woman walking into the engineering space. The I-poem below is from this discussion, displaying the back and forth, showing the voice of discouragement in dialogue with the voice of assurance:

> *I think*
> *I tried*
> *I'm very confident*
> *I'm not confident*
> *My initial response*
> *I'm just*
> *I did*
> *I was able*
> *My personality*
> *I was confident*
> *I've never*
> *I wasn't*
> *I just felt*
> *I wasn't*
> *I guess*
> *I don't know*
> *I know*
> *I'm smart*
> *I've been*
> *I was*
> *I was*
> *I think*
> *I coped*

In the above I-poem we see the back and forth between discouragement and assurance, for example: "I think, I tried, I'm confident, I'm not confident" and then again with, "I guess, I don't know, I know, I'm smart." We can hear these voices bounce back and forth, almost as if they are battling one another.

The voice of discouragement is most often expressed as the voice of others, such as in the voice of her peers (both men and women) as well as the voice of engineering culture. Sydney provides in-depth observations of her experiences in interacting with her women peers about what she experienced on co-op:

> *Other women my age, whether in computer or whatever, they saw the same things on co-op. It was really interesting coming back and see how they processed it differently. Because I think I was the only one who came to the realization like, 'Oh, sexism is real and this is bad. Be more confident in yourself and that kind of thing.' Some of the other girls were like, 'Oh, you're overreacting,' like all the girls were like you're overreacting. Like, everyone is nice and no one is looking to harass you. You can't be the girl that's going to go around and call out harassment about everything.*

Through the above excerpt, we hear Sydney attempting to process the comments she has received from her women peers. Not only is she experiencing feeling "othered" by her male peers, but when she seeks validation from her women peers, she gets very much the opposite. Sydney states that some of the "worst backlash" she received was from women peers. She goes further to state that she believes the backlash and denial are used as coping mechanisms for her women peers, stating, "Honestly I think that is kind of a coping mechanism for them and they don't realize they're doing it. Because it is hard as soon as you accept that things are terrible. Your life is never easy after that." If we listen to this quote as a voice poem, extracting the pronouns and verbs, we can hear Sydney's ideas, by hearing her voice of self in dialogue with voice of others as she experiences it.

> *I think*
>
> *You accept*
> *Your life*
>
> *Coping mechanism for them*
> *They don't realize*
> *They're doing*

As Sydney describes her experiences with her peers, she sifts her pronoun from "I" to "you." Raider-Roth (2005) and Brown & Gilligan (1992) both suggest that the shift from "I" to "you" often signals a sense of disconnection from self. An example of Sydney feeling disconnected from her peers is heard here, but it can be suggested that this disconnection for Sydney is a conscious choice. She sees the way her women peers are living and, in an attempt to avoid living that way, she actively disconnects from them. Therefore, in order to not become them, she disconnects from them. However, by disconnecting from them she is consequently

also disconnecting from herself. The separation from her peers may also be a coping strategy for Sydney to preserve herself, since in her experience when she was authentic with her women peers, she was left feeling unsupported and unheard, leading her to feel further disconnected from her peers and the field of engineering.

We continue to see Sydney's struggle, being who she truly believes herself to be and being who society (in this instance her women peers) is telling her to be. Sydney feels othered by her peers, because they are not willing to accept the reality of the sexism they face. I hear her use of "honestly," almost as if this is the first time she has admitted this out loud. Later she profoundly states that once she realized the reality of the situation, "Your life is never easy after that." Again, Sydney shifts from the "I" to the "you" voice when referring to herself, suggesting again that Sydney chooses to disconnect from her peers, but by doing so she is also disconnecting from herself.

The voice of discouragement from society is also telling Sydney what it means to be a good and qualified engineer. She describes the stereotypical engineer as male, introverted, and nerdy, and reflects:

> *In general, the culture was very introverted. People were very different from me. Felt like that was everyone ... I feel like specifically not because I'm the only girl but someone who is typically a little more extroverted and outgoing and that kinda thing, it's harder to be with people all the time who don't even really like to talk to me. (laughing)*

Here we can hear that Sydney feels as if she does not fit in or belong in engineering. This feeling stems from the feeling that her personality does not mesh with the field, once again contributing to her feeling othered. Throughout the interview she recounts feeling othered for being a woman, but here we see the feeling of being othered stemming from her extroverted personality. These feelings are painful for Sydney. The characteristics that make her who she is—an intelligent energetic extroverted woman—are the qualities that are not accepted in the field of engineering. She goes further to describe that her male peers often suggest to her that the only reason that she was hired was because she was "filling the diversity quota" and Sydney confesses that sometimes that's exactly the way it feels. These comments are examples of discouragement and they continue to leave Sydney feeling alone.

These experiences and comments cause Sydney to feel isolated from her peers and the engineering field. When she asks herself, "Why are you here?" we can hear her internal dialogue. The I-poem from this segment highlights her frustration:

> *It makes me feel*
> *I don't belong*
> *I will just go*
> *Somewhere I can succeed*
> *I don't know why*
> *Doesn't make sense to me*
> *I knew*
> *We were just as interested*
> *I never really understood*
> *I was just*
> *I remember*
> *I don't understand why*
> *I don't understand why*
> *I don't know why*
> *Confusing thing to me*

The above poem captures the essence of Sydney's frustrations with the gender gap in the field of engineering that she too is experiencing, even as a sophomore student. Not only does this poem capture Sydney's frustrations, but also her disbelief, stating multiple times, "I don't understand why" and "I don't know why." In the poem, we also get a sense of rejection when she articulates, "It makes me feel, I don't belong, I will just go." In this poem, we can see Sydney go back and forth between not belonging yet succeeding, being interested yet not understanding, and wavering in an attempt to make sense of her experiences. Here we hear her rooted in the "I" voice, as she wants to ensure that she is not speaking for other women here, but only speaking for herself.

As previously described, Sydney is a confident and bubbly young woman. Although her experiences within engineering thus far have been filled with negativity, she attempts to provide herself with assurance—assurance in her choice of a major/field, assurance that she is smart enough, assurance that she is capable, assurance that her purpose is in engineering, and assurance that she can be successful. The voice of assurance often seems to be on the defensive in Sydney's stories, often elicited by a negative experience that occurred. The voice of assurance sounds like this: "I could figure them (problems) out and I could do them well ... I am well qualified for my job ... I know I'm smart." When reading the

interview as a whole, I can hear that the voice of assurance is what keeps Sydney going and motivated to succeed. When describing her co-op experience and how she was discouraged after seeing so few females at the company, she concludes by saying that she felt much more confident at the end of her co-op experiences after watching the final presentations of all the co-op students. Through these final presentations she realized that her presentation abilities and the quality of work she produced was more significant and meaningful than that of her male peers, and this gave her a boost in confidence. Although she was one of the only women at her co-op company and her male peers were unaccepting of her (negative aspects of the experience), she was still able to perform well professionally (the positive aspect). Below is another excerpt in which we can hear her internal dialogue, where she tries to overpower feelings of discouragement with assurance:

> *But honestly I'm starting to realize that I think the only reason I thought I wanted to do that was because I was never confident enough to be like 'I can be the bubbly smart engineer'. So yeah I don't know. I think a lot that I've learned is that good communication skills can be really powerful in engineering.*

Above she is discussing how she wanted to become an engineering manager due to the fact that she has strong communication and leadership skills. However, in reflecting deeper she recognizes that she believed that being an engineering manager was her only option in engineering because she strayed from the stereotypical mold of an "engineer engineer," insinuating that being an engineering manager isn't "real" engineering. Her most recent co-op experience has provided her with the assurance that "good communication skills can be really powerful in engineering," reiterating that her skills can be a valuable addition within engineering.

Sydney describes feeling a sense of purpose within engineering, which provides her with assurance about her decision to persist in the field. She expresses a sense of purpose in a few different areas of the interview; however,; each time it immediately follows a segment of her discussing feeling discouraged within engineering.

> *It's confusing and frustrating and it makes me feel even more like I don't belong here because if women are doing everything else maybe this one [the engineering field] just has to be the guys' thing. I will just go somewhere else and find somewhere I can succeed. I don't know why it is, it just doesn't make sense to me ... But getting into computer engineering specifically where the gender gap was so bad I remember just being confused and feeling out of place. Because I don't understand why, I don't understand why women don't go into it. It's not, I don't know why it's any different than any other medicine field or anything like that. Yeah, so it's kind of a confusing thing to me.*

Sydney uses the term "confusing" multiple times to describe the way she feels. The feeling of disconnection from self and peers has contributed to this feeling by not allowing her to feel firmly grounded in her experiences and feelings. Let's take a look at the above except in poem form:

> *makes me feel*
> *I don't belong*
> *I will just go*
> *find somewhere I can succeed*
> *I don't know why*
> *it just doesn't make sense to me *
> *I remember just being confused*
> *I don't understand*
> *I don't understand*
> *I don't know*
> *a confusing thing to me*

Above we see a powerful expression of her discouragement, saying specifically "I don't belong." But this poem also highlights her disassociation from what she knows, saying multiple times "I don't know" and "I don't understand." As previously explained, Sydney is a confident and intelligent student, but here we hear her struggling to find a voice of assurance. We hear her go into a dissociative state of not knowing.

Following her response above, I asked, "Does it make you feel differently about the engineering field? Or what your future will look like in the computer engineering field?" Sydney responds:

> *Oh yeah! For sure because there still isn't women going into it which makes me think that, 'Why else would you not go into that field?' So yeah definitely it makes me think about that. In some ways it makes me want to stay even more for reasons I mentioned earlier so I can be another percent in engineering field and another woman to help*

> *inspire more girls to go into it. But in some ways it makes me want to be like okay, I'll just get this degree and get out of engineering, just so I can go do things I'm better at. Which is not true. But it feels like that.*

Sydney notes her purpose here as being another "percent" in engineering and inspiring younger women to go into the field. She sees it as her responsibility to change the field of engineering, to make it more equitable and accepting of women. Later in the interview she says, "I like to see how the things I'm working on are really helping people and really changing things." Again, we see the concept of helping and improving the lives of others. A sense of purpose provides Sydney with the assurance she needs to persist in tumultuous situations. When we move the above segment into a poem, it further strengths this argument:

> *makes me think*
> *definitely it makes me think*
> *makes me want to stay*
> *I mentioned*
> *I can be another percent*
>
> *it makes me want to be like okay*
> *I'll just get this degree*
> *so I can go do things*
> *I'm better at*

Here we can hear the voice of assurance facing strong opposition by the voice of discouragement. We hear the struggle in Sydney's tone: she wants to succeed in engineering, but she also doesn't want the rest of her career to be difficult. We hear Sydney present in the "I" voice, suggesting that she knows both sides of herself here, as if she is aware of this back and forth within her.

Throughout the interview we understand that the voice of assurance helps Sydney persist in engineering. The voice of assurance provides Sydney with encouragement and positive reinforcement in difficult times. Sydney also reflects, as if she herself is trying to bring her experiences and feelings into alignment. I hear her trying to sort her experiences, to uncover the truth of her feelings. Even as she answers certain questions, her responses are filled with equal parts encouragement and equal parts discouragement, which can be seen in the previously described themes. She appears at some points to be trying to convince herself that she will be able to overpower the reality of her experiences. Although these voices of discouragement and assurance are prominent throughout the interview, it is still obvious in Sydney's words that these voices are evolving and changing.

Summary

Taken together, the themes (the battle of multiple identities, the challenge of finding balance, and discouragement versus assurance) highlight the complexity of Sydney's experiences and the tangled process of negotiating identities. Sydney struggles to bring together her competing identities of being a female and an engineer, articulating that this is still something she is trying to navigate. An internal struggle develops for Sydney when she is faced with sexist comments, as she wants to speak out, but recognizes there are potential consequences to her career for doing so. Finding a balance between speaking up and being silent is something Sydney explains she is continuously trying to achieve, but even more important is finding a balance that allows her to feel as if she is being true to herself in the engineering space. Sydney's experiences thus far have been discouraging, leading her to feel as if she doesn't have a place within engineering. When we look at the voice poems specifically, we can hear the discouragement in Sydney's story. Additionally, within these poems we can hear the dangerous consequences of discouragement, a loss of connection with self. This loss of connection with self causes Sydney to feel unsure and go into a dissociated state of not knowing. Sydney's voice of assurance is resiliency and her attempt at keeping herself intact, despite difficult experiences and disconnected relationships.

THINKING ABOUT SYDNEY

During our one-hour interview Sydney invited me to look through the window of what it is like to be a woman in engineering. Sydney displays authenticity and vulnerability as she reflects on her experiences as a co-op student in the engineering field. Her ability to articulate her multiple identities, as a woman and an engineer, helps us understand the complexity of her experiences and the formation of her individual identity as a woman, as an engineer, and as an intersection of the two. Throughout the interview she describes how these identities are competing and how she has to negotiate between them, trying to find balance while also staying true to herself.

Sydney has taught me that the development of a professional identity is complex, messy, and sometimes difficult. Negotiating the competing expectations of her identity as a woman versus her identity as an engineer can prove to be overwhelming and exhausting. Navigating these seemingly

competing identities, however, is crucial to creating an identity and a life where a person feels they are able to achieve what they aspire to do—in Sydney's case, create an impact as a woman engineer. Sydney reflects on the difficulty of her experiences but expresses that she will continue to fight to find a balance among all the aspects of her identity as a woman in engineering.

What I find most profound from the interview is Sydney's ability to reflect on becoming aware of the situation/reality for women engineers in the midst of attempting to negotiate her multiple identities. She notes, "[I]t is hard as soon as you accept that things are terrible. Your life is never easy after that." The tone of her voice in this response conveys that she knows the difficulty she is describing from personal experience. We hear her deal with discouragement throughout the interview, by trying to display resiliency despite the pain of discouragement. The discouragement she experiences causes a disassociation from what Sydney knows. While Sydney is aware of the reality of being a woman in engineering, she is still trying to negotiate a life within engineering that allows her to feel as if she is still holding true to all aspects of her identity as a woman and as an engineer.

Discussion: Sydney through the lens of RCT

Throughout the interview we see Sydney refraining from sharing her authentic feelings with her male peers and colleagues, but also from other women. RCT suggests that if we find it difficult and dangerous to share our feelings and thoughts with others, we begin to find methods to protect ourselves, typically by choosing to not share our feelings and emotions. Miller & Stiver (1997) warn that "if we don't have other people in our lives who can resonate and respond, we become less and less able to state our feelings and thoughts or even to know them" (p. 54). In the long term, these experiences could have lasting consequences for Sydney, as she may retreat from sharing her authentic feelings in the future with colleagues and peers. By withholding from sharing her authentic feelings with others, her ability to create meaningful relationships with others will be impeded.

Within engineering, women often feel as if they are not recognized by their peers and are at risk of developing weaker identities as engineers, and, therefore, feel excluded within the field of engineering (Tonso, 2006). Sydney expresses feeling that her identity as an engineer is not recognized by her peers. She goes as far to say that she has even considered leaving engineering, because she often feels that the skills she possesses are misaligned with engineering. Within engineering, traits traditionally associated with women are generally seen as weaknesses and as unfit for the profession (Seron et al., 2016). Women within the field of engineering are often associated with being emotional, insecure, and irrational, perpetuating the concept of gender binaries that associate rationality with masculinity and emotionality with femininity (Bastalich, Franzway, Gill, Mills & Sharp, 2007). RCT highlights that society often regards the strengths of women as weaknesses (Miller & Stiver, 1997). Chu (2018) warns us that when we are socialized to "privilege masculinity and discount femininity" (p. 100), it can lead to a crisis of connection.

Throughout the interview, Sydney describes regularly experiencing disconnection from colleagues and peers in the engineering field. When Sydney attempts to speak up against the sexism she faces, she is met with backlash. It has been noted that one of the common dynamics and practices in engineering is sanctions for challenging offensive behaviors (Faulkner, 2009), helping us to begin to understand why women quickly stop speaking up about injustices within engineering. After prolonged periods of perceiving their feelings as illegitimate, women stop sharing and begin internalizing these feelings. They then isolate themselves from others and from their feelings, which perpetuates the cycle of disconnection. Sydney experiences disconnection from her peers—especially her women peers—when she shares her negative experiences and they respond by downplaying her experiences. RCT suggests that over an extended period of time without any change, disconnection can cause an individual to believe that their distress is illegitimate, since each instance contributes to a sense of being "small." When others cannot respond with empathy and mutuality, a person begins to believe that their feelings and difficulties are all their own (Miller & Stiver, 1997). Sydney is feeling "small" when sharing her feelings because her experiences are not met with empathy and understanding.

The values and norms of engineering, which include aggressive displays of self-promotion, self-confidence, and technical ability (McIlwee & Robinson, 1992), help create a culture that does not emphasize relationships and connection. In fact, it does the opposite. It can be argued that the culture of engineering discourages individuals from engaging in empathetic relationships, since such relationships go against the ideologies of the field.

We all develop strategies that help us stay out of connection with others. These strategies are developed in an attempt to

ward off experiencing further rejection or wounding; these are strategies of survival (Walker, 2020). Within engineering we see that women often dissociate from other women as a mechanism of survival (Bastalich et al., 2007), attempting to make themselves appear less feminine by adopting masculine qualities and rejecting feminine qualities (Seron et al., 2016). Sydney describes engaging in such behavior by explaining that she chooses not to "really do much with my hair and makeup," but rather to wear natural colors and try not to draw attention to herself. She goes on to admit that this was not her style, but that she was "unconsciously watering down my personality and myself to try to fit in more." Sydney states that she struggles with where to draw the line in these situations of being her true self and not making things more difficult for herself. Sydney is engaging in role playing, which Miller and Stiver (1997) describe as one of the main strategies used for staying out of relationships. Role playing encompasses "a range of behaviors that reflect efforts to please, control, or gain the attention of significant people" (Miller & Stiver, 1997, p. 111). Sydney attempts to control the situation by not drawing attention to herself and trying not to be seen as feminine, but in the process makes herself feel even more disconnected from herself and her peers.

Within the undergraduate engineering space, perceptions and opinions of peers is vitally important to how student sees themselves (Godwin, 2016). RCT reminds us that we "cannot develop a sense of worth unless the people important to us convey that they recognize and acknowledge our experience" (Miller & Stiver, 1997, p. 33). Research stresses that relationships during the college years are essential to a sense of belonging and psychological well-being (Robinson-Wood, 2015). Throughout the interview, Sydney describes attempting to share her experiences with others, but these attempts are often met with disdain. When describing the way she feels about her male peers, she offers, "It's just really frustrating that I have to deal with an emotional burden every day that they don't even know exists." RCT reminds us that when an individual has attempted to engage in a connection with another person and this attempt has resulted in feeling unheard and misunderstood, they will be left feeling disconnected (Walker, 2020). These encounters leave Sydney feeling more alone, isolated, and unseen. It is through these experiences that Sydney begins to internalize the idea that sharing her true self with her peers is no longer an option. She also attempts to hide her feelings to avoid being seen as emotional and feminine. RCT scholars remind us that hiding our feelings is a common technique used to prevent pain but that keeps us out of connection, hiding feelings in an attempt to gain "relational safety" (Walker, 2020).

As mentioned earlier, the discouragement Sydney experiences causes her to dissociate from what she knows. Therefore, Sydney is not only feeling disconnected from her peers, but she is also dealing with the consequences of discouragement by experiencing a dissociative state of knowing. This dissociation from what she knows also contributes to Sydney disconnecting from herself as an attempt to keep herself intact. Prior research (Raider-Roth, 2005) suggests that if relationships are compromised, our ability to know ourselves is compromised, and therefore our ability to know is compromised. This has significant implications for the co-op learning experience. If a woman's ability to know is compromised due to a lack of meaningful relationships, then her ability to contribute and grow is also compromised. The results of this compromise can have a lasting impact on women's ability to learn and grown during co-op as well as during her career as a full-time engineer.

Future Directions

Additional studies are necessary to explore the diverse experiences of women in engineering. It is recommended that feminist forms of analysis be utilized to ensure researchers stay true to the voices of participants and celebrate the complexity of their experiences. Only by understanding the diverse experiences of women in engineering in their own words can we truly begin to explore the sexism and masculine culture that is embedded in engineering. Judith Jordan (2004) reminds us, "We need to complain. With encouragement from others, complaints become protest. When protest is supported by community, it becomes social action. When communities join together to protest and take social action, social revolution is born" (p. 23). Let me be so bold as to say we need to complain. We need to hear other women complain and we must support them; only then can we find our way back to connection.

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The Gaskins Foundation: Building Community-Driven STEM Education

WHITNEY GASKINS • COLLEGE OF ENGINEERING AND APPLIED SCIENCE, UNIVERSITY OF CINCINNATI

DELANO WHITE • THE GASKINS FOUNDATION

INTRODUCTION

The Gaskins Foundation is a federally recognized 501(c)(3) non-profit organization committed to providing extraordinary opportunities for under-recognized and under-represented youth. Our mission is to present, engage, and prepare students of all ages to become leaders in Science, technology, engineering, and mathematics (STEM) by integrating algebra, programming, and design concepts into their educational journey. We believe that every student, regardless of background, deserves the chance to explore their potential and be equipped with the skills necessary to thrive in the ever-evolving fields of STEM.

To fulfill this mission, the Gaskins Foundation offers youth resources at many stages of their academic and creative lives, ensuring they have the support needed to succeed. Our comprehensive programs are designed to develop and foster the skill sets essential for a brighter future, whether through hands-on learning experiences, mentorship opportunities, or advanced training in STEM disciplines. By addressing the unique needs of under-represented students and guiding them through their educational journey, we empower the next generation of STEM leaders to overcome barriers that might impede students' success and create lasting change in their communities.

In addition to our core programs, the Gaskins Foundation actively partners with schools, community organizations, and industry leaders to expand our reach and impact. These collaborations allow us to bring innovative STEM opportunities directly to the communities that need them most, bridging the gap between education and real-world application. Through these partnerships, we not only provide students with access to state-of-the-art resources and mentorship from professionals in the field but also work to create a network of support that extends beyond the classroom. Our goal is to build a viable environment or culture that nurtures talent, fosters creativity, and inspires lifelong learning, ensuring that our students are well-prepared to excel in STEM careers and contribute meaningfully to society.

The foundation leadership has created a model that has cultivated change within the Greater Cincinnati region. The vision, moving forward, is to utilize the program as a model that can continue to expand within the region. In addition to strengthening local collaborations, the leadership is calling on individuals, organizations, and communities to join us in our mission to create a more inclusive and equitable future in STEM by integrating the model into communities across the country.

STEM LANDSCAPE

The STEM landscape for marginalized and minoritized communities, including women, Black, Indigenous, and Latinx individuals, remains one of significant disparity and underrepresentation. Despite strides toward inclusivity, these groups continue to face systemic barriers that limit their access to STEM education and career opportunities (The National Academies, 2019). Women, particularly women of color, are often underrepresented in STEM fields, facing challenges such as gender bias, lack of mentorship, and unequal access to resources. Similarly, Black, Indigenous, and Latinx individuals encounter systemic inequities that hinder their academic and professional progress in STEM disciplines. These barriers include underfunded schools, limited exposure to STEM role models, and cultural stereotypes that can discourage interest and participation in these fields. As a result, the STEM workforce does not fully reflect the diversity of the broader population,

which not only limits opportunities for these communities but also stifles innovation and creativity within the field. Addressing these disparities is crucial for creating a more equitable and dynamic STEM landscape, where all individuals, regardless of their background, can contribute to and benefit from advances in science, technology, engineering, and mathematics.

OUR "WHY"

The Gaskins Foundation was founded with a clear and passionate purpose: to level the playing field for underrepresented communities in STEM. Dr. Whitney Gaskins recognized the profound impact that access to quality education and career opportunities can have on an individual's life, and she wanted to ensure that these opportunities were available to everyone, regardless of their background. The Foundation's work is not just about providing resources; it's about creating lasting change. By addressing systemic inequities and offering a platform for young people to explore and excel in STEM, the Gaskins Foundation aims to transform lives and communities. Every program we develop, every partnership we forge, and every student we support is a step toward a future where diversity and inclusion are not just goals but realities in the STEM fields. This commitment to making a meaningful difference drives everything we do, as we strive to empower the next generation to overcome barriers to success and achieve their full potential.

The Gaskins Foundation's commitment to fostering opportunities for underrepresented communities goes beyond addressing the immediate educational needs of students. We are deeply invested in creating long-term, sustainable pathways that lead to both personal and professional success. Our programs are designed to not only provide academic support but also to build confidence, resilience, and a sense of belonging in STEM fields where these students have historically been underrepresented. By cultivating an environment where students feel seen, heard, and valued, we are helping them to develop a strong sense of self-efficacy. This, in turn, encourages them to pursue ambitious goals and to view challenges as opportunities for growth. The Gaskins Foundation is dedicated to opening doors for these young individuals and equipping them with the tools and mindset necessary to thrive in their chosen paths. This holistic approach ensures that the impact of our work extends far beyond the classroom, empowering students to become leaders and innovators who will drive positive change in their communities and the broader world.

COLLABORATION OVER COMPETITION

The Foundation's leadership team focuses on the power of collaboration over competition. We work with organizations such as Cincinnati Public Schools and the Cincinnati Recreation Commission, along with community churches. We foster collaboration by sharing resources and expertise so that both are more impactful in supporting underserved communities. By collaborating with local partners, our Foundation can create more opportunities for students, deliver higher-quality educational programs, and address systemic issues with greater efficiency, thus ensuring that every young person has access to the tools and support they need to succeed in the STEM workforce.

Our team also works with departments throughout the University of Cincinnati to connect college students to mentorship and service-learning opportunities for our K-12 students and families. These college students play an active role in delivering engaging curriculum, offering guidance, and serving as role models. The Gaskins Foundation works with the Office of Inclusive Excellence and Community Engagement in the College of Engineering and Applied Science to match service-learning experiences with students in need of service-learning hours. Many of these students who receive scholarships, such as Choose Ohio First and the Ohio Louis Stokes Alliance for Minority Participation (LSAMP), are required to complete fifteen STEM-focused volunteer hours. These students serve as volunteers for afterschool STEM (STEMTime) clubs and a program called STEMulating Saturdays. By working with the same group of students for, at minimum, one academic year, we can cultivate a mentor-mentee relationship between the pre-college students and the collegiate volunteers.

We also work with the university's Bearcat Buddies program through the UC Center for Community Engagement to connect volunteers with students at four schools in close proximity to the university. UC students are transported to the schools using the Bearcat Buddies transportation system. This year, we also expanded the partnership to allow Gaskins Foundation staff members to utilize the Foundation's van to connect more students to tutoring at the partner schools.

By bridging the gap between college and pre-college experiences, we are able to leverage the unique perspectives and skills of these mentors to cultivate a supportive learning environment, enriching the educational journey for both mentors and young learners alike. These collaborations foster community engagement and create a continuum of

learning that prepares K-12 students for future academic and career success.

OUR METHODS

At the Gaskins Foundation, we utilize Community-Based Participatory Research (CBPR) to develop both our programs and our curriculum, ensuring that they are deeply rooted in the needs and strengths of the communities we serve. This collaborative approach allows us to create educational experiences that are not only relevant but also impactful. During our program sessions, we implement the P.E.P. Model—Present, Engage, and Prepare—as a strategic framework for teaching. This model is essential in scaffolding the curriculum to suit different age groups, allowing us to tailor our approach to meet students where they are developmentally. By using the PEP Model, we ensure that each child receives the appropriate level of support and challenge, fostering a strong foundation in STEM learning.

The PEP Model is designed to track and enhance PK-12 students' academic progress, aiming to ensure that they perform at or above their grade level. For younger students (PK-3), the focus is on "Presenting" concepts. In these sessions, students are introduced to STEM through hands-on projects. For example, they might be tasked with building a bridge. By the end of the session, they not only complete the project but also learn a key STEM-related term, such as "tension."

For students in grades 4-6, the goal is to "Engage" with the material. Here, students continue to complete projects but with an added emphasis on understanding the science behind them. They learn specific STEM concepts and are encouraged to demonstrate their grasp of these ideas. Each session concludes with a three-question verbal survey asking:

1. Did you enjoy what we did today?
2. Would you like to learn more about topics like this?
3. Can you explain how the STEM concept of the day works?

For students in grades 7-12, our focus shifts to "Preparing" them for STEM careers. These sessions guide students through the steps needed to enter and succeed in a STEM pathway. Students are taught to design their own projects using the Engineering Design Process or the Scientific Method. They are given a design challenge, materials, and constraints, and then encouraged to innovate. After completing their projects, the session ends with a three-question verbal survey to assess their design process:

1. Did this process increase your interest in pursuing this as a career?
2. Can you walk us through your design process?
3. Can you think of another grand challenge that could be solved using a similar process?

OUR PROGRAMS

The Gaskins Foundation organizes its programs into four key focus areas each designed to address a specific aspect of STEM education and community engagement. These areas are STEMulAtes, STEM Workforce Development, STEM Thought Leadership, and STEMfluencers. The STEMulAtes focuses on early engagement and hands-on learning experiences to spark interest in STEM from a young age. STEM Workforce Development programs aim to prepare students and young professionals for successful careers in STEM fields, equipping them with the necessary skills and leadership qualities. STEM Thought Leadership emphasizes the importance of research, policy development, and community-driven initiatives to shape the future of STEM education and inclusion. Lastly, STEMfluencers recognizes and amplifies the contributions of individuals and organizations that serve as role models and advocates for STEM within underrepresented communities. Each initiative within the Gaskins Foundation aligns with one of these areas, ensuring a comprehensive approach to fostering diversity and excellence in STEM. More details on each area and program follows.

STEMulAtes

- **STEMulating Saturdays:** STEMulating Saturdays is a monthly program designed to increase student participation in STEM activities through hands-on, challenge-based learning experiences. Students are grouped based on their current grade level, and using the PEP Model, the program positions students to perform at least one grade level above current educational standards.
- **STEM Ready Institute (SRI):** The STEM Ready Institute (SRI) is designed to equip students in grades 7-12 with next-generation STEM skills, preparing them to enter and succeed in STEM majors and eventually matriculate into the STEM workforce. Beginning in the seventh grade, students can register for SRI courses, which consist of three tracks: Coding, Design, and Numeracy.
- **S3 (Safe Spaces for Students):** Our S3 program creates informal STEM learning environments in safe, community spaces. We collaborate with community partners to create STEMulation Zones where students can learn

skills and receive support in a nurturing environment. These zones focus on programming and training for youth, providing a safe outlet during weekends, after school, and summer breaks—the most dangerous times for urban youth. The curriculum for these zones is developed by the STEMulates team and corporate partners, with local volunteers serving as tutors and workshop facilitators.

- **Scholars Plus: Scholars Plus** is an initiative to increase the excitement and recognition of students who excel academically. Each semester, we give special recognition to students who make the honor roll at their respective schools. In-school celebrations include parties dedicated to their success, with honor roll students featured on video boards and given the opportunity to wear the "Honor Roll Belt" as a symbol of accomplishment. High school students who consistently make the honor roll receive a special honors cord to wear at graduation, representing the number of times they have achieved this distinction.
- **City-Wide Celebration:** Honor roll students are celebrated throughout the city each quarter, with achievements promoted in a digital press release shared with local media outlets. Students who make the "A" honor roll receive invitations to participate in community activities, including free access to sporting events and local attractions such as museums and the Cincinnati Zoo.
- **STEMmys Scholars:** Students performing well in STEM classes are eligible for the STEMmys Scholar of the Month award. Each month, one elementary and one high school student are recognized, receiving a $100 gift card and being profiled in local media outlets.
- **Young STEMinistas:** The Young STEMinistas program is a cohort-based initiative supporting young women as they navigate secondary school and pursue careers in STEM fields. The program offers STEM learning experiences through programming and mentorship, with students registering as early as grade six and remaining engaged until graduation. Families can participate through our partners or register at one of our program sites.
- **Research Experiences for Secondary Students (RESS):** The Research Experiences for Secondary Students (RESS) program supports active research participation by 11th and 12th graders, modeled after the successful Research Experience for Undergraduate (REU) program. Students engage in corporate or faculty-led projects designed for the RESS program, with sites hosted in collaboration with the Gaskins Foundation and local companies or universities.
- **Empowering Parents in Community Churches (EPICC) STEMulation:** The EPICC STEMulation program transforms church meeting spaces into STEM learning environments. Our curriculum team partners with church members to co-create customized learning modules, implementing these programs to establish STEM education opportunities for youth within the church and the surrounding community.
- **Empowering Students in Community Churches (EPICC) STEMulation** provides programming in churches within urban areas. This initiative creates a learning space in local communities, led by families and community leaders. Community STEM Centers offer free STEM courses open to families who already visit local recreation and learning centers. Additionally, STEMTime is a virtual out-of-school program designed to increase student access to ongoing learning at home, where families can download lesson plans and STEM kits to complete projects.

STEM Workforce Development

- **Women of Color in Tech:** Through a grant from JPMorgan Chase and support from Google, the Cincinnati Regional Chamber's Workforce Innovation Center partners with the Gaskins Foundation to offer Women of Color in Tech. The program helps women of color in the Cincinnati region prepare for new careers in high-growth fields by offering Google Career Certificates paired with wrap-around support. The Women of Color in Tech partners offer free training programs to prepare women for roles in cybersecurity, data analytics, digital marketing & e-commerce, IT support, project management, and UX design. The programs are designed to meet participants where they are with flexible, virtual, and in-person options, as well as childcare. The Foundation and Chamber facilitate employer interviews tailored to each participant to help them secure a job that best fits their new skillset, personal needs, and career aspirations.
- **Diversity in STEM Series:** Hosted by the Gaskins Foundation and the Cincinnati Chamber of Commerce, the Diversity in STEM series is designed to inspire and empower underrepresented communities to pursue careers in science, technology, engineering, and mathematics. Through engaging panels, expert speakers, and community collaboration, the quarterly series highlights

the importance of diversity and inclusion in the STEM fields, providing invaluable insights into overcoming barriers and achieving success. Attendees will have the opportunity to connect with industry leaders, learn about innovative solutions, and contribute to creating a more inclusive STEM workforce.

- **Men and Women of STEM Excellence (MWSE) Fellowship:** The MWSE Fellowship provides undergraduate students and early career professionals in STEM fields with an accelerated leadership development opportunity. This two-year fellowship focuses on developing leadership, problem-solving, and networking skills, preparing fellows for high-level leadership positions in their fields and communities. Fellows are matched with mentors who align with their career interests and engage in quarterly topics and readings designed to challenge their identities and strengthen their leadership abilities.

STEM Thought Leadership

- **State of Minorities in K-12 STEM:** The Foundation hosts an annual State of Minorities in K-12 Education Town Hall, an important forum addressing the unique challenges and opportunities faced by minority students in today's educational landscape. This event brings together educators, community leaders, parents, and policymakers to discuss critical issues such as access to resources, equity in education, and strategies for closing the achievement gap. By creating a space for open dialogue, the Town Hall aims to brainstorm actionable solutions that will empower and uplift minority students, ensuring they have the support and opportunities needed to thrive in the classroom and beyond.
- **EPICC Convening:** Originally launched as a component of EPICC STEMulation project, the annual EPICC Convening brings together STEM and church leaders to discuss strategies to bring STEM education to their local churches. The Convening is a weekend of programming, workshops, and collaborative sessions designed to create and strengthen STEM learning spaces in community churches. The Convening highlights the work of church partners through showcases, presentations, and discussions.

STEMfluencers

- **STEMfluencers:** The STEMfluencers initiative highlights individuals who have made significant contributions to promoting STEM education and careers, particularly within underrepresented communities. STEMfluencers' annual event highlights more than 100 individuals in STEM fields in four categories: Applied Science, Engineering, Healthcare, and Technology. These STEM leaders are honored at the event, which also serves as a book release for the STEMfluencers publication that highlights their achievements. The publication also has an accompanying calendar that highlights their work throughout the year and is designed to help educate students about these professionals' contributions to STEM and the community.
- **STEMTime Expo:** The STEMTime Expo is an international event that brings together people from around the world to inspire innovation and future developments. Participants engage in hands-on demonstrations, idea generation, and discussions led by leading experts on the impact of technology and innovation on our communities and the world.
- **The STEMmys:** The STEMmys were established to recognize the contributions of African-American individuals and organizations promoting STEM education for Black students in the greater southern Ohio and Northern Kentucky regions.
- **Women in STEM Honors:** The inaugural Women in STEM Honors, held during Women's History Month (March), celebrates trail-blazing women in STEM fields. This luncheon honors these advocates for women in STEM, recognizing their achievements and impact on the next generation of women in science, technology, engineering, and mathematics.

PROJECT BASED OUTCOMES

At the Gaskins Foundation, our work is driven by project-based outcomes that make a tangible impact on the community. One of our key initiatives includes creating documentaries that capture and detail the experiences of women in STEM, focusing on the challenges they face and what it takes to encourage more women to enter these fields. We also develop STEM curricula tailored to everyday life, making STEM concepts relatable and accessible to students from all backgrounds. To broaden our impact, we make these curricula available online for educators and organizations to use, ensuring that quality STEM education can reach even more students. Additionally, we provide a comprehensive Roadmap to STEM, designed to help parents understand the educational enrichment their children need to gain the experiences necessary for admission into STEM

post-secondary programs. These outcomes ensure that our programs not only inspire and educate but also provide clear pathways to success in STEM.

Research

Our STEM Thought Leadership team, in partnership with the Removing Obstacles for STEM Excellence (R.O.S.E. Lab) at the University of Cincinnati, strives to identify the barriers to entry in STEM fields for students, particularly underrepresented students. Utilizing data from admissions departments, the Roadmap to STEM was created to identify strategies for helping students to gain admittance into STEM programs.

IMPACT

The Gaskins Foundation has significantly influenced the local community by addressing the critical need for increased representation of underrepresented and marginalized youth in STEM fields. Through the implementation of comprehensive, evidence-based programs, the Foundation has successfully facilitated the engagement of students from diverse backgrounds in science, technology, engineering, and mathematics, disciplines where they have been historically underrepresented. Our initiatives, which include hands-on learning experiences, targeted mentorship, and academic support, have demonstrably improved educational outcomes for these students, fostering both academic achievement and the development of essential skills such as confidence and resilience.

Quantitative and qualitative assessments of our programs indicate a marked increase in STEM participation among women, Black, Indigenous, and Latinx students, contributing to a more diverse and inclusive STEM pipeline. Moreover, the Foundation's community-centric approach has fostered a supportive network that extends beyond educational settings, engaging families and community stakeholders in the process of encouraging and sustaining students' interest and success in STEM fields.

These findings suggest that the Gaskins Foundation's initiatives are effective in creating a more equitable STEM landscape, addressing systemic barriers, and providing underrepresented groups with the resources necessary to succeed in STEM careers. The Foundation's work represents a vital contribution to the ongoing efforts to diversify the STEM workforce and ensure that the voices and talents of underrepresented groups are recognized and valued in the broader scientific community.

AWARDS

The Gaskins Foundation has been recognized both locally and nationally for its contributions to creating equitable STEM opportunities for students and adults. Nationally, the Foundation has received Golden Torch Awards for Pre-College Initiative Program and Pre-College Initiative Program Director of the Year, respectively, in addition to over a dozen awards from national organizations. Locally, the foundation and leadership team have been honored by the Greater Cincinnati Chamber of Commerce, the Cincinnati Business Courier and numerous businesses and organizations throughout the Greater Cincinnati Region.

FUTURE

The Foundation has already expanded our programming into five cities in three states. Understanding that everything that is national starts local, the plan is to grow the STEM program into a national initiative by establishing local offices throughout the country to create strong, community-based networks. By setting up local hubs, the Foundation will be able to adapt to the specific needs of each region, fostering deeper connections with schools, businesses, and community leaders. These local offices act as ambassadors of the program's mission, helping to build trust and relationships that drive engagement. As each office nurtures talent at the grassroots level, the program can scale its impact nationally, ensuring that students across diverse geographic areas have access to high-quality STEM education and resources. With this localized approach, the program can grow its influence while remaining responsive and connected to the unique challenges and opportunities in each community.

CALL TO ACTION

The Gaskins Foundation is calling on individuals, organizations, and communities to join us in our mission to create a more inclusive and equitable future in STEM. We believe that by working together, we can break down the barriers that have historically excluded marginalized and underrepresented groups from these critical fields. Any type of support, whether through donations, partnerships, volunteerism, or advocacy, can make a tangible difference in the lives of young people who aspire to become the next generation of STEM leaders. By investing in education, mentorship, and community engagement, we can empower these students to realize their full potential, diversify the STEM workforce, and drive innovation that benefits us all.

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Sustaining a Robust Alternative to Traditional Cooperative Education (Co-op): UC's Experiential Explorations Program (EEP) for Creative Majors

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ABSTRACT

This article provides an overview of the Experiential Explorations Program (EEP) for creative majors in the College of Design, Architecture, Art, and Planning (DAAP) at the University of Cincinnati (UC). A brief evolution of this curricular innovation is provided and we focus on the current state of the program. We outline the pedagogical model with a focus on structure, accountability, and mentorship. EEP case studies are presented for three students across majors and class years. These serve to celebrate student success while providing an in-depth view of possibilities for self-directed learning in creative fields. Challenges and opportunities for continued evolution of the EEP model are discussed.

Keywords: experiential learning, creative majors, cooperative education, mentorship, self-directed learning, upskilling, project-based work

BACKGROUND

The University of Cincinnati (UC) invented the model of experiential learning called Cooperative Education (co-op) in 1906. In the 100+ years since the inception of co-op, the university has been widely recognized as a pioneer in experiential learning (Cedercreutz & Cates, 2010). In addition to supporting a full spectrum of experiential learning offerings across the university, faculty and staff within the College of Cooperative Education and Professional Studies (CCPS) maintain the world's third largest co-op program (*The Ultimate Guide to Cooperative Education (Co-op)*, 2021).

Co-op work is paid, full-time, and takes place in an industry-relevant workplace. In UC programs where co-op is a graduation requirement, students complete two to five work terms, alternating with academic semesters. While "on co-op," students complete an online course focused on academic and professional development, and their performance is assessed by their co-op employer. Upon returning to campus, students reflect upon and articulate their learnings via instructional meetings with CCPS co-op faculty (University of Cincinnati, DAAP Co-op Unit, 2022).

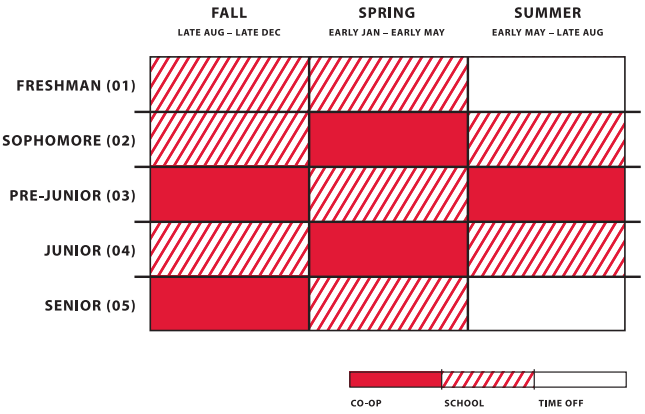
DAAP MANDATORY CO-OP

The College of Design, Architecture, Art, and Planning (DAAP) is comprised of four schools with seven undergraduate programs and four graduate programs integrating mandatory Co-op participation as a graduation requirement. In the 2023-2024 academic year, DAAP co-op faculty in CCPS helped students to earn more than 1,600 experiential learning semesters, with over 600 employer partners, across 35 states, in 16 countries. In that same time period, about 40% of DAAP students traveled outside the state of Ohio for their co-op positions (UC Professional Assessment

& Learning platform (PAL), University of Cincinnati, personal communication, n.d.). Figure 1 illustrates the co-op rotation schedule for the majority of undergraduate DAAP co-op students, whereby almost 40% of their learning is completed in workplace environments via co-op.

FIGURE 1

Sample co-op rotation schedule, utilized by majority of undergraduate DAAP co-op majors



DAAP students prepare resumes as part of their co-op job applications, but the art or design portfolio is the primary marketing piece that employers in creative industries consider when assessing candidates for interviews and eventual employment (Smith, 2023, p. 2). This is most typically a web-based portfolio containing case studies of projects completed in academic studios, as personal projects, or while employed in a co-op position. The portfolio is intended to be a compilation of an artist or designer's best work and is continually refreshed over the course of a career.

PANDEMIC SHIFTS TO DAAP COOPERATIVE EDUCATION

When the COVID-19 global pandemic caused shutdowns in March 2020, active DAAP co-op students fell into three groups: (1) Students working in Spring co-op positions who were just over halfway through their 16-week, full-time workplace experiences; (2) Students enrolled in classes who were planning to return to a previous co-op employer for the Summer 2020 semester or who had already been offered a role with a new employer for Summer 2020;, (3) Students enrolled in classes, collaborating with DAAP co-op faculty in search of a new co-op employer for the Summer 2020 term. A majority of the students working in co-op positions were let go in March, while a smaller number were able to shift to virtual work for the remainder of the Spring term. As for students preparing to co-op in Summer 2020, the percentage of students who were able to retain their offers for co-op employment plummeted to 39% (UC Professional Assessment & Learning platform (PAL), University of Cincinnati, personal communication, n.d.).

The underlying pedagogical and organizational structure of the present-day Experiential Exploration Program (EEP) was developed swiftly and collaboratively at this critical juncture in March 2020 (Alanson, et al., 2020). CCPS previously established EEP options to support students during the 2008 recession. Although these options were rarely utilized in recent years, they provided CCPS teams a head start in providing legitimate options for students to re-calibrate their learning plans for the Summer 2020 semester. The former Director and former Assistant Director of the DAAP co-op unit worked alongside leaders from across the College to develop revised EEP categories for faculty approval, to build out modified assessment instruments, forge partnerships, develop communications, and distribute seemingly endless lists of student resources. The amount of critical pedagogy that was developed during Spring 2020 is inspirational, but the details are well outside the scope of this article.

Over the past four years, the various academic units within CCPS have evolved their EEP requirements and processes in ways that best fit their respective student populations. For DAAP this has meant embracing that EEP is here to stay—refining EEP requirements in our student handbook, creating a robust student-facing Canvas (UC's learning management system) community, developing student assignments, and shifting faculty workload to facilitate the planning, execution, reflection, and tracking of EEP experiences.

The EEP categories approved for DAAP co-op students are: (1) Emerging Professional EEP, (2) Professional Practice EEP, (3) Career-Related TravelEEP, (4) Entrepreneurship EEP. Table 1 outlines the core characteristics of each EEP type.

From the prime pandemic years to present day, Emerging Professional EEP and Professional Practice EEP have been the most widely utilized EEP types. While a portion of students (typically those seeking a first or second co-op experience) are taking advantage of EEP due to the inability to earn a traditional co-op position, a second group of students are proactively planning EEP semesters in place of co-op semesters. Table 2 illustrates the large shift from co-op to EEP enrollments following the onset of pandemic shutdowns and chronicles the sustained need for an alternative to traditional co-op.

TABLE 1

Experiential Exploration Program (EEP) categories for DAAP students

EEP TYPE	STRUCTURAL REQUIREMENTS
Emerging Professional	Approved for first or second co-op term MUST include: Technical upskilling, Professional skill development, Project-based work Gain co-op faculty approval on EEP plan containing goals, deliverables, timeline Identify and meet with mentor minimum of once per month 300-350 hours, depending on semester length
Professional Practice	Eligible after completion of second co-op term or with co-op faculty approval MAY include: Technical upskilling, Professional skill development, Project-based work Gain co-op faculty approval on EEP plan containing goals, deliverables, timeline Identify and meet with mentor minimum of once per month 300-350 hours, depending on semester length
Career-Related Travel	Travel must be discipline- or career-related Plan must involve 12 weeks or more of active travel Detailed travel itinerary and proposed deliverables to showcase learning must be approved by co-op faculty prior to semester start Take all required actions to record and gain approval for international travel with the university
Entrepreneurship	Consult with co-op faculty 6-9 months prior to planned EEP semester Complete pre-requisite coursework: ENTR 5093* (1.0-4.0 credit hours) for academic credit OR a UC sponsored incubation program OR other approved incubation program Entrepreneurial pitch must be approved by incubator faculty or similar and plan must be career-related Identify and meet with entrepreneur-mentor minimum of once per month Craft start-up plan containing milestones to be executed during the EEP semester, ideally informed by mentor and approved by co-op faculty 300-350 hours, depending on semester length

Note: University of Cincinnati, DAAP Co-op Unit, 2022

TABLE 2

DAAP student experiential learning, Spring 2020–Summer 2024

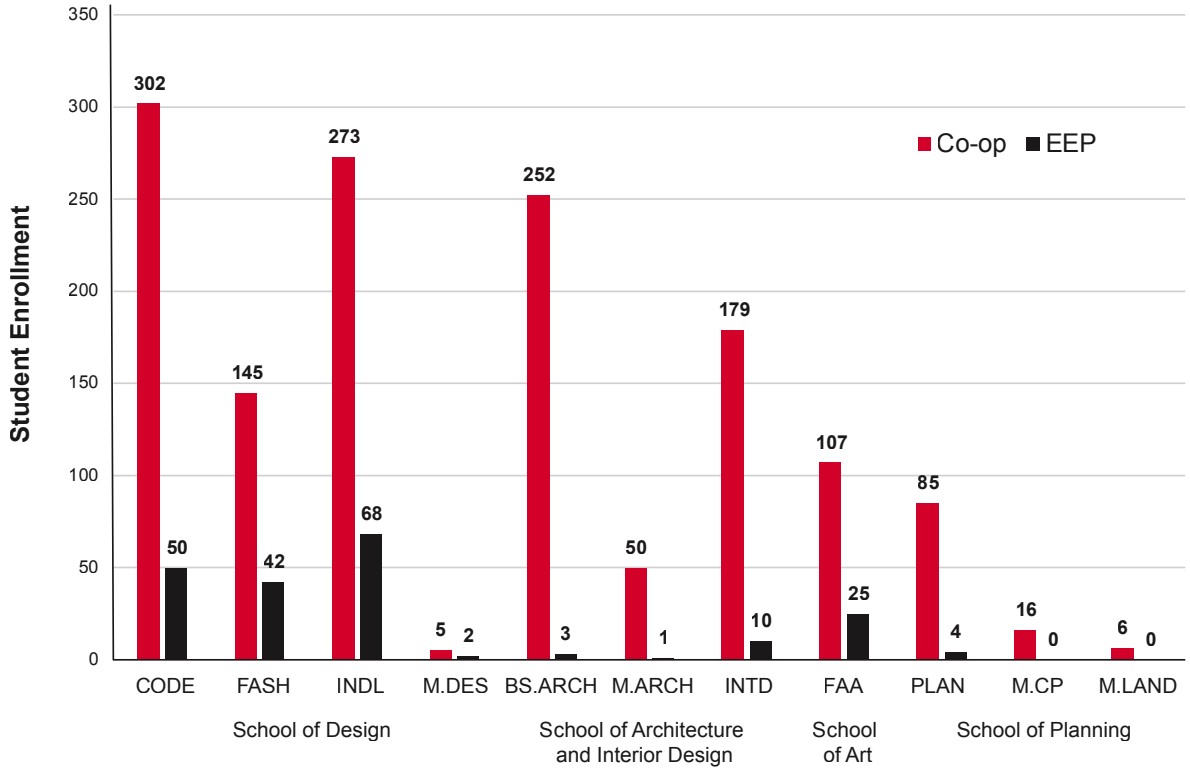
SEMESTER	CO-OP	CO-OP RATE	EEP	EEP RATE	WAIVER/ OTHER	TOTAL
Spring 2020	671	94%	12	2%	32	715
Summer 2020	195	39%	265	54%	34	494
Fall 2020	377	56%	288	43%	9	674
Spring 2021	377	58%	268	41%	10	655
Summer 2021	406	83%	78	16%	6	490
Fall 2021	487	86%	72	13%	10	569
Spring 2022	609	87%	77	11%	11	697
Summer 2022	430	95%	19	4%	5	454
Fall 2022	531	88%	51	8%	19	601
Spring 2023	565	85%	81	12%	17	663
Summer 2023	413	92%	27	6%	11	451
Fall 2023	465	83%	78	14%	14	557
Spring 2024	558	83%	97	14%	20	675
Summer 2024	398	90%	30	7%	14	442
Total	6,482	80%	1,443	18%	212	8,137

Note: Data retrieved from UC PAL (Professional Assessment & Learning) platform (University of Cincinnati, personal communication, n.d.).

Note:"Waiver/Other" encompasses all non-enrollments, covering a variety of circumstances.

FIGURE 2

Co-op and EEP enrollments for DAAP, 2023–2024 academic year



Note: CODE=Communication Design;, FASH=Fashion Design;, INDL=Industrial Design;, M.DES=Master of Design;. BS.ARCH=Architecture;, M.ARCH=Master of Architecture;, INTD=Interior Design;, FAA=Fine Arts;, PLAN=Urban Planning;, M.CP=Master of Community Planning;, M.LAND=Master of Landscape Architecture.

Figure 2 exhibits how experiential learning enrollments in 2023-24 were distributed across DAAP programs, as well as providing a comparison of traditional co-op and EEP enrollments by program.

ADDITIONAL EEP CONSIDERATIONS — CARETAKING IN A TIME OF UNCERTAINTY

Mahmud, Talukder, & Rahman (2021) found that a fear of COVID-19 induced career anxiety in individuals yet to enter the workforce. At UC we saw this firsthand, as students self-reported increased anxiety and worry related to their current and future job prospects. As we supported DAAP students in the development of EEP plans, we strived to forge a sense of empowerment. We wanted students to feel they had the agency to make some decisions about their lives and careers. We embraced the need for learner autonomy, accountability, peer support (Perrin, 2014), and faculty mentorship (Alanson, et al., 2020) as best practices to empower students during experiential learning.

Students who do not obtain a co-op or internship have great potential to experience negative emotions, but there is evidence that peer support may help to ameliorate these feelings (Cormier & Drewery, 2017). The DAAP EEP mentorship model is structurally inspired by interactions that are typical in a workplace — peers serve the purpose of colleagues, the EEP faculty lead acts in a supervisory role, and the official EEP mentor becomes a coach and direct supporter. The structural supports and requirements we put in place were intended to combat emotions such as fear and loneliness in order to improve learning outcomes.

EEP STRUCTURE AND ACCOUNTABILITY IN PRESENT DAY

The current EEP process extends across two academic semesters, with planning of the experience happening in the second half of an academic term (referred to as the "Planning" term) and the EEP plan being executed during the entirety of the subsequent academic term (referred to as the "Experience" term). A general outline of the 2-semester instructional model, including accountability checkpoints, follows.

Co-op Search / EEP Planning Term

Weeks 1–6

Each student seeking a co-op position participates in a required meeting with their co-op faculty member individually or in a small group. These meetings are designed to reflect on previous experiential learning semesters or previous life experiences and to plan for the upcoming co-op position search by sharing learning goals, assessing resumes and design portfolios, and discussing potential employers of interest to the student. At this point, a small number of upperclassmen students may self-identify as desiring to plan an EEP in place of a co-op semester.

Week 7

Students select final positions of interest in UC's proprietary job search platform, Professional Assessment and Learning (PAL), and resume/portfolio referrals are emailed to selected employer partners by the DAAP Academic Unit Head. Students are also applying to roles posted on other platforms and exploring opportunities within their existing networks.

Weeks 7–10

Employers review student marketing materials and reach out to schedule interviews. Employers begin to extend offers for co-op employment and students begin to finalize employment and travel/housing plans for the upcoming co-op semester.

Week 11

An official second round of co-op referrals is sent through the PAL platform and interviews and offers continue.

Weeks 11–12

Any student who has yet to secure a co-op position and wishes to be eligible to complete an EEP in place of a co-op experience is required to self-enroll in the EEP community in Canvas and is encouraged to attend both an EEP workshop and the office hours of their direct co-op faculty. The EEP Canvas community houses a number of resources to be utilized for planning, including but not limited to timelines, assignments, past examples of successful EEPs, and information on structured options. One to two faculty members from the team are identified to serve as EEP faculty leads each academic year and are tasked with management of Canvas community and facilitation of planning and reflecting.

Week 13

Students continue to consult with the EEP faculty lead and/or their major-specific co-op faculty. Students are required to submit Part 1 of the EEP Plan, comprised of overall concept, Specific, Measurable, Attainable, Realistic, and Timely (SMART) Goals, anticipated activities, and deliverables aligned to categories. The direct co-op faculty provides critical feedback, and student is asked to incorporate changes in next draft.

Week 15

Students refine plans and continue on to Part 2, comprised of an outline of learning platforms and resources, a timeline of deliverable milestones, a day-by-day schedule, and identification of mentor(s). Faculty members facilitate the identification of mentors in various ways, from identifying a group of willing alumni and employer partners and providing students with contact information to encouraging students to reach out to past employers.

Week 16

Students submit final EEP plans for faculty approval.

EEP Experience Semester

Week 1

EEP faculty lead conducts a mandatory kick-off meeting for all students completing EEPs for the semester. Semester structure and requirements are reviewed and students are able to ask questions and begin to connect with peers on a similar journey. Students reach out to mentors to solidify structure for check-in meetings and inquire about mentor communication preferences.

Week 5

Students completing Emerging Professional EEPs meet virtually in groups of 4-5 with the EEP faculty lead for 60 minutes for what we call "33% Progress" reflection meetings. Each student presents a brief visual presentation of work completed and learnings to date, while also reflecting on successes and struggles and posing a set of questions to be discussed with peers. Students completing Professional Practice, Career-Related Travel, or Entrepreneurship EEPs typically take part in a similar reflective process through a series of required online discussion posts. At this point in time, it is common for students to set-up group WhatsApp chats or plan weekly co-working days at local coffee shops to support each other. If a student appears to be struggling, the EEP faculty lead can reach out with supports in addition to what has been provided by peers.

Week 11

Reflective interactions similar to what is described above take place as a "66% Progress" touchpoint. The EEP faculty lead sends a performance assessment survey to students' mentors.

Week 16

Students elect to present their final EEP reflection as a recorded Pecha Kucha- style presentation (20 slides with 20 seconds of accompanying narration, originally conceived of by a set of architects) (Pink, 2007) or to submit an abstract and visual artifacts for inclusion in an EEP Showcase—an exhibit hosted in a gallery on campus. We have been intentional in assigning arts-based methods of reflection that promote connection with peers and feel celebratory in nature.

STUDENT EEP CASE STUDIES

In order to add dimension to the pedagogical framework of the Experiential Explorations Program, we present a deeper look at the EEP experiences of three DAAP students from the 2023–24 academic year. The case studies that follow include information and imagery summarized or directly quoted from student EEP assignments, stored privately on the university's learning management system.

Reece, Communication Design Sophomore (Second Year) — Emerging Professional EEP

Reece began his experiential learning journey by participating in the co-op position search in Fall 2023, applying to approximately 40 Cooperative Education positions. When a traditional co-op position was secured by November of his search term, his co-op faculty approved him to plan and execute an Emerging Professional EEP. This is the type of EEP experience typically approved for sophomores (second year) and pre-juniors (third year), in order to ensure that growth occurs across the categories of Professional Upskilling, Technical Upskilling, and Project-Based Work. Reece's Spring 2024 EEP plan included the following components:

SMART Goals

The following SMART goals are replicated directly from the student's approved EEP plan:

1. I will learn new programs which will help my overall ability and comfortability in this field.
2. I will complete one finished branding project for my portfolio.
3. I will explore different niches within the graphic design field.

(Reece, personal communication, December 2023)

Activities and Deliverables

Reece's experience was centered around his service to the non-profit Uhambo 8286. As shared on Uhambo 8286's website, "We partner with entrepreneurs in former apartheid communities of South Africa to educate, market and brand build their dream business. We learn as much from them as they learn from us and it"s incredible to see their hard work pay off. Their businesses provide them with a sustainable income and better their communities" (About Us | Uhambo 8286, n.d.). Faculty in CCPS originally partnered with UHAMBO 8286 founder and UC Lindner College of Business (LCB) annualized adjunct, Karen Manning, in November 2020. The faculty saw great potential in solidifying a relationship by which DAAP EEP students could learn while contributing their talents to the non-profit organization. Since Spring 2021, 18 students have been able to serve as interns for UHAMBO 8286, working alongside LCB students to provide branding and design services to entrepreneurs in Khayelitsha, South Africa.

Additionally, Reece chose to focus on upskilling in the design softwares of Figma and Adobe Photoshop via LinkedIn Learning and to showcase those learnings via a branding project for a fictional coffee shop. Table 3 outlines the various components of Reece's plan.

Learnings and Outcomes

In the 33% Progress peer check-in meeting, Reece shared visual progress on Uhambo 8286 website sketches and profiles of entrepreneur needs, as well as a near-final Bunny-Fish logo for discussion. Figure 3 is a screenshot from the visual presentation.

During the 66% Progress check-in meeting, Reece presented progress on all visual projects and discussed his struggles and successes associated with self-directed learning, as shown in Figure 4. Struggles related to time management and staying motivated are quite common and are typically a topic for discussion between students and EEP faculty lead during the accountability checkpoints.

TABLE 3

Components of Reece's Communication Design Emerging Professional EEP

CATEGORY	ACTIVITIES	FINAL DELIVERABLES	MENTORSHIP	HOURS
Technical Upskilling	Figma courses, LinkedIn Learning Photoshop courses, LinkedIn Learning	Certificates of course completion Newly attained skills are evidenced in EEP projects	Self-motivated, mentors below available for consult, as needed	40
Professional Upskilling	Uhambo 8286 project work	Branded visuals for Madam H Beauty Bar Branded visuals for Tasha's Beauty Spa Pages for Ekasi Village House website Pages for Uhambo Connect website	Karen Manning, founder of Uhambo 8286	320
Professional Upskilling	Online networking with professionals from the Society for Experiential Graphic Design (SEGD)	New LinkedIn connections	Self-motivated, using network to grow network	24
Project-Based Work	Coffee shop branding for BunnyFish	Logo, packaging, menu design App screens, designed and built in Figma	Family friend/owner of marketing agency	64

Note: Summarized from student's approved EEP Proposal (Reece, personal communication, December 2023) and Pecha Kucha (Reece, personal communication, April 2024)

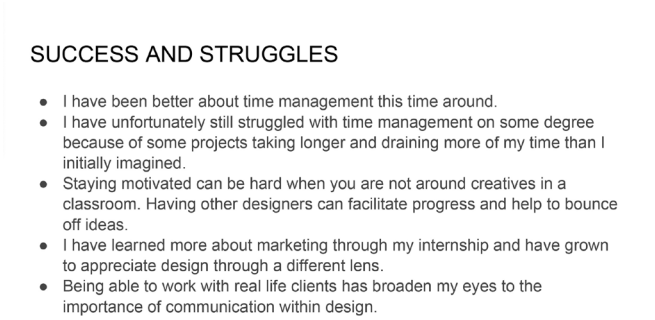
FIGURE 3

Café logo concept presented for peer and faculty feedback

(Reece, personal communication, February 2024)

FIGURE 4

Struggles and successes presented for peer discussion



(Reece, personal communication, March 2024)

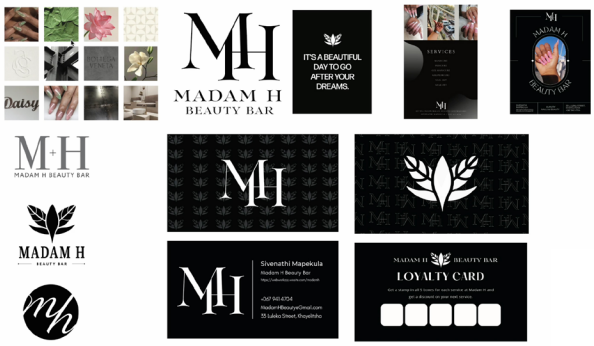
A summary of learnings from Reece's semester was shared in his end- of- semester Pecha Kucha presentation:

> *This opportunity helped me to grow as a person and find purpose within my design and helping these entrepreneurs in South Africa brought me a lot of happiness. I learned so much about the South African culture and made so many connections with entrepreneurs and my group mates. I worked with a team of business students to improve the businesses of the South African entrepreneurs. I learned through my communication and drive that I could create something very special and during this experience, I learned to be flexible and understood that my vision and direction can be completely changed by the client … I believe that it can get lonely so you can just surround yourself with people. In the future I would love to experience a co-op, but for the time being, and especially for my first co-op semester, I was very happy to do an EEP.*

(Reece, personal communication, April 2024)

FIGURE 5

Representative visual brand and collateral work for Madam H Beauty Bar, as shared via final Pecha Kucha reflection



(Reece, personal communication, April 2024)

FIGURE 6

Group of UHAMBO 8286 entrepreneurs wearing newly-branded apparel, including Reece's clients from Madam H Beauty Bar and Tasha's Beauty Spa

Note: Image courtesy of Karen Manning, Uhambo 8286

The founder of Uhambo 8286, Karen Manning, shared her praise for the impacts of Reece's participation:

> *Reece's design work truly transformed the way our entrepreneurs in Khayelitsha present their businesses. The creativity and attention to detail helped them develop a professional brand identity, giving them confidence and a polished image to attract more customers. Reece's contributions went far beyond just design, making a meaningful difference in the lives of these business owners by helping them take a huge step forward in their entrepreneurial journeys. Many thanks to the team at CCPS for creating this empowering experience for their students.*

(K. Manning, personal communication, October 4, 2024)

Reece's Emerging Professional EEP prepared him to earn a co-op position for Fall 2024 with a Chicago-based interiors studio (University of Cincinnati, Professional Assessment & Learning platform (PAL), personal communication, n.d.).

Eddie, Industrial Design Pre-Junior (Third Year) — Emerging Professional EEP

After spending his first co-op semester in a tech and digital function for a large national grocer, Eddie was focused on attaining a second co-op experience in the field of toy design and development. They kept their list of applications small and focused. When this plan did not ultimately pan out, he was highly motivated to craft a robust self-directed EEP with the goal of tailoring their portfolio for the toy industry for the subsequent co-op position search.

SMART Goals

The following SMART goals are replicated directly from the student's approved EEP plan:

1. Dedicate an hour a day to sketching and rendering a character or product.
2. By the end of my EEP, I would like to be able to model a character in Blender from imagination.
3. I will reach out to professionals from toy companies and people who are on my career path monthly to grow my network to 5 people by the end of the semester.

(Eddie, personal communication, August 2023)

Activities and Deliverables

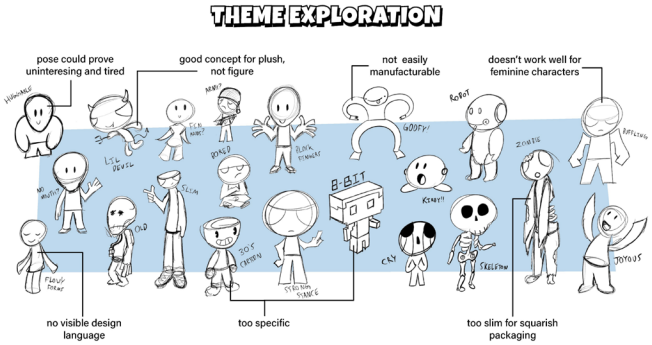
Eddie strategically crafted an EEP plan comprised of learning and deliverables that hit all required categories of the Emerging Professional EEP, while remaining singularly focused on the goal of attaining a future position in the toy industry. Table 4 outlines the various components of his plan.

Learnings and Outcomes

In the 33% Progress peer check-in meeting, Eddie shared a robust visual presentation with their peers, including market research; Blender experiments; anatomy studies; and concept sketches. Additionally, he shared his struggles and successes as a catalyst for deep discussion and sought peer critique on proposed form language for his collectible line. Figure 7 is a sample page of their presentation.

FIGURE 7

Presentation of sketch exploration for peer discussion

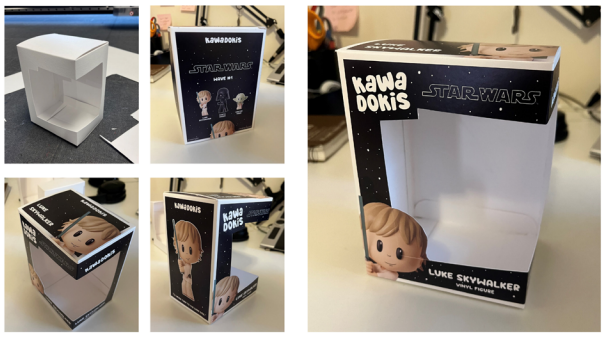


(Eddie, personal communication, September 2023)

By the time of the 66% Progress check-in meeting, Eddie had made great progress on the collectibles packaging, as shown in Figure 8.

FIGURE 8

Package prototype



(Eddie, personal communication, November 2023)

TABLE 4

Components of Eddie's Industrial Design Emerging Professional EEP

CATEGORY	ACTIVITIES	FINAL DELIVERABLES	MENTORSHIP	HOURS
Technical Upskilling	"Master 3D Sculpting in Blender" course Daily Sketch-a-Day practice Various YouTube training videos	Multitude of practice sculpts, renders, and sketches Newly attained skills to be evidenced in EEP projects	Self-motivated, mentors below available for consult, as needed Connect with peers doing similar upskilling, as needed	120
Professional Upskilling	Grow collection of contacts and advisors through online and in-person networking	New connections Gain advice on current projects and longer-term industry goals	Self-motivated, using network to grow network	16
Project-Based Work	Build System Project, extending school Power Tool project to full toy product concept: stages from market research through final rendering	Rendered digital models of Build System concept	Class of 2017 UC Industrial Design graduate working in toy industry Class of 2019 UC Industrial Design graduate working in toy industry	40
Project-Based Work	Collectable Figure Project: all phases from market research, sketching, digital sculpting, resin printing, painting	Full line of three figures with packages and promotional renderings	Class of 2017 UC Industrial Design graduate working in toy industry Class of 2019 UC Industrial Design graduate working in toy industry	340

Note: Summarized from student's approved EEP Proposal (Eddie, personal communication, August 2023) and Gallery Abstract (Eddie, personal communication, December 2023)

Eddie elected to participate in the EEP Gallery Showcase as his final method of reflection. Figure 9 shows the final collectibles that were displayed during the EEP Showcase.

FIGURE 9

Final collectibles deliverable

(Eddie, personal communication, October 2024)

In the abstract that accompanied Eddie's gallery show submission, they describe their learning from the EEP semester:

> *The project itself has solidified my goals as an industrial designer. I want to be a toy or collectible designer. I love designing with fun and aesthetics in mind, and I love digital sculpting. The only skill that needs significant improvement is my anatomy sketching, something that would be required for quick concepting at a collectible company. I've improved my digital sculpting tenfold this semester, upgrading from Nomad 3D to Blender, and soon, I'll upgrade once again to the industry standard, ZBrush. I have a plan that will help me learn the various skills I need to get a toy/collectible design job, the plan including me learning surface modeling via Solidworks, Subd modeling via Rhino, and continuous practice and analysis of anatomy. This has been my most productive semester yet, and I'm so excited to improve further.*

(Eddie, personal communication, December 2023)

Figure 10 showcases additional work Eddie created for his portfolio as a result of his EEP experience. Eddie's commitment to overhauling their knowledge, skillsets, and portfolio paid off when they earned a Summer 2024 co-op position with a Cincinnati-based 3D design and development studio focused on the toy industry (University of Cincinnati, Professional Assessment & Learning platform (PAL), personal communication, n.d.).

FIGURE 10

Additional portfolio work created by Eddie, as a result of learnings from EEP semester

(Eddie, personal communication, October 2024)

Olivia, Fashion Design, Pre-Junior (Third Year)— Professional Practice EEP

Following a first co-op term with an East Coast footwear, apparel, and accessory brand, Olivia spent her second co-op term with a Los-Angeles-based fabric studio. Her work with fabric mills around the world during this co-op piqued her interest in the product development side of the fashion industry (University of Cincinnati, Professional Assessment & Learning platform (PAL), personal communication, n.d.). She elected to explore her passion for textiles with a self-directed EEP in Summer 2024 in place of her third co-op term.

SMART Goals

The following SMART goals are replicated directly from the student's approved EEP plan:

1. I will educate myself on natural fabric dyeing techniques by researching, testing, and dyeing various fiber types. This will include individual studies as well as fiber dyeing workshops at the Weavers Guild and Sew Valley in Cincinnati. All of this work will be documented in a sample book by the end of the semester.
2. I will travel to Hawaii July 12–August 1 to learn indigenous fabric manipulation techniques from native artisans. All of this work will be documented in a sample book by the end of the semester, and a video essay will also be created to document my time.

3. I will create an 8-look womenswear collection based on the fabric dyeing techniques learned. It will include 8 looks and 2 final prototypes and will likely be print pattern heavy and primarily woven pieces.

(Olivia, personal communication, April 2024)

Activities and Deliverables

With two co-op semesters of industry experience, Olivia was approved by her co-op faculty to plan and execute a Professional Practice EEP. This category has less prescribed requirements than other categories, allowing for students to utilize their own expertise to structure deep exploration of a subject. Table 5 outlines the various components of her plan.

Learnings and Outcomes

While the Professional Practice EEP check-ins are intended to be asynchronous interactions between upperclassman students, for the Summer 2024 term the EEP faculty lead had all participants take part in the real-time virtual peer presentations. Figures 11 and 12 show visuals Olivia presented for peer and instructor feedback.

TABLE 5

Components of Olivia's Fashion Design Professional Practice EEP

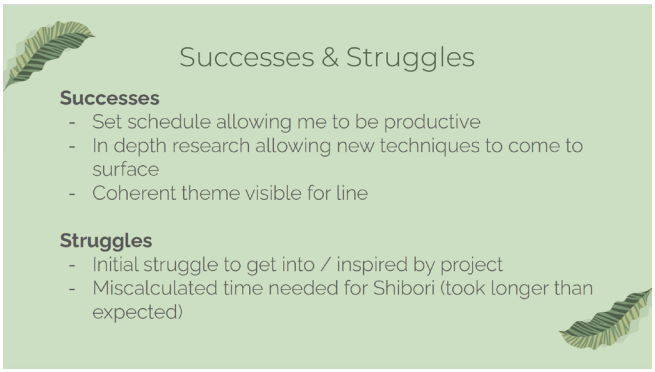
CATEGORY	ACTIVITIES	FINAL DELIVERABLES	MENTORSHIP	HOURS
Technical Upskilling	Weavers Guild workshop Sew Valley workshop	Dyed materials for sample book Newly attained skills to be evidenced in EEP projects	Workshop instructors	5
Project-Based Work	Self-directed experiments in fabric dyeing	Dyed materials for sample book Newly attained skills to be evidenced in EEP projects	Class of 2017 UC Fashion Design graduate working in fashion industry	129
Project-Based Work	Traditional indigenous weaving and dyeing courses at Nā Kūpuna Makamae Center, Hawaii	Dyed materials for sample book Video essay	Course instructors	120
Project-Based Work	Womenswear collection	Design 8 looks, including flats and selection of fabric techniques Produce one finished garment, utilizing traditional fabric dyeing processes	Class of 2017 UC Fashion Design graduate working in fashion industry	72

Note: Summarized from student's approved EEP Proposal (Olivia, personal communication, April 2024)

Note: Total hours are less than 350, due to fewer weeks in the Summer academic term

FIGURE 11

Successes and struggles presented for peer discussion



(Olivia, personal communication, June 2024)

FIGURE 12

Example of physical fabric samples Olivia produced

(Olivia, personal communication, June 2024)

During the 66% Progress check-in meeting, Olivia praised her mentor's valuable feedback and discussed timing and production setbacks. She shared how initial garment sketches (Figure 13) had evolved into more finished illustrations of final looks (Figure 14) and sought peer and instructor critique.

FIGURE 13

Initial garment sketch exploration

(Olivia, personal communication, July 2024)

FIGURE 14

Color illustrations, showcasing fabric samples

(Olivia, personal communication, July 2024)

As presented in Olivia's final Pecha Kucha reflection video, she discusses how her EEP semester increased her knowledge and confidence:

> *I really learned a lot from this EEP … it really taught me how to manage my own time wisely when I don't have someone telling me what to do and also really helped me utilize all of the things that I learned in school and create one big passion project. I think it's gonna be really, really helpful in the long run because I am very interested in going into the research and development or fabric field and I'm really happy that I got to dive deep into this because it helps me understand a lot more about fabric (Olivia, personal communication, August 2024).*

FIGURE 15

Spread from Olivia's design portfolio showcasing a garment from her collection

(S. Schaffer, Co-op faculty, personal communication, September 2024)

For her fourth co-op semester, Olivia will be traveling back to Los Angeles to work for a celebrity-founded lifestyle and apparel brand where a portion of her work will be focused on fabric buying and communications with mills and factories (University of Cincinnati, Professional Assessment & Learning platform (PAL), personal communication, n.d.).

IMPACTS OF EEP PARTICIPATION

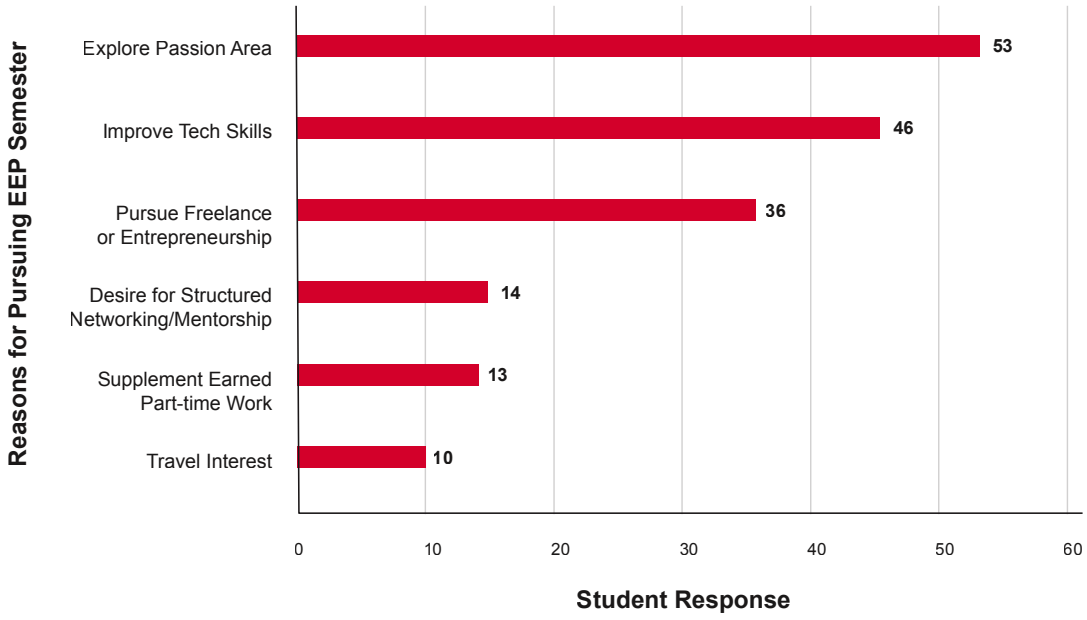
EEP was intended to be a temporary fix to allow students to develop skills and take part in experiences that would allow them to grow as professionals and individuals. The ultimate goal was to ensure that students would be more marketable to employer partners in subsequent co-op position searches. In many cases, a first-semester EEP became a "soft-launch" to the co-op journey, allowing students to spend a full semester focused on growing technical, professional, and project-based skillsets.

For DAAP students, participating in a robust EEP semester overwhelmingly leads to positive outcomes. An examination of 3-semester outcomes for Class of 2026 students in the School of Design who completed an EEP in place of their first co-op term (N=38) supports EEP as a valid learning alternative. By the time of this cohort's second experiential learning term, 69% (n=25) of the first-term EEP students who remained at the university were able to attain a traditional co-op position. By the time of the third experiential learning term, 86% (n=31) of the cohort had secured a traditional co-op position.

Additionally, we have found that the EEP option provides a welcome alternative to DAAP students across all class years who may be seeking to learn outside the traditional co-op model. Prior to the COVID-19 pandemic, approximately 2% of DAAP students took part in an EEP each academic year (see Table 2), with most experiences being travel-related. Of the 205 students pursuing EEP in 2023–24, 197 completed a survey on their reasons for pursuing EEP as a co-op alternative. Sixty-four percent of EEP students (n=126) indicated the pursuit of an EEP was a back-up plan upon not securing a traditional co-op position. Thirty-six percent of EEP students (n=71) indicated they proactively pursued an EEP as their first-choice experience for the co-op semester. Figure 16 illustrates the reasons DAAP students chose to proactively pursue an EEP in the 2023-24 academic year. The belief that EEP should remain as an alternative to traditional co-op is supported by the fact that over a third of DAAP EEP participants proactively sought this self-directed learning path in 2023-24.

FIGURE 16

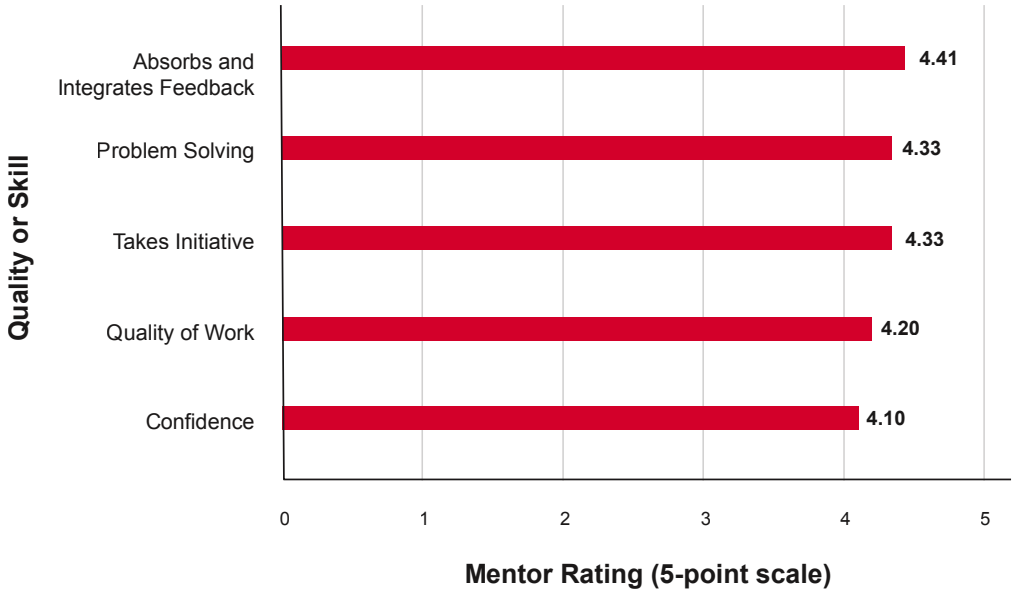
DAAP student selection of EEP as first, 2023–24



Note: n=71, students were able to select more than one reason.

FIGURE 17

Mentor assessment of EEP student performance, Spring 2024



Note: n=50, a mentor response rate of 52%.

Note: Scale provided was: 1=Unsatisfactory, 2=Needs Improvement, 3=Meets Expectations, 4=Exceeds Expectations, 5= Exceptional.

An additional measure of impacts is mentor survey responses on the performance of their mentees across more than 20 dimensions. Figure 17 presents mentor assessments of five key performance factors completed by Spring 2024 EEP mentors.

In post-experience reflection conversations with co-op faculty, students routinely report increased feelings of professional confidence and improved time management skills. Some students expressed gratitude that there was an opportunity to step -back from the realized stress of an unsuccessful job search or the perceived stress of a "9 to 5" workday. In a study of design students' perceptions of "creativity," McInerney (2022) uncovered "sanctuary seeking tendencies" in novice design students — the desire to create in an environment free from risk and ambiguity, where they are confident that they can succeed. This corroborates UC student self-reports of the great sense of freedom in being allowed to opt-in to a self-directed learning experience in a time when stress and competition may feel like insurmountable barriers.

CHALLENGES AND FUTURE DIRECTIONS

The DAAP co-op faculty have been committed to experimenting with new processes for EEP students each year, but the challenges have been great and the opportunities for future improvement are greater still.

Assessment

We have not done an effective job of measuring the impact of our EEP innovations. The added emotional workload of supporting students through a time of great uncertainty was intense and it was difficult to commit to designing and implementing sustainable assessment instruments. For instance, the mentor survey (referenced in the previous section) was not always deployed consistently, and response rates were relatively low. Our current methods are largely qualitative, the amount of data collected vast, and limited space in faculty workloads has made it difficult to commit to rigorous assessment of the EEP program. We have continued to allow EEP students to reflect on their experiences in less regimented ways, as a way of celebrating the uniqueness of their self-directed learning. We can make an informed determination on whether it is most strategic to assess EEP students on the same measures as their peers

completing traditional co-op experiences or if there is a benefit to formalizing differentiated measures of success. As we are now convinced the model is not just a temporary fix, we should commit to developing sustainable processes for quantitative and qualitative assessment of EEP experiences to inform structural and pedagogical improvements.

Streamlining Instructional Processes

After four years of evolution and experimentation, it is time to commit deeply to instructional best practices and to focus on streamlining communications to students. The EEP planning has been so intense and we would all benefit by making it easier for students. In the 2024–25 academic year, we have plans to streamline the crafting of student EEP plans by simplifying the plan structure and requiring attendance at a 2-hour group writing workshop in place of optional attendance at faculty office hours. We have an opportunity to simplify information housed in the Canvas community and to commit to a long-term plan for EEP that remains rigorous while consuming a smaller percentage of faculty workloads.

Mentorship

Mentorship has been a core tenet of the EEP experience, but we can always optimize. We have purposefully allowed the mentor/mentee interactions to remain fairly organic, but we may be able to design more structure and administer more rigorous assessments to enhance learning. We could devote energy to examining the benefit to the mentors, rather than remaining focused on mentee outcomes. The DAAP co-op unit has made a commitment to increasing peer mentorship opportunities in the 2024-25 academic year, and the EEP program is a prime opportunity to optimize near-peer mentoring through pairing upperclassmen and underclassmen during the Planning and Experience semesters.

Creative Entrepreneurship

There is a need to revise the criteria for DAAP Entrepreneurship EEP to fit creative majors. We have had a number of students exploring entrepreneurial ventures that were ultimately categorized as Professional Practice EEP, as the experiences did not quite meet the stringent criteria approved by CCPS faculty. We can lean into the unique landscape for creative entrepreneurs and redefine a structure to encourage student exploration.

"Structured" Experiences

Our faculty were committed to offering a number of "structured" EEP components early in the pandemic. With very large numbers of students seeking EEPs, we leveraged alumni, university, and employer relationships and created many opportunities for groups of 10–20 students to collaborate in shared learning environments, similar to the Uhambo 8286 experience. There is a belief that these structured experiences were of great benefit to sophomore students and we should determine whether devoting faculty workload to re-invigorating experiences of this type is sustainable.

Compensation for Non-profit Work

In most cases, students completing an EEP earn no money during a term when they originally anticipated earning a paid co-op position. This is perhaps the largest drawback of the EEP program. The DAAP co-op team is committed to partnering with CCPS leadership, the CCPS industry advisory board, and CCPS partnership development staff to explore ways to obtain funding for service to non-profits. This is something that has been in place in the past and we believe re-focusing efforts to think about this in new ways can provide a huge benefit to students.

CONCLUSION

Student, faculty, staff, alumni, and employer receptiveness to the Experiential Explorations Program (EEP) has allowed it to grow into a legitimate alternative to traditional co-op for students in creative majors. The DAAP co-op faculty are poised and energized to continue innovating to ensure the EEP program will remain a robust alternative that evolves alongside student learning needs for years to come.

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Identity Implications for Self-Evaluation of Performance in a Project-Based Leadership Course

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ABSTRACT

Due to the historical and contemporary underrepresentation of women and non-White people in leadership roles and in academic leadership programs in the United States, gender and racial identity carry implications for leadership education and experience-based learning. Gender differences in self-esteem and self-evaluation have been observed in leadership contexts, including in college and university leadership classrooms. Racial differences in self-esteem exist in a number of contexts and non-White leaders continue to experience discrimination in leadership positions. This quantitative study assessed the impact of gender and race on student self-evaluation scores in an undergraduate leadership minor course. Student self-evaluation scores were compared to supervisor scores during a field experience project to determine accuracy of self-evaluation of performance. Quantitative methods were used to assess the significance of gender and race for self-evaluation accuracy. Results indicated that gender had a medium effect on accuracy and racial identity had a small effect (Cohen's D). Implications for inclusive leadership pedagogy and equitable use of self-evaluation assignments are discussed.

Keywords: self-esteem, inclusive pedagogy, leadership, experiential learning, gender, race

INTRODUCTION

In a variety of professional contexts, women and Black, Indigenous, People of Color (BIPOC) are underrepresented among leaders and on leadership teams. Only fifty-three of Global 500 companies were women in 2023. In the United States, organizational leaders overwhelmingly identify as White men. The first woman to join the Fortune 500 list of CEOs did not do so until 1972, and the first BIPOC (Black, Indigenous, People of Color) man did not join until 1981 (Hinchliffe, 2023; Hinchliffe & Abrams, 2023; United Nations Foundation, 2023). Moreover, women and BIPOC leaders consistently identify workplace cultures, bias, and discrimination as factors impacting their presence and success at work and in leadership roles (Lloyd, 2021; McKinsey and Company, 2022; Rosette et al., 2008). There exist significant pay gaps on the basis of gender and race and pay gaps for women and BIPOC women in leadership roles (Bureau of Labor Statistics, 2015; Hoisl & Mariani, 2017; Tsui, 1998). These differences represent an important consideration for academic leadership programs that seek to equitably prepare students to take on leadership roles in the workplace.

Though significant research has been done on gender differences in self-esteem in leadership settings, and studies have been conducted on race and self-esteem in higher education contexts, more work is needed to assess the impact of undergraduate leadership curriculum on students with different identities. This study examines identity differences in self-evaluation of project performance in an undergraduate leadership minor program at a large, public university in

the United States. The researchers aimed to assess the impact of gender and race on how accurately students evaluate their own performance on a leadership field project, in order to explore whether or not students with different identities evaluate their leadership performance differently.

BACKGROUND

Leadership studies is an interdisciplinary and evolving field of study. Overtime, Western academic conceptualizations of leadership have evolved, from centering theories focused on one man with innate leadership qualities to theories that apply a critical lens to the idea of leadership itself and reconceptualize traditional understandings of what effective leadership can look like. Traditional leadership theories have been designed principally by and for leaders who have identified as White men. The overrepresentation of White men in leadership positions underscores the need to explore the impacts of identity in leadership education and self-evaluation of performance (Dugan, 2024).

Gender, Leadership, and Self-Esteem

In a variety of contexts, American men and women tend to demonstrate differences in self-esteem and self-evaluation of performance, especially within fields in which women are underrepresented (Beyer, 1990; Feingold, 1994; Johnson, 1989; Kling et al. 1999; Major et al. 1999; Rentzsch et al. 2016). This has been found to be true in workplace settings, where men tend more often to step into leadership roles (Magee & Upenieks, 2019) and are more commonly found in leadership positions across industries in the United States (McKinsey and Company, 2022).

Eccles et al. (1990) suggested that women and men differ in their gender socialization and are impacted by gender stereotypes. This results in men and boys exhibiting stronger self-esteem than women and girls. In a quantitative study of German adolescents and adults, Rentzsch et al. (2016) found that women exhibited significantly lower self-esteem than men in a few specific dimensions: self-regard, social self-esteem, academic self-esteem, and physical self-esteem. Tsui (1998) suggested that self-confidence positively impacts leadership ability: "Because managerial skills imply the ability to manage, and thus to interact with others, it is reasonable to expect successful managers to be confident in their abilities to socialize with and lead others" (p. 365). Examining 941 individuals in business management careers, Tsui found that individuals who were more confident in their leadership abilities were earning a higher salary, and that men were more likely to have higher self-confidence in the field of management, and to earn more income. Schneer and Reitman (1994) found that pay disparities by gender grow over time as managers move up in their organizations. A Payscale report (2023) found that the gender pay gap still exists following the Covid-19 pandemic, even when we control for job titles.

Some work has been done examining self-evaluation and peer feedback in graduate management (MBA) programs. One study by Mayo et al. (2012) found that students who identified as women were more influenced by critical peer feedback than their peers who identified as men. Women in the study tended to rate themselves lower in self-evaluations of leadership ability after receiving peer feedback than men did. In undergraduate settings, some work exists on self-evaluation of leadership by gender. Sax (2008) suggested that men tend to report more confidence in their leadership abilities than women in college settings. Moreover, Chan and Drasgow (2001) found that self-ratings of leadership ability partially predicted motivation and interest in leadership after college. This mirrors research discussed earlier on the impact of self-confidence on leadership performance in work settings. Blaney (2020) conducted a study of leadership development in undergraduate computing programs and found that men reported more confidence in their leadership abilities than women. Blaney posited that the underrepresentation of women in computing, along with sexism in the wider culture, may have contributed to these findings. Blaney's work in particular has implications for the present study, though it did not take place in a leadership studies department.

Race, Leadership, and Self-Esteem

Research has suggested that Black individuals report higher self-esteem than White individuals, perhaps in part because self-esteem—and the solidarity that comes from membership in a disadvantaged group—may counter negative perceptions or bolster them against discrimination. Hispanic and Asian adults in the United States have been found to have slightly lower self-esteem than White Americans. Among minoritized groups, Black participants had the highest reported self-esteem, in spite of being the most stigmatized and devalued minoritized population. Self-esteem was found to be particularly high among college-aged Black participants, and among Black participants in the Southern United States, suggested that education and proximity to Black cultural centers may support higher self-esteem

(Twenge & Crocker, 2002; Zeigler-Hill et al., 2012).

One 1994 study (Crocker et al.) found that Black students seemed to be able to separate self-esteem in their own racial identity from how the public views their racial group. In contrast, Asian students in the study appeared to have their private feelings of self-esteem in their identity significantly impacted by their perceptions of public sentiment toward their racial group. White students also had a positive correlation between public and private self-esteem in their identity (Crocker et al., 1994). Looking at the intersection of race and gender, de Santibañes et al. (2023) suggested that Indigenous women, and potentially other minoritized leaders, were required to respond to resistance to and denial of their leadership identities and had to do additional identity reflection and work to reconcile these experiences. Greenstein (2000) found that self-efficacy scores may be lowest for Asian American undergraduates, compared with other BIPOC populations, due to the impact of model minority myth expectations.

Due to the deep entanglement of Western conceptualizations of leadership with European colonialism (Liu, 2019), race is a fraught topic in leadership studies. Research has found that the association between Whiteness and leadership has not dissipated over time (Petsko & Rosette, 2023). Harper and Kezar (2021) have critiqued the lack of attention to race, racism, White supremacy and systems of oppression in leadership theory and leadership studies. Wiborg (2020) and Williams et al. (2022) have described the centering and reproduction of Whiteness in leadership programs in higher education, while Ospina and Foldy (2009) have written about the lack of diversity among participants in leadership research. Race-inclusive and anti-racist leadership education requires confronting resistance in the classroom and in administrative spaces, and this resistance can harm BIPOC students (Wiborg, 2020).

PURPOSE OF THE STUDY

Due to the dynamic nature of contemporary careers, there is a growing need for workers to intentionally navigate changing circumstances (Savickas et al., 2009; Savickas, 2013). Self-esteem supports career adaptivity, the capacity to adapt to changing career circumstances (Rudolph et al, 2017; Savickas et al., 2009; Savickas, 2013). Identity differences in self-esteem and self-evaluation of performance warrant examination to better understand how to prepare aspiring leaders for career challenges, especially those who do not identify as White men.

We attempted to fill a gap in the literature by examining the impact of identity on self-evaluation in an undergraduate academic department focused on leadership—specifically, a department within which students are pursuing various majors, but all have declared a minor in leadership studies. Students in this program were diverse in skills, personalities, interests, and identities, and yet had each demonstrated a commitment to leadership through their academic minor. The research team gathered data from an undergraduate leadership minor course and compared students' individual self-evaluation scores to scores provided by students' supervisors. We sought to assess the premise that students who identified as women might rate themselves lower, on average, than students who identified as men. This finding would be consistent with Sax (2008) and Blaney's (2020) findings that women in college settings—including leadership settings—tend to rate themselves lower than men. In terms of racial identity, we sought to explore the relationship between race and self-evaluation accuracy in an undergraduate leadership context, since—to our knowledge—this type of study had not been done at the time of this writing.

This assessment assumed that the difference in self-evaluation accuracy would be reflected in the comparison between individual self-evaluation scores and scores provided by their supervisors. Our research question was: How do students in an undergraduate leadership field course rate their performance on a project, and how might this vary by gender and racial identity?

METHOD

Leadership Field Experience Course

Students in the study were enrolled in an undergraduate leadership minor program at a large, public university in the United States. The leadership minor program has four required core courses, which each involve activity-based learning on topics related to teamwork, emotional awareness, adaptive leadership, social change, and structural leadership. There is a significant focus on self- and other-awareness and learning to lead with ethical integrity and community stewardship. Inclusive leadership is a significant focus of the program.

For this study, the research team examined self-evaluations of leadership on a work-based learning project in the third required course, which includes a field work project. By the time students find themselves in this field experience course, they have completed at least two previous leadership

TABLE 1

Summary Statistics

(a) Continuous Variables

VARIABLE	OBS	MEAN	MEDIAN	STD. DEV.	MIN	MAX
SelfEval	72	92.58	95	9.42	30	100
SuperEval	72	87.42	94.5	16.67	25	100
GPA	72	3.52	3.58	0.35	2.56	4
Accuracy (A)	72	5.17	1	18.11	-60	70

(b) Categorical Variables

GENDER	FREQUENCY	PERCENT
Men	19	26
Women	53	74
Total	72	100
RACE	**FREQUENCY**	**PERCENT**
BIPOC	27	37.5
White	45	62.5
Total	72	100
CLASS YEAR	**FREQUENCY**	**PERCENT**
Sophomore	14	19.5
Junior	34	47
Senior	24	33.5
Total	72	100

courses (6 total credits) in the minor. The field experience course combines a 40-hour, group project conducted in partnership with a local mission-based organization, with coursework on social change leadership. Students engage with their classmates often throughout the 15-week semester, attend classes in person, complete assignments and reading, and practice collaborative communication and decision-making through their field project. This is also the class during which students formally declare the leadership minor, indicating their commitment to the program.

Participants

The research team collected data for 72 students enrolled in four sections of a 3-credit field experience course in the Spring 2024 semester. These 72 students represented nearly all of the population of the 73 students who completed the field experience course that term; one student record was removed from the data set because the student did not identify within the gender binary. Demographic data was gathered through the university's enrollment system. Table 1 provides descriptive information about the 72 students included in the study. Seventy-four percent of the students in the data set identified as women and 26% as men. Sixty-two-point-five percent of the sample identified as White, and 37.5% identified as BIPOC (Black, Indigenous, People of Color). Due to relatively small racial subgroup sizes, we

elected to represent racial identity as a binary: White or BIPOC. The demographic data collected also included class year and cumulative GPA. Students were enrolled in a wide variety of majors, including life sciences, social sciences, health sciences, business, sports management, communication, art and theatre, and others, along with a few students who were undecided. Each student planned to declare a minor in Leadership—and all were in sophomore, junior, or senior class years. Self-evaluation scores and individual supervisor scores for each student were collected and analyzed. The variable "SelfEval" represents students' self-evaluation of performance (as a percentage out of 100%). The variable "SuperEval" represents the percentage score (out of 100%) that students were provided by their project supervisor.

Measurement

This study aimed to assess the impact of self-reported gender identity on the accuracy of leadership studies students' self-evaluation of performance on a leadership project. Of specific interest was whether or not self-evaluation accuracy would differ by gender and racial identity. The study employed a quantitative research design, collecting the scores students assigned to themselves and the scores their supervisors assigned to them at the end of a 15-week leadership field project. Data was collected at the end of the academic term for all four course sections at the field experience level of the program. Participants represent a sample of students, in the sense that data for all students in the program that semester was collected, but this was only one leadership program in a specific context. We hoped to explore implications for the wider population of leadership studies undergraduate students as well and used linear regression in our analysis. Institutional Review Board permission was obtained before data collection.

Individual Self-Evaluation and Supervisor Evaluation

At the end of their time in the field experience course, students completed a self-evaluation of their leadership on the field project. This evaluation was worth approximately 10% of their course grade. Students were asked to reflect on their contributions to the project, and determine a grade for themselves—as a percentage score, with a maximum of 100% and a minimum of 0% (representing no contributions).

Students' group supervisors were asked to provide each individual student with a percentage score—just as students were asked to determine a score for themselves. These scores could range from 0-100%, representing the quality of their leadership contributions throughout the project. Students' individual supervisor-provided scores represented approximately 20% of their final course grades.

Determining Accuracy

Accuracy of student self-evaluation of performance was represented numerically as the difference between a students' self-evaluation score (s) and their supervisor-provided score (p). Beyer (1990) used a similar method to determine gender differences in self-evaluation of performance accuracy. Accuracy (A) = (s) – (p). If a student's accuracy (A) was found to be a negative value: $A < 0$, this indicated an underestimation of their own performance relative to their supervisor's evaluation of their performance. If a student's accuracy (A) was found to be a positive value: $A > 0$, this indicated an overestimation of their own performance relative to their supervisor's evaluation of their performance. If a student's accuracy (A) was 0: $A = 0$, that student assessed their performance consistently with their supervisor, indicating more accurate self-evaluation of performance. The greater the absolute value of students' accuracy (A), the less accurate their self-estimation of performance was relative to their supervisor's evaluation.

This study aimed for content validity (Messick, 1989) in that it was designed to deliver meaningful information about the target population: students who completed the leadership field experience course at a large, public university in Spring of 2024. We did not, therefore, use inferential statistics. Though the findings of this study may not be generalizable to other contexts, they do assess the impact of identity variables among students in this population. It is intended to illuminate the impact of identity on students' self-evaluation of leadership performance in this context in ways that may inform efforts to support students of minoritized identities within other leadership programs.

Data Analysis

Analysis of this data required statistical techniques common in educational research. First, descriptive statistics were used to summarize data and illuminate patterns. Then, simple statistical tests were used to assess the research question. We used Pearson Correlation (Cohen, 1988; Ritchey, 2008) to explore the relationship between cumulative GPA and evaluation accuracy (A). We also used linear regression to evaluate the variation in the response variable, accuracy (A),

to assess how much it might be attributable to gender and racial identity as explanatory variables (Richie, 2008). For Gender we set women as the reference group (women = 1, men = 0), for Racial Group we set White as the reference group (White = 0, BIPOC = 1). Though we were interested in the sample of students, we also wanted to explore identity dynamics in the wider population of leadership students.

As a final measure, we calculated Cohen's D in order to evaluate the magnitude of the mean difference in accuracy (A) among the four groups, women and men. Cohen's D was used as a standardized measure of the difference between the variables (Cohen, 1988; McGrath & Meyer, 2006).

TABLE 2

Gender and racial group differences in evaluation and accuracy

	WOMEN	MEN	BIPOC	WHITE
SelfEval				
Mean	92.08	94	90.85	93.62
Median	95	95	94	95
Std. dev.	10.66	4.34	13.21	6.08
Range	70	15	70	30
SuperEval				
Mean	89.62	81.62	88.52	86.76
Median	95	90	92	95
Std. dev.	13.88	22.03	13.82	18.28
Range	50	75	50	75
Accuracy (A) *				
Mean	2.45	12.74	2.33	6.87
Median	0	5	0	2
Std. dev.	16.08	21.55	17.22	18.6
Range	100	79	97	100

**Accuracy values may be positive, negative, or zero since each students' accuracy (A) is equal to "SelfEval"—"SuperEval"*

RESULTS

Descriptive statistics and effect size for each identity group in accuracy

Table 2 provides descriptive statistics for self-evaluation scores and supervisor evaluation scores for each identity group: women, men, BIPOC students, and White students. It also provides descriptive statistics for the accuracy of students' self-evaluation, by identity group. Both mean and median are provided to support a more holistic picture of the data, and a sense of more common responses.

This table suggests that though students belonging to each of the four identity groups provided similar self-evaluation scores, especially as determined by median values, supervisor evaluation scores varied more widely for men and White students. Women and BIPOC students had mean and median accuracy scores closer to zero, when compared with men and White students. For gender, the difference in mean accuracy was 10.29 (women were more accurate). For racial group, the difference in mean accuracy was 4.54 (BIPOC students were slightly more accurate).

The distributions of accuracy scores by gender and racial group are represented in Figures 1 and 2. Negative values indicate when students underestimated their scores. Positive values indicate when students overestimated their scores. Visually, we did not find differences in accuracy distribution between men and women.

FIGURE 1

Accuracy distribution by gender

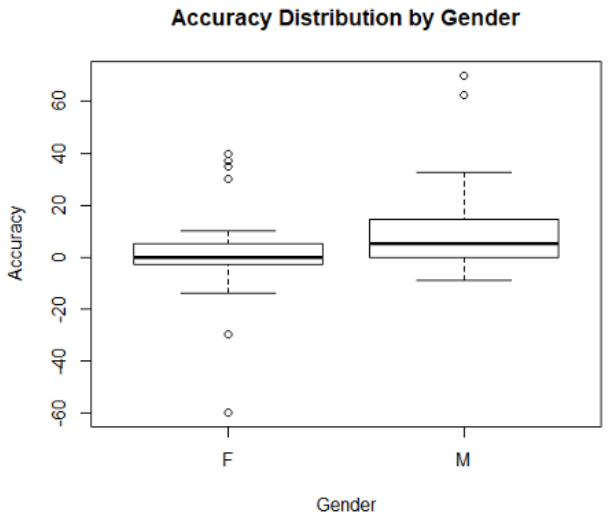

FIGURE 2

Accuracy distribution by racial group

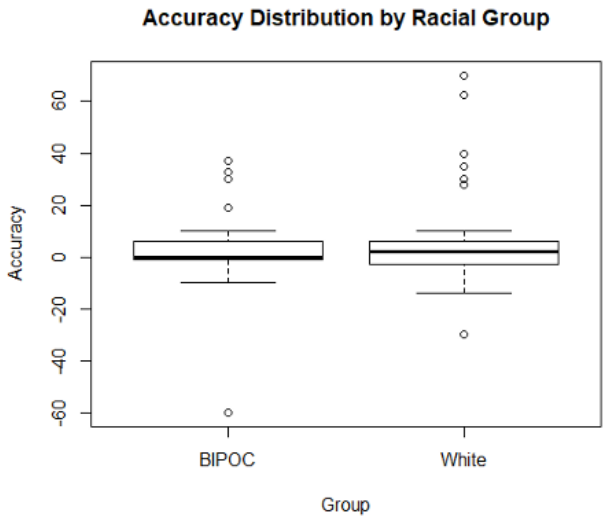

Figure 1 shows the spread of accuracy values by gender. "M" represents the accuracy scores for men in the sample, and "F" represents the accuracy scores for women. Outliers are represented by the dots at the top and bottom of the two plots. It is possible in this plot to see that men generally rated themselves more highly compared with women, and that women's self-evaluation scores more closely aligned with their supervisor scores.

Figure 2 shows the spread of accuracy values by racial group. It is possible in this plot to see that while the mean accuracy values for White and BIPOC students in the sample are similar, there is a small observable difference in outliers. White students had a few outliers with high scores relative to the mean, while one BIPOC outlier score was particularly low.

Cohen's D

Cohen's D was calculated to assess the magnitude of the difference between means for gender and racial group. Table 3 provides Cohen's D values for the difference in means for women and men, and BIPOC and White students. Cohen's D provides an indication of the effect size when comparing the mean accuracy for each group.

TABLE 3

Cohen's D

Cohen's d*	95% CI
Gender	
-0.58**	[-1.11, 0.05]
Racial Group	
-0.25	[-0.73, 0.23]

**Estimated using pooled standard deviation*

***Where d is between 0.2 and 0.5 indicates a small effect size and where d is between 0.5 and 0.8 indicates a medium effect size.*

Confidence intervals are also provided. Effect sizes were drawn from Sullivan and Feinn (2012). The effect size for gender was medium (-0.58) and the effect size for racial group was small (-0.25).

Pearson correlation and linear regression

To complete the picture of how the variables of interest in this study related to each other, Pearson correlation was calculated and simple linear regression analysis was performed. Pearson correlation was determined for the relationship between cumulative GPA and self-evaluation

accuracy. This is reported in order to provide a stronger picture of the data. The Pearson correlation was small: 0.01886. Thus, the linear relationship between accuracy and cumulative GPA is almost non-existent, within the sample.

Simple linear regression was used to explore the relationship between accuracy and identity variables—gender and racial group. When running a simple linear regression of accuracy vs. gender, the regression coefficient of -10.28 (lower mean accuracy percentage for women) had some evidence of statistical significance (standard error = 4.72, t = -2.18, and p-value = 0.31, on 70 degrees of freedom). The corresponding [R-squared] was 0.06.

After running a simple linear regression of accuracy vs. racial group, we found a regression coefficient of -4.53 (lower mean accuracy percentage for BIPOC), which had no evidence of statistical significance beyond the sample (standard error = 4.41, t = -1.03, and p-value = 0.31, on 70 degrees of freedom). The corresponding [R-squared] was 0.01.

The regression coefficients for each variable indicated some association between gender and accuracy and race and accuracy for the sample. The regression coefficient for gender was larger, indicating a stronger relationship. While the p-value for gender was less than 0.05, the p-value for racial group was not. Thus, *gender appeared to have a statistically significant effect on accuracy* in self-evaluation within the sample, and potentially in other similar contexts given the p-value. Racial group did not appear statistically meaningful beyond the sample, though there was a small observable difference in mean accuracy between BIPOC and White students within the sample.

DISCUSSION

After examining the influence of gender and race on self-evaluation accuracy relative to supervisor evaluation, we found that gender appeared to significantly affect accuracy, while racial group did not appear to significantly affect accuracy beyond the sample. The linear relationship between accuracy and cumulative GPA was nearly non-existent. These findings reflect and build upon some of the existing literature on self-evaluation and identity.

The significant relationship between accuracy and gender was consistent with our assumptions based on previous research (Blaney, 2020; Sax, 2008). Research conducted by Berg et al. (2006) suggested that women tend to be more conscious of how others may perceive their attributions of success. In other words, they may seek to demonstrate modesty in explaining their success. The authors observed a self-derogatory attitude among participants. Given that women in this study knew that their self-evaluation would be visible to the teaching team, and would be shared with their teammates and supervisor in final reflection meetings, these participants might have chosen more modest scores. If true, this might imply that women's self-evaluation would be more accurate if they were able to rate themselves privately.

The fact that accuracy and race were not found to have a significant explanatory relationship beyond our sample carries several potential implications. Previous research has found significant differences in self-esteem by racial subgroup (Twenge & Crocker, 2002; Zeigler-Hill et al., 2012). The fact that some minoritized racial groups were found to have higher self-esteem than White groups, and some were found to have lower self-esteem, may have produced a cancelling-out effect in our analysis on self-evaluation of leadership. In fact, there were small observable differences by racial subgroup in our study. Though we chose not to analyze those differences due to small sample sizes, there were small observable differences between the average accuracy of students who identified as Black and students who identified as Asian, consistent with the results of Twenge and Crocker's (2002) study. Of course, Twenge and Crocker looked at self-esteem, not evaluation of performance, a key difference. Self-esteem in general may differ compared with evaluation of performance on a specific project.

Nonetheless, Black students' average accuracy score in our study was higher than White students, while Asian students' average accuracy was the lowest of any demographic in our sample, a negative value. It is also true that Black students' supervisor scores were lower, on average, than any other group. Racial bias was not explored within the scope of this study. Thus, we cannot draw conclusions about self-esteem dynamics by racial subgroup. These subgroup differences do warrant further study in leadership education contexts.

Though women represented a majority in our sample, they nonetheless tended to rate their contributions lower than men. Blaney's (2020) examination of gender and leadership development in undergraduate computing found a significant difference in computing leadership confidence among women in her study, compared to men. Blaney attributed this, in part, to the lack of representation in the field of computing. This was reinforced by her finding that women had more confidence in their general leadership abilities related to their discipline-specific leadership

abilities. The disciplinary context may have impacted women's leadership confidence, according to Blaney. Though women are a growing minority in MBA programs, they still do not represent the majority (Reilly, 2021). Thus, one might expect women in an undergraduate leadership program to evaluate their work more critically than men, due to their underrepresentation. Yet, since women were the majority in the population we assessed, this may suggest that underrepresentation itself is not enough to explain the lower self-evaluations among women in the study.

It is also worth noting that Blaney's (2020) research examined women's ratings of their leadership confidence, not their self-evaluation of actual performance on a domain-specific project. McKee et al. (2018) found that women's self-ratings of leadership were less inflated relative to other ratings than their participants who were men, suggesting that women may have higher self-awareness of their leadership abilities. This is reflected in our study, since women's accuracy was closer to 0 (more accurate) in our study. It may therefore be the case that, rather than women underrating their leadership, our findings suggest that men tended to overrate their leadership performance. It might be that women held a more realistic view of their performance, or a more accurate understanding of how their supervisor might evaluate their work.

Implications for Future Research and Practice

This study contributes to the literature on gender and racial differences in self-evaluation of leadership in undergraduate settings, and carries implications for leadership education research and practice. Blaney's (2020) findings suggested that, for women, feeling a sense of belonging in the computing field was a strong predictor of confidence in leadership ability. Within the leadership studies minor in this study, significant curricular attention was paid to connection and belonging for students. One core principle of the program was "connection before content." In the first and second courses students completed before they reached the field experience course, they spent the beginning of each class session cultivating connection and belonging through structured personal storytelling and other community-building activities. This aspect of the curriculum likely promoted a stronger sense of belonging among students, not just in the course and the minor, but in the field of leadership itself. The program advocated for an "everyone leads" mentality, to counter gender and racial imbalances in the wider field. It may be that the emphasis on belonging in the program supported students' self-esteem and encouraged positive self-evaluation. As we have seen, study findings demonstrate that women's average self-evaluation score was still slightly higher than their supervisor evaluation, despite other research suggesting that women possess self-derogatory beliefs about their success (Herbst, 2020). It is possible that the strong emphasis on belonging supported students' positive self-evaluations, and women's more accurate self-evaluation. This contradicts the assumption that women are less accurate than men in self-perception accuracy, at least in this context.

Regardless, inclusive leadership curricula should represent a goal for leadership programs, at a minimum. White et al. (2021) described best practices for addressing equity in the classroom in the field of chemistry. White et al. provided evidence-based practices for inclusive curricula, and we have described a few below (2021, p. 332):

- Fostering a sense of belonging
- Validating students' scientific identities
- Allowing students to make mistakes
- Cultivating relationships
- Employing active learning and group work

White et al. suggested these practices for reducing equity gaps with respect to identity. The shift to digital learning environments, White et al. suggested, requires even more attention to these practices.

The nature of the field experience curriculum, in addition to the emphasis on relationships and belonging, is focused on project-based learning and group work. Building relationships and embracing uncertainty and failure are written into rubrics in the class, including the self-evaluation. Adaptability and managing uncertainty are also important career capacities (McGowan & Shipley, 2020). The presence of these aspects of inclusive pedagogy in leadership and career education curricula may support less identity difference in self-evaluation of performance. Newer leadership theories suggesting more anti-racist and liberatory practices also hold important value for leadership education (Dugan, 2024; Harper & Kezar, 2021) and may strengthen self-awareness for students with dominant identities.

Another important practice goal in this study was to explore whether or not a self-evaluation assignment in a leadership course, which is incorporated into a students' course grade, may thus affect their final grade in the course. In other words, if women and minoritized students give themselves lower scores, do they therefore have lower course grades?

This is an ethical consideration for educators in these spaces. Though this study did not find significant racial differences in self-evaluation—at least for BIPOC students as a group—it did find significant gender differences, which also include differences for BIPOC women. Educators who ask students to self-evaluate, without awareness of identity differences in self-evaluation, may risk creating identity differences in course grades. Strategies for counteracting identity effects—such as letting students know that men tend to rate their performance more highly—may prompt all students to reflect more deeply on their work. Though self-evaluation of performance provides students with the ability to contribute to their course grades in experiential learning models, and thus can be seen as a form of empowerment, it may also reproduce inequality if not conducted mindfully. Future research might explore these implications.

LIMITATIONS

One limitation of the study is the source of our gender and racial group information, which came from the university's enrollment system, rather than directly from students themselves (with the exception of one student who volunteered their gender identity). Also, in a study on identity differences, it is important to note that the research team fully recognizes and upholds the understanding that gender and race are socially -constructed identities, and that gender is not binary. For the purposes of this study, we do use a binary lens in order to explore the impact of socialized gender in leadership education. Similarly, due to our sample size, we chose not to assess racial difference in accuracy by BIPOC subgroup (Black, Latine, etc.). Instead, we created binary racial groupings, BIPOC and White. This was a significant limitation, especially because studies have indicated differences in self-esteem among BIPOC subpopulations (Twenge & Crocker, 2002; Zeigler-Hill et al., 2012).

Another important limitation lies in the fact that this study did not explore gender or racial bias and discrimination among supervisors. Thus, students' accuracy value represented the alignment between their self-evaluation and the supervisor's evaluation, rather than a truly objective measure of their performance. Further research should explore bias among supervisor evaluations in addition to student perceptions. Another limitation was the focused nature of the inquiry during a specific period of time with a specific course level at a large, public university. We hope that more inquiry will explore the evaluation accuracy of women and minoritized students in other leadership studies contexts, especially as the racial literature in this area is sparse, and add a qualitative lens to a limited empirical picture.

CONCLUSION

This study attempted to fill a gap in the literature on the impact of identity on self-evaluation in undergraduate leadership programs. Findings suggested significant gender differences in self-evaluation relative to supervisor evaluation, where women more accurately evaluated their leadership performance. We did not find significant racial differences for BIPOC students—as a total group—relative to White students. This work contains implications for inclusive pedagogical approaches in gender and racially imbalanced fields, such as leadership education. Curricular focus on relationships, disciplinary belonging, identity representation, active learning, and embracing mistakes (White et al., 2021) may partially address equity gaps in leadership education, and liberatory approaches may further close equity gaps (Dugan, 2024; Harper & Kezar, 2021). At a minimum, these approaches may ameliorate the impact of gender and racial stereotypes in the classroom and in experiential learning settings. We hope that future research will continue to expand upon these themes, addressing identity-based equity issues in higher education.

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JSCEE
Journal for the Study of Cooperative and Experiential Education
JOURNAL FOR THE STUDY OF COOPERATIVE AND EXPERIENTIAL EDUCATION • VOL. 1 • SPRING 2025

Natural Language Processing of Supervising Manager and College Intern Explanations of Work Ethic and Professionalism

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INTRODUCTION

Less than a decade ago, the National Association of Colleges and Employers rolled out their eight career competencies, identified as: leadership, communication, critical thinking, teamwork, professionalism/ethics, technical savviness, equity and inclusion, and career and self-development (NACE, 2016). An outpouring of time, money, and teaching resources continues by the higher education field, government, and the private employment sectors in hopes of increasing college student career readiness (Angel, 1995). However, after almost ten years of seeing the phrase "career competencies" transcend national conversations, (Human Resources-UNL, 2017, p. 1), supervising managers and college students still rate proficiency levels for competencies very differently. As Koncz and Gray point out, "in terms of graduates' level of proficiency in the competencies, employers and college students expressed very different opinions" (2022, p. 1). Pointedly, there continues to be a concerning gap in how recent college graduates and supervising managers learn, perceive, and describe career readiness. Detecting and identifying such a language gap through direct examination of language used by graduates and supervising managers may require unrealistically large labelling efforts by researchers. Natural language processing (NLP) methods can help bridge this gap by algorithmically finding topics that may constitute such "articulation gaps."

Of the eight previously listed competencies, a research effort by the National Association of Colleges and Employers (NACE) found leadership, communication, and professionalism/work ethic are among the top three performance gaps for recent college graduates (Koncz and Gray, 2022). In other words, recent college graduates rate themselves higher in the competencies of leadership, communication, and professionalism/work ethic than supervising managers rate the graduates. Although less prevalent, this troublesome trend continues through the other competencies. Further exploring the rating discrepancy for any one competency could shed light on the rating discrepancies seen in the other competencies. Using machine learning, narrative analysis, and artificial intelligence (AI) technologies can help to determine if any of those gaps are caused by ambiguities in competency definitions or generation-related language differences. Kovalcik (2019) refers to this as an articulation gap, as opposed to a performance gap.

To find articulation gaps requires examining potentially very large text corpuses to find potentially subtle differences between the way that supervising managers and students conceptualize these competencies. Leveraging AI in the form of natural language processing technologies can help address the difficulty of analyzing large amounts of data text, thus making the narrative analysis process more scalable and feasible as a research tool. This study demonstrates how natural language processing, as well as a lineup of other AI and statistical techniques, can be applied to extend researchers' analysis of large, text-heavy datasets.

FIGURE 1

Student-supervising manager group of interest

TOPIC #	TOPIC RELEVANT TERMS	TOPIC THEME	GAP (Student or Supervising Manager Favored, P-value)
1	Social, brand, rule, internship, work, policy	Rules and Policies	Student, 4.27e-6
2	Improve, ask, asked, worker, project, time, design	Questions and Improvements	Supervising Manager, 1.43e-10
3	Make sure, made sure, feedback, act, opportunity, communication	Opportunities and Consequences	Student, 1.01e-4
4	Ethic, integrity, situation, hard, challenge, skill, choose	Integrity and Ethics	Student, 3.28e-27
5	Information, confidentiality, right, sensitive, deadline, handle, data	Information and Confidentiality	Student, 4.76e-2
6	Environment, professional, come across, office, duty, accountable	Workplace Culture	Student, 2.47e-22
7	Complete, given, assignment, task, plan, complete task, hour	Completing Tasks on Time	Student, 1.50e-16
8	Animal, community, move, side, discussion	No Identifiable Theme	Student, 4.56e-14
9	Done, finish, completing, task, timely, committed, ability, great	Ability to Finish Tasks	Student, 2.21e-21
10	Honest, money, moral, professional, reliable, true	Honesty and Morality	Student, 5.18e-15

Note: Example topics from LDA model comparing student-supervising manager group of interest.

More pointedly, this study explores how those technical tools might be leveraged to further unpack the student-supervising managers nuances of the competency articulation gap. To effect this exploration, we address the research question: do students' and supervising managers' responses to our survey questions differ with respect to which topics those responses emphasize? We demonstrate how NLP topic analysis can be combined with a statistical analysis of its results in order to answer this question in the affirmative.

DATA

The data for this project was obtained through Clemson University's Center for Career and Professional Development (CCPD). The CCPD houses an internship class comprising on-campus internships, off-campus internships, and international internships. Any intern who completes an internship through a CCPD internship class must complete a survey regarding the evaluation of their individual career competencies as part of the final coursework. Out of the 3,792 responses used in the study, 3,593 are student responses, and 199 are supervising manager responses.

RESULTS

After constructing and running the LDA model with ten topics chosen with our methodology described above, our model produced the topics seen in Table 1 for the Student-Supervising Manager groups' responses to the ethics-focused question. The "Topic Relevant Terms" column is a curated list of terms selected from the top relevant terms produced by the model to create a more meaningful topic theme. It is important to note that LDA is a stochastic process, and the ten topics described below did not always appear in every run of the model (see Figure 1). However, many of the topics, such as: Topic 1: "Rules and Policies," Topic 3: "Opportunities and Consequences," Topic 4: "Integrity and Ethics," Topic 5: "Information and Confidentiality," and Topic 10: "Honesty and Morality" were consistent in their formation across many runs of the model.

DISCUSSION

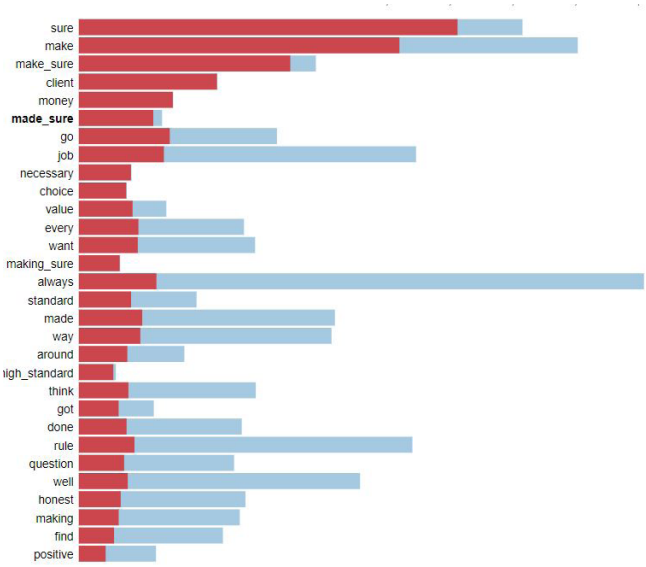
The miscommunication of how each group defines and explains the professional and work ethic competency becomes apparent in this study, and as Peck (2017) stated, "…very few [students] indicate that they are not gaining these skills in college" (p. 63). Instead, the results found in this work support Jackson's (2010) statement that supervising managers and students are "comparing and rating skills based on their own interpretation of the assigned skills" (p. 52). Students and supervising managers aren't just scoring professionalism and work ethic differently, their thought processes and descriptions for the competency is also incongruent. In short, these two groups have unique and contrasting constructs and paradigms for professionalism and work ethic.

Specifically, as students discuss the application and enforcement of rules and policies in the workplace, supervising managers are more likely to discuss students' abilities to analyze and solve problems. Students want to ensure that the rules are always or consistently being adhered to and enforced (see Figure 2). We also see in this study that talking about communication issues, being punctual and on time with projects, and owning up to mistakes are more aligned with supervising managers' thinking about professionalism and work ethic.

Viewed through a different lens, students are likely thinking about professionalism and work ethic as the competency relates to applying basic standards and adhering to written expectations. Their concerns are localized to the time of the incident versus the concept of an overall culture within the organization. Students want to ensure that procedures are being followed and that there is consistency in meeting those standards.

FIGURE 2

Made-sure word frequency



Note: Word frequency histogram displaying the topic Made-sure.

However, after supervising managers have onboarded and oriented a new team member, the supervising managers appear to be more concerned with more universal problems and workforce productivity. We see a trend of supervising managers defining the competency of professionalism and work ethic by using words and phrases often associated with the other seven competencies. They value professionalism and work ethic as the competency that relates to communicating effectively across team members and completing assignments independently and quickly. Having the foresight and self-awareness to analyze and fix problems is part of their definition of being highly proficient in the competency of professionalism and work ethic.

CONCLUSION

In the era of "Big Data," researchers have access to increasingly large amounts of data. For researchers undertaking labor-intensive, time-consuming qualitative analysis, such large datasets are both a blessing and a curse, in that such analysis is difficult to scale. Researchers frequently cannot carefully read the volume of documents available to them

for analysis. In such circumstances, there is a role in developing tools that can allow a researcher to gain insights from data that is too large for direct manual investigation. This paper presents a method that adapts NLP tools to perform this role, deriving insights from arbitrarily large sets of textual data, specifically tailored to identify and verify articulation gaps present in a text corpus for two or more groups of interest. We describe a text data processing pipeline that uses topic analysis to produce, for each text document in the corpus, scores describing the document's association with various topics, and then performs a statistical analysis to detect articulation gaps corresponding to any of the topics. Our method scales to arbitrarily large text corpuses with multiple groups. We demonstrate that this tool can be used to identify articulation gaps between student interns and their supervising managers regarding core workplace competencies. As previously stated, students and supervising managers aren't just scoring competencies differently. They are thinking, conceptualizing, and articulating the competencies in very unique ways, as well. These differences create the opportunity to adjust pedagogies and explore new teaching strategies.

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Unsettling Cooperative Education: Decolonial Directions

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ABSTRACT

How does decolonization inform co-operative education (co-op)? This question raises complex issues for educators and institutions, especially considering how decolonization is an unsettling journey (Regan, 2010) that involves critical reflexive change. Facing increasing pressures to support 21st century skills and career development—pressures that often mirror neoliberal socio-economic priorities of efficiency, growth, instrumentality, and productivity—it can be hard to know where to begin engaging decolonization in co-op.

This article explores theoretical discussions for how "decolonial praxis" (Gahman & Legault, 2019) can inform an approach to co-op that equips students to engage their integrative career development in holistic and responsible ways. Drawing from the work of curriculum theorist Dwayne Donald (2022), I will suggest that an important starting point involves practices of unlearning and relationality within co-op curriculum and programming. Practices of unlearning involve examining assumptions in co-op and assessing areas for change (e.g. values of neoliberal capitalism). Practices of relationality emphasize ways co-op can support student growth and responsibility within their own workplaces and communities. I conclude with a brief case study discussing how these directions have informed decolonial directions in unsettling co-op at the University of the Fraser Valley (Abbotsford, British Columbia).

UNSETTLING COOPERATIVE EDUCATION: DECOLONIAL DIRECTIONS

I begin this article with two hypothetical scenarios based on common interactions I have with university students in my role as Co-operative Education Coordinator.

Scenario #1: "I just want a job!" the student exclaimed to me as they sought advice on how to succeed in their recent job applications. I proceeded to offer encouragement and direction to the student, noting the importance of perseverance and the suggesting areas for improved professionalism in the application process. I could tell the student was highly motivated, ready to hustle in doing whatever it would take to improve. Within a few weeks the student notified me with excitement that they had received a job offer. Success!

Scenario #2: "I'm struggling to fit in," the student lamented while reflecting on their recent application to join the co-op program. Impressed by the student's skills and experience in their resume, I was surprised to hear their concern. They shared how they were struggling with the emphasis on individual "hustle" as a key to career success. They told me they don't mind working hard but are worried that their values of patience and connection to local community don't fit co-op. Promoted as a chance to find yourself, this student felt the opposite: the demands of professionalism in co-op would require them to lose themselves. The student never followed through with their application.

Scenario #1 illustrates a common experience for post-secondary students eager to make the most of their time and money by jumpstarting their career and getting a job related to their studies while they are still in school. And for many students, Work-Integrated Learning (WIL), and co-operative education (co-op) specifically, is a valuable pathway to achieve this goal. Alternating full-time work terms with academic study terms, co-op facilitates invaluable work experience for students within their education, often providing clarity in career direction and viable options for

employment following graduation. If you are a co-op educator, this scenario and description is likely familiar to you. And when students are successful, as many are, it is rewarding to sit back and observe the ways co-op is a well-functioning pathway for meaningful WIL experiences.

Scenario #2, however, highlights challenges students face when the emphases of co-op do not align with their own expectations, experiences, or values. Recent studies on WIL and accessibility have shown the narrow scope of many WIL programs are a barrier to participation for Indigenous and other minority student populations (see Zegwaard, 2019; Eady et al., 2022). Writing on the topic of Indigenous perspectives on WIL, Michelle Eady and team (2022) suggest that, WIL is a strategy that benefits all students and should be designed in a way that enables participation for all. However, current WIL experiences are largely developed through a Eurocentric, colonized lens and as such best lends itself to a white, able-bodied, self-sufficient, 18–24 year old population. (p. 131)

I relate the contrasting experiences of these two student scenarios with this analysis of narrow conceptions of WIL and see an opportunity for new understanding and change. This observation relates to calls in many areas of higher education to engage in the important work of decolonization (e.g. see Andreotti et al., 2015; Battiste, 2017; Donald, 2009, 2022; Patel, 2014; Pewewardy et al., 2022; Smith et al., 2018; Stein, 2019b). Writing from a Canadian context, I recognize that while decolonization[11] is a complex concept and practice with many different iterations, it is referenced in this article to mean the ways settler colonial perspectives, practices, and structures are interrogated and addressed in specific places and lands (see Tuck & Yang, 2012). Decolonization invites critical inquiry and concrete changes to the ways in which the injustices of settler colonialism persist in society, including education, such as the dispossession of Indigenous lands and the need to honour Indigenous self-determination and rights to lands they have resided on since time immemorial. As educational researchers Eve Tuck and Wayne Yang (2012) have asserted as an intentionally disruptive and unsettling statement: "Decolonization is not a metaphor" (p. 3) in that it addresses the reality of "total appropriation of Indigenous life and land" (p. 5). The importance of land, Tuck and Yang (2012) emphasize, highlights the specific qualities of settler colonialism that need to be addressed in decolonization:

> *Settler colonialism is different from other forms of colonialism in that settlers come with the intention of making a new home on the land, a homemaking that insists on settler sovereignty over all things in their new domain. … Land is what is most valuable, contested, required. This is both because the settlers make Indigenous land their new home and source of capital, and also because the disruption of Indigenous relationships to land represents a profound epistemic, ontological, cosmological violence. (p. 5)*

Returning to the opening example of a successful co-op student experience, these challenging directions in decolonization invite critical examination into the ways co-op is situated within settler colonial contexts of higher education. In particular, connecting decolonization to co-op requires the acknowledgement of possible ways Co-op structures and curriculum risk perpetuating problematic aspects of modern socio-economics in areas of accessibility, inclusion, and sustainability on the particular lands in which co-op programs are situated. As tempting as it is, for WIL educators keen to learn from and respond to the calls for change that decolonization raises, sitting back is not an option. Instead, as I explore in this article, WIL educators, including in co-op, are invited to participate in the journey of decolonization (Regan, 2010) through practices of unlearning and relationality that can lead to new ways of engaging WIL curriculum and programming.

As a contribution to research on decolonization and WIL more broadly (e.g. Ramji et al., 2021), this article wrestles with implications of decolonization and higher education within the structures of co-op common in many post-secondary institutions. Inquiry begins with theoretical reflections on decolonization and co-op, briefly defining co-op and situating it within the current social context of higher

1 I realize that the term "decolonization" is contested in debates about what terminology to use in describing efforts to assess and respond the legacy colonization in modern society and education (see Daza & Tuck, 2014). Leigh Patel (2014), for example, suggests that the term anticolonial can "draw into relief the ways in which decolonial should always speak directly to material changes, specifically to land" (p. 359). Where decolonization implies a stripping away—a freeing from the grips of colonial injustices—anticolonial names the need for interrogation of the ongoing phenomenon that is colonialism. This is an important distinction that I include in my approach here, but because decolonization remains the more prominent term higher education research, I have chosen to use it here.

education. This is followed by discussion of how decolonization in education invites practices of unlearning and relationality as a way to address the contextual complexity of the places and land in which co-op programs are located and experienced. The article concludes with a brief case study of unsettling co-op by exploring two areas of unlearning and relationality within co-op at the University of the Fraser Valley: interrogating neoliberal assumptions and fostering holistic student experience.

A brief note on my positionality before continuing. I am a settler researcher and educator living and working in Stó:lō territory, home to the Halq'eméylem speaking "people of the river" (i.e. Stó:lō). This land is also known as the Fraser Valley, a suburban-rural area about 100km east of Vancouver, British Columbia. I have worked in higher education for over a decade in teaching and administrative roles focused on interdisciplinary and experiential learning curriculum, in which I have developed and taught a variety WIL programs and courses including community-based learning, internships, and co-op. My own unsettling journey of decolonization (Regan, 2010) really only began when as an adult I finally learned the horrifying history of Canada's Indian Residential School system which included schools in the Fraser Valley (see Truth and Reconciliation Commission of Canada, 2015). Hearing stories of survivors during Canada's Truth and Reconciliation Commission that concluded in 2015 disrupted my understanding of what it means to be a resident of Canada, and specifically on the land where I live in the Fraser Valley. I have since been on a journey of learning from the gift of Indigenous people and land, specifically Stó:lō in my own context. This learning experience has opened my eyes, heart, head, and hands to considering new ways of structuring education in this place. I am grateful to the Stó:lō elders, communities, colleagues, and students who have graciously shared their wisdom with me. So, here I am as co-op educator, continuing this journey of decolonization in my current work and place. Extending from my doctoral research in Educational Studies at the University of British Columbia tentatively titled, "Unsettling Education in the Fraser Valley," the following reflections on how decolonial directions lead to unsettling co-op are a window into part of this journey.

COOPERATIVE EDUCATION (CO-OP)

While there are a number of ways that co-op has been defined and structured as a form of WIL (Fannon, 2023), this article will reference the most common form of co-op, in which students alternate full-time semesters of academic study with periods of full-time, paid employment related to their academic program "in appropriate fields of business, industry, government, social services and the professions" (Anderson et al., 2012, p. 59). This basic co-op structure reflects the definition from Co-operative Education and Work-Integrated Learning Canada (CEWIL Canada, 2021) that informs my own context in a Canadian university:

> *Co-op work terms have specific requirements; the student must be engaged in productive work for which they receive remuneration, the student's performance in the workplace is supervised and evaluated by their employer, and that the work term lasts for a minimum of 12 weeks and/or 420 hours. Co-op is intentionally designed to ensure that the skills the student learns are relevant to today's job market. (para. 2)*

Aimed at supporting student career development and employability as part of their education, co-op is contributing to ways post-secondary institutions are responding to the ongoing pressure to provide dynamic and evidence-based WIL programming (Zegwaard & Pretti, 2023). To start connecting this common form of co-op to decolonization in higher education, I turn now to name some of the contextual dynamics of co-op within today's higher education climate.

CONTEXT OF CO-OP

Co-op emerged as a form WIL education focused specifically on preparing students to transition into the workforce upon completion of their studies. In the early 1900's, as Annie-Marie Fannon (2023) summarizes, "rapid industrial advancement was highlighting a requirement for better-trained workers to meet the needs of industry and society" (p. 147). While an increase in service-industry jobs and other non-standard forms of work (Taylor, 2019) highlight a changing modern context of employment since those early years of co-op, the popularity of co-op and other forms of WIL continue in the face of ongoing challenges students face in navigating the transition from education to work (Sawchuk & Taylor, 2010). It is in this context that conversations about decolonization and co-op need to identify the cultural climate in which co-op exists, specifically neoliberalism.

There is no shortage of commentary on the influence of neoliberalism within higher education (see Bottrell &

Manathunga, 2019; Davidson-Harden et al., 2008; Spooner & McNinch, 2018; Stein, 2019a; Tett & Hamilton, 2019), including examples of WIL research and curriculum (see Björck, 2021; Johnston, 2011). Very broadly, neoliberalism refers to the ways in which society is structured to sustain a socio-economic arrangement based on liberal values of personal freedom (i.e. individualism) that are rooted in the structures of capitalism to sustain that freedom. Neoliberal impulses orient educational experience around equipping individuals for success within these structures of capitalistic modern society. As Sharon Stein (2019a) notes in her analysis of modern higher education, this approach involves a "(neoliberal) model of *students as customers and entrepreneurs* … educated to rationally pursue affluence, maximize utility, and enact seamless progress and development through the supposedly universal governing architectures of the nation-state and global capital" (p. 133, emphasis in original).

In co-op, and WIL generally, this lens of neoliberal individualistic success is a common approach (Johnston, 2011). Within this view, the purpose of education is to maximize individual success in ways that contribute to neoliberal socioeconomic structures, a "human capital perspective that views [higher education] as an investment which 'pays off' in subsequent employment opportunities and earnings" (Burke et al., 2017, p. 89). Curricula like co-op, then, provide the hands-on work experience that enable to students to experience this sort of value in higher education. In my interactions with future co-op students, for example, I often see this when they enroll with a hyper-focus on the personal benefit of WIL in their education. "How will co-op help me get a better job?" is the type of phrase I hear repeatedly from students as their rationale to join the program. And considering the complexities of modern employment and economic uncertainty, along with the aspirations to overcome socioeconomic barriers that a co-op job can help overcome, it is not surprising that co-op is viewed in these terms. In the Canadian context, which is likely similar in other locations, a focus on individual career development within a competitive job market (CEWIL Canada, 2018), contributes to a co-op structure that reflects the neoliberal principles of individual hard work as the pathway for employability (Bal & Dóci, 2018; Letts, 2019). In this context, co-op student success is often dependent on a student's ability to fit this mould of neoliberal employability oriented around values of personal responsibility, work ethic, and confidence. For students who do not fit this mould, however, there can be negative impacts, such as lack of support and relationships and gaps in academic and career preparation (Nielsen et al., 2022). As the second scenario introduced, students coming from more community-oriented cultures, such as Indigenous students, can feel pressured to conform to these expectations for professionalism that contradict some of their own community values. For students coming from a background that includes the intergenerational legacy of colonization, these neoliberal expectations can be significant barriers to participation.

Yet I do not think these socio-economic trends of neoliberalism mean that co-op is resigned to operate within neoliberal assumptions. While all curriculum is informed by its larger context—in this case, neoliberal socio-economics—zooming into the particularities of place (Donald, 2020) can be a way of imagining alternative approaches that reflect other characteristics of context that tend to get lost in the noise of larger cultural trends. While the full-time, paid employment of co-op is practically beneficial in preparing students for the modern workforce, what happens when calls for decolonization in education call into question the very assumptions and structures at the core of co-op success? To begin answering this question, I first acknowledge the disruptive nature of this analysis (Regan, 2010) and then turn to the wisdom of Papaschase Cree curriculum theorist Dwayne Donald for helpful guidance on decolonization and education.

THE UNSETTLING OF DECOLONIAL THEORY AND EDUCATION

It is important that co-op educators prepare themselves for the unsettling nature of decolonization more broadly, especially for educators working within settler institutions as most universities are in their history, structure, and culture (see Marker, 2019). Decolonization is by nature disruptive in not only interrogating the structures of modern education, but in demanding changes to the structures that perpetuate injustices on the Indigenous lands on which they operate. This is why settler educational researcher, Paullette Regan (2010), in her book *Unsettling the Settler Within*, invites educators to embark on a "decolonizing journey" (p. 12) that connects concepts of decolonization to the practical implications of these ideas in their own practice. Such work of decolonization cannot be taken lightly as it will no doubt be difficult in the contextual complexities and obstacles that educators will face along the way. As the authors of *Developing Stamina for Decolonizing Higher Education* pointedly ask, "How much effort are you, and

others in your institution/office/department, willing to put into your own learning (and unlearning)?" (Stein et al., 2021, p. 33).

Alongside recognizing the unsettling experience that decolonial directions in education present, it is also important not to navigate these challenges alone but to accept the wisdom and presence of others in the process. Here is where I am grateful to the teaching of curriculum theorist Dwayne Donald (2022) in providing helpful guidance for educators on this journey of decolonization, particularly in his reflections on the practices of unlearning and relationality. Within decolonization, Donald (2022) suggests, unlearning requires educators to identify the problematic aspects of colonialism, such as the ways "different aspects of a human being are increasingly fragmented and disassociated as a person becomes educated" (para. 6). Identifying this fragmentation, Donald (2022) proposes unlearning colonialism as a practice of interrogating the structures of education, a way of "decentring, denaturalizing, and unlearning colonial logics of relationship denial as curricular and pedagogical common sense" (Donald, 2022, para. 8). In the case study below, I share how interrogating assumptions in co-op can be a practical way to engage this unlearning.

Alongside unlearning, Donald (2022) also notes the importance of relationality, what he describes as renewing "kinship relations" (para. 9), a recognition of the interrelatedness of all things that is a fundamental teaching in Indigenous ways of being and knowing. Receiving the wisdom of Indigenous knowledge, Donald (2020) notes elsewhere, requires practices of ethical relationality in which all forms of knowledge are valued—not just Eurocentric "decontextualized and universalized approaches to knowledge and knowing" (p. 157; see also Donald, 2009, 2012). Learning in connection to local Indigenous communities, as this case study explores, is one way to practice relationality in co-op.

Together, Donald's emphases on unlearning and relationality as practices of decolonization in education have inspired my own approach to co-op curriculum and programming in which I seek to engage a "decolonial praxis" (Gahman & Legault, 2019) for co-op. Decolonial praxis refers to the concrete ways decolonial directions are embedded in curricular practices situated within the local context of Indigenous people and land. The remainder of this paper explores these theoretical directions in a case study of unsettling co-op at the University of the Fraser Valley.

UNSETTLING CO-OP: A CASE STUDY

The University of the Fraser Valley (UFV) is located on the territory of the Halq'eméylem speaking Stó:lō people who have resided in this territory since time immemorial. UFV is committed to journeying in relationship with Stó:lō communities and land in all areas of the institution, including the type of community connections that co-op is part of (see University of the Fraser Valley, 2024a). As part of the university's strategic plans for Indigenization and Reconciliation, this commitment includes engaging ways that curriculum and programming are "designed to educate, build awareness, and develop capacity" for how the institution engages in unlearning and relationality in connection to Stó:lō people and land. UFV's Teaching and Learning Centre supports these directions through equipping staff and faculty to engage Indigenization within their work as follows:

> *Indigenization is a process of naturalizing Indigenous knowledge systems and making them evident to transform spaces, places, and hearts. In the context of post-secondary education, this involves bringing Indigenous knowledge and approaches together with Western knowledge systems. This benefits not only Indigenous students but all students, teachers, and community members involved or impacted by Indigenization. (University of the Fraser Valley, 2024b)*

In UFV's co-op department, we are accountable for developing ways for co-op to support these institutional commitments, which has led to two areas of focus in decolonization and co-op that I will share for this case study: interrogating neoliberal assumptions and fostering holistic student experience. While I have identified these as two relevant areas for this case study, I should note that they are not exhaustive or complete. Each topic reflects the current reality in the ongoing journey of decolonization in UFV's co-op program.

Interrogating Neoliberal Assumptions

The first area of unsettling co-op at UFV has been interrogating the neoliberal assumptions that exist within the structure and practices of co-op in our context. An important part of unlearning, as Dwayne Donald (2012; 2022) instructs, is to examine the colonial logics in curriculum as a way to identity problematic areas that get perpetuated in education. Donald's instruction relates to the observations

by a team of WIL practitioners from the University of Victoria who in speaking specifically to ways decolonization can inform WIL describe how educators must be "checking our assumptions and adjusting our understanding" in order to adapt the contextual demands of WIL experiences (Ramji et al., 2021, p. 315). What has interrogating neoliberal assumptions looked like in co-op at UFV?

Under the direction of UFV's Indigenization specialists[22], co-op curriculum was updated to reflect aspects of Indigenous ways of being and knowing, particularly those of Stó:lō people and land. While I will show ways that this learning informed approaches to student experience, here I will first note how it has also highlighted ways that the neoliberal assumptions in co-op can perpetuate the colonial logics that decolonization is addressing, specifically, in how student success is understood and pursued.

Historically, co-op at UFV has operated within the common co-op structure in which students are required to navigate the demands of searching and applying for jobs, and if successful, working for periods of full-time employment was part of their educational journey. The neoliberal assumptions for employability outlined here have characterized the general approach to co-op at UFV, not surprisingly considering its context within a public Canadian university. As a result, students who wish to succeed in both their academic program and the additional work experience of co-op have to expend additional time and energy to be successful in the program, especially when academic credit is typically additive (i.e. not part of their academic program credit load) and jobs are secured competitively (CEWIL Canada, 2018). In my observation of successful co-op students, it is the students who can best conform to these demands that are successful, and the system rewards their individual hard work with a valuable career development experience.

This approach to success in co-op reflects common assumptions in modern workplaces, in which "the focus on the individual employee indicates the implicit assumption that the individual is primarily responsible and accountable for ensuring employability, high quality jobs and engagement at work" (Bal & Dóci, 2018, p. 542). To clarify, it is not necessarily the demands of time and energy that require unlearning. Rather, in ways that mirror demands for conformity to Western conceptions of knowledge and individuality that are prominent in all areas of modern education (Donald, 2012), these neoliberal definitions of success risk perpetuating these settler colonial assumptions of superiority within co-op. Organizational psychologists Matthijs Bal and Edina Dóci (2018) note that the influence of neoliberalism is significant in definitions of success in the modern workplace: "The core principle of neoliberalism is that human welfare will be maximized when individuals have ultimate economic freedom to act" (p. 538). Neoliberal ideology, they continue, has a specific idea for what individual workplace success involves:

> *Each individual is expected to be self-interested, and to pursue maximization of one's own outcomes. Individualism refers not only to the opportunity for individuals to pursue their individual goals and desires, but also to the individual responsibility and accountability for one's actions and well-being … people are expected to be self-reliant, and to ensure their own well-being, education, employability, wealth, societal success and so on." (p. 539).*

These neoliberal assumptions for workplace success are reflected in the demands co-op places on students to succeed in these ways, an implicit demand for conformity to this vision for workplace success that has little to say about complex socio-economic issues in the local contexts of co-op work terms or address ongoing injustices related to society and Indigenous lands on which co-op jobs are located. One way of unsettling co-op at UFV, then, has been to examine where these assumptions show up and explore ways to address and change them where necessary.

One area where we have identified the persistence of these neoliberal assumptions of success are the ways that programming and communication offer repeated calls on students to conform to these expectations of success through words, actions, attitudes, and overall administration of co-op. The co-op team has had to practice what is sometimes referred to as institutional reflexivity

2 The UFV Indigenization specialists have the following role in UFV's Teaching and Learning Centre: "UFV's Indigenization Specialists play an integral part of the work of Indigenization, decolonization, and reconciliation at UFV. The Indigenization Specialists work with faculty, staff, and students to respond to the Truth and Reconciliation Commission's 94 Calls to Action and UNDRIP. The Indigenization Specialists are available to work one-on-one, small and large groups to assist and support faculty and staff by building relationships while supporting Indigenization and reconciliation efforts in the world of academia from an Indigenous perspective." (University of the Fraser Valley, 2024b)

(Antonacopoulou et al., 2019; Moore et al., 2018; Westerlund et al., 2021) in assessing ways our programming and administrative structures are stuck within these neoliberal assumptions of student success. We are early in this analysis and recognize that such interrogating is part of larger institutional dynamics within higher education, a context in which we are only one small part. However, we have begun identifying areas for potential change, such as co-op course learning outcome terminology, program descriptions and advertising, and workshop language. A first step has been naming these neoliberal assumptions as I have outlined here. Interrogating assumptions, however, is only one step that has led to the additional areas of unsettling co-op in how we approached student experience.

Fostering Holistic Student Experience

In efforts to respond to ways neoliberal assumptions existed within co-op, we engaged in learning from Stó:lō Indigenization specialists at UFV. During a curriculum development workshop (Andrews & Joe Senóqw'iye, 2024), Stó:lō educator and curriculum developer Leanne Joe Senóqw'iye noted the congruence between the experiences of co-op and Indigenous ways of being and knowing taught by Stó:lō communities. Stó:lō people learn practices of responsibility to the land through mentoring and hands-on learning, which are also common aspects in all forms of WIL, including co-op. A central part of Stó:lō teaching is the belief that each person's giftedness—their knowledge and skills—is to be shared with the community. Each person has a responsibility to share their gifts with the community. All individuals' gifts are part of the interconnected relationships between the community and land in which they belong. Personal success, then, is measured in terms other than just common definitions of employability that emphasize skill development to increase job opportunities and potential earnings (Burke et al., 2017). Instead, the focus is on ways that education can strengthen students' sense of giftedness within the context of community (Andrews, 2023). In review and revision of UFV's co-op curriculum, my colleagues and I are asking, how does co-op work experience enable a new or strengthened sense of giftedness? Reflecting on this question has led to incorporating the language of giftedness and responsibility in framing the purpose of co-op education and updating some of the terminology in reflection assignments to align with these directions.

Another element to student experience related to unsettling co-op is to invite students into the complexity of decolonial praxis themselves within the course of their co-op experience. Through the development of a land acknowledgment exercise at the beginning of every work term, UFV's co-op curriculum now invites students to understand and respond to the legacy of settler colonialism within the context of their co-op employment. They are invited to do so in ways that receive the gift of wisdom, people, and place represented by Indigenous desires for the future (Tuck, 2009) and specifically with local Indigenous peoples and land (Tuck & Yang, 2012). In practice, this activity involves a version of the following activity:

> *Using the address of your co-op employer's location (if working remotely, use the address of the company's main office), identify the local Indigenous communities using the website Native-Land.ca or Whose.Land. Spend some time exploring the various links provided to learn more about the Indigenous people and land of your work term location. For further reading, see Davey (2023), "Indigenous Inclusion In Employment."*

Following this first step, depending on which work term co-op students are completing, they are invited to reflect on the following:

- **Work Term #1:** Based on your learning, list 2-3 topics of learning that were noteworthy to you. For example, if you are working within Stó:lō Téméxw (land/territory), are there history, characteristics, or programs that stood out to you (e.g. see https://www.stolonation.bc.ca/)? Why did you pick these? Explain in a short paragraph (100-200 words).
- **Work Term #2:** Based on your learning, what are some potential areas of connection between your co-op job and one of the Indigenous communities you learned about? For example, if you are working within Stó:lō Téméxw (land/territory), is there a Stó:lō program or service (e.g. see https://www.stolonation.bc.ca/programs) that your job or industry is related to? Explain in a short paragraph (100-200 words).
- **Work Term #3:** Based on your learning, reflect on the following: Does your employer have any current connection to local Indigenous communities/groups/tribes? What are some challenges that Indigenous people may have in your field of work? Brainstorm 1-2 practices you believe you and/or your employer could engage that are connected to a program or service of one of the local Indigenous communities (e.g. see https://www.

stolonation.bc.ca/programs)? Explain in a short paragraph (100-200 words).

By inviting students to connect their co-op work experience to the Indigenous people and land, they have the opportunity to consider how personal career development can occur amidst practices of responsibility within the particularities of place (Donald, 2020) in which they find themselves. It is just one small action within the larger process of engaging Indigenous people and land in UFV's curriculum, but we are hopeful that the knowledge and relational connection to the Indigenous communities and land that emerge can be one way UFV's co-op program participates in this important work.

At the time of writing this article, these curriculum changes have only just been implemented for the first time, so we have yet to get in-depth assessment of the impact of these directions. The first set of student reflections have given some initial indications for possible impact. For example, students have stated that this land acknowledgement exercise was an experience of new learning about the local history and experience of Indigenous communities. Several students noted how this was not something they had considered before, especially in relation to a work experience. Some students, however, admitted a struggle to make connections between their area of work and Indigenous communities and land, highlighting a possible need for some additional student preparation prior to the work term experience. I envision a follow-up to this study that explores the impact of these directions more thoroughly, for students, but also for employers and the local community.

CONCLUSION: THE ONGOING JOURNEY OF DECOLONIZATION

These two brief examples of unsettling co-op at UFV are just a sample of the ways that decolonial directions in education can inform WIL in modern higher education. No doubt the neoliberal context of higher education will continue to place demands on co-op programming and student experience that will require ongoing unlearning and relationality within the unique contexts of co-op across the spectrum of higher education, including at UFV. But with each step in the ongoing journey of decolonization, while the unsettling will continue, there is a chance to heed Dwayne Donald's (2021) challenge for educators "to facilitate the emergence of a new story that can repair inherited colonial divides and give good guidance on how to proceed differently" (p. 57). Through unlearning and relationality, co-op can be one chapter in the ongoing story of decolonization.

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