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3rd – 7th of August, 2019, University of Cincinnati, Ohio, United States

Editors
Karsten E. Zegwaard & Marty Ford
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Front cover: Statue of Herman Schneider, founder of Cooperative Education, Herman Schneider Quadrangle, University of Cincinnati, Cincinnati, Ohio, United States.
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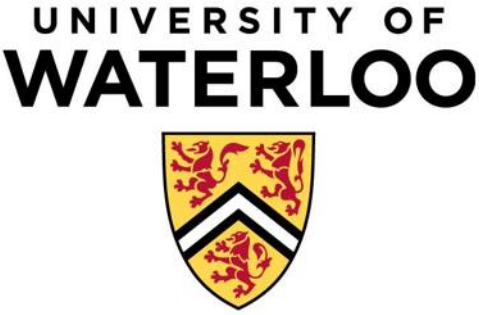

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Teaching assistants in jail: Engaging traditional students in correctional education

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ABSTRACT

The Violent Crime and Law Enforcement Act of 1994 effectively ended higher education programs in U.S. penal facilities by declaring incarcerated people ineligible for federal funding for education. To combat the corrosive effects of incarceration and to contribute to anti-recidivism efforts, colleges and universities have since attempted to fill the void by offering private higher education programs in prisons and jails. In this article, we discuss the provision of college courses in a county jail. Specifically, we examine the role of traditional students, both undergraduate and graduate, who work alongside incarcerated students as Teaching Assistants. In attending lectures, assisting with writing workshops, and running exam review sessions, these traditional students are integral to the incarcerated students' success, but they also gain valuable, real-life experience teaching in a penal setting.

The literature on experiential learning and incarceration is concerned with the ethics and utility of prison visits or tours by non-incarcerated students. While visits are problematic for a number of reasons, they are often the only access that the general public has to the penal institution. We argue that creating the context for sustained interaction allows for a deeper understanding of the issues associated with incarceration and encourages compassion, while also providing a valuable resource to incarcerated students. Teaching Assistants learn a number of important lessons related to the realities of incarceration and the inherent conflicts between the goals of education and confinement.

THE CHALLENGES OF EXPERIENTIAL LEARNING IN A CORRECTIONAL SETTING

The United States is the world's leading incarcerator, yet prisons and jails remain largely off-limits to the general public (Lewis, 1980; Wacquant, 2010). The majority of people cannot access penal institutions freely like other public buildings. Civilians may visit friends and loved ones who are incarcerated, but the concentration of incarceration in poor communities of color means that mass incarceration does not touch all lives equally (Mauer, 2016; Western and Pettit, 2010). As a result, many college students have never set foot in a penal institution, nor do they understand the ramifications of mass incarceration. Bordt and Lawler (2005) found that students at a private liberal arts college had thought very little about incarceration prior to signing up for a seminar on prisons.

One way that students get exposure to penal facilities is through tours offered to schools and community groups. For colleges, this often takes the form of field trips as part of a course, with varying levels of contact and interaction with incarcerated people. The utility and efficacy of carceral tours is debated among criminologists. Supporters argue that tours are a useful pedagogical tool that should be made available to all students interested in criminal justice (Smith, Koons-Witt, & Meade, 2011; Wright, 2000). Field trips can reinforce long-term learning (Farmer, Knapp, and Benton, 2007), and help illustrate

theoretical knowledge about penal systems in real life (Callaghan, 2005; Wright, 2007). However, criticisms of carceral tours are many. Critics argue that carceral tours are educationally useless: so tightly controlled by staff and administration as to misrepresent carceral life (Brown, 2009; Meisel, 2008; Piche and Walby, 2010). Meisel (2008) found that carceral tours made both his students and incarcerated people uncomfortable, partially because some of the students behaved inappropriately, but also because participation was involuntary for the incarcerated people they encountered, and there was a clear invasion of prisoners' already-limited privacy. Others argue that there is a middle-ground, whereby carceral tours can be educationally and ethically sound provided students are given the right preparation (Rockell, 2009; Smith, Meade, and Koons-Witt, 2009; Smith, 2013).

In an effort to challenge the separation of incarcerated and non-incarcerated people, the Inside/Out Prison Exchange model has flourished in the U.S. and abroad as a profound and transformative educational experience. Unlike tours, whose limited educational value is one-sided in that traditional students are meant to learn from visiting a penal institution, the Inside/Out Prison Exchange model is a *co*-learning experience (Pompa, 2013). Instructors bring traditional college (outside) students into correctional facilities to share class with incarcerated (inside) students, a model that encourages incarcerated and non-incarcerated students to see each as equals and break down barriers created by incarceration. Inside/Out poses many challenges for instructors related to prison and university legal concerns, students' physical and emotional safety, and creating a diverse classroom (Van Gundy, Bryant, and Starks, 2013). The logistics can also be quite difficult to navigate, and instructors may have to defer important decisions, like class times and enrollment, to criminal justice professionals (Link, 2016). Despite these challenges, participation in courses is correlated with higher rates of self-efficacy (Allred, Harrison, and O'Connell, 2013). Students report that courses are profound learning experiences (Allred, Belche, and Robinson, 2013; Hilinski-Rosick and Blackmer, 2014). Inside/Out is an excellent model for providing sustained and meaningful interaction between incarcerated and non-incarcerated students that transcends many of the inadequacies of carceral tours.

There are many challenges to providing college coursework in a correctional setting. Instructors may face pedagogical challenges due to inadequate space, time, and resources (Osberg and Fraley, 1993), as well as the fact that instructors cannot freely communicate with students outside of class (Hackman, 1997; Gunn, 1999). Classes can also be canceled at any time (Michals and Kessler, 2015). Arguably, the biggest challenges to teaching in a correctional setting are cultural and emotional. The goals of punishment and confinement contribute to and create a culture that is markedly opposed to the goals of higher education (Michals and Kessler, 2015; Runnell, 2016; Wright, 2005). Students can be transferred, punished, and removed from class at any time without notice (Bhatti, 2010; Michals and Kessler, 2015). Behan (2007, p. 158-159) argued that correctional educators must take extra care in the penal environment in order to maintain their identity and purpose as teachers: "The agenda of the correctional authorities can contrast in many ways with the philosophical ideas that underpin the pedagogical process. Educators must be careful about being subsumed into correctional agendas." Teaching in a correctional setting requires constant negotiation to serve students while simultaneously negotiating institutional rules and cultures that do not necessarily support educational goals.

These very challenges, however, provide unique experiential learning opportunities for university students. Our students work as Teaching Assistants, thus gaining hands-on experience with tutoring, providing writing help, exam prep, and general academic support for incarcerated students. More

importantly, they learn to navigate the challenging culture and structure of the penal institution. They also experience first hand what it is like to be beholden to the whims of a correctional institution when students are pulled from class or the facility is locked down without notice. Ultimately, through continuous engagement with incarcerated students, they confront the realities of incarceration, lessons that cannot be learned in a traditional classroom nor on a carceral tour.

THE TEACHING ASSISTANTSHIP IN CORRECTIONAL EDUCATION

We first connected with the jail through Criminology and Criminal Justice courses. Our students toured the facility and met with prisoners who shared their life stories. While these were interesting exchanges for students, many of whom had never entered a penal facility, their experiences were also consistent with others' critiques of carceral tours (Brown, 2009; Meisel, 2008; Piche and Walby, 2010).

As an institution of higher education committed to the greater good, it is our responsibility to educate others and serve our community (removed for review). To this end, since Spring of 2017, we have provided one for-credit course per semester to students incarcerated at the (removed for review) in (removed for review). Thus far, we have taught four courses in criminology and two in creative writing; 39 incarcerated students have earned college credit and 15 are currently enrolled. By working with the only penal facility in (removed for review) county, we are contributing to anti-recidivism efforts in our community by providing much-needed educational programming to an underserved population. This work, however, does not just serve our community; correctional education also presents a unique experiential learning opportunity for our traditional students.

So far, ten students have served as Teaching Assistants. All have been criminology students, from both masters and undergraduate programs, who are interested in working in the criminal justice system and understand the social justice issues related to incarceration. Credit has been available from the criminology department in the form of directed studies, capstone projects, or internships. The Teaching Assistantship is not for every student; outside a strong academic record and familiarity with the subject matter, this role also requires a certain level of maturity, open-mindedness, unflappability, and simply a willingness to work in the unique setting of a penal institution (removed for review).

While the Teaching Assistantship has considerable value for our students, TA presence is in fact critical to the success of these courses. Incarcerated students do not have access to computers on their own time, and thus TAs' presence in the jail on off-teaching nights is crucial for students to complete assignments and allows the class to convene four night per week: two nights for class time and computer lab time, respectively. TAs also act as conduits for information between teachers and incarcerated students. They provide updates regarding students' status (e.g. who is in "the hole," has been transferred or released, or facing a court date), relay questions about assignments, and facilitate make-up work for students who are unable to be in class for any number of reasons (visits, medical, court, etc).

Logistics aside, the presence of traditional students helps bring a sense of the outside college setting into the jail. This contact can be of particular value when traditional students attend the class itself; their participation in discussions and activities as class members can help counter the jail culture and show incarcerated students that they can hold their own in a college classroom. TAs' participation as equal members of the class--a departure from their usual position of relative authority--brings students closer

to the unique and potentially profound dynamic of co-learning that the Inside/Out Prison Exchange teaching model achieves. While this exchange is categorically *not* an Inside/Out course, the course does facilitate meaningful and sustained interaction between traditional and incarcerated students.

Pedagogically speaking, the Teaching Assistantship is an enriching experience for our students. Students get first-hand experience with the teaching process, helping to educate a student body with diverse backgrounds by tutoring and facilitating study sessions. They also get exposure to the procedures, culture, and environment of the correctional system and learn to navigate the often conflicting priorities of penal and educational institutions. As teaching assistants, our students are concerned with teaching and learning, but they are working within a culture that prioritizes control and punishment. Even the terminology used underlines a stark difference in value systems; once our incarcerated students leave the classroom, they return to being "inmates" in the eyes of the penal institution. As with faculty, TA's face the challenge of situating themselves in the correctional context while maintaining a separate identity as teachers who are there to help incarcerated people learn (Behan, 2007).

Administrators have welcomed the program and are grateful for our presence at the jail, but not all staff feel the same. Challenges to our work have taken a variety of forms: students have been involved in conflicts outside of class that lead to them missing classes or being removed from courses altogether; the facility has been locked down, one time indefinitely and without notice; staff have challenged TAs regarding dress, repeatedly and despite reprimand from administrators; the failures of jail bureaucracy have wasted our time and caused great frustration.

Despite these difficulties, TAs have been enthusiastic participants in the program and taken great pride in incarcerated students' progress. Several TAs have signed on for multiple semesters and shared information about the program with their friends, who have subsequently reached out to us to inquire about the TA position. They enjoy getting to know our incarcerated students. This work puts a face on incarceration and challenges many stereotypes about crime and punishment. Involvement in correctional education also pushes our traditional students to examine what it means to learn in a penal environment. It urges them to reflect on the intent and purpose of education and to question the role of higher education in addressing the issues associated with mass incarceration.

CONCLUSION

The Teaching Assistantship provides an alternative option for experiential education in penal facilities that transcends the short-term structure and limited interaction between incarcerated and non-incarcerated people that field trips can provide. We argue that alternative forms of interactions between colleges and penal facilities are readily available when educational institutions commit to providing college coursework for incarcerated students. Opportunities for traditional students to engage with incarcerated students over a sustained period of time are vastly more likely to produce meaningful interaction, rather than the speculative and short-term engagement that field trips allow. While Inside/Out is one such model, the Teaching Assistantship offers traditional students an opportunity to engage in correctional education in the context of experiential learning.

It is important to note that while our TAs are students who are interested in criminal justice issues and often, criminal justice careers, the TA is not akin to an internship in corrections. Rather, TAs focus on

helping to teach, process ideas, and encourage incarcerated students, many of whom have not had access to college coursework in the past, to realize their academic potential. TAs learn very quickly that there are specific challenges to teaching in a correctional setting, where concerns for security and punishment regularly supersede educational concerns.

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“No, I’m not the secretary”: Using participatory action research to explore women engineer’s experiences on co-op

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ABSTRACT

Studies exploring engineering students’ experiences with cooperative education (co-op) typically utilize traditional quantitative and qualitative methods to focus on overall outcomes as opposed to individual voices. As a result of this, women’s experiences in a co-op environment are rarely captured. Historically, women are underrepresented in engineering undergraduate programs, and this can lead to feelings of isolation and low self-efficacy, which, in turn, can lead to attrition. Participatory action research (PAR) not only highlights marginalized voices, but also empowers participants. The current study implements Group-Level Assessment (GLA), a large-group PAR method, to study the co-op experiences of women in engineering at a large US research institution. During the GLA, participants developed an action plan to improve co-op experiences for women in order to improve retention and help future women succeed.

INTRODUCTION

Despite a continuous effort to increase the number of women in undergraduate STEM majors, women are still lagging in enrollment in engineering majors within the United States. Since 2000, women have earned roughly half of the bachelors degrees administered, however women account for only 20% of engineering degrees administered in 2015 (National Science Board, 2018). According to the Bureau of Labor Statistics (2011), women represent only 10 percent of full-time employed engineers. As a result of this, undergraduate Women in Engineering (WiE) tend to feel lonely, unsupported, and tokenized (Haas, Koeszegi, & Zedlacher, 2016).

This gender gap continues to cause concerns for universities of higher education and employers around the United States. With organizations such as the National Research Council (2007), releasing a call to action, stressing that the science and technology fields must be strengthened to maintain economic and social prosperity. It can therefore be suggested that an increase in the number of engineers entering the workforce, by way of retaining and recruiting more female engineering students, could ensure prosperity continues within the engineering and technology field. However, researchers continue to struggle with understanding strategies for recruitment and retention of women engineering students.

College campuses continue to make strides to improve recruitment and retention of engineering students, with the development and implementation of mentor programs, research opportunities, and learning communities. However, women continue to be a minority in the engineering field, with engineering being the “last gender-equitable and race-equitable profession in the United States” (Pierrakos, Beam, Constantz, Johri, & Anderson, 2009, M4F-1). Engineering as a profession is considered

"gender typed as masculine", often referred to as manly and male-centered (Hatmaker, 2013). The gendering of engineering causes the perception that men are more appropriately suited for careers in the field, with the perception that men have more beneficial traits and are more competent (Hatmaker, 2013). This can cause women to experience resistance from co-workers and supervisors. It has been noted that women engineers live within a paradox where they are highly visible as being women, but at the same time invisible as an engineer (Faulkner, 2009).

Balakrishnan and Low (2016) mentions the importance of the college experience on increasing the pipeline of women engineering professionals, saying, "collegiate experiences... have an immense impact on their (women) intentions to pursue careers in the engineering field. These intentions are shaped through positive learning experiences in terms of quality of teaching, respect and care from lecturers, and good communication and interaction with peers, especially male students" (p. 236). Suggesting that continued research must be done to understand the causes of attrition and uncover impactful interventions that can improve retention.

A recent study looked at the factors that impact a female student's decision to persist in computing majors, findings suggested that students who choose to persist had (1) adequate exposure to learn the necessary computing skills, (2) community support, which included parents, peers, and faculty, and (3) encouragement and respect from others in their computing community (DuBow, Kaminsky, & Weidler-Lewis, 2017). Students perceptions and attitudes regarding engineering impact their decision to remain in an engineering major (Pierrakos et al., 2009). Studies suggest that female students, as compared to their male peers, have lower confidence in their engineering background knowledge and lower confidence in their ability to succeed in engineering (Besterfield-Sacre, Moreno, Shuman, & Atman, 2001).

WiE frequently view the environment of engineering as cold and unreliable (Malicky, 2003), which is further supported by the frequently described "chilly" climate in engineering in higher education setting (Cole & Espinoza, 2011). A study by Thoman, Arizaga, Smith, Story, & Soncuya (2014), highlights the isolation felt by WiE, indicating that these women are more likely than their male counterparts to switch out of engineering to another field. Bernold, Spurlin, & Anson (2007) state, "in spite of considerable research about the poor retention rate of undergraduate engineering students, we still have an inadequate understanding of the factors that affect students' decisions to remain in engineering programs" (p. 26). Suggesting that continued research must be done to understand the causes of attrition and uncover impactful interventions that can improve retention, this could be studied and achieved using participatory methods.

Participating in a cooperative education (co-op), or work-integrated learning, experience has many benefits for undergraduate students. Co-op provides students the opportunity to integrate classroom learning into the workplace. Eames (2000) notes that while on co-op students developed a variety of skills including: additional skills and knowledge, interpersonal skills, and time management. It has also been found that students who participate in a co-op program receive promotions and pay increases at a higher rate than their peers (Phillips, 1978). Participating in co-op also provides students the opportunity to broaden their knowledge about their particular field or major (Drysdale, Frost, and McBeath, 2015). Participating in co-op provides students an opportunity to develop themselves not only as a professional, but also holistically.

Although cooperative education and women in engineering are both well researched topic in their respective fields, we could not find any literature highlighting the experiences of women engineering students on co-op. Our hope is that by better understanding the experiences of women in engineering that we can begin to create interventions that will improve the retention of women in the field.

METHODS

In the current study, we employed Group Level Assessment (GLA), a qualitative, large group, participatory method that allows participants the opportunity to voice their opinion on a specific topic, while also developing action strategies for measurable change meant to benefit the community or institution. GLA involves an interactive session that mirrors a focus group in which participants individually respond to prompts, discuss major themes, and create an action plan. GLA has been used as a tool within organizations to engage stakeholders and recognize the needs and issues within a particular group (Vaughn & Lohmueller, 1996). GLA has been successfully used in a support group setting (Vaughn & Lohmueller, 1996) as well as within higher education (Guy, 2017). The emphasis of a GLA is action, allowing participants to develop realistic solutions and create sustainable change in their organization or group (Vaughn & Lohmueller, 2014). Participatory methods help empower participants and are particularly successful when working with marginalized groups (Anderson, Herr, & Nihlen, 2007) and GLA, specifically, allows participants to have a voice in the research process (Vaughn & Lohmueller, 2014).

Study Context

A series of GLAs were facilitated with WiE at a large, midwestern university in order to examine the experiences of WiE at our particular institution. Seventy-nine WiE participated in three GLAs over the course of 3 semesters, with 31, 39, and 9 women participating in the 2018 Spring, Summer, and Fall GLAs, respectively. Two of these GLAs were with WiEs in all stages of their experience (Spring 2018 & Summer 2018), and one was conducted with seniors in which the prompts were specifically focused on the co-op experience (Fall 2018). Participants were recruited via email through the university's Society for Women Engineers (SWE) chapter as well as the researchers' own connections with WiE (advisees, current or former students, etc). Each participant received a $10 gift card for their time.

The prompts we created for the GLA were meant to provide us with a holistic look at WiE's experiences at the university. Prompts were a mix of serious (Advice I would give a freshman female engineering student at [institution name] would be...) and lighthearted (If the culture of engineering was a movie it would be titled...), as well as positive (Things I enjoy about the engineering program at [institution name] is...) and critical (If I could change one thing about engineering at [institution name] it would be…). We included a blend of course-focused (My professors in engineering are...), co-op focused (Being in a professional engineering environment [co-op] makes me feel...), and culture- focused (The culture of engineering at [institution name] is…) prompts in order to explore the breadth of experience that WiE have at the university.

We followed the GLA process as defined in Vaughn and Lohmueller's article (2014), aside from a minor modification in Step 2. Below are the steps that we carried out during each GLA session:

1. **Climate Setting**: During climate setting, we introduced ourselves and explained the GLA process. We then facilitated a brief icebreaker so that participants could get to know each other and become comfortable with us as the GLA facilitators.
2. **Generating**: The generating phase involved the qualitative data generation. In this step, participants responded to a series of open-ended prompts presented around the room on large poster paper. Instead of asking participants to write directly under each prompt, we directed participants to prepare their responses (words and brief phrases) on sticky notes, then place their answer under the appropriate prompt. This deviates slightly from the process outlined in Vaughn and Lohmueller (2014). Our reasoning behind this modification is to add another layer of anonymity surrounding the GLA process; modifying this step prevents participants from being influenced by others' responses as they answer each prompt individually.
3. **Appreciating**: During the appreciation step, participants were instructed to walk around the room and read others' responses. Participants also identified answers they agreed with, and indicated this by writing check marks or stars by them.
4. **Reflecting**: The reflection phase involved participants individually reflecting upon prompt responses holistically.
5. **Understanding**: Participants were divided into small groups and randomly assigned a set of prompts to "analyze." We asked participants to reflect on the answers to the prompts they were assigned, and collaboratively come up with 3-5 themes across the prompts that encapsulated overlapping ideas and the general spirit or tone of the prompt responses.
6. **Selection**: During the selection phase, small groups shared out their themes and we discussed them as a large group. The large group, as a whole, then condensed the small group themes and selected 3-5 main themes that identified common areas across all prompt responses.
7. **Action**: The end of the GLA process is when participants used the final themes to identify action steps to carry out that take into consideration the final themes. As the facilitators, we guided the large group of participants to focus on action items that were both concrete and measurable as well as realistically achievable.

Data Analysis

Qualitative data from both the GLA as well as the questionnaire was analyzed. During each GLA, preliminary analysis of the prompt responses was conducted during the "understanding" phase of the GLA. We then combined the data and final themes from the three GLAs and thematically analyzed them using with our undergraduate research assistants using Jackson's (2008) group analysis method as a guideline. This provided us with an initial coding of the themes; we then facilitated a second-cycle of coding using Dedoose, a qualitative coding software. The questionnaire responses were analyzed using Braun and Clarke's (2006) thematic analysis to identify common themes.

FINDINGS

Based on the GLA responses, WiE find co-op to be a valuable experience; an overwhelming amount of participants indicated that the opportunity to co-op is one of their favorite aspects of being a part of the engineering program at UC. In response to the prompt, "Things I enjoy about the engineering program at UC are:" seventeen out of the 28 responses during the spring 2018 GLA involve "co-op," and in summer 2018, "co-op" made up twenty-eight of the thirty-nine responses to this prompt. Extracting from this data, it is clear that WiE enjoy and appreciate their co-op experiences overall.

In each GLA, one prompt presented was "Being in a professional engineering environment (co-op), makes me feel…" The predominant answer was "nervous" or "anxious" during the spring 2018 GLA, which was comprised mostly of underclassmen, particularly first-year WiE students. However, during the fall 2018 GLA with the senior WiE, responses involved a blend of both positive and negative experiences. For example, one WiE indicated that "being in a professional engineering environment" made her feel both "out of my league" and "excited to explore my options." Another WiE responded that she felt "either comfortable or 'at the bottom of the totem pole.'" From these responses, it is clear that through the variety of co-op experiences engineering students are provided with, experiences can vary from one extreme to the other.

During the GLA with senior WiE, in particular, we asked more targeted questions specifically about the co-op experience. From the responses to these prompts, we gathered that while there are several positive aspects about being on co-op for WiE, there are still several issues within co-op environments that companies and universities should make an effort to address. Positives aspects of co-op involve the sense of responsibility it imparts on WiE, leading them to feel confident and empowered. On the other hand, co-ops also make WiE feel overwhelmed, inadequate, and insecure. Additionally, supervisors run the gamut between being supportive mentors or being unhelpful and poor leaders.

CONCLUSION

Overall, WiE assert that the co-op program is a great opportunity and allows for professional growth; however, there are several issues within co-op that need to be addressed in order to provide a better experience for WiE. Therefore, it is essential to not only tackle issues with co-op, but also capitalize on what is working or going well. One of the senior women responded that if her co-op experience was a movie, it would be called "No, I am not the secretary." This quote highlights the inequitable environment between men and women that frequently occurs in professional engineering environments, which is an issue that could be rectified through items such as incorporating inclusive practices as well as supervisor training in fostering diverse work environments. In fact, through these GLAs, participants developed action items that we have either already acted upon, or are currently actively engaging relevant stakeholders to help bring the plans to fruition. These action steps include working towards building a stronger community of undergraduate WiE, plans for addressing inappropriate behavior on co-op, and improving staff/faculty training.

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Preparing for the future global workforce in the mining industry: Career path mapping

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ABSTRACT

The global mining industry is facing several challenges in labor shortages, skill gaps, and evolving digital technologies calling for appropriate training in skills, competencies and behaviors in the industry. Facilitating this change is the responsibility of higher education institutions and require the collaboration between them and mining companies. The objective of this research is to analyze strengths and shortcomings of skills, competencies, attitudes and behaviors of mining professionals and to use this information to develop training modules and build career pathways for future professionals. A bilingual (English/French) webpage was hosted with an online link to the Lime Survey which gathered 352 responses from current and retired mining professionals from all over the world. In responding to the questionnaire, based on the Work Skills Development (WSD) framework, they self-assessed their competencies and career goals. The competencies were comprehensively grouped as – Initiative, Leadership, Lifelong Learning, Management, Problem Solving, Communication and Cultural Awareness. For the purpose of the study, the respondents were broadly categorized as mining engineers, mining geologists, environmental scientists in mining, and managers in mining. The results demonstrated variations in the strengths and shortcomings in work skill competencies within these professional groups and also within individual skill competencies with the least understanding in 'cultural awareness'. Results of this study will be used to plot career pathways and train both post-secondary students and junior mining professionals. This backward mapping approach is expected to inspire and innovate other professional careers and help evolve career pathways to bridge the gap between post-secondary teaching and industry requirements and contribute to Work-Integrated Learning.

Keywords: Mining industry; Work Skills Development (WSD) framework; Career path mapping; Work-Integrated Learning (WIL).

INTRODUCTION

Twenty-first century skill shortages in the global mining industry, as evidenced in Canada (MiHR, 2019; HR Data Miner, 2019), Australia (Solomon et al., 2008), and South Africa (Botha & Rasool, 2011), has prompted the need to re-assess the mining industry for future sustainability. The unprecedented shifts in the mining workforce demographics, technology, globalization, regulation and changing customer behavior are major challenges for the future.

There has always been general debate on the sustainability of the mining industry (Auty & Warhurst, 1993; Mikesell, R., 1994; Tilton, 1996; Miller, 1997; Hilson & Murck, 2000), and specific focus on reducing impact at mining and processing sites (Giurco & Cooper, 2012) and technology (Batterham, 2014), with little said on the quality and training of labor. This study addresses the need for training mining professionals for future sustainability of the industry.

The Executive Director of The Mining Industry Human Resources Council (MiHR, 2019), Canada, said:

> Mining is … challenged by skills gaps and labor shortages that have the potential to derail operations … Investigating challenges and trends and how they are expected to change over the course of the next decade is critical to ensuring companies and post-secondary educational institutions are prepared for the road ahead.

Work-Integrated Learning (WIL) in higher education institutes play a major role in such training and strengthening a country's labor market requirements to support the broader economy by providing a skilled workforce. From the students' perspective, WIL complements the theoretical knowledge of an academic subject with practical skills required in industry and thus enhance their prospect of employability.

This study differs from the traditional training of mining professionals which largely focus on technical skills training, to that of incorporating emotional, social, cultural perceptions, attitudes and behaviors (affective skills) required in the mining industry of the twenty first century.

The objectives of this study are firstly, to identify the strengths and shortcomings in competencies as perceived by current and past mining professionals as a group and then, to determine whether there are further variations between and within professional competencies, in each of the mining professions selected for this study.

This paper is based on stage 1 of a larger research project which aims to map career pathways of mining professionals. Stage 2 is verification and validation of data, and stage 3 designing appropriate tertiary courses that are based on the feedback from this research project. That is, to address current shortcomings in the industry recruits and develop teaching courses aligned with career pathways mapping in order to bridge the gap between industry and post-secondary institutions in training appropriate recruits.

METHODOLOGY

In order to achieve the long term objectives of this research project, perceptions of current and retired mining professionals were sought via a random survey. This backward mapping methodology (Elmore, 1979-1980) has been previously used to ascertain occupational competencies of high-achieving graduates from a number of discipline areas to improve curriculum design, and teaching and learning practices.

The survey was administered in both English and French and open to participants from all over the globe working in the mining industry. The survey yielded a total of 352 valid responses from Canada, Australia, US, UK, South Africa, South America and India. These participants were categorized broadly into four major occupational groups for the purpose of this study as – *Geologists*, N= 163 (Mining and

Exploration); *Engineers* in mining, N= 96; Mine Site *Environmental Scientists*, N=39; and *Managers* on mine sites, N=54.

This sampling method was adopted in this study since there is no known global inventory of mining professionals, and use of other possible sampling methods like stratified purposive sampling or quota sampling were not possible. Snowball sampling was incorporated to a limited extent in that an initial respondent or a company was asked to suggest other people willing to participate in the research project.

The survey focused on assessing the current challenges in the work skill competencies in the mining industry. These competencies were based on seven interlocking generic work skills adapted from an internationally trialed WIL model, the Work Skill Development (WSD) framework (Bandaranaike, 2018) comprising six work skill competencies. For the purpose of this survey, *Cultural Awareness* as a competency was added as a separate entity to the six WSD work skill facets, because of its high relevance when working with indigenous communities. Table 1 illustrates the application of these competencies (general attributes) and the content of the survey topics. Each of the seven competencies had a series of questions to gather further information on skills, perceptions, attitudes, and behaviors within each competency, totaling forty-two questions. Professionals responded to self- perceptive questions using a five point Likert scale of 1=Strongly Disagree, 2= Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree. The 'neutral' scale of 3, sometimes seen as redundant on a Likert scale, was used in this survey to encourage maximum participation from respondents who may have opted out of the study (as envisaged in the pilot study) if they didn't understand the question or were undecided due to lack of knowledge /information? This factor was taken into account in the analysis.

The survey also included other variables such as - background details on the employing company and

TABLE 1: Work skill competencies and their applications in the study

Work Skill Competencies	**General Attributes**	**Survey Questions [abbreviated]**
INITIATIVE	Motivation to work in isolated & remote areas; Willingness to travel & spend time away from home; outgoing and self-reliant; embrace new techniques & technology; curiosity;	Confidence in performing role; Motivation to set & achieve goals Motivation to succeed at work Personal values aligned with Company values Persistence in pursuing goals despite adversity
LEADERSHIP	Ability to manage & motivate people; ability to deal with challenging situations; ascertaining risks; training & supervising staff;	Connecting for positive change Empathy & understanding Adapting as work evolves Adjusting needs & responsibilities Providing new ideas to improve work
LIFELONG LEARNING	Knowledge of health and safety issues; assessing feasibility and potential for future; respectful; creative; projects into the future; reflect and evaluate; self-esteem;	Learning new skills Impact on Emotions SWOT Awareness Post-secondary training Opportunity to followed Career Path Benefitting from a Mentor Furthering via technical training Understanding aspects of mining Understanding Mining Economics Familiarity with Govt. Regulations Additional Technical Training
MANAGEMENT	Time management & planning; priorities work load; finance & budgeting; health	Planning & managing projects Contributing to growth & sustainability

	& safety compliance; emotional & social intelligence; financial acumen.	Fostering positive relationships Taking responsibility for actions Ease in making decisions
PROBLEM SOLVING	Analytical problem solving; knowledge of IT & specialist software; digital skills; resourcefulness; innovation;	Possessing new ideas to improve work Convincing others on your ideas Honesty Setting high standards Conveying ideas with ease Accessing required technical skills
COMMUNICATION	Working as part of a team; communication & presentation; networking; share knowledge with colleagues;	Communicating for positive change Communicating with others outside Presenting own ideas clearly Following company code of ethics Following professional conduct Successfully navigating conflict Working collaboratively
CULTURAL AWARENESS	Knowledge of indigenous and cultures other than your own; dealing with diversity; cultural intelligence	Understanding indigenous culture Interacting with other cultures Awareness of other cultures

country, post-secondary training specialty, time spent in post-secondary field of study, current area of expertise and time spent, total time worked in the mining industry. These variables will be used in stage 2 of this research project.

This study used Excel analysis to identify variations in strengths and shortcomings within each of the work skill competencies and among occupational groups. Ethics approval for the project was authorized by Laurentian University on December 20th 2017. Subsequently, postcard sized bilingual (French/English) cards featuring the study with links to the online survey were printed and distributed at international conferences, including a poster presentation at WACE 2018, Chiang Mai (2017) to encourage participation in the survey. The survey targeted retired and current mining professionals across the globe. The survey was promoted further through advertisements and/or information about the study through the Goodman School of Mines supportive global industry partners and the Laurentian University alumni.

RESULTS & ANALYSIS

Overall Comparison of Competencies

Fig. 1 illustrates the overall status for each of the seven competencies compared across the four professional groups selected for this study. A score of 100 percent meant the entire group agreed on the relevance of that particular skill. Figure 1 provides a summary of these scores for each competency across individual occupations. For example, more than 85% of those interviewed in all occupational categories perceived they had a good understanding of *Initiative* and *Leadership* in the workplace and least in *Cultural Awareness*, and then *Lifelong Learning*. Engineers in particular, had a very poor understanding in the practice of *Cultural Awareness* in the mining industry (Figure 1).

Approximately eighty-five percent of Managers perceived a very high understanding of *Leadership* and *Communication* skills, while Geologists on the other hand, displayed a high understanding in *Initiative* (>85%) and *Problem Solving* (>80%) skills, with Environmental Scientists displaying a good understanding in *Management* (85%) and *Communication* (85%) aspects of the mining industry.

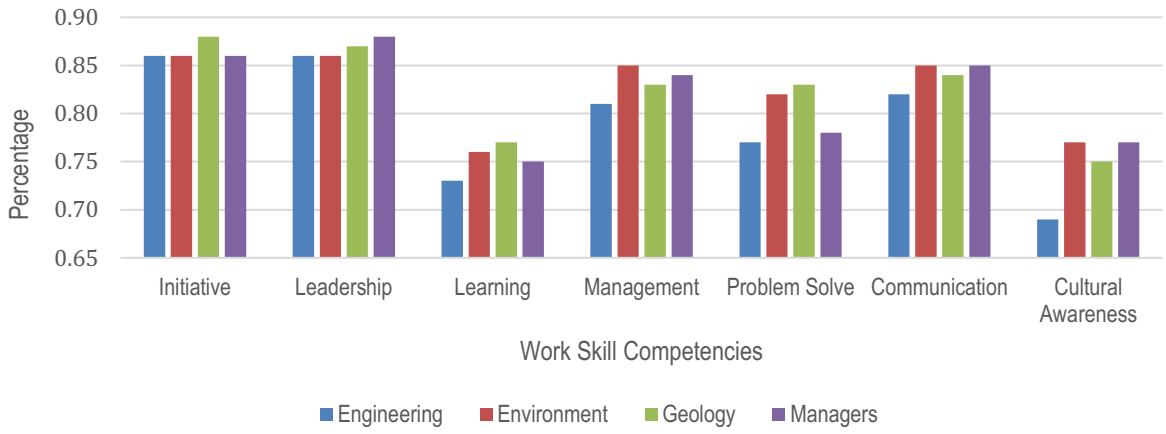

FIGURE 1: Perceived relevance of work skill competencies across occupational groups

Questions within each Competency

Each of the seven competencies had several questions (Table 1, column 3) to elucidate further the strengths and weaknesses within each competency on the 5 point Likert Scale. For example, in *Initiative*, the question 'You are confident in your abilities to perform your current role' (abbreviated as 'confidence in role' in Figure 2) will have a response from each occupational group as the average for that group, as: 1=Strongly Disagree, 2=Disagree, 3=Neutral/No Response, 4=Agree, 5=Strongly Agree. These values are referred to as 'scores' in this paper.

With *Initiative* (Figure 2), scores were between 4.2 and 4.7 for 92% of all respondents in their 'confidence in abilities to perform their current role', with Geologists having the greatest confidence with a score of 4.6, Engineers and Environmental Scientists a score of 4.4 each, and Managers 4.2 . The question whether they were 'motivated to succeed at work' was very strongly agreed to by 67% with a further 23% responding, agreed, giving a total of 90%. The overall score for 'motivated to succeed at work' was above 4.4, with Managers having the highest score of 4.7 (Figure 2). The question whether their 'values were aligned with those of the company' had only 77% responding strongly agree/agree, with 14% of the respondents 'unsure' (score of 3) of their response to this statement.

Together with *Initiative, Leadership* had one of the highest overall scores (4+) to all its survey questions (Fig. 3). Ninety four percent responded strongly agree/agree, to 'welcoming new ideas to improve work', with Managers in particular having a high average score of 4.7 (Figure 3). Likewise a total of 90% said, strongly agree/agree to ability to adapt to their work as it evolves, with Managers a high average of 4.7. However, even though the overall average scores were very high across all statements in *Leadership* yet, eight percent were unsure of their responses and a further 1.8 % did not respond at all to some of the questions.

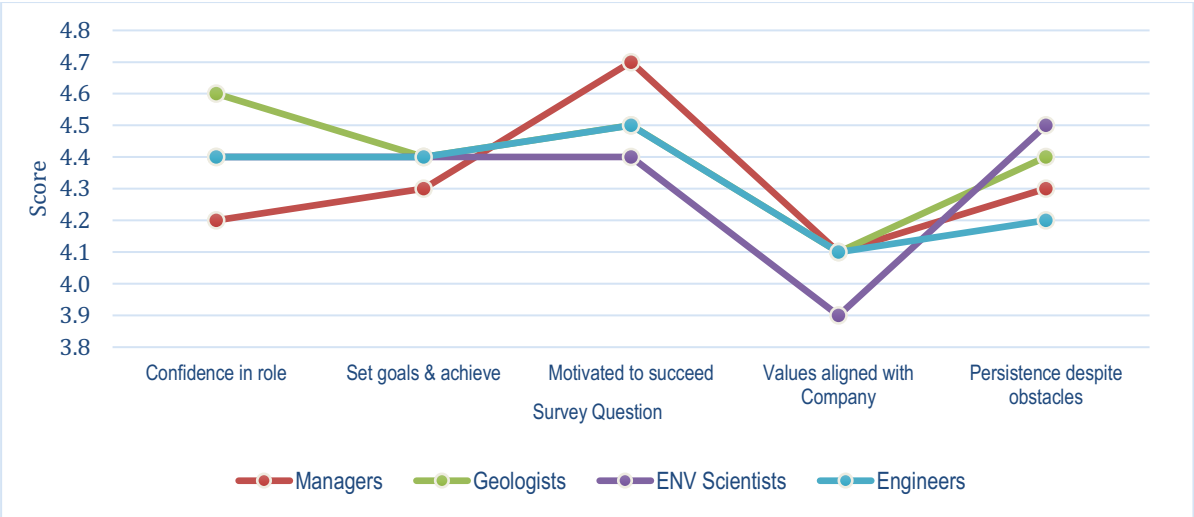

FIGURE 2: INITIATIVE: Distribution of skill competencies by occupation groups

Responses to questions on lifelong *Learning* (Fig. 4) varied from 87% strongly agreed/agreed acknowledging their understanding of strengths and limitations ('Aware of SWOT'), to only 47% strongly agreeing/agreeing to have followed the career path that they initially intended after graduating from post-secondary education ('follow career path').

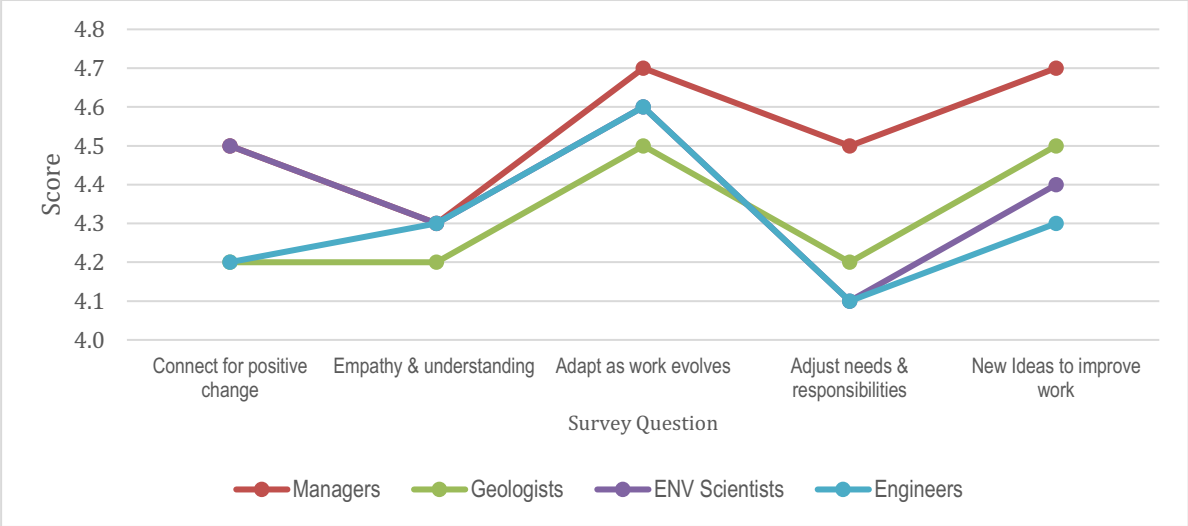

FIGURE 3: LEADERSHIP: Distribution of Skill Competencies by Occupation Groups

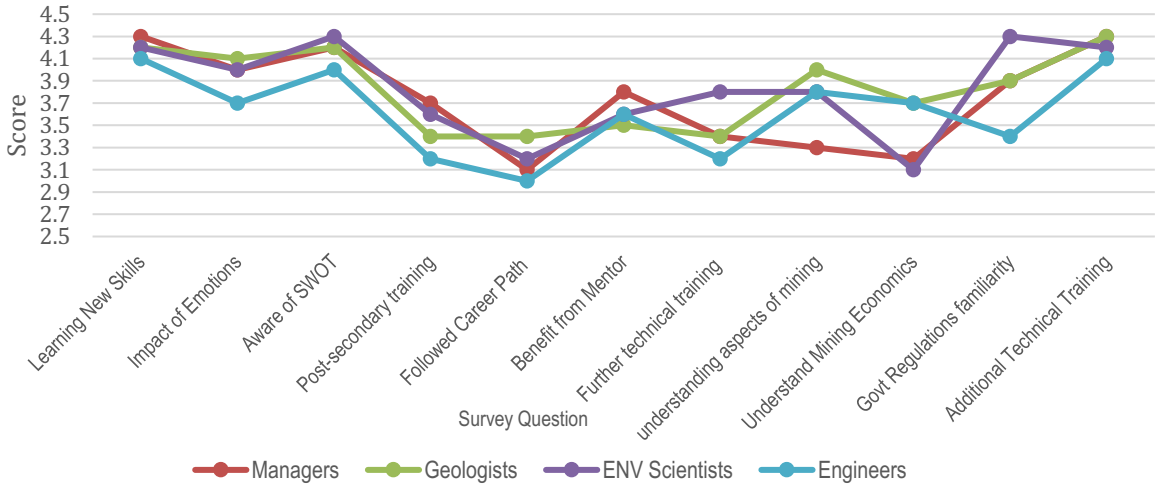

FIGURE 4: LEARNING: Distribution of skill competencies by occupation groups

All respondents strongly agreed/agreed (82%) they could benefit more from 'additional technical training' outside their company's training, and also in knowing how and where to 'learn new skills'(82%). Some of the shortcomings in lifelong Learning were the inability to 'follow the career paths' of their choice, with only 47% responding strongly agree/agree to this statement.

In Management (Figure 5), 89% of respondents strongly agreed/agreed that they find it easy to 'take responsibility for their actions' that result in both positive and negative implications'. All occupational groups also strongly agreed/agreed (86%) that they 'foster positive relationships' with their co-workers for the success of their projects Responses to the question – that they know how to 'contribute to the growth and sustainability' of their organization had an overall 20% not responding

possibly because they did not comprehend the question fully? Among the individual occupational

groups Geologists (4.4) strongly agree/agree that they 'take responsibility for their actions', and Environmental Scientists were best in 'fostering positive relationships' (Figure 5). Managers on the other hand perceive themselves as being 'strong' in planning and managing projects more so than fostering positive partnerships. Overall Engineers scored the lowest across all statements in Management. In Problem Solving, all occupational groups scored >4.2 in setting 'high standards' and maintaining exemplary 'honesty' (Figure 6). Engineers consistently scored less than the other categories in all questions pertaining to Problem Solving, with some of the lowest scores in 'convincing others to adopt their your ideas' (3.3), and in the 'ease to convey their ideas' to gain buy-in (3.5). Across all work competencies, Communication (Figure 7) had some of the highest scores, with 95% strongly agree/agree to follow company code of ethics. Managers in particular scored 4.9 and Environmental Scientists 4.8 (Figure 7). Some of the shortcomings within Communication were the inability to 'successfully navigate conflict' (average score 3.8), and the opportunity to 'communicate with others outside' their company {average score 4.0).

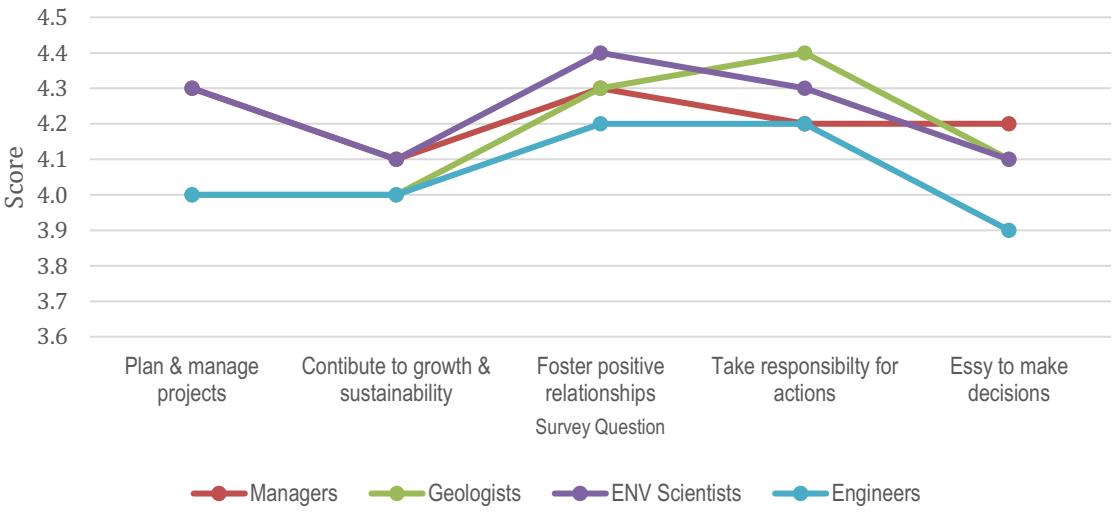

FIGURE 5: MANAGEMENT: Distribution of skill competencies by occupation groups

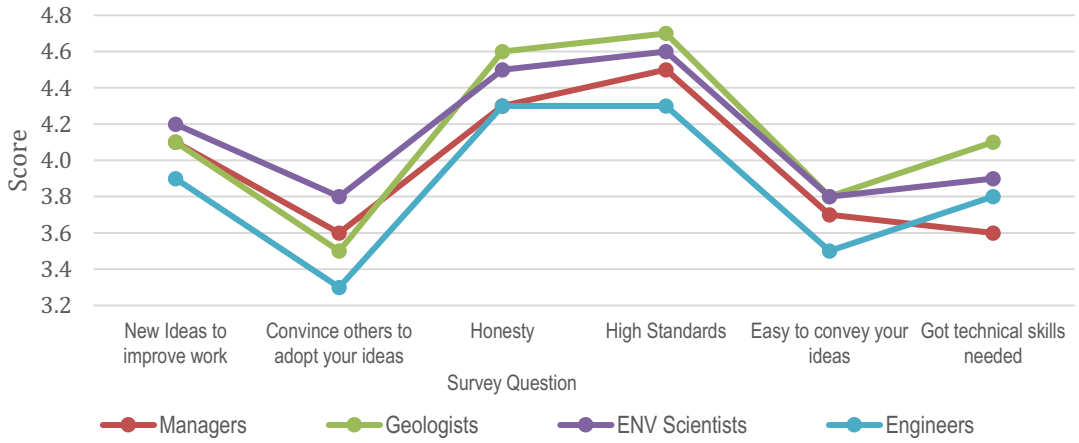

FIGURE 6: PROBLEM SOLVING: Distribution of skill competencies by occupation groups

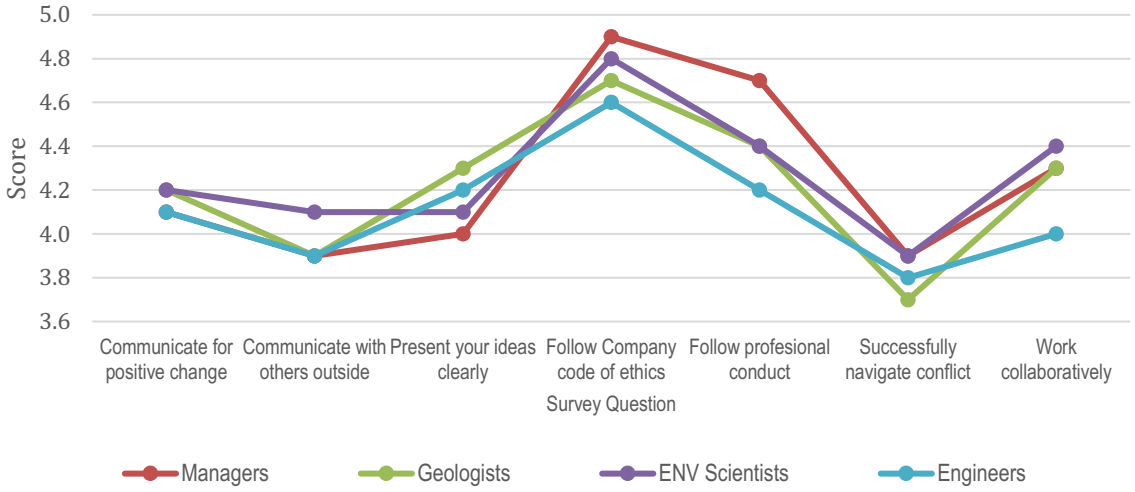

FIGURE 7: COMMUNICATION: Distribution of skill competencies by occupation groups

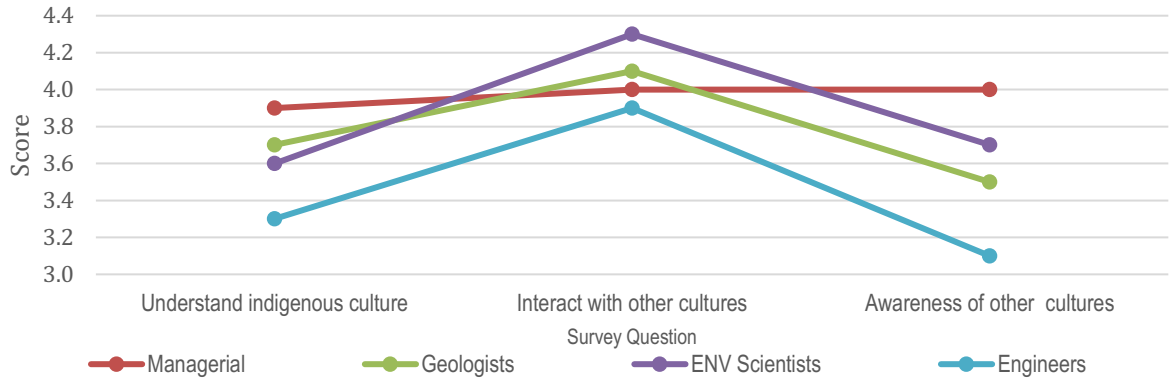

FIGURE 8: CULTURAL AWARENESS: Distribution of skill competencies by occupation groups

Some of the weakest scores in the survey are in their understanding of *Cultural Awareness* (Figure 8). Whilst they agree they willingly interact with other cultures, their understanding of indigenous cultures was weak.

Occupational Variations within a Competency

As much as there were variations in work skill competencies among the professional groups, there were also variations in their responses within each of the seven competencies, as illustrated below for *Problem Solving* (Figsure 9-12).

Eighty percent of the Engineers in the mining industry, excelled in their exceptional 'honesty, and 79% 'setting high standards' in their work. Yet 36.8% in response to do you have the ability to

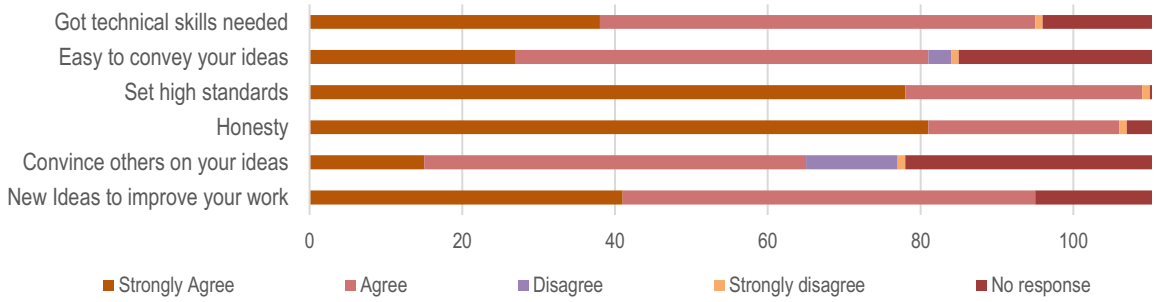

FIGURE 9: ENGINEERS: Problem Solving

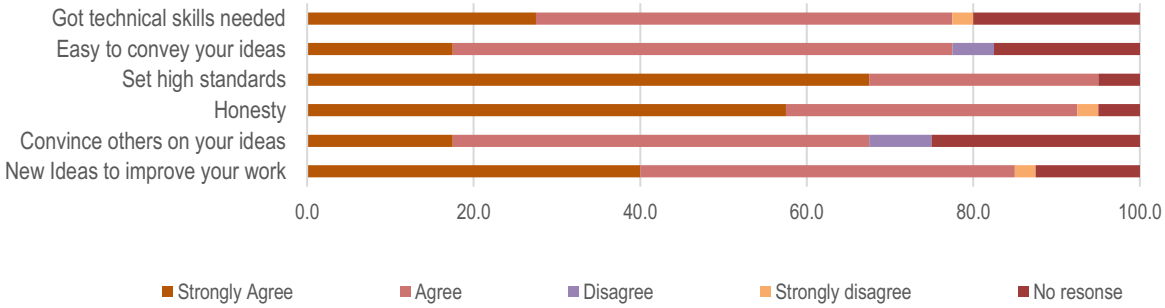

FIGURE 10: ENV SCIENTISTS: Problem Solving

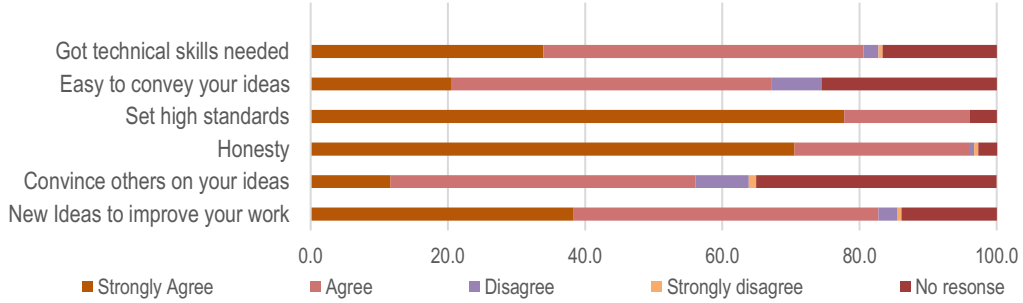

FIGURE 11: GEOLOGISTS: Problem Solving

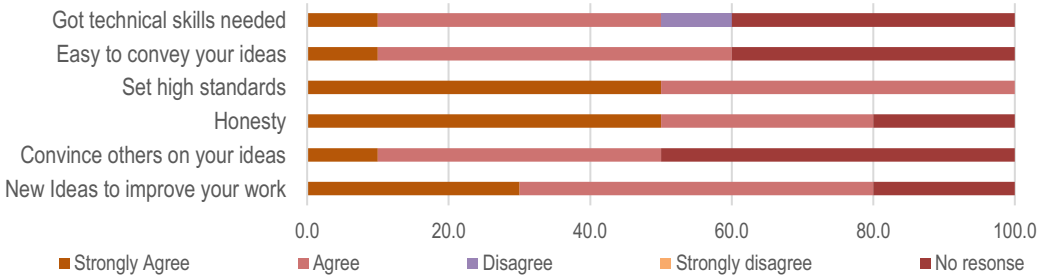

FIGURE 12: MANAGERS: Problem Solving

'convince others of your ideas', were neutral/did not respond, and a further 10% strongly disagreed/disagreed in their response (Figure 9). Likewise, Environmental Scientists also had similar low responses to the same questions. However, 95% strongly agreed/agreed that they had 'new ideas to improve' their work further (Figure 10).

Geologists were also outstanding (>95%) in their response to setting high standards and levels of honesty displayed at work (Figure 11). Yet, 44% of them responded as neutral/disagree/strongly disagree to the question 'easy to convey your ideas'. Another shortcoming with the Geologists was 33% stating they could not 'convince others on their ideas' (Figure 11). One hundred percent Managers (Figure 12) perceived they set high standards, while 50% were neutral/no response in their ability to 'convince others'.

DISCUSSION

Higher education is under increasing pressure to evaluate the appropriateness of its teaching to workplace practice and incorporate these experiences to its curricula (Bates, 2008). This study based on perceptions of current and past mining professionals, gives an important insight to major strengths and shortcomings within each work competency and also within specific occupational groups in the mining industry. The findings also endorse the long term research goal of this study which is to support the development of mapping career pathways and ensuring high-quality training of mining professionals. This integration of theory and practice is recognized as one of the key elements in the development of professional expertise and vocational competence (Collins & Tynjala, 2003).

Some of the current strengths of the industry identified in this study were in *Initiative*, the motivation to engage in the mining industry. A large majority (92%) expressed 'confidence in their ability to perform their current role'. At the same time however, there was a slight doubt whether 'their values were aligned with that of the company they worked for', a useful finding to address for the future. Likewise attributes of *Leadership* were well perceived, and in particular the fact they 'welcomed new ideas, approaches or information from others to improve their own work' and their 'willingness to adapt to new work'. These findings are very promising when training new recruits.

Some of the major shortcomings were lack of understanding of *Cultural Awareness* and their weak understanding of the relevance of lifelong *Learning* competencies in the workplace. Future

training modules therefore, should be directed more towards cultural awareness within the mining industry. While most agreed they found it easy to interact with people of other cultures, they acknowledged their understanding of indigenous culture in the workplace was poor. Mining Engineers in particular were unsure of their understanding of indigenous culture and how best to interact with them. Changing existing perceptions are essential to improving motivation, productivity and sustainability of an industry. For example, worker output and motivation can be affected by changing the working conditions that are causing negative organizational behaviors.

With reference to lifelong *Learning*, approximately half the respondents felt their post-secondary training had not prepared them for their current role, which is a significant finding in this study and can be addressed clearly through curricula planning. Also 50% said their performance could benefit by having a mentor. Fifty percent also felt that 'additional technical training could benefit better performance at work'. These shortcomings can be addressed through industry negotiation.

Atkins (1999) appropriately suggests, given that jobs in this century will be vastly different from any that have preceded them, perhaps it is time for employers and universities to reconceptualize the kinds of generic skills and abilities that are considered necessary for the new graduates. This is supported by the *Mining Professional* (2017) predicting 'graduates in the next century are likely to be knowledge workers and symbolic analysts, service providers, members of learning organizations, and managers of their own careers' further supporting the introduction to career pathways mapping.

The importance of industry involvement in curriculum design has been identified previously (Andre & Barnes, 2010). Industry expectations are that graduates excel in all generic competencies (Lawnton, 2002) and be adaptable and transformative people capable of initiating as well as responding to change (Holmes, 2001)). These and other findings have contributed to the rapidly growing body of literature on stakeholders' expectations of higher education.

A pathways approach addresses the above concerns in articulating knowledge, skills, and competencies, which connect education with work in an occupation (Hamilton, 2012). It complements WIL in that it facilitates progression in to industry, but at the same time it maps occupational pathways within specific industry groupings and describe skills needed to advance occupational tiers. The objective of a pathways approach is to produce workers with the appropriate skills for jobs in the region. Therefore education and workforce agencies are critical partners in mapping and building skill pathways for key industries, such as mining.

LIMITATIONS

Some of the limitations in this study are associated with the randomization of the sample owing to limited access to the global mining community. However since 84.7% of the sample was from Canada, and its application to pathway mapping designed at Laurentian University, Canada, the sample is justified. If the study were to be applied globally, perhaps a quota sampling to have a comprehensive cover of global mining professionals would be desirable. Since the survey was self-administered there were a few responses left unanswered (no response) due to either ambiguity or lack of clarity. Also, as mentioned under methodology, using a Likert scale of 5 with a 'neutral' response may have encouraged laggards?

CONCLUSION

The combination of an aging workforce, competition for skilled workers and declining enrolment in mining-oriented academic programs is the source of great concern in the mining industry. As for example in Canada, approximately 95,000 workers are to be hired by 2029 to replace the retiring baby boomers (Canadian Mining Labour Market Intelligence, January 2019). Collaboration is vital to close the gap between the current and the future-fit workforce. Employers should be active partners with educators and have an input to what skills are being taught to address the current shortfall.

This paper has attempted to bridge a significant gap in the sustainable development of the mining industry in terms of meeting the needs and shortcomings of the professionals engaged in the industry with suggested training to be provided by higher education institutions.

Skills development, training and working in collaboration with industry is a highly valuable method of engaging workforces. The study illustrated skill gaps in the industry as perceived by those who are

working and have worked previously in the industry. Higher education institutions can play a major role in training new recruits through career path mapping suggested in this research to meet the demands of the twenty first century mining industry.

Pathway models can provide a clear progression of a course of study towards achieving a chosen credential in a specific occupation within a cluster, and most successful when post-secondary teaching is combined with industry needs paper.

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A multidisciplinary approach to work-integrated learning preparedness

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ABSTRACT

One of the factors that influence students' ability to learn and be transformed from workplaces during their Work-Integrated Learning (WIL) is the lack of thorough preparation for WIL. Employers who take on students for in the workplace. As a result, they do not maximize the learning experience. Efforts done WIL in South Africa have indicated that although student interns enter workplaces with adequate discipline knowledge, they often have unrealistic expectations and lack soft skills needed to prepare students for WIL in South Africa and Namibia include the Employability Improvement Programme (EIP). The EIP is a multidisciplinary WIL preparedness two-day workshop offered to students before they are placed in industry for WIL. The Japanese principle: Kaizen (continuous improvement) is at the center of the program in which students from various disciplines get to understand and apply the same principles in a car manufacturing workplace simulation. This study is, thus, a qualitative exploration of the value of this multidisciplinary work preparedness program through a questionnaire and observation of 300 students at a university of technology in South Africa who took part in the program between 2017 and 2018. The findings revealed that the students' experience differs according to discipline. Engineering students for instance were eager to apply the concepts before fully understanding them which resulted in them compromising quality. In contrast, business and applied sciences students took their time to complete the product as to maintain quality. This study aims to shed light on an innovative way to approach multidisciplinary WIL preparedness in the university setting.

Keywords: Work readiness, Employability improvement, Continuous improvement, Work-integrated learning, Multidisciplinary research

BACKGROUND AND CONTEXT

Research on work preparedness in the South African higher education sector and globally has mainly been focused on students' preparedness for actual employment. This has been reported from the impact Work-Integrated Learning (WIL) has had on work preparedness. Higher education institutions in South Africa and Namibia have adopted WIL or cooperative education as an educational pedagogy that prepares students for work before completing their studies. WIL is defined as an educational strategy of combining traditional academic study, or formal learning, with student exposure to the world-of-work in their chosen profession with the core aim of preparing undergraduates for entry into the workforce (Jackson, 2015). WIL is termed differently in the varied contexts, however, each form encourages students to experience authentic work practices and application of skills and knowledge in a real-world context. Higher education institutions globally have therefore entered into partnerships with industry who take on WIL students so as to maximize and ensure that students fully learn from

the workplaces during WIL and are employable after. WIL can be explained as a strategy for increasing student employability, by improving their academic and career management capabilities (Rambe, 2018). However, for students to learn and be transformed from workplaces during their WIL, they need to be thoroughly prepared while still in university.

WIL preparedness at university is vital as students find WIL placements in different workplaces with varied support and mentorship. While students are placed in industry for WIL with adequate academic knowledge, some students are not as equipped with soft skills. Employers who take on students for WIL in South Africa have indicated that some students often enter the workplace with unrealistic expectations and are generally unprepared for the workplace and as a result, they do not maximize the experience and learn as they should (Pop, 2018). Dwesini (2015) affirms that adequate preparation for WIL can contribute towards positive and rewarding experiences that can assist students to enhance and acquire the soft skills, knowledge and attitudes required for professional practice.

The Employability Improvement Programme (EIP) is multidisciplinary and is offered to students in various universities in South Africa and Namibia before they are placed in industry for WIL. This workshop is meant to prepare them for WIL, in a form of a car manufacturing workplace simulation, with special emphasis on soft skills such as communication, critical thinking, team work, productivity, attention to detail, critical thinking and adaptability. The Japanese principle: Kaizen (continuous improvement) is at the center of the program. Students from various disciplines therefore get to apply and understand the same principle from their unique perspectives. During the two-day workshop, students go through a theoretical session in which concepts on employability, higher education-industry link, work-breakdown, organizational structure, productivity, cost, quality, SWOT analysis, wastes and housekeeping are explained. They then get to apply these concepts through a truck manufacturing exercise. This include knowing the inventory needed for the truck, being able to follow instructions on how to build the truck with correct measurements and parts and having a quality/road worthy check at the end of the assembly. Students go through an individual round and build teams in consecutive rounds. The reasoning behind all of it is to acquire an understanding of the continuous improvement principle through planning, execution of plans, checking if the plans work, and being innovative to improve the plans while experiencing the side of the workplace that is not necessarily discipline specific.

This study is, thus, a qualitative exploration of the value of this multidisciplinary work preparedness program from 300 students' perspective at one university of technology in the Western Cape, South Africa. An understanding of the EIP workshop in terms of its capability to prepare students for WIL and application of concepts from different discipline background is explored in this study. Students who participated in this study are from the Engineering, Applied Sciences and Business Management disciplines and applied the same principles according to their discipline backgrounds. The different employability skills and prioritization of these in different disciplines are also explored in this study.

WIL PREPAREDNESS

WIL preparedness in research has been explored from the same disciplines, as specific disciplines conduct research in order to enhance their WIL programs internally. However, WIL in research has been highlighted as an education pedagogy in which employability skills that graduates should possess to successfully transition from university to workplace, are universal and apply to all disciplines. This

study is thus exploring a multidisciplinary option to WIL preparedness. Universities in South Africa, have different strategies to prepare students for WIL. Dwesini (2015) investigated the WIL preparedness program in a hospitality program at Walter Sisulu University in South Africa. The WIL preparedness program that the university provided to the Hospitality students is termed "orientation" and is offered prior starting WIL in the workplace. In this program, students are equipped with generic skills that every workplace requires from students such as communication and critical thinking. This program, from the feedback provided by students helps the students be prepared for WIL, however, it is theoretical and students do not get an opportunity to learn from doing.

Simulations have been highlighted to play an important role in closing the gap between theoretical and practical pedagogies for WIL preparedness. Although, these are reported to have mainly been applied in the clinical and applied health disciplines, disciplines such as entrepreneurial education, software engineering have benefited from simulation games, especially with the readiness for work aspect. Simulation, is defined by Masethe and Masethe (2012) as representation of reality, a model of events or processes or items that exists. Masethe and Masethe (2012) used simulation as a WIL program at Tswane University of Technology in South Africa for Information Technology and Software Engineering students. Their simulation was not necessarily to prepare them WIL but actual WIL hence students engaged with employers. The simulation model was meant to improve employability and entrepreneurship of the students, and embrace ability to retrieve relevant information, improve communication and presentation skills, planning and problem solving, and improve social development and interaction in a workplace. These are skills that the EIP highlights and aims to develop and enhance in the students. For students to learn and be transformed from their WIL, they should not only be knowledgeable in their disciplines but be prepared with regards to soft skills as well. When the soft skills and preparation before industry placement is taken into consideration, then the whole WIL process would have been maximized.

In Rambe's (2018) view, WIL cannot be considered completely maximized if universities continue to adopt selective approaches to WIL which prioritizes the employers' expectations and does not pay particular emphasis on the competency development of students. While Rambe in his study found a correlation between the course organization and the enhancement of WIL knowledge and skills, his study recommended that the whole WIL process from the conceptualization and implementation be strengthened, this also includes delivery methods, content and teaching modalities. WIL preparedness hence becomes important in this context. In addition, Rambe explains that students' perception or their experiences and how they experience the curriculum and how they learn better, be used to understand the implementation of WIL. Students can thus be used a central item when thinking and designing the WIL pedagogy.

Billet (2011) suggests pedagogies appropriate for integrating WIL in the university setting. The curriculum and pedagogic practices as explained by Billet (2011) are ways in which WIL can be integrated in curricula as: intended and enacted curriculum but also curriculum as experienced by students. In the intended and enacted curricula, WIL is incorporated with on-campus learning and students are able to make links and understand through various settings, what is required of them. Jackson (2015) explains this kind of integration as an enabler for students to critically appraise relevant learning concepts; practice certain behaviors/procedures; reflect upon these applications and understand how the procedures combine to address complex problems and shape workplace practice.

However, how students actually then experience the curriculum should be equally considered, hence Billet highlighted the importance of students' preparation while in the university setting as for students to benefit in the intended curriculum as well as enacted curriculum, their readiness has to be taken into consideration.

In the curriculum as experienced by students, Billet (2011) suggests that students' learning through doing, as in the EIP case, enable them to identify what their strengths and weaknesses are, amongst other things. Students are thus able to construe and construct what they experience, but readiness is key. According to Billet (2011, p. 23), the following are considerations in the experienced curriculum that highlight WIL readiness:

- students' interest is central to the quality of their engagement and learning in practice settings, and reconciling this learning within the course of study
- the level of their readiness will shape students' responses to the sequencing, duration and rotation of experiences in practice settings, and how they come to reconcile those experiences within their university course
- the level of readiness is most evident when there are conflicts or contrary demands between workplace and university requirements
- different kinds of readiness have particular implications for students' learning (e.g., international students' lack of knowledge about social, institutional and local practices, domestic students' naïveté and idealization of their selected occupations)
- the need to view issues associated with readiness as a duality comprising i) the students' experience; and ii) the requirements of the workplace and academic institution
- immediate and pressing concerns such as performing adequately in a forthcoming practice setting experience is likely to be the focus of students' interest
- identifying premises for students' interest and engagement are likely to be quite salient for enacting and realizing effective learning outcomes in practice settings
- students' confidence likely mediates their engagement in practice settings
- early and staged engagement in practice settings seems to boost many students' confidence to re-engage and learn effectively
- challenges to personal confidence and sense of competence through practice-based experiences can be redressed by effective group processes, including sharing of experiences.

While it is evident from the above that the level of readiness for students may eventually be determined by the students' knowledge of the occupation, career interferes, and maybe even in their capacities to understand and/or engage in that practice, these can be the limiting factor in getting ready for the workplace. Coll et al. (2009) in a national project to investigate WIL programs highlighted that students' perception of what they were doing was mainly limited to their career expectations. The ability to expand and be narrow as far as career directions are concerned is determined by where a student finds themselves going to university, and how much exposure students get to various career prospects. In Coll et al.'s study, students have highlighted that their lecturers did cover the practical stuff that could

prepare them for WIL but theoretically. The on-campus pedagogies which are supposed to prepare students for on-placement were therefore not as adequate or practical enough as students highlighted the fact that "they learn more from the lab". This suggests that should practical pedagogies where students learn from doing be provided, they would learn more. This of course does not mean that theory should be scrapped as what is to be applied needs to be understood first. How then should a WIL preparedness model that will benefit students from multiple disciplines look like? Below is a model that covers all aspects students would need to be prepared for WIL.

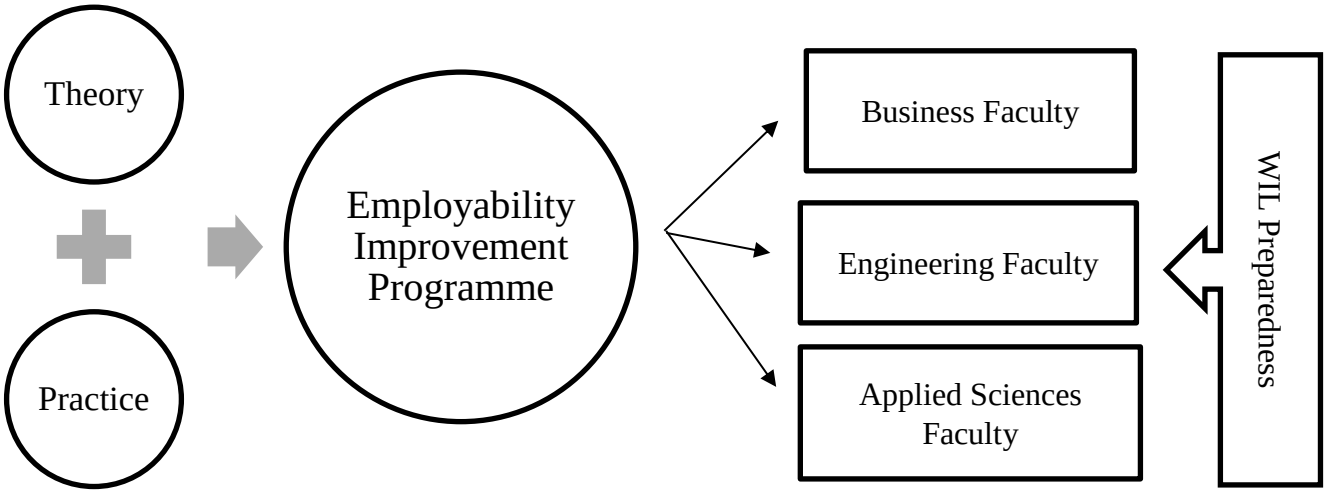

FIGURE 1: WIL Preparedness through the employability improvement program model

The theoretical section of the WIL preparedness program is dependent on what the aim or focus of the preparedness is. An example would be, entrepreneurial related information or any theory that is not discipline related and would be applicable and relatable to all students. The information and instruction on what is to be expected should also be clarified under the they section, as students from different backgrounds usually understand concepts differently. The practice will then be in the form of games, a manufacture of a certain product, establishment of a business and any simulated practice in which students are to apply the theory. This would then result into a skill(s) that would be considered to have improved their employability. The students are then to reflect and apply, improve or move into the advanced process of the application with their specific disciplines in mind and how this experience would be applied in the world of work. With this type of exercise, students, most of who may have never worked before will know what to expect when placed in industry for WIL.

METHODOLOGY

This is a qualitative study in which the participants' words, actions and feedback are examined through patterns of meaning that emerged from the data gathered at the EIP workshops. According to Lunenburg and Irby (2008), patterns in qualitative research are often presented in the participants' own words as they provide an in-depth understanding of the phenomenon being explored. Random purposive sampling was used to select 300 students from a population of 536 students who took part in the EIP from 2017 to 2018. The population from which the sample was taken are all students who were eligible for WIL from the three faculties namely: Engineering, Business and Applied Sciences at one University of Technology in the Western Cape and took part in the EIP. Omona (2013) explain random

purposive sampling as a sample design in which the researcher chooses cases at random from the sampling frame consisting of a purposefully selected sample. Random purposive sampling was used in the study because it enables the researcher to represent all faculties from the population. Random purposive sampling, even of small samples, increases the credibility of the results when potential purposeful sample is too large (Patton, 2002; Miles & Huberman, 1994).

Data was collected through questionnaires administered to the students who took part in the EIP and are from the Engineering, Business and Applied Sciences faculties. The questionnaire aimed to solicit students' views on the EIP, the skills acquired or enhanced and the experience of the workshop from their distinct disciplines. Additional views were obtained through observation as well as the students' reflection in the workshops. The data in this study was analyzed through patterns of meaning that emerged from the data gathered from the questionnaire, observation notes and students' reflection.

FINDINGS: BUSINESS AND APPLIED SCIENCES

Students from the Business Management Faculty varied in programs under which they were registered. These are real estate, accounting sciences and operations management and each had similar and slightly different experiences of the program. The focus of the study was however to observe them collectively as business management students as their experience is classified as such in the findings and had more similarities than differences. The applied sciences students' experience is combined with the business management students in this section because their responses and experience of the program was similar to the business students. This is in terms of the priority of skills acquired and/or enhanced as well as the overall program experience and WIL preparedness.

Employability Skills

The skills that both business management and applied sciences students prioritized include communication, team work, self-confidence, continuous improvement, self-management, logical thinking, problem solving, listening skills, interpersonal communication, creativity, respect, leadership and willingness to continuously learn. In the students' responses, the skills are summarized in the following responses:

> The workshop was very important to me because I learned how to communicate with others and I have broken the ice on expressing my ideas and opinions on given tasks.
>
> The roles that were exchanged made me realize my ability to work with others effectively.
>
> Working with a team has not always my thing, but the workshop made it clear for me that without teamwork, work can be done late or wrong.
>
> The EIP improved my employability skills because now I know how I am supposed to behave in the workplace and respect my colleagues.
>
> The workshop really helped me to see things differently, now I know the importance of team work because I had a different mind-set about it.
>
> I now that it is important to help each other in the workplace when a colleague is having difficulties in their parts.

> Time is not really important compared to wasting the resources and making sure what is being produced does approve quality and meets the standards.
>
> I also learned that we should learn to be patient because you might work with a slow colleague. They might be slow but they give out their full performance, therefore, we should not rush them, instead, support them.
>
> I gained great leadership skills and that possessing listening skills is the best way of having a great work environment.
>
> I learned the importance of tolerance and understanding the process.

Application of Concepts and WIL Preparedness

Although the feedback above suggests that students have learned or acquired all or some of the skills mentioned above, some business management students seem to have had less interest in the theoretical session and some in the practical component of the workshop as well. 15% of the students responded with the fact that the actual practice which is the lens through which they were supposed to learn was the repetitive. One student shared:

> The trucks that we did today are the same as the ones we did yesterday, so I think that was time consuming, we could have done something else although it was fun.

In contrast, the theory was appreciated and acknowledged by the applied sciences students. It could be because it was foreign from their usual discipline knowledge as opposed to the business management students, this was expressed on the importance of theoretical knowledge:

> What I found useful most useful was teaching of the theory first so that we can have a very clear understanding of what to apply.

In addition to responses from the questionnaires, during reflection, business management and applied science students were the most excited about the program because of how foreign its application was to them. According to them, these are things only Engineers do. In fact, some were nervous when they were informed that each student will build the truck by themselves. One student expressed:

> The employability improvement workshop came with so much anxiety for me at first, not knowing that it was only going to prepare and enhance me too the work field exposure.

For most students, this was the first time they have ever been in an environment where they could experience work in action and workplace etiquette. 87% of the participating students indicated that they have never been employed before. It was thus an eye opener to observe what could happen in the actual workplace and taking into account the skills needed. Students who indicated that they then had a clue on what to expect in the workplace and what to do when placed in industry then reflected and revealed that actual doing is different from reading or just being told about what to expect. According to them, the workshop introduced them to a range of challenges that a student in normal circumstances would not think of and how to go about solving these problems. Some reflection are as follows:

> This really introduced us to the expectations of employment, now we have more knowledge and skills of the workplace environment and also challenges to expect and how to deal with them without being discouraged by the negativity.

> This was perfect because in the classroom, we are only taught about what we will do, discipline knowledge; but not how we will conduct ourselves.

The workshop was also an eye opener to students as far as career prospects and exploitation of their disciplines is concerned. Students felt they would be open minded when entering the workplace in terms of what they can learn and how to distinguish their unique selves from the rest of the group instead of sticking to what they know. The workshop thus enabled them to explore how their discipline knowledge can vary and open them up to a range of career directions that they have never thought of before and enable career growth in general. This is evident in this reflection:

> It reassured me of how theoretical knowledge can be appropriately exploited. I have gained skills that will enable me to be employable and well equipped to articulate, merge, produce, conduct within time, quality requirements.

Students were also able to find the importance of simple tasks such as work breakdown as well as respecting everybody's role in the workplace. By building trucks from scratch both individually and in groups and doing things with no supervision of the facilitator but themselves and still remaining honest about the results no matter what they might be, proved to them just how different being a student is from an employee. This was emphasized in their group work, the roles they assigned each other and understanding of how an organization functions. Some responses and reflections on the subject are as follows:

> Working together as a team really shows how much important to really depend on someone in order to finish up your job, hence there were layouts.
>
> Building the trucks requires proper and effective co-operation between suppliers, managers and workers.
>
> I now have an idea of how things operate between workers, managers and suppliers, how to plan a production.

FINDINGS: ENGINEERING

The response and experience with Engineering students was quite different from the business and science students. Although there were skills that overlapped such as communication, problem solving and critical thinking, most Engineering students seems to have acknowledged unique soft skills that they acquired from the workshop. This may be alluded to the fact that the practice was relatively easier and familiar to most Engineering students, understandably so. They therefore found the practice refreshing, especially because it is things that they are used to doing but with a different goal in mind.

Employability Skills

The skills that were highlighted by the Engineering students were thus: awareness, co-operation in a team, fortitude, consideration for others, thinking out of the box, work ethics, planning, respect, the importance of strengths and weaknesses as well as acknowledgement of other people's roles. These are evident in the responses below:

> I have learned how to act professional in the workplace and how to treat fellow colleagues.
>
> I learned that every team member plays a vital role in the team regardless of their hierarchy.

> People can bring out the best of you, if you allow them. By this, I mean I now that know I can be a team player if I listen carefully and it revealed what my strengths and weaknesses are.
>
> The workshop has opened up my mind, now I know that in the workplace one must have a relationship with his/her team, know your team and know their strengths and weaknesses.
>
> I have improved in a way that now I am able to voice my own opinion to my team. Also to be able to allow myself to be led and respect leadership.

Application of Concepts and WIL Preparedness

All Engineering students were excited or eager rather to start the practical work without fully grasping the theory. They were thus very fast to assemble trucks but their products had many defects. They were also hesitant to reflect but only realized the importance when they saw that quality was important than rushing the work only to have defects. They therefore highlighted the work ethics and the importance of problem analysis and paying attention to detail before executing the task. Engineering students were also keen on working individually and hesitant to work in teams. In the students' responses, they stated:

> I feel that this workshop is so essential to the development of our work ethics and preparedness for the workplace. The workshop really made things much lighter with regards to working with different people and learning how others think, act and carry out tasks
>
> Observation of the surrounding, analyzing the situation and then identifying a solution that is to be executed.
>
> I have developed respect for certain roles in the workplace and that one needs to go to the depth of the problem before you make a claim.

All Engineering students who participated in the study were eligible for WIL as explained in the methodology and were all in their third year. This means that they have been studying together as classmates for more than two years, yet, many had never engaged in a conversation with each other. The workshop requirements were however that students work in teams hence they had no choice but team up. These students found that the isolation has been robbing them from opportunities to learn from each other and enhancing their ability to work in teams. On this, students had this to say:

> Working with someone that you have not spoken to is quite strange because we have been in one class for two years but come practical and we were told that you should work with someone you have never talked to.
>
> The workshop really did help because I never thought that it would be very nice working with people that I don't spend much time with.
>
> I got to know many of my classmates better, and learned a lot about them and from while working in a team.
>
> It broke the ice with regards to the social side of things

In some responses, students acknowledged that the workshop enhanced their ability to not only respect others, but recognize their differences and varied capabilities in comparison to other students and how this is a strength in attaining certain goals. This is evident in these responses:

Sometimes when team members do not work according to plan which frustrates but I learned to self-manage my frustrations and deal with differences to work towards the goal.

You cannot do everything alone, so other people's ideas and opinions are worth listening to and not take them for granted.

DISCUSSION

The findings revealed that the students' experience of the EIP differed in terms of their various disciplines. The priority in the skills gained and enhanced also differed as evident in the findings. Research has shown that in addition to being prepared for WIL academically, students are also required to have an understanding of the soft skills. Demonstration of theoretical knowledge by students are both important foundations for a successful WIL experience (Martin, Rees, & Edwards, 2011). Engineering students for instance were eager and faster to apply the concepts which resulted in them compromising quality. They were also hesitant with reflection and did not see the importance of reflecting until they experienced its importance first hand. This is in contrast to business and applied sciences students who took their time to assemble the cars but reflected more and ensured that they produced quality products in a timely fashion.

Business and applied sciences students also alluded to the fact that employability in general and work had a different feel and definition after the workshop to how they had previously defined it. This was realized by realizing that they could follow instructions to do something they never thought they would do in their discipline simply by following instructions. This gave them a confidence boost as they had acknowledged that they could achieve anything, no matter how foreign it may seem. This state of mind or attitude in the workplace is an asset because students will always go an extra mile and be solution oriented when they think they can achieve anything (Martin & Hughes, 2009).

Preparation for WIL will hence influence these students and chances of even getting placements in organizations that they have always wanted to work with. Lowden, Halls, Elliot and Lewin (2011) reported that employers stress the importance of and value efforts into creating good first impressions, such as CV preparation and self-presentation at interviews, which are lacking in most students. In their study, they found that graduates do not take the time to craft CVs and prepare geared to a particular employer, whilst some candidates had limited motivation to apply themselves to the interview and do background research on the employer. These students have been equipped with skills to not only know how to behave in the workplace but create good first impressions by articulating what they can do and different ways in which they can add value to any organization, whether on their CVs or during interviews. In addition, they will be able to le open minded and truly learn and allow full career growth and transformation from WIL.

CONCLUSION

While WIL has been recognized to assist students with the transition from university to the world of work, students' preparation for WIL is just as vital and should be part of the curriculum before students are even placed in industry for WIL. From the EIP explored, students have demonstrated that they have gained and enhanced skills that will assist them and learn from WIL placements. Students have had a chance to gain a better understanding of the workplace expectations from the EIP, be open minded, are self-confident and motivated to learn from WIL. A practical program is deemed suitable from this study

as it enables students to apply the same principle regardless of their studies background and gain skills that they can apply in their various contexts. Such a model can thus be used as a WIL pedagogy in the university setting, before industry placement. Natoli (2013) affirms that WIL must reinforce institutional learning that is achieved in a university environment. WIL thus needs to be embed broadly into the curriculum and not just an event at the end of the study program. Only then, students would be provided with the opportunity to fully immerse in their disciplines and be open minded enough to explore the career prospects they have. This way universities will produce graduates who are proficient in their disciplines and able to work successfully with clients, customers, colleagues and managers, while matching the cultures of the organizations they will end up in. The follow up of this study is to obtain feedback from these students after their WIL placements as well as their mentors in the workplace to find out how they have applied the concepts in the real world and if the program has indeed been beneficial in terms of skills application. This study aimed to shed light on one innovative way to approach multidisciplinary WIL preparedness in the university setting.

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A practice-based pedagogy: Expanding the scope of experiential education

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ABSTRACT

Higher Education providers face significant challenges designing and delivering curriculum that prepares graduates to be work capable as well as future-proofing their skills for jobs that may not exist by the time they graduate. In response, the University College, University of Tasmania, has developed a practice-based pedagogy, which draws on an outcomes-based education model. The pedagogy is informed by purposefully designed work-integrated and experiential learning approaches from across the globe. It contextualizes industry and community relevant knowledge through contemporary experiential learning and reflective practice.

Our model of experiential education, adapted from Oliver (2015), ensures highly authentic learning while allowing flexible curriculum design that focusses on two core components, 'the experience' and 'the practice'. In addition, the curriculum extends beyond traditional work-placements and contextualizes learning within a range of approaches that include local and international case studies and projects; field trips; simulated work environments; wicked problems; and design thinking frameworks. It exposes students to key practitioner elements informed by academic principles and industry knowledge; underpins strong theoretical and practice-based knowledge; and delivers opportunities for students to develop a range of skills and employment capabilities.

University College courses are designed for students to develop practice wisdom (Higgs, 2011) which enables them to understand how, when and why to complete a task. This occurs within a framework of knowledge, skills, behaviors and attributes and situates 'the practitioner' in the center of the curriculum design process. This paper discusses the challenges, successes and future goals for a practice-based pedagogy at the University of Tasmania.

INTRODUCTION

The Changing Workforce and Higher Education

Higher Education faces significant challenges preparing graduates for work in the current and future changing world. Technological changes in industry, demographic shifts, and increased globalization have meant fundamental changes in what employers expect of their workforce and the graduates they employ (Harrison, 2017; Keating, Nicholas, Polesel & Watson, 2005). Employers are looking for innovation, flexibility and agility to respond to rapidly changing markets with fewer labor-intensive jobs driving the change from physical skills to interpersonal and creative skills (Australian Government, Department of Jobs and Small Business, 2018). Employers expect, and indeed require, employees to add

value to their organizations immediately. Knowledge of complex organizational structures, high-order analytical and critical thinking skills, communication skills, cultural competency, professional and ethical values, and leadership skills are expected in beginning employees (Harrison, 2017). To meet these changing needs, Higher Education must be prepared to rethink traditional forms of education and curriculum. Harrison (2017, p. 9) argues that for higher education providers to contribute to the current and future workforce "…we need to become very good at putting together diverse teams to innovate and design responsive solutions." Some higher education institutions have introduced a range of initiatives, for example, cooperative education programs, internship programs and work-integrated learning frameworks.

University College, University of Tasmania

University College was formed in 2016 with broad aims to widen educational attainment in Tasmania, Australia and deliver courses that would provide work-ready graduates to the Tasmanian workforce. Characterized by an assertive access agenda, University College has a strong commitment to regional Tasmania, social inclusion and the delivery of work-ready graduates, and delivers enabling programs and industry-informed diploma and associate degree programs. Distinctively different in nature – both in pedagogy and structure – the University College's courses address the educational needs of Tasmania, improve accessibility to higher education, offer learning geared to student success, and drive necessary innovation (while building career pathways) in Tasmanian industries (University College Strategic Plan, 2018).

A PRACTICE-BASED PEDAGOGY

The University College approach to teaching involves learning through practice by exposing students to authentic learning experiences designed to develop skills and understanding related to industry, community, and/or global needs. Drawing on outcomes-based educational theory (Killen, 2000; Mallan, 2000), our practice-based pedagogy encompasses four broad principles: 1) student-centered teaching; 2) contemporary industry and community relevant teaching and learning that is applied, authentic, flexible, adaptable, work-oriented, and entrepreneurial; 3) partnership driven – drawing on a team of teams organizational model and approach to curriculum design and implementation; and 4) is future-focused.

The University College practice-based pedagogy exposes students to a set of key practitioner elements informed by academic principles and industry partners, which are underpinned by the development of a range of work-ready employability skills. Students are provided with strong theoretical and practical knowledge that includes the 'why' and the 'how' to act. They also develop practical skills through work-integrated learning experiences that focus on gaining professional and cultural discipline awareness (Patrick, Peach, & Pocknee, 2008). This practice-based pedagogy couples practice and theoretical knowledge through interactive, blended and digital learning experiences to ensure genuine engagement and reflective practice.

The key sources and products of learning are behaviors and attributes, skills, and knowledge. Over the duration of the courses, students develop the skills, knowledge, behaviors and attributes to become paraprofessional practitioners. On completion of the one or two-year courses, students are able to apply

the three discrete but interdependent elements (behaviors and attributes, plus skills, plus knowledge) within workplace contexts (see Figure 1 below).

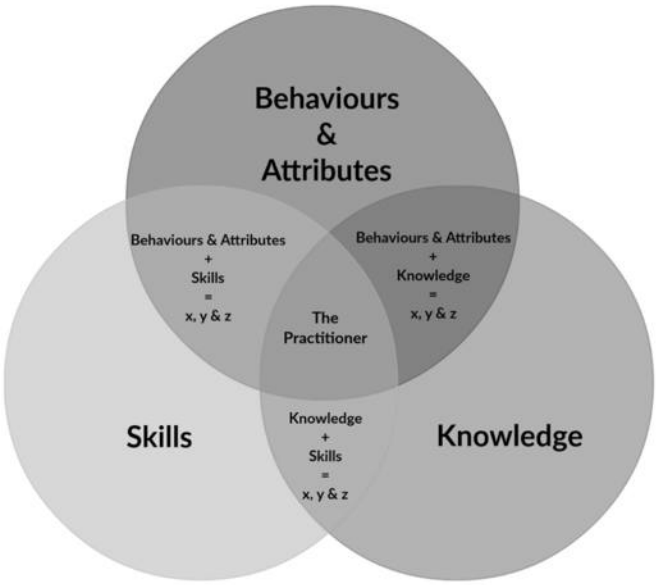

FIGURE 1: University College Practice-Based Pedagogy

In terms of key behaviors and attributes (i.e., the top circle in Figure 1), we support graduates to develop empathy, courage and confidence. We encourage them to be driven by professional values and codes of conduct and to behave as ethical global citizens. In addition, we emphasize the importance of qualities such as being authentic, purposeful and engaging. Over the duration of the program, we therefore provide interactive, authentic and practical learning experiences where students develop a deeper understanding of these professional behaviors and attributes. For example, student involvement in community projects and volunteerism provide opportunities to make a local contribution, develop citizenship qualities, consider values and ethics, and build confidence. In the case of industry projects, students receive the mentoring and experience to be courageous and purposeful with what they propose and learn how organizational culture and values drive what they do in the workplace.

In terms of key skills (i.e., bottom left circle in Figure 1), these include a range of employability and discipline-specific skills. For example, effective communication, the ability to build teams, critical thinking, critical reflection, problem solving, active inquiry and planning and organization. In addition, we e support students to learn how to be adaptive, entrepreneurial, independent, professional and analytical. These skills are typically developed through student participation in experiential education approaches, particularly in structured placements or projects, which are more authentic and closer in proximity to the actual workplace.

In terms of knowledge (i.e., bottom right circle in Figure 1), at minimum, our curriculum provides students the opportunity to learn and apply key concepts relevant to their chosen discipline. Students learn about and know how to use discipline-specific tools and techniques. Students therefore complete the program knowing how to apply theory to practice, when to do it, and why.

This is not an exhaustive list of the behaviors and attributes, and skills and knowledge that students develop at University College to become practitioners. It is an example list to highlight how Figure 1 University College Practice Based Pedagogy, can work, partially informed by Morrison (2007), Collins (2007), and DeSio (2015); whose work explores leadership and leading teams, values and empathy, implementing change, making meaning out of situations and narrating that to others, and reflecting on personal development in the context of the workplace and others.

Conceptually, the students begin with identification of self and their professional identity with knowledge and skills developed and interwoven throughout the course of study. The practitioner at the end of the course will leave with a portfolio recognizing a range of skills, knowledge, behaviors and attributes that they have developed through study at University College. The challenge for University College is ensuring through our curriculum design process that students have ample opportunities to develop these three separate, but inter-related, elements of being a paraprofessional practitioner.

Approaches to Experiential Education

The courses that University College offer consist of eight units of study that support the learning of behaviors and attributes, skills and knowledge within three core components. Firstly, the experience (i.e., the approach to experiential education); secondly, the practice (i.e., what students do and learn to do) within the context of the experience; and thirdly, the evidence of learning and development (i.e., recorded in a 'Practice Manual'). Work-related experience for any given unit of study is based on an approach to experiential education (see Table 1 below). These approaches all place experience at the center of the learning, encourage students to articulate their values and aspirations, and develop work-related knowledge, skills and behaviors.

The range of approaches to experiential education are designed to ensure students can respond to industry, community, and/or global needs. Over the course of the diplomas (one year of study) and associate degrees (two years of study), students are exposed to a range of these approaches (at least eight different approaches from a potential 16) depending on the relevance to any given unit of study.

As Table 1 highlights, all of the approaches to experiential education are different, which enables students to develop skills, knowledge, and behaviors in a range of contexts. The capabilities and understandings that students develop therefore vary depending on the approach to experiential education that informs the unit of study. For example, some approaches apply to developing collaboration, team work, communication, problem solving and conflict resolution skills. Whereas others apply to developing research, observation, analysis and critical thinking skills. Additionally, some approaches focus more or less on self-awareness, civic outcomes, innovation and entrepreneurship.

In local projects, for example, students design a project that responds to industry, organization or community need or opportunity. These projects are realistic and involve constructive investigation. Students develop professional knowledge and skills and humanitarian and civic values. Throughout the project, students work individually and or in teams and reflect on practices and their own skill development and goals. In most cases they implement and evaluate the project and produce a project summary on completion. In other cases, they produce proposals, action plans, evaluation tools, and rationales and pitch to industry panels for feedback. Through the local project, they develop skills

mainly around project management, team work, communication and active inquiry, and explore values, skills, and goals.

TABLE 1: University College Typology of Approaches to Experiential Education

CORE APPROACHES At least one approach from this list (1-12) will be undertaken for each subject pair (unless an extended approach to experiential education is undertaken).			
Project/Virtual Project (Local)	Project/Virtual Project (International)	Case Study (Local)	Case Study (International)
Data-Driven Decision Making	Field Trip/Site Visit	Appreciative Inquiry	Design Thinking
Simulated Work Environment (including Laboratory Simulations and Studio Simulations)	Action Learning Cycle	Community Based Learning/Service Learning/Volunteerism	Wicked Problem
EXTENDED APPROACHES Only one of the following may be completed in any given year of study (or part-time equivalent).			
Internship, Apprenticeship or Traineeship	Work Placement or Work Experience	Applied Research/ Fieldwork/Participatory Action Research or a Major Project	Program/Course Exchange or Student Exchange

In comparison, in work simulations, students problem solve, manage conflict, innovate and act, as they encounter challenges, 'on the spot'. Students actively participate in role plays, mock interviews, simulated board meetings, or any type of activity deemed relevant to a particular discipline. Reflection and feedback on participation is critical and enables students to realize their capabilities and also pinpoint areas for further skill development. The focus in work simulations is therefore more on thinking and innovating 'on the spot' and building interpersonal, conflict resolution and problem solving skills under pressure, in particular scenarios.

Another brief comparison is that between data-driven decision making and field trips. In data-driven decision making, students concentrate more on finding and analyzing data to inform decisions. Students collect, analyze and present information to a specific audience and must reflect on ethical considerations of the particular activity. Yet on field trips, despite the importance of data collection and ethics, the skills focus is on observation and reflecting on skills and goals. These basic examples highlight how students develop employability skills and engage in reflective practice through experiential education, but the actual type of approach can vary the capabilities that students build.

Irrespective of the approach to experiential education, the aim is for students to complete one or two years of study as work-ready graduates, who have a range of employability skills and attributes that afford them greater opportunities and choices. The approaches to experiential education (see Table 1.)

are scaffolded so the degree of complexity increases over time and as skills are developed. As a guide, approaches 1 to 8 align with the Australian Qualifications Framework (AQF) diploma (Level 5). Then approaches 9 to 12 build toward AQF associate degree (Level 6) and by the completion of the second year of study, the approaches align with AQF Level 6. Students therefore typically build up to more complex and deeper learning experiences as they progress.

Developing and Evidencing Emerging Skills

University College's approach to curriculum design and delivery is experiential, problem-based, and project-based, and therefore ensures students develop a range of employability skills and professional attributes over the chosen course of study (Baldwin, Rosier, Slade, Budge, Coiacetto, et al., 2013; Taylor, Adachi, Hagger, McNamara, & Brown, 2018). While there is some debate on what employability skills and professional attributes are, and how they are categorized, there is a general consensus that they fall under the following areas: effective communication: literacy (including information, digital, financial, critical, internet, media); team work (including project work); critical thinking and problem solving; planning and organization; general numeracy; ethics and social and cultural responsibility; creativity, innovation and entrepreneurship; critical reflection; active inquiry (Bowman 2010, Deakin University 2017; Strijbos, Engels & Struyven, 2015). University College students develop these skills along with discipline-specific skills and learn how, when and why to apply them in relevant work-related contexts. Importantly, students capture evidence of their skills development and key learnings in a Practice Manual (see Figure 2 below. This contains a collection of evidence against personal, academic and professional development. For example, students include reflections, assessment pieces, records of skills development, notes from experiences and course material, key learnings from tutorial and workshop activity, and a Professional Development Plan for goal setting and ongoing learning. The format of evidence in the Practice Manual varies and includes written work, sketches, photographs, podcasts, video and posters or presentations. Academic staff coach and mentor students to develop, review, and maintain their Practice Manual and their Professional Development Plan. The professional component of the Practice Manual is organized under the above-mentioned categories for employability skills and attributes. Early workshopping of these elements of the curriculum ensure students are aware of our focus on experiential education, practice and skills development.

To support the development of employability and academic skills outside of the experience or work-integrated learning activity, students also have access to an online 'Bookcase' containing learning resources focusing on employability skills (Angel & Lewis, 2018). Practice-based tutorials and workshops also provide students with opportunities to actively practice skills development, obtain feedback, reflect and record progress.

Practice Wisdom

University College graduates have the 'know-how' as well as the 'know-why' and learn how to ethically apply this practice wisdom in different work contexts (Higgs, 2011). That is, they can apply in the real world, their tacit knowledge and skills plus the skills learned through practical application and experiential education, underpinned by theoretical knowledge. Students therefore know how to complete a task or action, and the reasons for which they undertake the task in the chosen way. They develop this practice wisdom through structured work experience, simulated work environments and

industry projects and events in which reflection and feedback are central throughout the learning experience. Students also develop practice wisdom in situated work contexts when they adhere to professional codes of conduct, industry standards and practice expectations (see Higgs, 2011). The curriculum also provide interactive online learning activities and deliver workshops on professional conduct, values, leadership, ethics and empathy to further support students to develop skills and knowledge of industry expectations, codes of practice and professionalism.

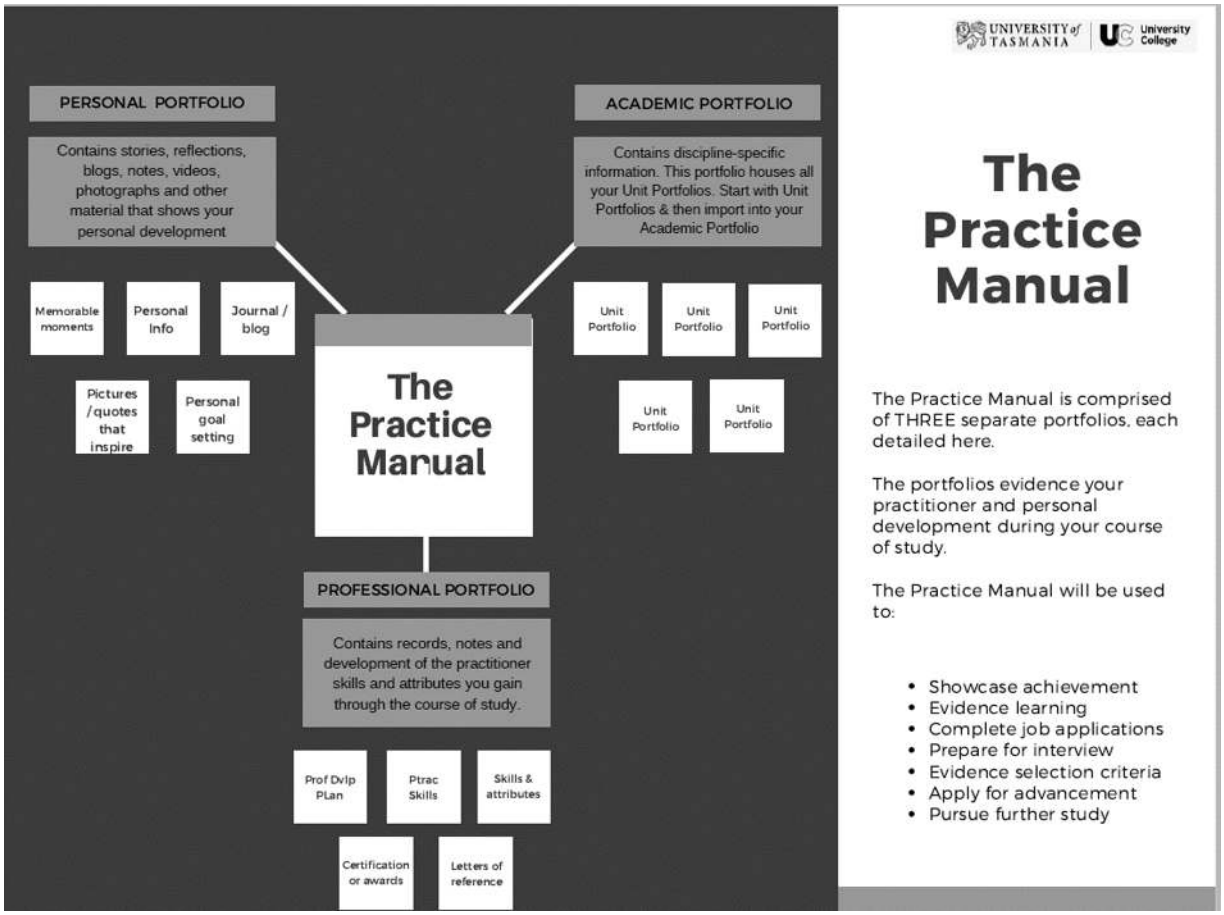

FIGURE 2: The Practice Manual

Challenges and Successes

Across a two-year period, University College has established five applied courses comprising Business, Agribusiness, Design, Health, and Science. Developing resources and designing and delivering curriculum 'on the run' as University College has been in a start-up phase has proved both challenging and rewarding. Academic and professional staff work to ensure units of study are designed and developed to a high standard within our practice-based pedagogical framework. Curriculum developers, instructional designers, and academics work together to ensure the student experience is high quality. Although challenging at times, this co-design process creates opportunities for innovation and creative solutions. The student experience becomes a combination of learning through high impact,

interactive online activities, practice-based workshops and tutorials and work-integrated learning or experiential education.

We have begun to build strong partnerships with industry and community organizations that have enabled structured work experience opportunities for students. Our challenge is to continue to build and establish further partnerships without exhausting the limited opportunities available in a state that comprises predominately small to medium sized businesses. The Higher Education Standards Framework (2017) outlines strict guidelines in terms of work-integrated learning and efforts are focused on developing appropriate monitoring and assessment of student activity, work health and safety priorities, and providing workplace supervisors with appropriate training and support. Working groups have been established to further develop our work-integrated learning and work placement framework.

Our greatest challenge, but also our greatest area of growth, has been building a culture of collaboration. This is supported by University College's agreed behaviors that focus on empathy, courage and purposefulness. Consideration and respect for ideas of others; courage to act in the best interest of the college and its students; and demonstration of commitment to delivering quality results for our students and our partners provides strong foundations for staff. Drawing on these values, our team of teams approach underpins the curriculum design process that brings together instructional designers, academic developers, teachers and industry experts and has allowed a focus on developing quality and relevant curricula. University College successes sit largely around how practice with a focus on transferable employability skills (Oliver, 2015) has been embedded into every unit of study and drives the collaborative curriculum design process. Online, work-place and classroom experiences are interactive and meaningful and workplace relevant with industry and community partners supportive of the experience University College provides students and future graduates/employees. Graduates are beginning to report benefits of their studies and sharing positive stories of employment gained. University College offers a unique experience for students in flexible, but authentic and often dynamic learning environments.

THE FUTURE

As work continues in the design, development and delivery of work relevant courses our focus continues on ensuring our practice-based pedagogy underpins and allows the development of graduate employability skills. Alongside the development of discipline-specific skills, professional and transferable skills are key to graduates ability to work in the 21st century. Our outcomes-based approach to teaching and learning develops practitioners for a constantly changing workforce and responds to industry and community needs. It is critical to our success that units of study continue to be driven by approaches to experiential education that provide students with collaboratively designed practical activities that enable practitioner development. A further essential element is an evaluation plan that encompasses, scrutiny of the impact and effectiveness of our curriculum through multiple lenses: the student, staff, graduate and employee, and employer.

The curriculum design process must therefore continue to be framed by two questions, 'what is the approach to experiential education in this unit of study?' and 'what does the practitioner look like?' This places the focus of the design conversation on 'the experience' and the skills, knowledge, behaviors and attributes that are to be, taught and assessed in every unit of study. These questions allow a clear picture

of the employability skills that are to be developed, alongside other skills, knowledge and behaviors. For example, in design thinking approaches at University College, problem solving and critical thinking are typically the two main employability skills that students build. However, students also usually have to work in teams, provide feedback and mentoring to one another, make decisions, plan, evaluate and reflect. Students also have to withhold judgement to empathize with the user, define problems, generate ideas as a group and develop prototypes. The employability skills they develop through design thinking alone are highlighted in this example, but these are only one part of 'the practitioner'. Let us consider, for instance, that the unit of study itself is computer programming. In this case, through a design thinking approach, students also communicate key concepts in programming, solve applied mathematical problems and design an Arduino-based device that responds to community or industry need. This soon changes 'what the practitioner looks like', as discipline specific knowledge and skills come into play alongside the employability skills developed through design thinking.

This example illustrates a need for us to remain vigilant in the design process when asking the question, 'what is the approach to experiential education?' at the same time as 'what does the practitioner look like?' Our focus must also be to map practitioner development across each course and seek industry partner feedback to inform curriculum quality assurance and an improvement cycle. As our courses progress through their initial full delivery life-cycle we are implementing a programmatic approach to the evaluation of their impact and effectiveness. Alongside a scholarly evidence-based approach to curriculum quality assurance and improvement we are casting our eyes nationally and internationally to create opportunities for students and staff to broaden their learning and skills, and to disseminate and share our expanding scope of experiential education.

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Establishing a work-integrated bachelor degree program in computer science in Austria

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ABSTRACT

The lack of well-educated graduates, especially in the field of Computer Science in Austria is high (APA, 2019). In order to address the needs of the industry and to meet the demand of the job market for future employees the University of Applied Sciences Technikum Wien (UAS Technikum Wien) introduced a work-integrated (so-called "dual") Bachelor degree program in Computer Science in 2017, where parts of the education are provided by partner companies. This close cooperation between companies and universities offers new and attractive possibilities for students, but also involves didactic challenges, which have to be faced to ensure a valid education on academic level. We present the created design of the curriculum, the process of integrating companies within the academic education, as well as the experiences gained during the first one and a half years of the Bachelor degree program. Since students are employed part time at one of the currently eighteen partner companies, time distribution between university and the company and the didactic implementation of the courses turned out to be critical factors. In order to be able to improve the degree program and to adapt the curriculum, an external institution was asked to carry out a scientific evaluation. Online questionnaires and personal interviews were used to ask the involved stakeholders, such as students, representatives of the partner companies as well as the degree program director for their experience and improvement suggestions. Finally, we show those first results and discuss possible future changes.

Keywords: Work-Integrated Curriculum, Computer Science Education

INTRODUCTION

As the demand of graduates especially in the capital city of Austria in the field of Computer Science cannot be covered anymore by surrounding universities in recent years, the Ministry of Austria appealed in a project called "the future of academic education" (Austrian Federal Ministry of Education, 2019) for suggestions to meet the needs of the industry. As a result, the UAS Technikum Wien extended its fulltime Bachelor degree program of Computer Science by a work-integrated organizational form. This allows companies to be part of the academic education and students to gain work experience while studying. At the moment the UAS offers thirty study places in the program - an increase is subject to market demands and university resources. After the first three semesters of the program we scientifically evaluated the program focusing on the curriculum, the time table and didactic challenges that lecturers and companies are confronted with. Implementations of the results and future changes of the curriculum are expected to be realized within the following years.

BACKGROUND

The presented dual Bachelor degree program in Computer Science was the first introduced work-integrated program in Vienna. Dual study programs are well known in Germany but rather new concepts in Austria (Noe et al., 2019; Wegweiser duales Studium, 2019). In 2014 Universities of Applied Sciences in Austria formed together a platform of dual studies and defined work-integrated studies as followed: dual studies intent to integrate two equivalent learning environments – university and company – to commonly form an education on academic level. (Platform dual studies in Austria, 2019) Advantages lie clearly in the possibility of fostering the learning transfer towards a bidirectional learning transfer as the time intervals between company and university phases are rather short. This two-way-process allows the transfer to be seen as a recurrent process of learning and performance and gained knowledge to be applied at work while new knowledge can be generated and transferred back to the university courses and vice versa. (Lebermann et al., 2006; Rubenzer, 2013; Vermeulen, 2002)) Moreover, learning motivation, often gained from practice- and project-oriented study content has a high impact of the graduation success (Burge, 2009; Daun et al., 2014; Richardson et al. 2009).

THE CURRICULUM DESIGN

The development of the work-integrated curriculum was based on the well-established full-time curriculum (UAS Technikum Wien, 2019) of the Bachelor degree program in Computer Science and first implemented in winter term 2017. The main goal was to structure the curriculum in a way students are able to achieve parts of their learning outcomes within their working phase at the company, even though companies do teach and apply didactic methods differently as universities. Besides the difficulty of deciding which courses are possible to be moved to the companies' responsibilities, one of the challenges was to consider a wide variety of partly contradictory ideas of the companies with the requirements of the university regarding a valid academic education program.

To guarantee the achievement of the learning goals those parts of the curriculum have to be identified that can easily and implicitly be reached within the daily work. The courses, marked in red in Figure 1, have been chosen to be transferred to the companies' responsibility. In total 70,5 ECTS (European Credit Transfer and Accumulation System (Austrian Federal Ministry of Education, 2019) out of 180 ECTS a Bachelor degree program covers are part of the company's teaching. Important for a proper curriculum was to assure that every graduate of the program is able to fulfill all requirements the industry and the academic education in general imposes. Therefore, critical and mandatory courses like basics in Mathematics or Web Technologies have still to be taught at the university. Not all companies could ensure to cover those learning outcomes, depending on the field the company operates in. As a result, the more practical oriented part of the curriculum is taught by the companies. If we take a closer look at the distribution of the courses that are moved out of the university, it is evident that the first semesters do not comprise as much credits as later semesters. This indicates that the workload is also not distributed equally over the semesters, which turned out to be a critical factor.

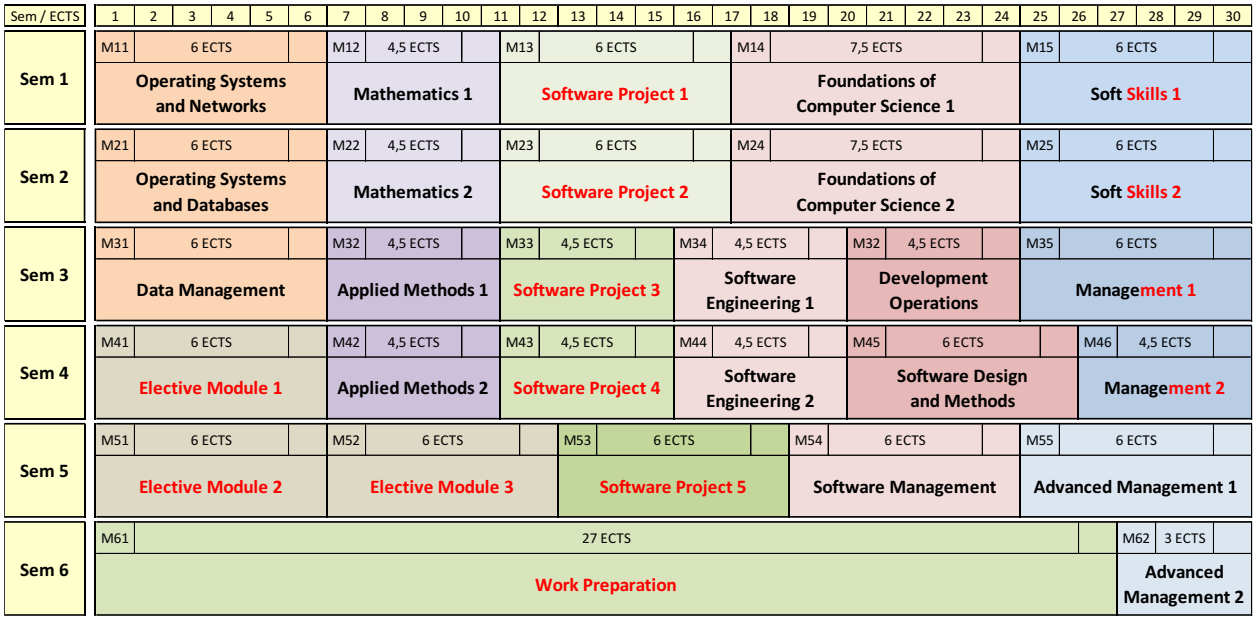

FIGURE 1: Work-integrated curriculum Computer Science – modules (yet to be published)

Every student in the program has to be employed at least twenty hours per week in average to guarantee that the workload can be covered by the companies. Eighteen months of practical experience in the company are included within the curriculum, in comparison to the full-time Bachelor degree program, which covers only fourteen weeks of internship. Different options regarding time distribution have been implemented so far: in the first run in winter term 2017 a two-weeks-rhythm was introduced. Students have been alternately two weeks at the company and the university. The feedback of one of the bigger partner companies was the reason to change that rhythm into a three months one in winter term 2018. The time schedule is shown in Figure 2. This solution is still not perfect and does not reflect all companies' preferences. Moreover, restrictions at the university concerning term limits and numbers of weeks per semester are restraining factors. The time schedule also implies new didactic challenges for lecturers, because the dual study requires the same learning outcomes to be reached than the full-time equivalent while the time between course units is shorter. Additionally, for the learning outcomes to be fulfilled during the company phases, students need to write a so called learning diary where the learning outcomes of the transferred parts (implicitly reached within the daily work) have to be reflected in conjunction with the working tasks. The need for coordination between the companies and UAS turned out to be very important.

PARTNERSHIPS WITH COMPANIES

At the moment we count eighteen partner companies for the dual study program and the number is likely to increase in future. Those companies are quite heterogeneous in size (small businesses to big enterprises) and specialization (software developing to more consulting-oriented companies). Common to all, however, is that the operation field is in the IT or ICT sector. The motivation for joining the program for the companies is on the one hand to satisfy the demand of graduates in the field of Computer Science and Informatics by investing comparably low resources and on the other hand to be part of the curriculum development. In higher semesters students can specialize (elective modules) in fields companies particularly need.

Winter term 18/19	1st Sem.	Cal. week	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	UP
		CW		1	2	3	4	5	6	7	8	9	10	11	Hol.									8-Oct-18
		UAS/Comp.	CP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP			CP	CP	CP	CP	CP	CP	CP	21-Dec-18

Summer term 19	2nd Sem.	Cal. week	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
		CW						1	2	Hol.	3	4	5	6	7	8	9	10	11	12														1-Apr-19
		UAS/Comp.	CP	CP	CP	CP	CP	UP	UP		UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	5-Jul-19

Winter term 19/20	3rd Sem.	Cal. week	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	
		CW		1	2	3	4	5	6	7	8	9	10	11	Hol.									7-Oct-19
		UAS/Comp.	CP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP			CP	CP	CP	CP	CP	CP	CP	20-Dec-19

Summer term 20	4th Sem.	Cal. week	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
		CW						1	Hol.	2	3	4	5	6	7	8	9	10	11	12														30-Mar-20
		UAS/Comp.	CP	CP	CP	CP	CP	UP		UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	26-Jun-20

Winter term 20/21	5th Sem.	Cal. week	40	41	42	43	44	45	46	47	48	49	50	51	52	53	1	2	3	4	5	6	7	8	
		CW		1	2	3	4	5	6	7	8	9	10	11	Hol.										5-Oct-20
		UAS/Comp.	CP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP		CP	CP	CP	CP	CP	CP	CP	CP	23-Dec-21

Summer term 21	6th Sem.	Cal. week	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
		CW					Hol.	1	2	3	4	5	6	7	8	9	10	11	12	13														6-Apr-21
		UAS/Comp.	CP	CP	CP	CP		UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	UP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	2-Jul-21

Cal. Week	Calendar week
CW	Course week
UP	University phase
CP	Company phase
Hol.	Public University holidays

FIGURE 2: yearly time schedule - company and university phase (yet to be published)

It is rather easy to become a partner company with a few requirements to be signed in a cooperation agreement. This cooperation agreement between the company and the UAS states for example the number of students a company is approximately capable to contract yearly, a technical and organizational supervisor, and a contact person at the company for communicational issues with the university. Important is also to raise the awareness of the companies that the employees are at the beginning of their academic education, need organized supervision and therefore cannot be treated like graduates or full-time employees. Students and companies sign a training contract which deals with labor law related circumstances.

The application procedure for the dual study program is structured in two separate parts: students need to apply at the university and therefore pass a ranking test to fulfill the requirements to start a study at the UAS Technikum Wien. Additionally, companies carry out their own individual application process (e.g., assessment center, interviews). The best 30 students at the ranking test who have a contract with one of the companies can start the program. The commitment of the companies is an absolute must criterion.

METHODS OF EVALUATION

The intention of the external evaluation was to collect first experiences with the dual study program and therefore gaining a better insight in the study challenges as well as identifying necessary changes regarding the curriculum, teaching, learning process and the cooperation with partner companies to be implemented in future. The evaluation process was accompanied by a project group formed of representatives of the UAS and the Viennese Chamber of Labor. The survey was conducted by the Alpen-Adria University of Klagenfurt (AAU) involving all necessary stakeholders (students, UAS and partner companies) in the time period of November 2018 to January 2019.

Specific subject areas have been chosen for the evaluation:

TABLE 1: Subject areas for the evaluation

· motivation of the students	· learning and competence transfer
· selection of the students	· expectations und experiences
· time schedule	· supervision of the students at the company
· organization of company phase (workplace as a working and learning facility)	· collaboration between supervisors, lecturers and students
· integration of the company phases into the education	· ability to study and balance of study, work and family life
· learning goals during university and company phases	· contract situation

Based on that subjects the evaluation design was developed and divided into three parts: two modular online questionnaires with students (both cohorts) in November 2018, personal interviews with staff of the UAS and students in December 2018 and a group discussion with the partner companies in January 2019.

The online questionnaires have been designed slightly different for the two cohorts as students started in winter term 2018 have not attended a company phase at the time of the evaluation. The prior identified subject areas have been clustered into following main topics:

- study related information: motivation of the study, confidence with the choice of the program
- statements to partner companies and the company phase: size, contract design, working tasks
- information about specific characteristics of a dual study program: learning transfer
- information about studying and time expenses
- social demographic data
- personal assessment

The anonymous survey consisted of 38 questions, where some were open to textual answers, but most to choose from given options. It took students around 20 minutes to complete the survey. The link to the survey was distributed by email on November 7th, 2018 and was open till November 25th, 2018.

The response rates of the online questionnaires are with 95% for the students in the third semester (start winter term 2017 – first cohort) and 68% for the students in the first semester (start winter term 2018 – second cohort) quite high. The results have been analyzed using IBM SPSS.

Additionally, and in regard of the results gained from the questionnaires seven personal interviews with selected students of both cohorts and responsible persons of the UAS took place in order to cover circumstances the survey could not take into account. The interviews started with an entry question about estimates of the dual study program and lasted around 30 to 45 minutes with the students and up to 60-90 minutes with the staff of the UAS (program director and professor for occupied field research). The interviews took place in December 2018.

Those personal interviews were followed by the group discussion where nine representatives of the companies met to exchange impressions, figured out critical factors and developed suggestions for future changes. The group discussion was scheduled on 8th of January, 2019. The data of the personal interviews and the group discussion have been evaluated using an inductive creation of categories and included into the results of the online survey. (Mayring, 2015/Kucktarz, 2018)

FINDINGS AND RESULTS

Age disputes show a mode of 22 years in the first cohort and 20 years in the second cohort, most of them having been at a higher-level technical school before applying for the academic study program. Table 1 shows the results of the reasons to choose the dual study in Computer Science. It can be seen that the possibility of gaining practical experiences are often mentioned reasons for choosing the dual study (mean 3.58 cohort 1/3.85 mean cohort 2)

TABLE 2: Reasons for choosing the dual study program (mean, "I strongly agree"=4 – "I strongly disagree"=1)

	cohort 2017	cohort 2018
I was interested in the full-time study as well	2,56	2,3
I could afford a study only in concjunction with a job	3,22	2,7
I am gaining a Bachelor dregree as well as working experience at the same time	3,53	3,9
It is a good opportunity to gain practical experiences	3,58	3,85
The study program and the working tasks are coordinated well	2	3,42
I can network with potential employers	3	3,26
I have the best chances to get a permanent job after the study	3,5	3,42
I see opportunities to develope myself in my career	3,44	3,45

Regarding the satisfaction of the organization form "dual" it has become clear that, especially in the first cohort students are not satisfied, whereas students who started in winter term 2018 are satisfied with their choice. The personal interviews revealed that this can be explained by the experiences students from the first cohort gained with the first time schedule model (two weeks' rhythm). The change of the time model led to misunderstanding and discomfort. Moreover, students also indicate that the three-months-rhythm is a possible obstacle for the study-work-life balance as the time spent at the university and the available time for finishing tasks and exercises within the university phase is very limited. Individual and consequent time management strategies are mentioned as a success factor for a good study-work-life balance. Additionally, students fear not having enough time for an intensive dispute with interesting topics as the university phase is used for exams as a first priority.

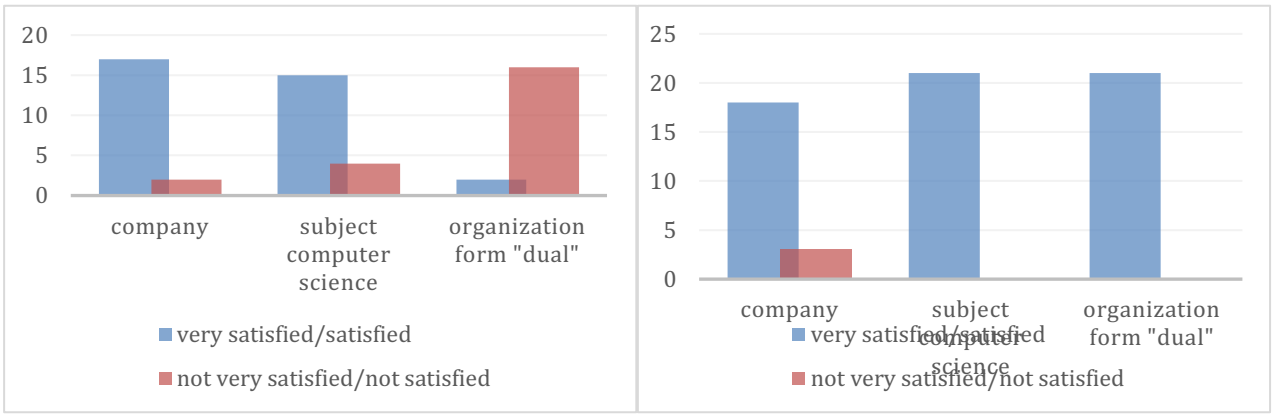

FIGURE 3: Satisfaction with the decision of company, subject, organization form (l: cohort 1, r: cohort 2)

The representatives of the company also mention a lack of communication between students, UAS (organization and lecturers) and the companies as another possible barrier. Not being included into changes regarding restructurings like the change of the time schedule was identified as a point of criticism.

Results in relation to the learning transfer between the two learning environments (company and university) deliver the need for supporting actions. The learning diaries, which have been introduced in winter term 2018, are more likely to be accepted than a written reflection work. The missing consistent specification of the diaries, nevertheless, make it difficult to keep the diaries properly according to the responses of the students.

In order to minimize the study workload students have been asked about their use of support activities provided by the UAS, the company or self-organized measures. Table 3 shows that 12 students indicate having used the support of other students often or always, whereas the support given by the university and the company happen in particular cases when specifically asked for. The personal interview with one of the students reveals that especially the differences between the full-time equivalent regarding for example additional tutoring courses are critical aspects. The flexibility of the lecturers concerning postponements of exams was mentioned positive.

TABLE 3: The use of support activities

	never	particular case	often	always	total
... self-organized supporting measures by students	1	5	9	3	18
… provided by AUS	1	15	3	0	19
… provided by the partner company	3	7	5	4	19
total	5	27	17	7	56

Table 4 shows the estimates personal and professional growth in conjunction of the dual study program. The majority of the students confirm that the gained knowledge has a positive effect on the actions at the working place, problem solving skills can be applied and the willingness to learn new things increased. On the contrary, students cannot deal with conflicts in a better way and cannot use the available time more efficient.

Students of both cohorts also have been asked how and if their expectations of the dual study program in general have been fulfilled. The result shows that in regard of the UAS, the company and the financial situation the expectations have been met by the majority of the students.

At the end of the survey the students had the possibility to give advice to future students: it is necessary of having previous knowledge in informatics in order to be able to compensate the missing time resources and to deal with the increased stress situation a dual study program in comparison to the full-time version involves. However, students also recommend taking the chance of studying dual, due to the possibility of gaining working experience and a graduation at the same time.

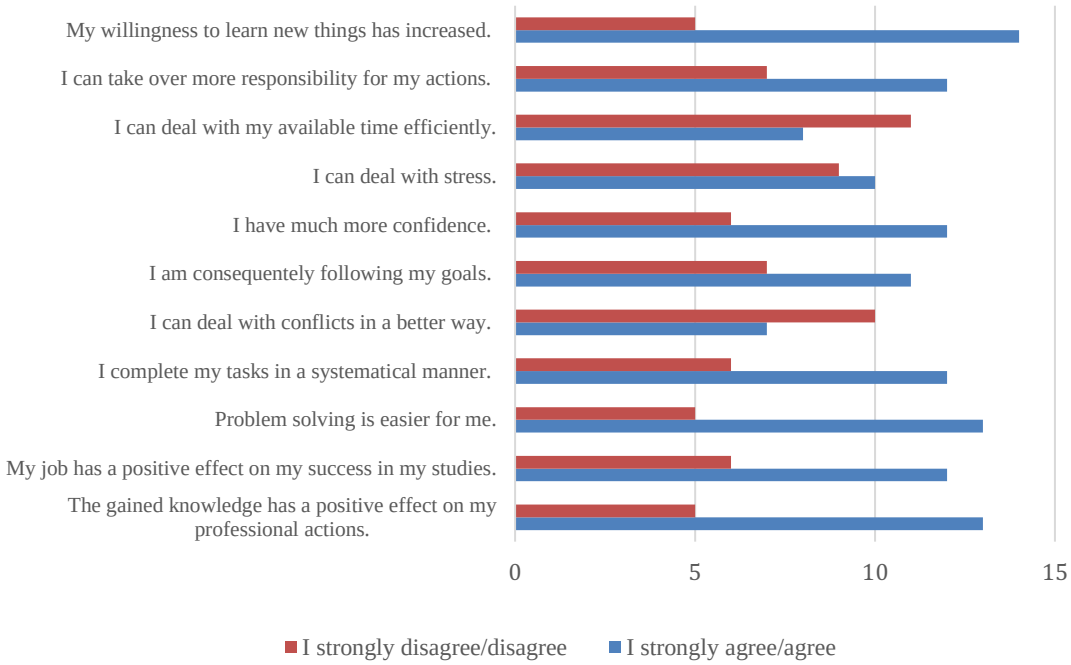

FIGURE 4: Estimation of the personal and professional growth because of the dual study

CONCLUSION AND FUTURE WORK

The Bachelor degree program, introduced in 2017, is the first attempt of a dual study in Vienna in the field of Computer Science. An evaluation was conducted after three semesters by the AAU in the time period of November 2018 to January 2019. Reassuring on the results the external evaluation brought, a few recommendations for future changes could be developed:

To foster the awareness of the development of competences during the company phase and to evolve the reflection of the learning outcomes (courses in responsibility of the companies) into a "reflection in action" instead of a "reflection on action" (Schön, 1983) it is important to revise the concept of the learning diaries. Helpful would also be to count this reflective work of the students as working time in the company and to offer trainings for the company staff or include a peer feedback possibility.

The time schedule and the change of university and company phases seem to be a critical factor for students. Suggestions from the companies include a change to a 4-6 week-rhythm instead of the three-month-rhythm that we have realized at the moment. Possible would also be to implement one day per week during the university phase for the communication with the company. Another form of solving this issue could also be to start the company phase at the third semester, having one full study year to develop all the necessary basic knowledge students need. Different options will be discussed to find a solution that fits to the semester term limits of the UAS, the company and the student's learning effort. The change of company and university phases presents a highly sensitive topic, regarding didactical challenges, the integration of the companies and their working processes and the awareness/satisfaction of the students.

Moreover, the group discussion of the representatives of the companies revealed the wish of strengthening the communication between the company and the university. The implementation of regular meetings and the possibility to network, as well as a "package of basis information" at the beginning of the cooperation seem to be mandatory steps.

The curriculum needs to be adapted to reduce the impression that the dual study is a compressed version of the full-time program. Additionally, it is important to include and to sensitize lecturers (referring to a better management of the workload of the students).

ACKNOWLEDGEMENTS

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What can service-learning and community engagement contribute to our understanding of cooperative and work-integrated education?

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ABSTRACT

This paper will provide a general overview of higher education community engagement, including service-learning, community-based learning, community partnerships, and community-engaged scholarship. Several features of community engagement will be highlighted, including the focus on reciprocity; the attention to power, privilege, social justice, and social change; and the development of the civic identity of the student. This paper will discuss the relevance of these community engagement principles to cooperative and work-integrated education more broadly.

This paper will argue that all forms of higher education experiential education fall on a work-volunteer continuum. This paper will problematize the meaning of work versus volunteerism. We will consider what it is that people want out of their work and volunteer experiences and how early structured experiences in college can support later career fulfillment. This paper will also address the possibilities and limits of developing students into engaged citizens through higher education community engagement and work-integrated education.

Special attention will be given to the conceptual framing of higher education community and work experiences. The cognitive apprenticeship framework will be contrasted with Freire's liberatory learning approach. We will discuss the role of faculty and staff in guiding students' community engagement and work-integrated education and we will consider the role of faculty and staff in mediating relations between the student, the placement, and the higher education institution.

Keywords: community engagement; service-learning; community partnerships; reciprocity; experiential education; cognitive apprenticeship; liberatory learning; volunteerism

INTRODUCTION AND OVERVIEW OF HIGHER EDUCATION COMMUNITY ENGAGEMENT

This paper discusses the potential contributions of the literature on service-learning and community engagement to the practice of cooperative and work-integrated education. Community engagement and cooperative education are complimentary practices in higher education and it is worthwhile to consider their similarities and relevance to one another. While WACE was founded in 1983 as the World Council and Assembly on Cooperative Education, the organization has intentionally moved toward a more expansive focus on all forms of work-directed experiential learning (WACE, n.d.). Thus, there is already acknowledgement in the field that scholars and practitioners representing different forms of higher education practices that provide hands-on professional and vocational experiences ought to interact with one another for the purposes of networking and sharing best practices.

Community engagement, in its broadest sense, is about partnership with groups of people, including people connected with one another by geographic proximity, special interest, or circumstances and situations, to address the needs of these groups (Clinical and Translational Science Awards Consortium, Community Engagement Key Function Committee Task Force on the Principles of Community Engagement, 2011). Higher education community engagement places emphasis on reciprocity between institutions of higher education and community partners. The Elective Carnegie Classification in Community Engagement describes this as a, "…mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Brown University Swearer Center, n.d. a).

Higher education community engagement is a growing global movement. In addition to being included in WACE, The Talloires Network formed in 2005 to focus specifically on the civic purposes of higher education internationally (Tufts University, 2018). The Elective Carnegie Classification in Community Engagement, which is a vehicle for colleges and universities in the US to receive recognition for the institutionalization of community engagement, is presently in the pilot stage internationally (Brown University Swearer Center, n.d. b).

The roots of the current higher education community engagement movement in the US are apparent in the early philosophical work of Dewey (1944; 1997) and in the grassroots community organizing initiatives of Addams (Daynes & Longo, 2004). More recently, Boyer (1996) advocated strongly for the valuing of the scholarship of engagement as a legitimate contribution to the academy. There have been some efforts to categorize and describe the various types of scholarship of engagement. For example, Barker (2004) described five critical practices, including public scholarship, participatory research, community partnerships, public information networks, and civic literacy. The recent publication of *A Crucible Moment* (2012) lends further legitimacy to the field of community engagement by pointing to evidence of the declining civic health of the US and the potential value of community engagement practices for remedying these ills.

LITERATURE REVIEW

Higher Education Community Engagement Practices

This paper reviews several common forms of higher education community engagement, including service-learning, community-based learning, community partnerships, and community engaged scholarship.

Service-learning includes course-based, academic learning, paired with service-oriented, experiential learning, where the service is designed to address real community needs identified by the community, and is also intended to provide for synergistic connections with academic course content (Bringle & Hatcher, 1996). In Bringle and Hatcher's definition, reflection provides the necessary link between the service and experience and several authors, in addition to them, have expanded on the methods and benefits of reflection (Hatcher & Bringle, 1997; Marchel, 2004; Eyler, 2001; Eyler, 2002).

Arnstein (1969) proposed that civic participation occurs on a continuum from low levels of genuine engagement by the public to full citizen power and control. Along these lines, teaching and learning experiences involving community may be seen as more or less beneficial to the community. DeMontmollin and Hendrick's (2006) matrix of community-based learning experiences is a helpful model for conceptualizing students' experiences as more or less impactful as a learning tool and more

of less beneficial to the community. In deMontmollin and Hendrick's model, service-learning is of high value to the community and also has high value for student learning. Community-based learning, on the other hand, is of high value for student learning only. Community-based learning is a learning experience that takes place in the community but does not have a substantial service component attached to it. Community-based learning might involve shadowing a professional, informational interviews, or community-based research, for example. It is effectively unidirectional, thereby seemingly contrary to the reciprocity element of community engagement.

Community partnerships are typically understood as larger, more broad-based collaborative efforts between institutions of higher education and community groups. Community partnerships require significant long-term investment and commitment to particular groups and may engage several departments or schools across a college or university. These partnerships are generally viewed as more complex and more purposeful than those of service-learning and community-based learning initiatives. There is a greater emphasis on large-scale social change (Barker, 2004). Baum (2000) suggests that community partnerships should include clear and reasonable, attainable goals, and measures of accountability for partners; similarly, Mulroy (2008) advocates for evidence-based decision-making that is grounded in clear goals and objectives and assessment of community needs and resources.

Community-engaged scholarship is research developed with and for communities (Falk & Vine, 2016). Community-engaged scholarship may be called participatory action research, action research, community-based participatory research, or some other name, and each strand of community-engaged research has its own identity. Youth participatory action research, which is essentially community-engaged scholarship with young people, is also a common practice today. The common elements of the varying strands of community-engaged scholarship is a focus on genuine participation of community members and an action component, where research serves to informs and assess action.

DISCUSSION

There are three important principles of community engagement that warrant further attention. These are the focus on reciprocity; the attention to power, privilege, social justice, and social change; and the development of the civic identity of the student. As each is discussed, its relevance to cooperative and work-integrated education will be explicated.

Reciprocity is the principle that higher education community engagement ought to benefit communities and institutions of higher education. The idea of reciprocity is not apparent in the general definition of community engagement, but rather, in definitions of higher education community engagement, specifically. The notion of reciprocity is frequently challenged as researchers question whether there is too much emphasis on student outcomes, as in service learning, with too little attention given to community benefits. Ross and Stoeckler (2016) criticized the emphasis on measuring learning outcomes of community engagement rather than community outcomes. Edwards, Mooney, and Heald (2001) found that community volunteers were generally given more substantial work than student volunteers.

I, too, question this emphasis on reciprocity as a defining principle of community engagement, as I see community engagement as having community aims first and foremost, with other aims as secondary. However, when we apply the concept of reciprocity to cooperative and work-integrated education, the notion of reciprocity fits well. Quality cooperative and work-integrated education ought to have

reciprocal benefits, that is to say, student learning and organizational impact. Cooperative and work-integrated education ought to have clearly stated outcomes for both student learning and deliverables.

Community engagement, by its nature, addresses issues of power, privilege, social justice, and social change. Working with vulnerable populations facing issues of discrimination and oppression, course content and service preparation and reflection exercises provide opportunities for learning about diversity and social justice. Students, faculty, and administrators who are involved in community engagement activities, whether service-learning, community-based learning, community partnerships, community-engaged scholarship, or other forms of community engagement, need to continually strengthen their culturally competence. There is a growing body of literature focused on educating college students about power and privilege. Several authors have written specifically about teaching and learning about social justice through service-learning and community engagement (i.e., Megivern, 2010; Rosner-Salazar, 2003; Schamber & Mahoney, 2008).

I contend that discussions of power, privilege, social justice, and social change ought to become commonplace in cooperative and work-integrated education. Power and privilege plays out in all work contexts. Multicultural competence and global citizenship is requisite for virtually all work in today's society. Many disciplines are already deepening connections between professional practice and social justice at the graduate level. Nixon et al. (2010) described teaching about multiculturalism with marital and family therapy graduate students. Osei-Kofu, Shahjahan, and Patton (2010) described their efforts to develop a social justice concentration within a higher education graduate program. Miranda, Radliff, Cooper, and Eschenbrenner discussed an approach to embedding social justice education into school psychology. This work is important at the undergraduate level and across disciplines.

The third and final principle of community engagement discussed here is the development of the civic identity of the student. Eyler and Giles (1999) argued that the skills that students gain from service-learning experiences prepare them for active citizenship. In particular, Eyler and Giles noted that students who engaged in service-learning experienced a sense of community connectedness, valued social justice, believed in the importance of involvement, and had a sense of personal efficacy. The development of a civic identity and a professional development are parallel and related processes. Cooperative and work-integrated education can help build students' civic identities while developing students' professional identities. A focus on professional ethics can be a space for making connections between the two.

The Work-Volunteer Continuum

While we generally conceptualize work as one part of our lives and service as another, the reality is that they are similar activities and have a similar place in our lives. Wilson defined volunteering as, "any activity in which time is given freely to benefit another person, group, or organization" (p. 215). However, he noted that whether materials rewards can be considered within the realm of volunteering is debatable, noting that many people give their lives to low-paying work because of their belief in the cause. Thus, service is activities which are pursued for the benefit of others and work is employment for which we generally paid monetarily.

However, both work and service can provide us with professional experiences which may be valuable for us in our careers. Both work and service may contribute to our development of knowledge and

skills, including field-specific knowledge and skills and soft skills such as organization, time management, and professionalism. They may both increase our sense of self and personal self-efficacy.

Both work and volunteer contexts are spaces where human beings connect and associate with one another. As social beings, the opportunity to interact with others can be highly motivating. Being in a positive, pleasant work or volunteer environment, is generally motivating. Both work and volunteer contexts provide us with the opportunity to utilize our knowledge and skills. We can be productive and we can contribute. Generally speaking, people like to feel productive and useful. Work and volunteer contexts also provide opportunities for people to explore topics and issues of personal interest.

The internal exploration required to identify one's interests and strengths is similar whether a student is preparing for service learning or for cooperative and work-integrated education. The sense of satisfaction a student might experience from participation in community engagement or cooperative and work-integrated education is quite similar.

Students who are preparing for careers in giving professions may conceptualize their professional lives as their service. Their professional and civic identities may be naturally intertwined. On the other hand, students who are preparing for careers that are not oriented around giving may benefit greatly from service-learning and from structured opportunities to deepen the civic aspects of their cooperative and work-integrated learning. Perhaps there are opportunities for students to become involved in the giving and philanthropic arms of corporate and bureaucratic environments, for example.

Educating students for civic and community engagement is paramount. Society needs competent and compassionate citizens (Colby, A., Ehrlich, T., Beaumont, E., & Stephens, J., 2003). Early experiences as a volunteer are believed to be associated with later volunteerism. Fang, Galambos, Johnson, and Krahn (2018) found civic engagement levels to be relatively stable between young adulthood and middle-age. Volunteerism is associated with positive health in older adults (Corporation for National and Community Service, 2007). Thus, it is worthwhile for all college students to experience service learning and other kinds of volunteerism, in addition to any internships or cooperative work experiences they may have.

Johnson (2017) proposed a model for college students' civic identity development. The model includes five major levels or stages, nascent awareness; emergent exploration; developing commitment; deepening commitment; and integration. Nascent awareness may begin in grade school, when students are observing their parents' involvement. Involvement in programs such as the Girls Scouts provided opportunities for emergent exploration. Development commitment seems to occur before or during college and deepening commitment and integration may occur during college, as students' civic identities becomes increasingly a part of their sense of self. It is noteworthy that, at the integration stage, students spoke of their uncertainty and concerns about how to align their careers with their civic identities. For example, Johnson wrote, "Antoinette described her thinking between career and civic identity similarly. 'They're not two separate identities anymore. Now, they're just one big clash of identity.'" One student wondered aloud about free clinics and mission trips that might be integrated into her proposed future studies in medical school while others had trouble envisioning harmonious civic and professional selves. Business school students struggled as did students in other majors who encountered unsupportive faculty and administration. Johnson explained:

Many students faced resistance and sometimes hostility as they integrated their civic identities into their careers, especially in the business school. Oliver cited a lack of support from his human services coursework in supporting funding meaningful employment that aligned with his civic identity. Cameron, another business major, argued that there is a mantra in the business school: 'You got to keep reading if you want that corner office and that Mercedes." He felt that the business school had a culture 'geared towards being successful, climbing the ladder.' (p. 50)

Cooperative and work-integrated education can provide students with opportunities to talk about, reflect upon, and develop their civic and professional identities, seeking convergence, synergy, and alignment.

Differences in individuals' levels of engagement may be attributed to many factors. There is a civic engagement gap which distinguishes between the level of engagement of non-white, poor, immigrant youth and white, wealthier, native-born youth (Levinson, 2007). Fang, Galambos, Johnson, and Krahn (2018) recently found happiness was a predictor of later civic engagement. While the influence of community engagement and cooperative and work-integrated experiences may be limited, there impact on the civic and professional lives of young people can be significant and lasting.

Framing Community and Work Learning Experiences

How we frame and conceptualize learning experiences matters. Students' community and work experiences may be framed as cognitive apprenticeships. In a cognitive apprenticeship, a student is learning from a master. Dennen (2004) describes cognitive apprenticeships as learning experiences involving defined projects or tasks which are completed through the interaction of novices and experts. A cognitive apprenticeship allows a novice to learn through hands-on, direct experience, with the guidance and support of an expert. "Legitimate peripheral participation" (p. 814) is an important component of a cognitive apprenticeship. Through legitimate peripheral participation, the novice begins with tasks that are on the margins of the central work and increasingly takes responsibility for more meaningful and central work.

Four important teaching and learning strategies pertinent to cognitive apprenticeships include modeling; scaffolding; coaching; and mentoring. Modeling involves the use of examples for students. Scaffolding is when supports are incrementally removed over time until the student is able to complete tasks fully independently. Coaching involves supporting student practice and the acquisition and development of skills through observation and correcting of performance. Mentoring involves student-mentor relationship-building to support professional development and advancement.

Liberatory learning is a Freirean (2006) conception of learning whereby students and teachers learn alongside one another through intentional dialogue focused on the resolution of real-world problems and issues. Liberatory education seeks to minimize and eliminate unnecessary power imbalances through egalitarian practices with the goal of reaching deeper levels of knowledge and understanding.

Both the cognitive apprenticeship model and the liberatory learning model can be useful for framing students' community engagement activities and cooperative and work-integrated experiences. When we are supporting students in their early professional experiences, there is a degree to which activities such as coaching, modeling, scaffolding, and mentoring can be invaluable for students' learning and skill acquisition. However, it is critical that we never present the world as finished, static, and

unchangeable but rather as always a work in progress. Students have as much, or more, to contribute to the development of new knowledge and deeper understanding as anyone else. As instructors and supervisors, we need to engage in true dialogue with students, as Freire (2006) proposed, and we need to listen and be open-minded to their ideas. When we treat students as co-investigators (Freire, 2006), co-learners, and collaborators, we create opportunities for transformational learning for students and teachers alike.

On a recent site visit to a site where a community engagement fellow has been providing service this year, meeting with the supervisor and the fellow, the supervisor stated that when the fellow asks him why a certain task must be done or why a certain procedure is followed, it causes him to pause and ask himself: *Why do we do it this way? Is this necessary? Is this the best way?* This is a wonderful example of how the relationship between the student learner and the supervisor can become liberatory, where the student is not only learning at the site but also providing feedback to supervisors that strengthens and enhances organizations.

CONCLUSION

There is an apparent divide in higher education between the goals of educating students for civic and community engagement and training young people for careers. The divide between service-learning and community engagement, on the one hand, and cooperative and work-integrated education, on the other, mirrors this larger philosophical and practical debate pertinent to the goals and objectives of higher education. In reality, higher education serves the dual purposes of developing individuals for careers and employment and also for civic lives. Alongside academic, theoretical, and scholarly course content, experiential learning serves as a critical component of both forms of preparation. There is a synergy between the two that is not necessarily fully taken advantage of. Service-learning and community engagement experiences may not only help students to become more knowledgeable and committed civic actors but they may also help students define and develop their professional interests and preferences. Similarly, cooperative and work-integrated experiences can both help students strengthen their knowledge and skills for the marketplace and also provide opportunities to reflect on critical civic matters such as diversity, oppression, and social change. Providing students with opportunities for reflection, dialogue, and exchange pertinent to community engagement and work experiences can facilitate lasting impact for students, instructors, supervisors, and sites.

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Rapidly innovating program curricula through industry insights

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DESIGN INNOVATION INDUSTRY CONTEXT

Due to increased global disruption and uncertainty, innovation is not optional. This creates a growing demand for designers who can create for a disrupted future, emergent consumer group, or alternate future scenario (Johansen & Euchner, 2013). Even in recruiting at the undergraduate level, this increased demand is seen in the number of available design innovation Co-Operative education positions far exceeding student attainment of those positions. For context at the University of Cincinnati – Division of Experience-Based Learning and Career Education, from Fall 2016 to Fall 2018, successful placement of design students in design innovation roles hovers at just above 50%. This means that nearly half of all design innovation roles are unfilled and the total number of positions continues to increase each semester.

Looking deeper at the practice of design innovation, order to understand, and then innovate, for the future, designers must be introduced to the practice of Trend Forecasting. To specify, Trend Forecasting is defined as a strategic research practice that detects patterns or shifts in attitudes, mindsets or lifestyle options that run against current thinking or how people normally behave, live, dress, communicate or trade (Raymond, 2010). Researching and forecasting these emergent changes enables designers to create for the world of tomorrow, instead of being limited to only what is known today. This indicates that design students are lacking a foundational of skill needed in design innovation: Trend Forecasting.

Not only is there is a very prescient supply and demand imbalance in industry recruitment of design students who understand Trend Forecasting, but the profession of Trend Forecasting itself is changing. Initial analysis of the design industry's use of Trend Forecasting through both literature review and qualitative interviews with design innovation experts, reveals that, once the sole purview of fashion designers, trends have become ubiquitous in every creative field (Tetlock & Gardner, 2015). From shopper and retail trends to socio-cultural and technology trends - with a click of a mouse, industry professionals and students alike are inundated with a landslide of copy-cat reports on "what's next" (Edelkoort, 2015). The profession of Trend Forecasting at a crossroads which creates ideal the opportunity to assess the evolution of the Trend Forecasting practice in industry and leverage those insights specifically for curricular improvement.

PROGRAM CURRICULA INNOVATION APPROACH

To begin assessing the present and future of Trend Forecasting, data was gathered through both qualitative semi-structured interviews on the present and projected future of Trend Forecasting from industry experts and quantitative Co-Op position analysis from Fall 2016 through Fall 2018. The intent of this approach is to evaluate current pedagogical practices related to current industry requirements and situate any improvements to align with the evolution of the practice. The opportunity to revise

curricula, and implement revisions quickly, is rare so the approach to developing the research foundation, strategic recommendations, and pilot interventions are structured, much like a trend forecast, leading from our present state into the future.

Analyzing Design Innovation Co-Op Positions

Over the previous two academic years, total Co-Operative education (Co-Op) positions that contain the terms "trend", "trend analysis" and/or "innovation" in the job title or description have increased from 165 to 330.

FIGURE 1: Total Co-Op Positions Available Containing the Terms "Trend", "Trend Analysis" and/or "Innovation" vs. Total Placements.

A Co-Op position is defined by the University of Cincinnati, Division of Experience-based Learning and Career Education as a full-time, full-term, alternating, paid, industry-relevant work experience that is integrated into an academic program of study. The University of Cincinnati is on a "trimester" calendar where both academic and Co-Op semesters are scheduled as January-April for Spring term, May-early August for Summer term, and late August-December for Fall term.

In analyzing trend Co-Op positions, all majors (Fashion Design (FASH), Industrial Design (ID), Graphic/Communication Design (GRCD)) are seen as relevant by employers. DSGN indicates a position where an employer has indicated that all School of Design majors are relevant. However, fashion design is the only major where Trend Forecasting courses are mandatory. This potentially indicates an unmet employer demand for Trend Forecasting education in majors where that content is not currently present.

With the exception of the Fashion Design major, other majors have consistently more positions offered than students who secure positions. In Graphic/Communication design, which has the highest recruitment for trend-related positions, attainment of positions averages to just over 57% across the examined semesters while number of total positions continues to steadily increase. In Industrial design, attainment of positions averages to just over 64% across the semesters, with total positions steadily

increasing. In Fashion design, attainment has remained consistently high, however total number of positions, especially over last two years has significantly increased. Not reflected in the table, is that these positions are targeted to multiple majors, so a single position could be open for applicants across all three majors.

TABLE 1: Percentage of Trend Co-Op Position Attainment by Major

Year/Semester	*Total positions available to GRCD*	*Percent of positions secured by GRCD*	*Total positions available to ID*	*Percent of positions secured by ID major*	*Total positions available to FASH*	*Percent of positions secured by FASH major*
18/Fall	134	52%	102	67%	78	119%
18/Summer	158	30%	103	30%	45	60%
18/Spring	134	69%	96	66%	42	112%
17/Fall	109	64%	78	72%	39	108%
17/Summer	106	37%	82	44%	37	76%
17/Spring	87	92%	72	93%	29	172%
16/Fall	77	57%	56	80%	20	160%

This leads to the first insight in changing the present Trend Forecasting curricula: Trend Forecasting courses should be intradisciplinary and available to all design majors

Assessing Design Innovation Industry for Insights

To set the foundation present day Trend Forecasting practice, for the purpose of design innovation, qualitative semi-structured interviews were conducted with industry experts to garner their insights on the future of the industry and requirements of students to participate in design innovation. Interview participants represented domestic and international trend, strategy, and design firms and included representatives from Batterii (Cincinnati, Ohio), Cassandra Speaks (NYC, NY), Doneger Group (NYC, NY), Hyperquake (Cincinnati, Ohio), Institute for the Future (Palo Alto,CA), LPK (Cincinnati, Ohio), Landor (Cincinnati, Ohio), Livewell Collaborative (Cincinnati, Ohio), R/GA (NYC, NY), The Future Laboratory (London, UK), Trend Union (NYC, NY), WGSN (NYC, NY), in addition to representation from one global corporation (Whirlpool (Chicago, IL)). Practices in terminology, team organization, and use of trend forecasts in industry have shifted and indicate that the role of the professional forecaster is expanding beyond solely thinking about future trend trajectories to include active involvement in education (what is the forecast) and translation (how to use the forecast) for a wide variety of audiences. Even terminology used to express the role of Trend Forecasting methodology in industry focuses on active statements: implicate, activate, translate, innovate.

This leads to the second insight in changing the present Trend Forecasting curricula: Trend Forecasting courses should be treated as design studios, as opposed to lectures, to better reflect the active requirements of this practice in industry.

Further, industry interview revealed that the application of trend forecasts is shifting as well. Across all interviews, industry stakeholders repeatedly acknowledged the role foresight plays in anticipating and acting for future scenarios. The term foresight can be understood as insights from the future and was often a synonym for trend reports or used to qualify and validate trend forecasts. Deeper analysis of this particular shift in Trend Forecasting practice, outlines an interconnected relationship between trend

forecasts, resulting foresight, and foresight translation. In effect, foresight is the essence, or DNA, of a forecast that enables effective translation to design innovations.

This leads to the third insight in changing the present Trend Forecasting curricula: The future of Trend Forecasting no longer stops at the creation of a trend forecast. Therefore, the Trend Forecasting methodology, as taught in the School of Design, must evolve to include active translation and application of foresight.

PROGRAM CURRICULA INNOVATION CONCLUSIONS

This point to a clear necessity to evolve current Trend Forecasting curriculum to: be more intradisciplinary across design majors; be an active, studio-based course; actively relate forecasts and foresight to translation. With a long-standing reputation for integrating industry practice and academic theory, it is critical that the Trend Forecasting curriculum, in particular, be continually reevaluated and evolved, as the design industry evolves, so that School of Design students are well equipped for the future of their industry.

Scaled Curricular Interventions

It is illogical to expect that all design curriculum or industry innovation efforts should stop so that parties can learn, or relearn, an evolved methodology. This is why it is necessary to present agile, scaled interventions that address the required level of learning (basic, intermediate, or advanced), offer a variety of formats that can be integrated to existing curricular timelines, and construct a visual reference for where a student is situated in their level of learning relative to the larger curricular structure.

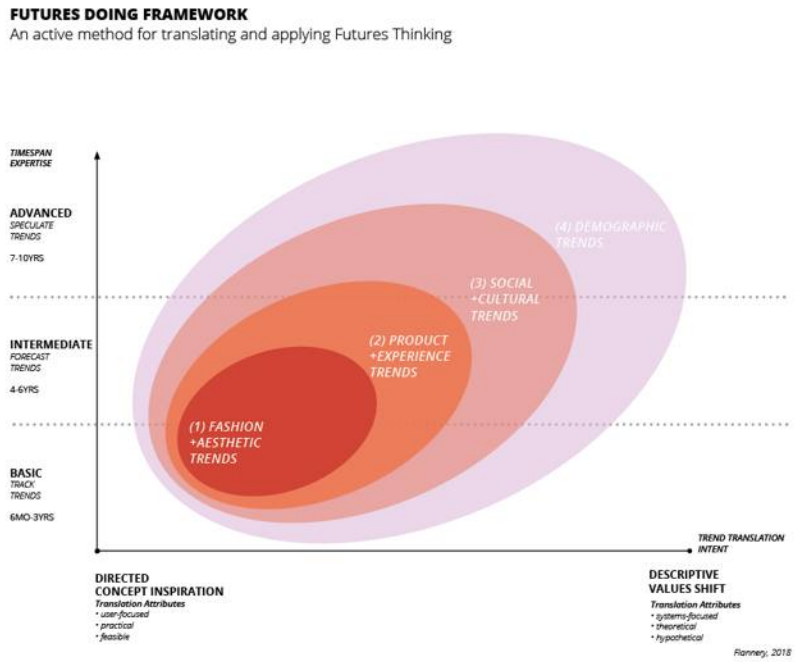

FIGURE 2: Futures Doing Framework

Futures Doing Curricular Intervention

For illustration, a basic level intervention in a one-day format using the above Futures Doing Framework would be structured as:

One-Day Futures Doing Workshop Summary

Actively practice trend forecasting methodology to identify emerging trends and translate foresight into future-ready concepts. Collaborate with others in intradisciplinary team sprints, craft compelling future scenarios, and design with foresight in mind. Become a future-focused designer poised to lead industry evolution.

Learning Objectives

- Critical evaluation of multiple types of data to develop trend forecast
- Work in intradisciplinary team to become working-experts in area of trend forecast
- Informed ideation for future user/scenario using trend foresight

Outcomes

- Demonstrate ability to synthesize multiple forecasts into credible and compelling future scenario
- Identify, translate, and apply foresight using Futures Doing framework
- Articulate impact of trend forecast to design action

Timeline of Workshop

1:00 - Kick Off: Introduce workshop focus and outputs; present a practical approach to trend forecasting methodology and introduction to actionable trend forecasting framework (Futures Doing framework)

2:00 - Futures Research: In groups of 2-3, using a pre-determined focus area, develop future-forward bibliography and collect fast data, slow data, disruptive data relative to focus area

3:00 - Refine Research: Document and cluster relevant, credible, and emergent evidence into sub-themes aiming for at least 2 well-defined sub-themes per group; Document macro insights and knowledge gaps of sub-themes

4:00 - Reassess Research: Conduct second round of search/research, analysis, and synthesis based upon identified knowledge gaps; enhance or deprioritize sub-themes based upon expanded future-forward knowledge

5:00 - Develop Forecast: Plot macro-insights and sub-themes to Futures Doing framework; Articulate trajectory and evolution of themes from nearest trend territory to furthest. Express through visual, verbal, written, and/or physical artefacts

6:00 - Frame Future Scenario: Using framework as guide, distil actionable principles of the forecast (foresight) and evolve into a future scenario that illuminates a day in the life of a target user using WWWWWH (who, what, where, when, why, how) prompts

7:00 - Foresight Translation: Referring to foresight and using key features of the scenario, develop foresight design tool kit to set design requirements of scenario; Guided if/then brainstorming using scenario and foresight toolkit to translate to future-focused concepts for target user

8:00 - Implication Reflection: Active reflection on impact of future scenario, foresight toolkit, and concepts to individuals in session (implications) - How does this future scenario implicate changes to design, our target user?

ADDITIONAL CONSIDERATIONS

Future work will be undertaken to test the impact of these revisions to student attainment of innovation and trend-based roles in industry. Following Spring 2019 pilot start, review quantitative job placement data for Summer 2019 through Summer 2020 which would contain three semesters of pilot data. Qualitative industry review and insight should be gathered throughout to ensure that the teaching of this practice can keep pace with the future of its industry, as now identified, and in order to meet future employment needs.

Trend forecasting tells us that the only thing constant, is change. If we want design students to be prepared for the future of their industry, it is incumbent on us as educators to make changes today.

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The deciding parameters that influence business students' selection of internships: An empirical analysis of students and company representatives' views and experiences

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ABSTRACT

The paper studies the deciding parameters that influence business students' selection of internships in Germany. The findings are based on literature research and a survey amongst students and company representatives and asks to rate the importance of 24 different aspects of internships. The benefits and negative impacts of internships on students, companies and universities are discussed in detail. The results of different demographic groups are compared:

- Results of the actual student survey and a similar survey carried out five years previously.
- German and international students
- Students and recruiters with regard to the importance placed on the different aspects of internships

The findings from the research suggest that companies (e.g.) seem to have little knowledge of what is important to students and they overrate themselves in nearly all aspects of the internships.

Keywords: Internships, Determinants, Survey, Recruiters, Germany

INTRODUCTION

Internships are an essential part of the studies of many students in different subjects in many countries. Research on an international level has identified three stakeholders as the beneficiaries of internships: students, employers, and higher education institutions (Coco, 2000; Divine, Linrud, Miller, & Wilson, 2015; Gault, Redington, & Schlager, 2016). A typical internship program has four components: (a) a specific number of hours, (b) a paid or unpaid work component, (c) school credit and (d) oversight provided by a faculty coordinator and a corporate counterpart. (Gault et al., 2016) All these components are available for an internship in the dual degree program of the ESB Business School, Reutlingen, Germany, in the International Management Double Degree International Management program. It is highly important that the company truly understands what aspects of the internship are highly valued by students and how well their internship programs are carried out to satisfy students with regard to these aspects.

BUSINESS INTERNSHIPS IN GERMANY

There are various types of business internships in Germany; pre-study internships (*Vorpraktika),* main internships *(Hauptpraktika)* and recommended voluntary internships (*Empfohlende freiwillige Praktika)*. Main internship or mandatory student internship with university is a subject relevant internship that takes place at a prescribed time for a specified minimum duration according to the internship regulations of the university. This can take the form of a Praxis-semester, which can last between 19 and 26 weeks, is considered an exam component and therefore it is not mandatory to pay social security contribution. (Schade, 2012) With regard to remuneration, there are considerable differences depending on the type of internship. Pre-study internships are usually not compensated, but even with mandatory student internships employers are not obliged to pay. (Deutscher Akademischer Austauschdienst, 2018)

THE GERMAN EDUCATION SYSTEM

Germany has a differentiated school system that puts students on academic versus non-academic tracks at the age of ten. (McElvany & Holtappels, 2013). There are three types of secondary schools in Germany, the Hauptschule (Secondary School), the Realschule (Middle School) and the Gymnasium (High School).

The German education system focuses on creating a skilled workforce. The figure below indicates how internships are already mandatory in the German System at early stages in the school system in Germany. (Hilpert, 2012).

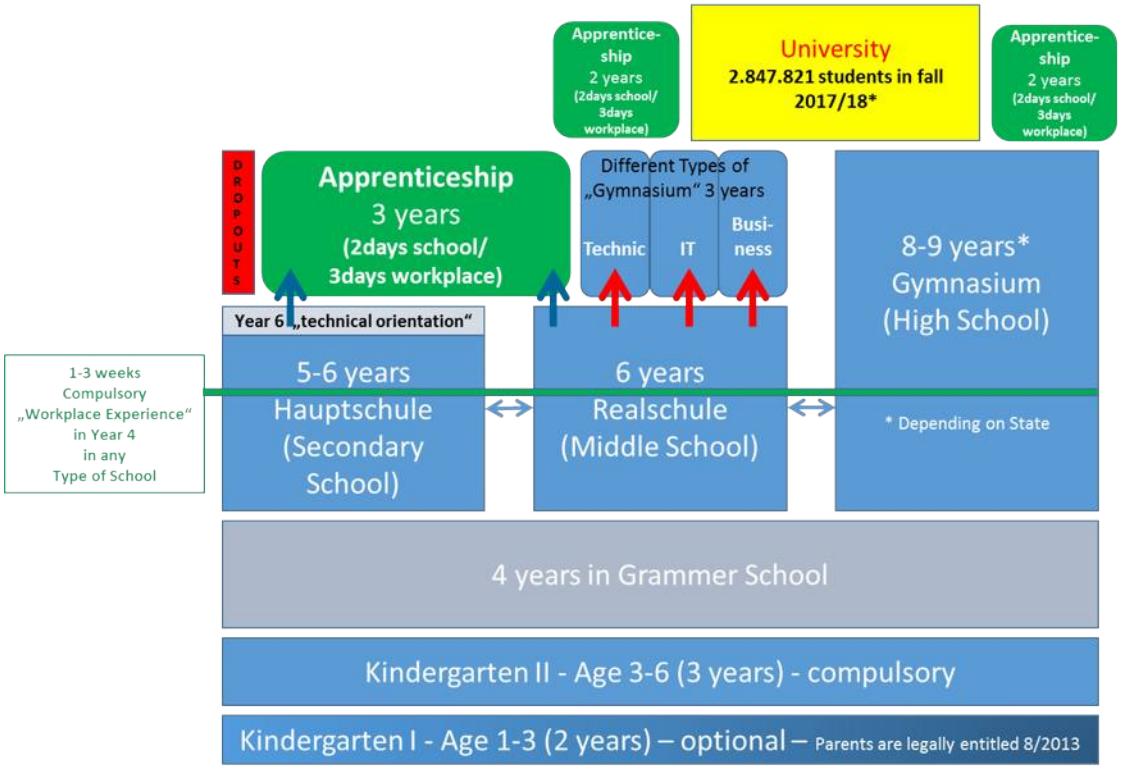

FIGURE 4: The German School System - creating a skilled workforce (Hilpert, 2012)

One of the ways Germany has addressed the issue of the skill shortage arising due to the aging population is by encouraging international students to study in Germany. Offering international students tuition-free degrees was considered one possible solution to the problem. (Noack, 2017) Germany continues to build on its international position as a major study destination as international student numbers in Germany increased by more than a third (roughly 36%) between 2012 and 2016. The 2017 report reinforces Germany's position as the sixth-leading global study destination after the US, UK, Australia, Canada, and China. (ICEF Monitor, 2017).

BENEFITS FOR STUDENTS

Internships provide a wide variety of benefits to students. Internships are considered a key strategy for developing employability capabilities in students and increasing their future job prospects (Freudenberg, B., Brimble, M., & Cameron, C., 2011). It is thought that internships boost students employability prospects by enhancing skill outcomes (Jackson, 2013) Internships are also a valuable learning experience (Cook, Stephen Parker, & Pettijohn, 2004). Students with work experience such as an internship can also tend to have higher starting salaries (Coco, 2000; Gault et al., 2016; Pianko, 1996; Taylor, 1988) and overall better job satisfaction (Knouse & Fontenot, 2008; Taylor, 1988) compared with students who do not complete internships. One of the main benefits of internships for the student is that it makes him/her more employable and enhances his/her future career prospects. (Callanan & Benzing, 2004; Knouse, Tanner, & Harris, 1999; Taylor, 1988). Internships have become the way in which graduates acquire and demonstrate work-readiness to potential employers (Chillas, Marks, & Galloway, 2015)

BENEFITS OF INTERNSHIPS FOR BUSINESSES

Recruitment practices in most companies follow a talent pool strategy: the company recruits the best people and then places them into positions rather than trying to recruit specific people for specific positions. (Stahl, Günter, & Björkman, 2012) A study carried out by (Winterhager & Krücken, 2015) detected an increasing relevance of recruiting graduates through internships, student jobs and dual study programs. Companies place a high importance on soft skills such as communication, teamwork, adaptability, problem solving, leadership, critical observation, interpersonal skills, time management and conflict resolution. Internships enable students to develop these skills in practice. (Freudenberg, B., Brimble, M., & Cameron, C., 2011; Jackson, 2013; Molseed, Alsup, & Voyles, 2003) Internships ensure future employees have the required competencies and know-how as well as the experience of the professional work environment.

APPROACH OF THE SURVEY

This Survey builds on the research carried out by Scheidt in 2012. He assessed 24 aspects by students of the ESB Business School on their importance in selecting for an internship (Questionnaire Appendix 1 – see also Figure 2). Scheidt divided the different aspects/ determinants into four groups of macro factors; the emotional aspects, the team and culture, tasks and responsibilities and framework. The findings of Scheidt's survey were published in 2014. The diagram below shows the adapted structure of the 24 factors. Scheidt's research shows that there are significant differences between students assessing the importance of the 24 parameters depending on the subjects they study (e.g., Business,

Natural Sciences). In this paper only business internships are studied with the aim to comparing and contrasting various demographic groups of students.

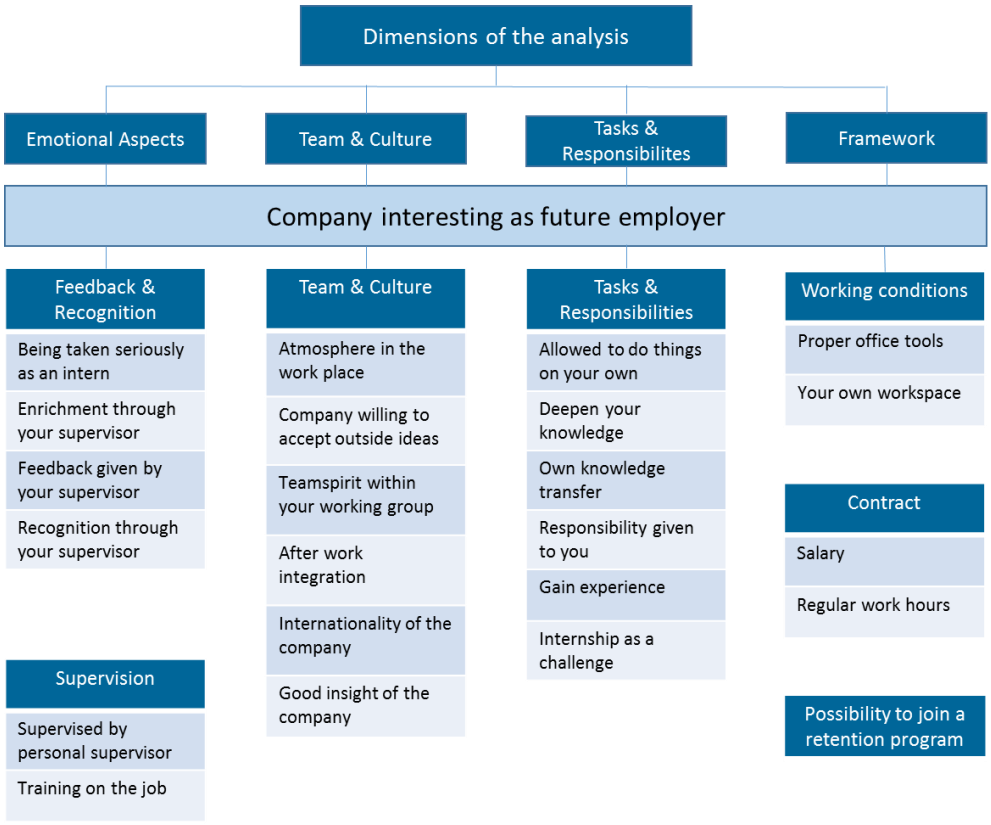

FIGURE 5: Determinants influencing the success of internships (Hilpert & Scheidt)

Development of the Survey

As discussed a survey regarding internships using the same questionnaire (Appendix 1) had already been carried out by one of the authors and Scheidt for the survey "Praktika als Instrument der Rekruitierung und Retention von High Potentials der Generation Y" (Scheidt 2013). The same questionnaire was used for the students of ESB and the company representatives in 2017 in order to accurately compare and contrast the results with those of the students and company representatives surveyed in 2012.

The data from the 2017 student survey (90 internships) were compared with the data from the 2012 survey (107 internships).

The results of this data collection in 2017 from the company representative survey (35 company representative at the 2017 "Firmen Forum" – a recruiting event at ESB Business school), however, were finally combined with the data collection carried out by Scheidt at the "Firmen Forum" 2012, at which time 29 company representatives participated as statistics showed no significance. The total data set of company representatives amounts therefore to 64 subjects.

Design of the Survey

For the student survey the students had select an answer for differentiation criteria about general information of the internship such as

- Which University of Hochschule Reutlingen IPBS network they were recruited through
- Length of the internship
- Size of the company according to number of employees
- Faculty of the graduate internship
- Industry of the company

Then the students had to indicate before they started their internship how important the 24 aspects/parameters of an internship are to them. After having finished their internship they had to rate their experience(s) based on the same 24 aspects/parameters. The company representative survey the respondents had to make assessments about what aspects/parameters they consider important to students. They would evaluate the levels of fulfillment of those expectations. A 11-point Likert scale was used consistently to obtain an uniform assessment (Likert 1932). The Likert scale, which was developed by the psychologist Rensis Likert, captures the intensity of participants' attitudes and feelings towards given items (Cross 2005)..

ANALYSIS OF RESULTS OF THE SAMPLE

This study compares the results of various demographic groups with regard to the importance placed by them on aspects of the internship as well as the level of satisfaction perceived by the respondents to the same aspects of internships. A double-sided T-Test was applied.

Comparison of results between the 2017 and 2012 student survey

The students interviewed in 2012 and 2017 studied until the 7th semester at all partner universities involved followed almost identical syllabi. It should be expected that only a few parameters of the 24 examined parameters have shifted in importance over time.

However, when looking at the data of the 2017 student survey and 2012 student survey, there are some statistically significant differences with regard to the importance students place on different aspects of the internship such as *Contract*, *Supervision* and *Team & Culture*. Interestingly, despite only a five-year gap between the surveys there are some significant differences across certain parameters.

Contract

Under the dimension, *Contract* there is a significant difference in *Salary* and *Regular Work Hours.* Students place a high importance on salary. Traditional benefits, salary and health insurance ranked most important among Millennials' job considerations. (Brown, 2009). A study found that Generation Y to which students in both surveys belong ranked Salary level the highest when it comes to the most attractive element of job rewards and benefits (Hays, 2013).

TABLE 5: Contract.

Parameter: importance				
Absolute				
Aspect	Group		Significance	Level
	2017 all Students	2012 All Students		
Salary	7.54	6.41	YES	***
Regular work hours	7.45	6.56	YES	***

Students seek a career whereby they can contribute to society and enjoy a full and balanced life (Allen, 2004) as well as meeting personal goals (Eisner, 2005). Work/life balance may also reflect a desire for work and play, more than a need to accommodate juggling family and work/life (Schweitzer, & Lyons, 2010) This will have important implications for professional services firms in recruiting and retaining interns and future employees. (Smith, 2010)

Supervision

The 2017 students place a higher importance on the aspects of *Being Supervised by personal supervisor* and *Training on the Job*.

TABLE 6: Supervision

Parameter: importance				
Absolute				
Aspect	Group		Significance	Level
	2017 all Students	2012 All Students		
Supervised by personal supervisor	8.33	7.50	YES	***
Training on the job	7.96	7.45	YES	**

Researchers have shown that internship experiences were more valuable when the intern had a mentor. (Callanan & Benzing, 2004) Another study found that the degree to which interns learn and receive mentoring from their supervisors during the internship, influences the interns' job satisfaction, affective commitment to the company, and career attitude and a positive attitude toward the industry of the internship. (Liu, Xu, & Weitz, 2011) A major part of Training in the job involves supervision from

designated trainers or experienced employees who have been properly prepared to deliver structured on-the-job training at regularly scheduled training sessions. (Walter, 2002)

Team and Culture

The mean of the parameter *After work-integration with work colleagues* for all 2017 students was 7.73 compared to the 2012 students mean of 6.90. Students do not want 'colleagues' at work but rather 'workmates' or friends. They do not seek a separation between work and personal life the way older generations do. (Landrum, 2017).

TABLE 3: Team and culture

Parameter: importance				
Absolute				
Aspect	Group		Significance	Level
	2017 all Students	2012 All Students		
After work-integration with work colleagues	7.73	6.90	YES	***

First Conclusion

The importance of the 24 parameters assessed by the 2017 students compared to the 2012 students' data shows only a few significant differences. One can see that students have become more demanding in the past five years with regard to some parameters. The 2017 students have higher expectations than the 2012 students in particular with regard to work life balance, which we can see in the differences in the Importance parameters of *After work-integration with colleagues* and *regular work hours*. However, the experience rating of most other parameters of both groups was almost identical (Table not shown here).

The little to no difference in the experience ratings of 2017 and 2012 suggests that despite the two groups of students differing with regard to the importance of various parameters of internships, both groups are equally as satisfied/or not satisfied with their internship experience.

COMPARISON OF GERMAN STUDENTS AND INTERNATIONAL STUDENTS

The majority of students surveyed were recruited through ESB, Germany (56%). For this dual management degree all students are required to complete an internship in Germany. There was a significant difference between the German students and students from abroad in terms of the importance students place on the following dimensions Feedback and Recognition, Team and culture and Tasks and Responsibilities.

The research shows that Germans want more feedback and recognition compared to students from abroad. This is in contrast to the findings of (Molinsky, 2013) who says that from a German point of view, employees are expected to do a particular job, and when they do that job, they do not need to be recognized. These positive work behaviors are viewed as normal, rather than extraordinary.

With regard to Team and Culture Students from abroad find *After work-integration with colleagues* more important than German students. They are more concerned with social activities after work. The average importance on this parameter by Students from abroad was 7.76 compared to German students 6.89. Germany has a good reputation regarding atmosphere in the workplace. (Müller-Mundt, 2014).German companies also have significantly shorter working hours. The German Working Time Regulations (Arbeitszeitgesetz) regulate working hours on a legal basis. In Germany, almost 5% of employees work very long hours, less than the OECD average of 13%. (OECD, 2015, pp. 74–75).

TABLE 4: Comparison of German students and students from abroad across importance parameters

Parameter	Importance			
(●) Absolute ( ) Relative	Group			
	German Students	Students from Abroad	Significance	Level
				*_***
After work integration with colleagues	6,89	7,76	YES	***
Allowed to do things on your own	9,06	8,86		
Atmosphere in the working place	8,93	8,59	YES	*
Being taken seriously as an intern	9,20	8,50	YES	***
Company interesting as future employer	7,80	7,55		
Company willing to accept outside ideas	7,13	7,38		
Deepen your own knowledge	8,30	8,35		
Enrichment through your supervisor	8,60	8,05		
Feedback given by your supervisor	8,64	8,53	YES	**
Gain experience	9,04	8,86		
Good insight of the company	8,17	7,94		
Internationality of the company	7,59	7,79		
Internship as challenge	8,43	8,01	YES	*
Own knowledge transfer	7,47	7,63		
Possibility to join retention program	5,90	6,27		
Proper office tools	6,39	6,64		
Recognition through your supervisors	8,21	7,82	YES	*
Regular work hours	6,96	6,97		
Responsibility given to you	9,02	8,60	YES	**
Salary	6,78	7,10		
Supervised by personal supervisor	7,86	7,90		
Teamspirit within your working group	8,50	8,05	YES	**
Training on the job	7,63	7,74		
Your own working space	7,10	7,22		

COMPARISON STUDENTS AND RECRUITERS ACROSS IMPORTANCE PARAMETERS

The company recruiter for Business Studies students should know the importance of the parameters that are decisive for the selection of an internship by the students and know about its importance.

The column *Who S or R* of Table 5 shows which group (S- Students or R- Recruiters) placed more value on the parameter.

The research found that there are significant differences between the students and recruiters. Recruiters place more value on the following parameters under the *Team and Culture* dimension.

TABLE 5: Comparison of students and recruiters across importance parameters.

Parameter	Importance				
(●) Absolute ( ) Relative	Group				
	All Students	All Recuiters	Significance	Level	Who?
				*-***	S or R
After work integration with colleagues	7,27	6,97			
Allowed to do things on your own	8,97	8,41	YES	***	S
Atmosphere in the working place	8,78	9,10	YES	*	R
Being taken seriously as an intern	8,89	9,46	YES	***	R
Company interesting as future employer	7,69	8,13	YES	*	R
Company willing to accept outside ideas	7,25	7,17			
Deepen your own knowledge	8,32	7,94			
Enrichment through your supervisor	8,36	8,05			
Feedback given by your supervisor	8,59	8,48			
Gain experience	8,96	8,81			
Good insight of the company	8,07	8,68	YES	**	R
Internationality of the company	7,68	6,90	YES	**	S
Internship as challenge	8,24	7,29	YES	***	S
Own knowledge transfer	7,54	7,37			
Possibility to join retention program	6,06	6,70	YES	*	R
Proper office tools	6,50	6,22			
Recognition through your supervisors	8,04	8,22			
Regular work hours	6,97	6,92			
Responsibility given to you	8,84	8,29	YES	***	S
Salary	6,92	6,92			
Supervised by personal supervisor	7,88	8,00			
Teamspirit within your working group	8,30	8,51			
Training on the job	7,68	7,89			
Your own working space	7,15	6,40	YES	***	S

Team and Culture

Recruiters place more importance on the following aspects of internships than students do. Atmosphere in the workplace, Company interesting as future employer, Good insight of the company. Recruiters

also consider Possibility to join a retention program and Being taken seriously as an intern more important than students do on average.

TABLE 6: Team and culture

Importance				
Aspect	Group		Significance	Level
	All students	All recruiters		
Atmosphere in the work place	8.78	9.10	YES	***
Company interesting as future employer	7.69	8.13	YES	*
Good insight of the company	8.07	8.68	YES	**

Tasks and Responsibilities

Students place more value on the dimension *Tasks and responsibility* than recruiters do. It is surprising that recruiters do not seem to know the importance the students place on these parameters. The findings show that students want to carry out independent work. Students want more responsibility and they want to feel that the work they are doing is worthwhile. Responsibility appeals to interns as they feel that their work is meaningful and actively contributing to the company. Recruiters do not consider this aspect of internships as important as the students do. Under the parameter, *Internship as a challenge* the mean for students is 8.24 and for recruiters is 7.29. These results are not surprising given that much research indicates that Generation Y students like challenging, interesting and stimulating work. (Sherman, 2014) In addition, *Internationality of the company* and *Your own working space* were not considered as important by recruiters as they were by students. This suggests that companies do not understand the needs of the interns fully.

TABLE 7: Tasks and Responsibilities

Parameter: importance				
Absolute				
Aspect	Group		Significance	Level
	All students	All recruiters		
Allowed to do things on your own	8.97	8.41	YES	***
Responsibility given to you	8.84	8.29	YES	***
Internship as a challenge	8.24	7.29	YES	***

Feedback and Recognition

Generation Y to which all the students of the two surveys belong seek recognition for their accomplishments (Sherman, 2014) and instant gratification rather than long-term investments of time and effort (Southard & Lewis, 2004). So much so that Generation Y is also referred to as "The Trophy Generation" (Tolbzie, 2008) due to the "everyone's a winner" mentality with which they were raised. This need for feedback and praise can be very motivating as interns are willing to put in effort to achieve it.

COMPARISON OF STUDENTS AND RECRUITERS RATINGS

This analysis compares the students' rating of their internships to how the company representatives/ recruiters rate the internship offered by their firm.

TABLE 8: Comparison of students and recruiters ratings

Parameter ○ Absolute ◉ Relative	Rating	Group All Students	All Recuiters	Significance	Level *_***	Who? S or R
After work integration with colleagues		6,63	7,06			
Allowed to do things on your own		7,52	7,94	YES	*	R
Atmosphere in the working place		7,56	9,02	YES	***	R
Being taken seriously as an intern		7,82	8,70	YES	***	R
Company interesting as future employer		6,65	8,49	YES	***	R
Company willing to accept outside ideas		6,44	7,25	YES	***	R
Deepen your own knowledge		7,22	8,06	YES	***	R
Enrichment through your supervisor		7,16	8,00	YES	***	R
Feedback given by your supervisor		7,43	8,22	YES	***	R
Gain experience		8,36	9,21	YES	***	R
Good insight of the company		8,02	8,49	YES	*	R
Internationality of the company		8,22	7,49	YES	*	S
Internship as challenge		7,46	8,02	YES	*	R
Own knowledge transfer		6,49	7,14	YES	**	R
Possibility to join retention program		5,28	5,92			
Proper office tools		7,09	8,25	YES	***	R
Recognition through your supervisors		7,76	8,16			
Regular work hours		7,54	7,46			
Responsibility given to you		7,83	8,00			
Salary		6,85	7,90	YES	***	R
Supervised by personal supervisor		7,32	8,43	YES	***	R
Teamspirit within your working group		7,25	9,00	YES	***	R
Training on the job		6,95	8,00	YES	***	R
Your own working space		8,06	7,71			

The column *Who S or R* of Table 7 shows which group (S- Students or R- Recruiters) rated the parameter more highly.

Company representatives on average rated themselves higher in almost all parameters of the internships than what the students rated their personal experience of internships. The difference can be explained by the fact that HR managers tend to rate some companies better than they actually do from the trainee's point of view. The findings suggest companies are actually not meeting the expectations of

students with regard to these aspects of internships. Not only do companies not understand the expectations of students but also they are unaware of the discrepancy that exists.

CONCLUSION

The comparison of students surveyed in 2017 vs 2012 resulted in minor shifts in importance of the 24 examined parameters over the 5 years. The 2017 students have higher expectations of internships than the 2012 students. However, the experience rating of both groups was almost identical which suggests that despite the two groups of students differing with regard to the importance of various parameters of internships, both groups are equally satisfied after having been in an internship.

The data show significant differences between the German students and students from abroad in terms of the importance students place on the dimensions *Feedback and Recognition*, *Team and Culture* and *Tasks and Responsibilities*, whereby the Germans found many parameters to be more important.

The research found that students and recruiters show significant differences in how important they considered various aspects of internships. The finding from the empirical research suggest that companies seem to have little knowledge of what is important to students.

Furthermore, the students and recruiters rating of the fulfillment of those aspects through the student's internship experience and through the company representative's knowledge of the internship offered by the company also showed significant differences. Companies overrated themselves in nearly all parameters. A suggestion is that at the end of an internship students should rate the company across the different parameters and give feedback to the company.

RECOMMENDATIONS FOR FUTURE RESEARCH

The results of the present study show interesting results for a small group of students and companies. It would be highly interesting for the companies, are the results found only relevant for ESB Business School Reutlingen, IMX, or are the results generally valid for Business School students? In this context, it would be conceivable to extend the study to other comparable business schools in Germany or even to conduct a study for business school students in internships worldwide.

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APPENDICES

Appendix 1: Questionnaire in German for students of International Management

Bewertungsbogen Praktika – IMX

2	Rekrutiert durch:	9
☐ Student ☐ Studentin	☐ ESB ☐ Breda ☐ USA ☐ Dublin ☐ Krakau ☐ Lancaster ☐ Madrid ☐ Piacenza ☐ Puebla ☐ Reims	

In welchen Unternehmen haben Sie Ihre Praktika absolviert? NAME des/der Unternehmen(s)		NAME Unternehmen 1	NAME Unternehmen 2
Gesamt-Dauer Ihres Praktikums a) Bis 2 Wochen b) 2 – 4 Wochen c) 1 – 3 Monate d) 3 – 4 Monate e) Mehr als 4 Monate	1	Buchstaben hier eintragen oder Buchstaben hier eintragen	Buchstaben hier eintragen oder Buchstaben hier eintragen
Das Unternehmen Ihres Praktikums hatte ... Mitarbeiter a) 1-10 b) 11-50 c) 51-100 d) 101-500 e) 501-1500 f) 1.501-2.500 g) mehr als 2.500	3	Buchstaben hier eintragen oder Buchstaben hier eintragen	Buchstaben hier eintragen oder Buchstaben hier eintragen
Sie waren im Praktikum im Bereich ... a) Buchhaltung/Controlling/Rechnungswesen b) Consulting c) HR d) IT e) Konstruktion f) Logistik g) Marketing h) Mergers & Acquisitions i) Produktion j) Forschung & Entwicklung k) Vertrieb l) andere	7	Buchstaben hier eintragen oder Buchstaben hier eintragen	Buchstaben hier eintragen oder Buchstaben hier eintragen
Die Branche des Unternehmens war... a) Gesundheit b) IT c) Tourismus & Unterhaltung d) Transport/Verkehr e) Maschinen- & Anlagenbau f) Automobilindustrie g) Finanz- und Versicherungswesen h) Energiewirtschaft i) Lebensmittelbranche j) Consulting k) Pharma-/Chemieindustrie l) andere	8	Buchstaben hier eintragen oder Buchstaben hier eintragen	Buchstaben hier eintragen oder Buchstaben hier eintragen

0 Punkte = total unwichtig bzw. schlecht erfüllt 10 Punkte = ganz wichtig bzw. hervorragend erfüllt	Wichtigkeit für mich Punkte von 0 - 10	Erfüllungsgrad durch die Unternehmen Punkte von 0 -10	
Dinge tun dürfen /Handlungsmacht			
Integration nach Arbeitsende durch Mitarbeiter			
Atmosphäre/Klima im Unternehmen			
Als Praktikant ernst genommen werden			
Unternehmen interessant als zukünftiger Arbeitgeber			
Offenheit des Unternehmens für Ideen von außen			
Wissen vertiefen			
Förderung durch Vorgesetzte			
Feedback durch Vorgesetzte			
Praktische Erfahrung			
Einblick ins Unternehmen bekommen			
Innovationsfähigkeit des Unternehmens			
Praktikum als Herausforderung			
Wissen umsetzen			
Möglichkeit der Aufnahme in ein Bindungsprogramm			
Arbeitsplatzorientierung			
Anerkennung durch Vorgesetzte			
Angemessene Arbeitszeiten			
Verantwortung übertragen bekommen			
Höhe der Bezahlung			
Betreuung durch einen Ansprechpartner			
Teamgeist in Ihrer Arbeitsgruppe			
Einarbeitung ins Arbeitsgebiet			
Eigener Arbeitsplatz			

Appendix 2: Questionnaire for company representatives

Evaluation Praktika – Partner Unternehmen - FiFo

2 NAME Ihres Unternehmens ☐ männlich ☐ weiblich		
Bitte unterstützen Sie Frau Maxwell bei ihrer Bachelor-Thesis		
Danke		
Prof. Dr. Dörner Hilpert		
Ihr Unternehmen hat Mitarbeiter: 3 a) 1-10 b) 11-50 c) 51-100 d) 101-500 e) 501-1500 f) 1.501-2.500 g) mehr als 2.500		
Ihr Unternehmen gehört zu folgender Branche: 8 a) Gesundheit b) IT c) Tourismus & Unterhaltung d) Transport/Verkehr e) Maschinen- & Anlagenbau f) Automobilindustrie g) Finanz- und Versicherungswesen h) Energiewirtschaft i) Lebensmittelbranche j) Consulting k) Pharma-/Chemieindustrie l) andere		

0 Punkte = total unwichtig bzw. schlecht erfüllt 10 Punkte = ganz wichtig bzw. herausragend erfüllt	Wichtigkeit m.E. für Studenten Punkte von 0 - 10	Erfüllungsgrad durch unser Unternehmen Punkte von 0 -10	
Dinge tun dürfen /Handlungsmacht			
Integration nach Arbeitsende durch Mitarbeiter			
Atmosphäre/Klima im Unternehmen			
Als Praktikant ernst genommen werden			
Unternehmen interessant als zukünftiger Arbeitgeber			
Offenheit des Unternehmens für Ideen von außen			
Wissen vertiefen			
Förderung durch Vorgesetzte			
Feedback durch Vorgesetzte			
Praktische Erfahrung			
Einblick ins Unternehmen bekommen			
Internationalität des Unternehmens			
Praktikum als Herausforderung			
Wissen umsetzen			
Möglichkeit der Aufnahme in ein Bindungsprogramm			
Arbeitsplatzausstattung			
Anerkennung durch Vorgesetzte			
Angemessene Arbeitszeiten			
Verantwortung übertragen bekommen			
Höhe der Bezahlung			
Betreuung durch einen Ansprechpartner			
Teamgeist in ihrer Arbeitsgruppe			
Einarbeitung ins Arbeitsgebiet			
Eigener Arbeitsplatz			

Perceptions of the challenges of internships in undergraduate business education

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ABSTRACT

A single case study was used to examine the challenges of internships in undergraduate business education at an AACSB accredited business school located at a Research 1 university in the United States. Internships are the dominant form of experiential learning (or learning by doing) used within the college under study and the "preferred method of business schools worldwide to give students practical experience and help them transition to the real world" (Kosnik, Tingle, Blanton, 2013, p. 616). However, a review of the literature showed that funding, administration, quality and quantity of internship experiences, and legal issues are among the top challenges that internship programs face (Moorman, 2004; Sattler, 2011; Stirling, Kerr, MacPherson, Banwell, Bandealy, & Battaglia, 2017). Research Question: Based on the perspectives of administrators, employers, and students, what are the challenges of internships in undergraduate business education at the institution under study? Research Method: This article presents a qualitative, single case study exploration of the challenges of internships in undergraduate business education using multiple data sources – 14 individual interviews, 1 focus group, and several document reviews. The researcher used pseudonyms to protect the identity of the research participants. Results: The results of this study revealed that despite challenges, internships have not lost their significance in undergraduate business education.

Keywords: Experiential Learning, Career Development, Professionalism, Higher Education

INTRODUCTION

Internships, a form of experiential learning, have become a common feature in undergraduate business programs (Hergert, 2009; Knouse & Fontenot, 2008) with 92% of business schools offering some type of internship experience (Coco, 2000). Since the Association to Advance Collegiate Schools of Business (AACSB) recommended to increase experiential learning in business education, internships have played a significant role in addressing this directive (Hergert, 2009). In recent years, employers have expected interns to come into the workplace trained while students expect employers to provide the training (Gault, Redington, & Schlager, 2000, Hurst & Good, 2010). With this knowledge, academia has recognized that students with real-world work experience are more desirable to employers because they often require less training and less supervision (Birch, Allen, McDonald, & Tomaszczyk, 2010; Gault et al., 2000; Hurst & Good, 2010; McDonald, Birch, Hitchman, Fox, & Lido, 2010). These findings have elevated internships as a necessary component in the undergraduate business curriculum with more business schools increasing their focus on various internship forms (Birch et al., 2010; Gault et al., 2000; Hurst & Good, 2010).

Knouse and Fontenot (2008) found that while internships enhance employability and allow interns to gain both work and organizational learning, they can be improved with clearer expectations, more

hands-on experience, and more involvement from both students and employers during the internship development process. "The value of the internship will be maximized if educators can provide the appropriate structure and integrate the experience with the academic background of the student" (Hergert, 2009, p. 12). Business schools are constantly trying to attract the best students and develop relationships with top companies (Gerken, Rienties, Giesbers, & Konings, 2012). Therefore, improvements in the effectiveness of internships can provide significant benefits not only to the students but employers and business schools alike.

Benefits and Limitations

Internships allow students to immerse themselves into an organization's culture, participate in realistic tasks, gain insight into career choices, prepare for future employment, gain an individualized experience, and provide motivation to remain in a chosen career field (Divine, Linrud, Miller, & Wilson, 2007; Kosnik, Tingle, & Blanton, 2013). Internships also help students develop skills in judgement, integrity, trust, and collaboration while promoting the development of moral values (Kosnik, Tingle, & Blanton, 2013). Gault, Redington, and Schlager (2000) found that interns have greater job satisfaction and also have more leverage to request a higher salary.

While the benefits are noteworthy, it is important to identify some of the limitations that internships pose for students and institutions. Among those include (a) an extensive time commitment, (b) logistics and location, (c) placement, (d) costs, (e) variableness in the quality of the experience, (f) limited integration with business curriculum, (g) unstructured learning experience, (h) incomplete learning cycle, and (i) less conducive to teamwork (Kosnik, Tingle, & Blanton, 2013). Requiring students to participate in an internship would require administrative expertise, a large network of employers (Divine, Linrud, Miller, & Wilson, 2007), and a dedicated staff to coordinate student assignments which could be very costly to "smaller schools and programs, or for schools located in rural areas" (Kosnik, Tingle, & Blanton, 2013, p. 617).

Experiential learning typifies the AACSB directives of innovation, impact, and engagement while providing students with the opportunity for both personal and professional growth (Kosnik, Tingle, & Blanton, 2013). In addition, Generation Y has shown a preference toward experiential learning as an educational tool, therefore, warranting increased attention on this teaching technique to ensure that learning expectations are addressed and met (Kumar & Bhandarker, 2017). With an anticipated 25 million vacant jobs in the U.S. by 2020 (Friefeld, 2013), business schools are finding ways to incorporate creative experiential learning activities that not only enhance soft skills (Alon, 2003; Paul & Mukhopadhyay, 2005; Riddle, 2003) but yield positive employment outcomes for graduates.

CONCEPTUAL FRAMEWORK

To investigate the research question identified, I adopted a constructivist orientation to learning. Constructivists believe that meanings are both subjective and objective. Paul and Mukhopadhyay (2005) note that, unlike the positivist era that dealt primarily in scientific knowledge, constructivist take values into consideration. The constructivist perspective is evident in multiple theories of learning; however, I used work-based learning to assist in my analysis and interpretation of the findings.

Work-Based Learning

Work-based learning often refers to work that occurs in a place of business resulting from a need to resolve a workplace issue (Lester & Costley, 2010). Much of the learning received in the workplace is outside the scope of what higher education institutions traditionally engage; however, when planned and organized it has the capacity to gain value through university involvement (Lester & Costley, 2010). When institutions and employers work together, work-based learning provides an opportunity to create a space for the development of new learning opportunities in the workplace (Boud, Solomon, and Symes, 2001; Roodhouse, 2010). To achieve this goal, institutions will often view work-based learning as a field of study receiving formal accreditation as a university course (Costley, 2001; Roodhouse, 2010). According to Boud, Solomon, and Symes (2001), work-based learning programs in higher education typically share the following six characteristics: (a) a partnership between an external organization and an educational institution; (b) learners are actual employees of the organization; (c) the work performed at the organization is the curriculum; (d) current competencies and desired learning outcomes are identified before the learner begins the process; (e) projects and assignments take place in the actual workplace; and (f) institutions assess the learning outcomes based on a pre-established framework accepted by both the institution and the employer.

Organizations that commit to work-based learning partnerships are typically larger and make a great investment of time and resources to ensure the development of its employees (Boud, Solomon, & Symes, 2001). This type of learning demonstrates a key example of how academia and industry work together to ensure that learners gain skills, credentials, and wages to help them succeed in the labor market (Rodriguez, Fox, & McCambly, 2016). Lester and Costley (2010) found a "growing body of evidence to indicate that work-based learning of various kinds is effective in increasing adult participation in higher education and in developing the capability of individuals and organizations" (p. 567). Therefore, work-based learning provided an ideal framework to analyze how administrators, employers, and students work together to overcome challenges and increase the benefits and intended outcomes of internships in undergraduate business education. When industry and education work together, new knowledge has a platform on which to emerge.

METHODOLOGY

Case studies allow individuals to make meaning of their own experiences. Therefore, I used multiple data sources – 14 individual interviews, 1 focus group, and several document reviews - to verify and confirm my findings.

Research Setting

The institution under study is a large research 1 institution located in the United States with a student population of more than 40,000. During the Spring 2017 semester, 6,359 students were enrolled in the College of Business. I chose this institution because of its current standing as an AACSB accredited business school, its size, and its concentrated efforts to incorporate internships into the curriculum.

Participants

Participants in this study included eight administrators employed within the college that have adequate knowledge of the current internship program offerings; five business students that have recently

participated in an internship experience and received academic credit through enrollment in an online internship course; and six employers that provide internship opportunities to business students within the college. Participation was voluntary using the purposive, or purposeful, sampling strategy.

Procedures

I used the semi-structured interview approach for the individual interviews and student focus group. Semi-structured, or guided, interviews allowed me an opportunity to develop a standard set of questions for each participant while still providing flexibility to modify questions for the purposes of probing more deeply while clarifying key points (Lichtman, 2013; Merriam & Tisdell, 2016). In addition, I collected a variety of documents including the internship course syllabi, student internship policy and procedures manual, employer policy and procedures manual, the college's strategic plan, the employer recruiter guide, and the internship office staff training manual. Hammersely and Atkinson (1983) found that documents provide rich descriptions, are easily accessible, and help minimize ethical concerns.

Data Collection and Analysis

Data collection and analysis occurred simultaneously. By doing so, I was able to minimize the difficulty in deciphering large volumes of material (Merriam & Tisdell, 2016; Merriam, 2009). Interviews and the focus group were audio recorded and transcribed for the purpose of analyzing. Once interviews were transcribed, they were reviewed and shared with each participant for the purpose of member checking. Member checking helps to ensure credibility, trustworthiness, and transparency (Merriam & Tisdell, 2016). Coding was done manually using a notepad and post-it notes. As recurring themes emerged, I also maintained memos to document what was heard, observed, and how the findings were interpreted. By creating memos after each data collection procedure, I was able to compare findings and better prepare for subsequent interviews (Merriam & Tisdell, 2016; Merriam, 2009).

Investigator Position

In this study, I served as a participant observer and the primary research instrument (Merriam & Tisdell, 2016; Merriam, 2009). My belief in the constructivist paradigm allowed me to merge my thoughts with those of my research participants in order to create an interpretation of the findings based on the construction of new knowledge (Merriam & Tisdell, 2016). As I made meaning of the case, I maintained an inquisitive mind and a "high tolerance for ambiguity" (Merriam & Tisdell, 2016, p. 18).

RESULTS

The analysis of administrator, employer, and student perceptions of the challenges of internships in undergraduate business education yielded the following themes: (a) financial constraints impact growth; and (b) access to internships, data, and students should be simplified. This section highlights the findings from each of those themes.

Financial Constraints Impact Growth

Financial constraints were the most pressing concern for administrators, employers, and students regarding internship program growth and participation. The cost associated with internships has been identified nationwide as a limitation that many students and institutions face (Kosnik, Tingle, & Blanton, 2013). Five of the eight administrators interviewed mentioned the need for more financial

resources to hire staff able to support a growing student population. Donald, dean of the college, shared "there's not a single problem in this college I can't fix with money." Jason, associate dean for undergraduate programs, mentioned that an increase in staff is necessary to accommodate any structured internship program with over 6000 students. "We would have to dramatically increase the staff and their limitations of financial and personnel resources to do this," he said. According to Ingrid, an MIS professor, her department would have an internship program specific to her area with its own internship coordinator if money was not an issue. "The more a person is tuned into the content of a major, the better," she said.

All six employers, agreed that more staff would be helpful in their ability to recruit and retain quality interns. Four of the six employers interviewed suggested that more outreach should come from the college to help employers navigate the recruiting process. Paul, a corporate communications and outreach director, mentioned that he has discussed hosting events with the career center where the university invites businesses to campus and shows them how to recruit interns. "Invite companies that represent various industries," he said, "and showcase how you go through the process of recruiting. Really hold their hand through the process." In addition, each of the six employers offered paid internship opportunities and strongly suggested that all employers do the same, when possible. "If you're getting output from an individual, you need to pay them," said Jeffrey. Amanda agreed and shared that if the company is benefiting, pay should be required.

Overall, all employers agreed that financial constraints could have a negative effect on their ability to grow their internship programs and provide students with competitive wages. According to Heffernan (2017), the most beneficial internships can sometimes come at a higher cost to employers because they provide "practical and substantive experiences" along with financial compensation (p. 1786). In return, employers receive access to potential hires that have already completed a comprehensive training program with hands-on experience (Heffernan, 2017).

Each of the students participating in this study had a paid internship; however, when asked if he or she would accept an unpaid experience, all agreed that they would decline. Isabella, an accounting major, shared that her internship was out-of-state and the compensation was a great help in her ability to support herself during the weeks that she was away. Dylan, a sales and marketing major, also participated in an out-of-state experience and shared that if it had not been paid, he would not have been financially able to support himself. Two students questioned whether employers truly value the intern if the experience is unpaid. Christopher, a human resource management major, shared that "employers who don't pay, don't value the position; therefore, it's not worth my time to give my time to your organization." While pay was essential for Dylan's internship participation, he was able to share how the experience itself ultimately outweighed the money that he received. "When I take a step back and look at everything that I learned in terms of professionalism, hands-on skill development, and leadership, the value that I gained far eclipses the money that they paid me that summer," he said. In sum, each student preferred paid internships because they help cover essential costs (i.e., relocation/living expenses, tuition, etc.) and demonstrate that the employer truly values the work that they perform.

Access to Internship, Students, and Data Should be Simplified

Students seek internships, employers seek students, institutions seek data, and the cycle continues. While the need for each is essential, the process to obtain can sometimes be daunting. For example, all students interviewed for this study were critical of the traditional career fair model for finding internships and full-time jobs. Employers felt challenged in their ability to make meaningful recruiting connections within the university environment and administrators were concerned with, both, capturing college-wide internship data and understanding some employer recruitment strategies. Bandow (2015) found that business and academia must work together to see improvements in the overall nature of internship programs.

Three of the eight administrators interviewed saw tracking internship participation as a major challenge facing the college. Matthew, a professor in the management department, shared that, "It's hard for us to have consistency in what the structure of an internship should look like if we don't have good mechanisms in place for tracking." His suggestion to combat this problem was to make internship participation a requirement. "Making it required as part of any type of undergraduate curriculum will force a little bit more structure," he shared. Matthew also argued that tracking internship participation is about more than numbers. "It's also looking at the qualitative elements." He also added that tracking internship participation while gaining qualitative data can help to ensure that students and employers are matched correctly and that our curriculum is relevant. Jason, associate dean, noted that the college can easily track internships for those that register for one of our internship courses but tracking college-wide remains difficult.

Four of the eight administrators expressed concern over recruiting strategies. Frank, a finance professor, and Thomas, a marketing professor, felt that students should get involved in internships as early as possible. "I would say the end of their sophomore year, going into their junior year, if possible," said Frank. Thomas added that the college should do more outreach to first-year students in order to prepare them early with the knowledge they need to secure an internship. "Send them emails and talk to them about the need to do an internship," said Thomas. "We're talking about a change." For two administrators, early recruiting was a major challenge for their departments. Mary, an accounting professor, fears that larger firms will start to recruit earlier than usual causing students to commit to a company without having the opportunity to explore other options. Like Mary, Abigail, a risk management and insurance professor, also finds it challenging when recruiters begin the recruiting process too early. Her department typically hosts recruiting events at the end of February or March. "I've got companies that make their summer internship decisions by October. How do we serve that market? How early can they keep getting ahead because they're competing against one another," she said. Both Mary and Abigail acknowledge that it is great that their interns are securing full-time jobs before they graduate. However, the war over talent can sometimes be challenging in the recruiting process as a whole.

Four of the six employers interviewed felt that recruiting students is challenging for some companies because of their inability to connect with the appropriate persons within the college. Paul, a corporate communication and outreach director, shared that an average business that has not spent the time developing relationships on campus would find recruiting interns to be quite difficult. He said, "a lot of people have told me they don't know where to begin in the recruiting process. I can imagine it's quite

daunting." All six employers advertise their internships by posting positions to the university job board or by making contact with a connection at the university. Other methods of recruiting depend on the types of relationships the company representatives have with the college and/or the overall internship needs of the organization. Regardless of the methods used, five of the six employers agreed that the college could do more to educate employers on internship programs and assist them in gaining access to the students in order to recruit more effectively.

Four of the students interviewed expressed concern over the difficulty of finding an internship. Christopher, a senior human resource management major, shared that he applied for over 500 internships, got 10-12 interviews, and only two offers. "It's really stressful," he said, "because you want to find an internship for what you are studying. Receiving rejection emails and having people not communicating with you was difficult."

For most of the students interviewed for this study, traditional recruitment methods have become ineffective. According to Dylan, a senior sales and marketing major, he was not impressed with the university-wide career fair. "I think that the idea was really great in the beginning, but in my opinion, they haven't adjusted for the massive amount of over-population the school has experienced." Jill, a risk management/insurance and sales major, shared that her department also hosts a separate career fair and she agreed that this major-specific event was most helpful. "I think some majors are ahead of the game on this," she said. Although individualized career fairs within the major are not unique to all departments within the college, each student interviewed felt that it would be helpful if they were a part of the overall recruiting process. "I think we should do this," said Isabella. "There are lines of people at the university-wide career fair and only surface level conversations are taking place. Then your resume goes in a pile." Christopher, a senior human resource management major, agreed and felt that career fairs are not the best places to secure top talent. "I found the internship that I secured and the full-time job that I have accepted through an individual and not a career fair," he said. "I was the one having a conversation and allowing the recruiter time to get to know me and that's how I got my job."

Despite their concern, they all believe that what the college offers in terms of recruitment is invaluable, but may require simplification and personalization in order to increase participation from both students and employers.

CONCLUSION

This study was exploratory in nature, but it helped in my understanding of key challenges related to the college under study and its current internship program. It also provided recommendations that could be used to make improvements and implement new strategies for this institution as well as other colleges and schools of business with similar initiatives.

Findings from this study suggest the need for more funding, easier access to students, and a new approach toward recruitment strategies. However, another common theme that emerged was the need for more communication between academic departments, employers, and students. These conversations have the potential to bring more awareness of issues and a better understanding of best practices. By doing so, a more cohesive internship program can be established that meets the needs of all stakeholders involved. Abigail, a risk management and insurance professor, mentioned that many departments on campus are in silos. "If we were more knowledgeable about what others are doing in

regard to internship development and administration, we could expand opportunities and eliminate the need to always re-create the wheel."

This study supports the importance of internships in undergraduate business education. However, a focus solely on internships in undergraduate business may be too narrow. Should other forms of experiential learning be introduced into the curriculum? Mentorships, service learning, capstone courses, cooperative education, job shadowing, and a curriculum based on entrepreneurship have all been identified as common forms of experiential learning (Govekar & Rishi, 2007; Griffis, 2014; McCarthy & McCarthy, 2006). Through further exploration and more discussion, colleges and schools of business can continue to move forward in helping students gain valuable work experience that will aid in their ability to produce graduates poised for the rigors of today's competitive workforce.

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The integration of the hospitality curriculum in the work-integrated learning placement to enhance knowledge and employability

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ABSTRACT

A key focus of the Cape Peninsula University of Technology (CPUT), as a higher education institution, is to produce employable graduates. Research has shown (McNamara & Ruinard, 2016; McAllister & Nagarajan, 2015) that the integration of the curriculum into a Work-Integrated Learning (WIL) placement is an important aspect in improving the employability of graduates. The purpose of this paper is to discuss whether the required learning outcomes of the CPUT Hospitality Management curriculum are incorporated into the WIL placement in preparation for future employment of hospitality graduates.

This study used a quantitative research approach. Data was collected via online surveys and all responses were anonymous. The study population consisted of 159 hospitality students registered at CPUT in 2017, and 49 hospitality establishments that accepted these students for WIL placements in the same year. Data was analysed using SPSS version 24 and presented with tables and graphs.

The findings revealed that 51% of students identified the link between the learning outcomes of the curriculum and actual work completed during the WIL placement, and that 61% implemented these learning outcomes. This meant more than 40% of students could not identify the learning outcomes.

There is a need for a revised method of integrating the learning outcomes into the WIL placement by improving the WIL preparation classes, and including these learning outcomes in the WIL assessment forms. Although there are students who are able to identify the learning outcomes during their WIL placement, the number is insufficient to meet the expectations of the institution.

Keywords: Curriculum, hospitality industry, employability, work-integrated learning, learning outcomes

INTRODUCTION

There is considerable research in the responsibility of higher education institutions to enhance the employability of students through the development of graduate attributes (Beaumont, Gedye & Richardson, 2016; Knight & York, 2003; McNamara, 2013; Oliver, 2013; Rowe & Zegwaard, 2017). Research has shown that there is a reduction in graduate unemployment in the case of students undertaking WIL placements (Jonck, 2014). Smith and Worsfold (2015) explain that students given the opportunity to work in the "real world" develop skills that enhance their ability to secure employment almost immediately after the completion of their studies. For these reasons WIL has become an

important component within the structures of university education (Jackson & Wilton, 2016; Jacobs & Teise, 2014; McNamara, 2013; Smith, 2012). At the Cape Town Hotel School, (CTHS), a department of the Faculty of Business and Management Sciences at CPUT, the WIL component is embedded as a credit-bearing subject in the National Diploma of Hospitality Management (ND.HM). This means there is a requirement that the WIL subject is assessed according to expected learning outcomes of the subject. Reich, Collins & Bartlett (2016) support this statement, stating that the importance of the assessment of learning outcomes in hospitality programs cannot be underestimated. However, before the assessment can take place, it is important to establish whether the learning outcomes of the ND.HM are incorporated into the WIL placement. Tensions exist between the hospitality industry and higher education institutions regarding learning outcomes, and the focus on management knowledge and operational skills (Jiang & Alexakis, 2017; Nachmias, Walmsley & Orphanidou, 2017). The assessment of WIL also has numerous challenges due to the variable conditions within a work environment which make it difficult to ensure that appropriate and thorough methods of assessing WIL students are used (Ferns & Zegwaard, 2014; Hodges, Eames & Coll, 2014). The purpose of this paper is to discuss whether the required learning outcomes of the CTHS ND.HM curriculum are incorporated into the WIL placement in preparation for future employment of hospitality graduates.

DEFINING WORK-INTEGRATED LEARNING AT CPUT

Because it is an important part of the hospitality qualification at CPUT, it is essential that the concept of WIL is understood. Engel-Hills, Garraway, Jacobs, Volbrecht & Winberg (2010) identified that the Work-Integrated Learning Research Unit at CPUT use the term "work-integrated learning" (WIL) to best explain the integration of the educational requirements of the institution into the workplace-learning module. They define WIL as "an educational approach that aligns academic and workplace practices for the mutual benefit of students and workplaces" (Engel-Hills et al., 2010). Patrick, Peach, Pocknee, Webb, Fletcher and Pretto (2008) consider WIL to be a number of strategic processes that considers a specifically designed Australian curriculum to allow the theoretical aspects to be incorporated into the work environment. Similarly, the Council of Higher Education (CHE) Good Practice Guide defines WIL as "an umbrella term to describe curricula, pedagogic and assessment practices, across a range of academic disciplines that integrate formal learning and workplace concerns." (Winberg, Engel-Hills, Garraway & Jacobs, 2011). Eames and Cates (2004) agree that the purpose of the WIL placement is to integrate learning from the academic environment with learning that occurs in the workplace, and add that the success of this integration is dependent on the curriculum and pedagogy informing WIL programs.

UNDERSTANDING THE HOSPITALITY INDUSTRY

The hospitality industry is an element within the tourism industry (Wood, 2015) and the two industries are often jointly referred to as the hospitality and tourism industry. The crux of these industries is that they are generally service-related, in the sense that they provide a service to guests. According to Walker (2009) hospitality and tourism can be divided into five sub-sections, namely travel and tourism, lodging, assembly and event management, restaurants, managed services, and recreation. Figure 1, adapted from Walker (2009), illustrates examples of the types of service-related sectors found within each section of the industry. The focus of this study is on the lodging sector of the hospitality and tourism industry which encompasses hotels, lodges and resorts. The core purpose of these establishments is to provide

guests with accommodation and, depending on the type of hotel, services such as restaurants, bars, lounges, meeting and convention rooms, health spas, business centers, concierge services, in-room dining and general information services (Walker, 2009).

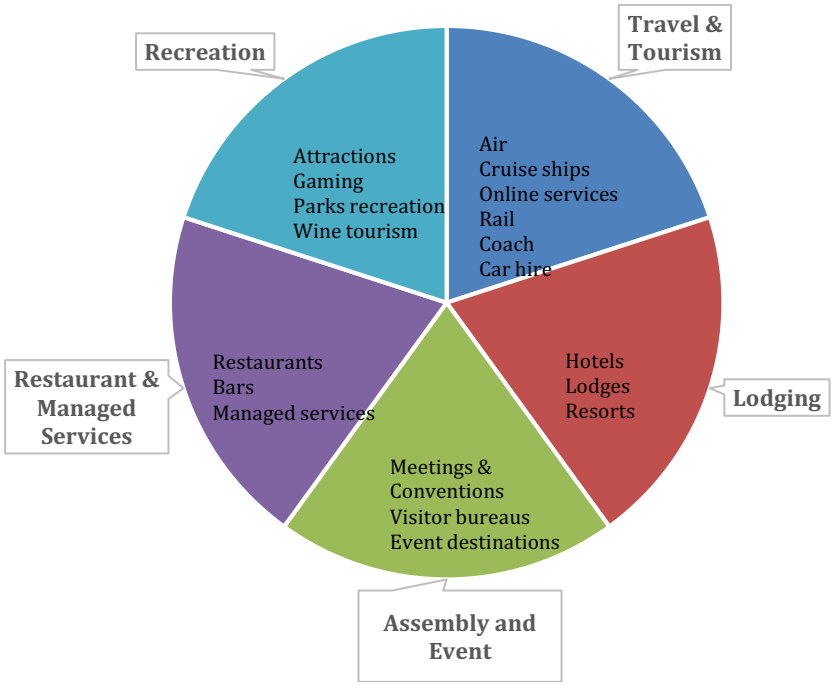

FIGURE 1: The scope of hospitality and tourism (Walker, 2009)

Hotels consist of a number of major departments that operate with revenue and cost centers on a daily basis. These departments are referred to as rooms division, food and beverage, marketing and sales, human resources, financial control, and facilities, and each department is headed by an executive manager and numerous staff to "get little things right all the time." (Walker, 2009). The WIL program has to correlate with the functions of each of the departments to ensure that students are trained in the skills of each function.

CONCEPTUALIZING THE HOSPITALITY CURRICULUM

Numerous researchers have emphasized the importance of developing suitable hospitality curricula that incorporates the competencies required by the hospitality industry (Stansbie, Nash, & Chang, 2016; Jiang & Alexakis, 2017; Leung, Wen, & Jiang, 2018). The curriculum design of a hospitality qualification is important as it has an impact on the graduates who will eventually enter the hospitality industry. A combination of operational and behavioral skills should be implemented in the curriculum design to meet the standards for accreditation purposes (Leung, Wen & Jiang, 2018). According to Wood (2015) the purpose of education in hospitality is to train the front-line workers, like chefs, waiters, receptionists, and rooms staff, although the oldest two hotel schools, namely, the Hotel School in Lausanne in Switzerland, and the School of Hotel Administration of Cornell University, USA, have always focused on teaching the best methods of managing hotels (Wood, 2015). Given the competencies required in the

dynamic environment of hotels in the 21st century, the focus of the curriculum should be on the managerial aspects required to succeed in the hotel environment.

In 2009 a United Nations Educational, Scientific and Cultural Organisation (UNESCO) report by Altbach, Reisberg & Rumbley (2009) discussed the many concerns of higher education in the 21st century. An important element in this report is the massification of higher education, in terms of which the number and diversity of students joining higher education institutions have increased dramatically. This has led to changes in the type of students at universities and, according to Biggs and Tang (2011), the onus is on the university to find ways of teaching and developing student engagement to ensure that all students can achieve the sought-after qualification. This has led to the "student-centered" approach to education, where the emphasis is placed on "what the students are expected to be able to know and or/do at the end of the module or program" (CPUT. Fundani, 2017). The concept of learning outcomes has developed over the years in line with the student-centred approach to learning.

There are various definitions for learning outcomes, but they are all quite similar. Kennedy (2007) gives the following defintion: "Learning outcomes are statements of what a student is expected to know, understand and/or be able to demonstrate after completion of a process of learning". The learning outcomes for a hospitality program incorporate specific skills relevant to the hospitality industry, such as leadership, critical-thinking, quantitative reasoning, ethical reasoning (Reich *et al*., 2016). Graduates are expected to display these attributes on completion of their qualification.

Each subject within the qualification has specified learning outcomes that should be integrated into the learning outcomes of the WIL component. According to Biggs and Tang (2011) there should be no more than five or six learning outcomes per subject. Several topics can be integrated into one learning outcome, since too many learning outcomes makes the alignment of teaching/learning and assessment activities impossible to manage, producing an ineffective learning environment. Biggs and Tang (2011) explain that although different professional education programs may have detailed and specific learning outcomes for WIL placements, there are learning outcomes that are common to the majority of professional programs. These learning outcomes are designed for the student to be able to:

- Integrate knowledge and skills learned in university to real-life professional settings;
- Apply theories and skills to practice in all aspects of professional practice;
- Work collaboratively with all parties in multidisciplinary workplace settings, and
- Practice with professional attitudes and social and ethical responsibilities in their respective professions (Biggs & Tang, 2011).

Whilst working in these departments the student would regularly apply theoretical knowledge acquired from the other core subjects in the curriculum:

- Business communication skills are applied through verbal and written communication; for example, when working as a receptionist the student has to communicate with guests;
- Hospitality management theoretical knowledge is applied as students identify different management styles during their exposure to different managers. Conflict management skills are exercised when students are placed in confrontational situations with guests and staff;

- Hospitality financial management knowledge is applied when the students carry out banking and cash-up duties under the guidance of a supervisor;
- Hospitality information systems knowledge is applied whilst working in reservations, where email and MS Office are integral to the daily work;
- Hospitality Industry Law theoretical knowledge is important in understanding the legislation pertaining to the tobacco, liquor and gaming laws. For example, a guest may request alcohol outside of legitimate service hours; armed with the legal knowledge, the student can confidently deal with the guest's request.

A carefully designed WIL program is needed to integrate the learning outcomes required for each subject.

RESEARCH METHODS

Purpose of the Research

The purpose of this paper is to discuss whether the required learning outcomes of the CPUT ND.HM curriculum are incorporated into the WIL placement in preparation for future employment of hospitality graduates.

Participants

This study investigated whether the 2017 CTHS WIL students could identify the learning outcomes of the ND.HM curriculum during their WIL placement. Data was obtained from hospitality industry stakeholders to establish their understanding of the skills required of graduates to increase their employability. To be able to gain valid and reliable data it was necessary that data be obtained from both students and industry stakeholders involved in the same placement period. For this reason the study population was limited to students and hospitality industry stakeholders involved in WIL placements during the 2017 academic year and can be identified as:

- All the students registered for WIL at the CTHS in 2017;
- All the hotels in the Western Cape that accepted CTHS students for their WIL placements in 2017.

For this study the population of students numbered 159 consisting of 86 second- and 73 third-year hospitality management students at the CTHS registered for the WIL subject in 2017. Because the population size was relatively small and manageable, the entire population of students became the sample, and sampling was not in fact required. All the students who accessed the questionnaire agreed to complete it, but only 75 actually did. Twelve students who formed part of the sample were not eligible to complete the questionnaire as they did not complete their WIL placements in 2017. The sample size of the hospitality establishments was 49, all of which were within the Western Cape and had accepted second- and third-year students for WIL placements in 2017. Of the sample group, seven establishments belonging to the same hotel group, declined to complete the questionnaire due to company policy. Of the 49 questionnaires distributed, 21 were completed.

Methodology

A descriptive research approach was used to allow the delineation of the learning outcomes incorporated in the ND.HM curriculum. This included establishing whether the students understood what the expected learning outcomes were, identified the link between the learning outcomes and the actual work, and could implement the learning outcomes on a day-to-day basis. In incorporating the learning outcomes into the WIL placement, it is important that these outcomes be assessed. Data was obtained to establish whether the assessment of their work performance by the workplace supervisors contributed to meeting the expected learning outcomes. The data collection was done through a quantitative research approach, however a mixed-method approach was used to obtain additional information from industry stakeholders to determine whether there were additional attributes required of graduates that were not highlighted in the questionnaires. The quantitative data was obtained through two different questionnaires distributed to the population groups with each questionnaire compiled of a combination of quantitative questions. The first questionnaire targeted the key stakeholders within the hospitality industry who accepted CTHS students for WIL placements in 2017. The second questionnaire was sent to the second- and third-year students at the CTHS who had completed their WIL placements in 2017. The questionnaires were distributed via email and all data collection was anonymous.

Validity and Reliability

To ensure the reliability and validity of the instruments used in this study, the questionnaires and interview questions were adapted and modified after feedback from a pilot study. The questionnaires and interview questions were vetted by a CPUT statistician and the CPUT Ethics Committee before the fieldwork commenced.

The data was captured and coded using SPSS Version 24. Each question was analyzed and the findings interpreted in relation to the study. In some instances comparative analysis was done between two questions to gain further insight into the outcomes of the data.

RESULTS AND DISCUSSION

Incorporation of the Learning Outcomes in the WIL Placement

The purpose of this study was to establish whether the CTHS students could identify the link between the learning outcomes of the hospitality curriculum and the actual work completed druing the WIL placement. Industry stakeholders were questioned regarding the importance of the assesment process in contributing to student learning. The initial point of departure was to establish whether students actually understood the expected learning outcomes of the qualification. The findings were positive with 89% of students agreeing that they were aware of the learning outcomes, and therefore the expectations of them. However, when questioned regarding their ability to identify the link between the expected learning outcomes and actual work completed during the WIL placement, only 51% of respondents felt they could identify this link, and 61% felt they could implement the learning outcomes on a regualr basis.

Considering that the success of a WIL placement is based on the application, development and consolidation of the theoretical work into the workplace (Hall, Pascoe & Charity, 2017), the feedback

obtained in this study illustrates there is something of a gap in the integration of the theoretical and practical aspects of the WIL placement for some CTHS students. Winberg *et al*. (2011) argue that a student is required to reflect on the experiences gained during a WIL placement and develop their own theoretical understanding. Gannon, Rodrigo & Santoma (2016) similarly claim that WIL is a process of doing and reflecting.

Assessment of Learning Outcomes Through Work Performance

Data was obtained to determine the degree to which the assessment of students' work performance contributes to meeting the learning outcomes of the ND.HM. This feedback was positive where 73% of the students agreed that their assessment process contributed to learning and the meeting of learning outcomes by identifying areas for improvement. The findings from the industry stakeholders correlated with these results, where 90% of the industry stakeholders agreed that assessment of work performance contributed to meeting learning outcomes. WIL links the theoretical outcomes with the practical aspects of the curriculum in a real-world environment (Gannon et al., 2016), and a WIL placement can only be validated if the students achieve the learning outcomes of the curriculum. Smith and Worsfold (2015) stress the importance of "[measuring] both the 'outcomes' of these programs, and the 'processes' by which these outcomes are generated". The WIL component of the ND.HM is the capstone of the qualification, and the questions posed were designed to ascertain whether the students understood the exit-level outcomes of the qualification, and whether they felt that they had achieved these outcomes during the WIL placement.

CONCLUSION AND RECOMMENDATIONS

The learning outcomes must encompass the attributes expected by the hospitality industry and increase the employability of graduates. Although the learning outcomes of the hospitality management qualification are quite specific, in real-world situations they do not seem so clearly defined. The student must learn to identify how certain of the outcomes fit into the daily tasks performed during the WIL placement. For example, the subject hospitality management is a major subject for the ND.HM, yet there is no one specific department where the student would be able to implement the theory learnt in this subject. Rather, the theoretical knowledge of management must be applied across all departments and in a variety of situations. The recommendation is that these learning outcomes are incorporated into the ND.HM. The WIL placement requires the support of the academic supervisor, commencing with the preparation of students for the placement by identifying the skills, learning outcomes, and competencies that they are required to develop (McNamara, 2013). These learning outcomes should be clearly explained to students in classes preparing them for the WIL placement, so that they can from the outset start identifying how they will be implementing their theoretical knowledge in their daily work during the WIL placement. A further recommendation is that these learning outcomes be incorporated into the assessment forms. If this is done, the student can be assessed in terms of achieving a learning outcome. The manager or supervisor should provide feedback to the student, alerting him or her to the areas in which they have reached competence, and to those in which they need to improve. A detailed assessment form specifying the learning outcomes to be achieved could well improve the degree to which students can incorporate the learning outcomes into the WIL placement.

Limitations to the Study

There were some limitations to this study. The response rate from both the students and hospitality industry was just below 50%, which could question the validity of the study. This study was done anonymously, however, after the completion of this study the researcher felt that it would have been beneficial to follow up the questionnaire with qualitative interviews with the student respondents to establish insight to the reasoning for their responses. A further limitation is that the study is limited to one University of Technology (UoT). A comparison study involving the method in which all the UoTs in South Africa integrate WIL learning outcomes into the WIL placement would establish the best method of ensuring learning outcomes are met.

Future Studies

As an integral part of university curricula, the need for future studies in WIL placements is ongoing. The hospitality industry is an ever-changing environment and therefore future studies are required to ensure learning outcomes for the WIL component of the curriculum is meeting the demands of the hospitality industry.

A future study is recommended into assessment of students on WIL placements from the hospitality industry's perspective. The hospitality industry is driven by supply and demand and establishing the best ways to assess the students from their perspective will encourage an improved relationship between the student, the establishment and the academic institution. Technology plays an important part of everyday life. A future study is required to establish ways in which the assessment can be converted from a paper assessment to a digital assessment, a recommendation mentioned by both an industry and student respondent in this study.

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The financial capability center: Experiential education through community engagement

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ABSTRACT

The Financial Capability Center was founded in 2015 by Merrimack College, North Andover, MA, to provide students with experiential service learning opportunities, to advance financial inclusion and capability in the community, facilitate research initiatives, and promote healthier financial behaviors. The program has since offered: internships in financial coaching to students from all majors, bilingual semester-long financial coaching to low-income residents, educational workshops, and tax preparation through an IRS-certified program for community households. Its mission is to advance financial inclusion for vulnerable populations and to inspire college students to be the agents of change. Students gain real-world experience as they are matched with local clients to offer financial coaching to support goal achievement. Community engagement and development is at the heart of the Center's activities. This is reflected in strong partnerships with local non-profits. It earned the 2016 Outstanding Center Award from the Association for Financial Counselling and Planning Education for its "*ability to create accessible financial education and coaching services tailored to the needs of the audience*".

INTRODUCTION

Low- and moderate-income households in the U.S. face significant financial challenges due to low, unpredictable and unstable incomes, poor or invisible credit histories, and limited access to affordable housing and financial services. Financial vulnerability is especially persistent among minority and immigrant communities.

At the same time, college students are exposed to an increasingly sophisticated financial world, rising education costs, and booming student debt. Important financial decisions are made by students without prior exposure to financial education. As a result, college students are also a financially vulnerable population who are not ready to manage the challenges they face while in college and after graduation. In addition to the concern of high student debt, return on investment and the guarantee of employment upon graduation are among the topics concerning college students today. Wyllie (2018) identified seven factors that 80% of students considered important when choosing a college: affordability, availability of a desired program, reputation/academic quality, career outcomes, value of education for cost, feeling of fit, and proximity to home.

College-aged students have changed over time which adds to the challenge of guaranteeing high-quality educational outcomes. Students who are entering college today have little to no part-time work or community engagement experience as compared to previous generations of college-aged students (Twenge, 2018). This presents a new challenge to higher education faculty and administration in

ensuring career preparedness for their students before graduation. Our stakeholders expect nothing less.

In response to this new reality, colleges and universities have begun to transform student services and curriculum. There is both a need and a desire to expose students to multiple experiential learning opportunities over the course of their undergraduate years and across the curriculum. According to Kolb (2015), "In the field of higher education, there is a growing number of educators—faculty, administrators, and interested outsiders—who see experiential education as a way to revitalize the university curriculum and to cope with many of the changes facing higher education today." (pg. 4)

Kolb (1984) views learning as the "process whereby knowledge is created through the transformation of experience" (pg. 38) with each stage being mutually supportive of and feeding into the next. Colleges and universities, now more than ever, are clear on the importance of experiential learning, with these experiences happening both in and out of the classroom. According to McRae, et al (2017), experiential *learning* is defined as, "Hands-on learning occurring in the co-curricular and extra-curricular space." It is "learning that can result from the engagement in an activity."

Experiential learning (EL) is not a one-size-fits-all proposition. The commitment to EL often stems from an institution's strategic plan where the planning is well-thought-out and resources are provided to bolster EL institution-wide. In some instances, EL begins from the ground up, in the classrooms of individual faculty or in a co-curricular program. Other institutions' definitions of EL stem from their mission and/or strategic plan and are likely to be very purposeful in how they define experiential learning.

Research has shown that students learn most when they are more engaged in the experience rather than as passive participants (Sendall, et al, 2016). George Kuh (2008) recommends that all institutions should seek to have all students participate in at least two high-impact activities over the course of their undergraduate experience. High-impact practices are becoming common place across university programs for recruitment and retention purposes and to enhance student success. Kuh (2018), identifies 11 high-impact educational practices for undergraduate student success. They are: first-year seminars and experiences, common intellectual experiences, learning communities, writing intensive courses, collaborative assignments and projects, undergraduate research, diversity and global learning, e-Portfolios, service and community-based learning, internships, and capstone courses/projects.

In order for any experiential learning program to be considered truly experiential, the National Society for Experiential Education (NSEE) recommends following the *Eight Principles of Good Practice for All Experiential Learning Activities* (Eight Principles, n.d.). According to NSEE, "Regardless of the learning activity, both the experience and the learning are fundamental." For this to happen, the NSEE recommends following their 8 principles: Intention; Preparedness and Planning; Authenticity; Reflection; Orientation and Training; Monitoring and Continuous Improvement; Assessment and Evaluation; and Acknowledgment. In the discussion section of this paper, the authors describe how the Financial Capability Center strives to follow these principles.

According to McMurtrie (2018), "Real-world engagement can help promote student success. Research shows that activities such as service learning, study abroad, internships, and collaborating on projects with a professor deepen learning and enhance intellectual development" (pg. 20). For the purposes of this paper, the authors focus on high-impact, experiential learning activities including; community

engagement, service learning, internship, undergraduate research, intercultural learning, and integrative and applied learning.

The American Association of Colleges & Universities (AAC&U) has developed 16 VALUE (Valid Assessment of Learning in Undergraduate Education) rubrics for 16 learning outcomes as part of its Liberal Education and America's Promise (LEAP) initiative. Each rubric was "developed from the most frequently identified characteristics or criteria" of learning (Value Rubrics, 2009). Of the 16 VALUE rubrics, the Financial Capability Center experience places emphasis on civic engagement, integrative learning, and intercultural knowledge and competence.

On the Civic Engagement rubric, AAC&U cites Ehrlich's (2000) definition of civic engagement as, "working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference…" (Civic Engagement, 2009). The Carnegie Classification for Community Engagement defines community engagement as the, "collaboration between institutions of higher education and their larger communities ... for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity" (Community Engagement, n.d.).

According to the AAC&U, integrative learning is "an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus" (Integrative Learning, 2009).

Intercultural knowledge and competence can be acquired by working in service or community engagement with diverse local communities. Bennett (2008) defines intercultural knowledge and competence as, "a set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in a variety of cultural contexts" (Intercultural Competence and Knowledge, 2009). The AAC&U lists diversity and global education as one of its high-impact practices. They emphasize the importance of exploration of other "cultures, life experiences and worldviews" that differ from the students' own, including domestic diversity. This HIP encourages students to explore "difficult differences" such as "racial, ethnic, and gender inequality" (Kuh, 2018).

This paper describes how one program combines several high-impact and experiential learning activities including community engagement, intercultural learning, undergraduate research, internship and integrative and applied learning to foster student growth and community empowerment.

THE FINANCIAL CAPABILITY CENTER

Given the financial challenges faced by both local communities and college students and the increasing demand to expose students to "hands-on" learning activities, faculty from Merrimack College identified the need to create a high impact educational program to serve both populations in a synergistic way. As a consequence, the college opened the Financial Capability Center (FCC) in the fall of 2015 to provide students with experiential service learning opportunities, advance financial inclusion and capability in the community, facilitate research initiatives, and promote healthier financial behaviors. The FCC initially launched a semester-based financial coaching program where students from all majors were trained to become personal financial coaches for clients and staff of local nonprofit organizations.

The FCC expanded its outreach by offering coaching for local high school students transitioning into the workforce or college and by opening free community tax clinics. In the fall of 2016, the program earned the Outstanding Center Award from the Association for Financial Counselling and Planning Education (AFCPE) for "*its ability to create accessible financial education and coaching services tailored to the needs of the audience*". The FCC later replicated its program at the Universidad del Norte in Barranquilla, Colombia, by training a group of faculty, upperclassmen, and financial aid counselors to offer financial coaching to low income freshmen. Most recently, health was added to the high school curriculum and a peer program was initiated to serve vulnerable first year college students.

Since inception, the FCC has trained more than 100 college students as financial coaches, served 275 local clients with financial coaching, helped 122 families with tax preparation, and returned more than $100,000 to the community in the form of tax refunds.

PROGRAM DESCRIPTION

The central activity of the FCC is a semester-based financial coaching program designed to support participants to make meaningful changes in their financial behavior. Financial coaching integrates techniques from the behavioral and financial disciplines to help clients develop the ability to reach their goals. Given the interdisciplinary nature of coaching and the characteristics of the target audience, the program draws from the diverse knowledge and skill set of faculty and students from disciplines such as business, economics, psychology, social justice, education, and world language and cultures, among others. To be trained as coaches, students participate in faculty- and professional-led workshops where they develop coaching, intercultural, and personal finance competences.

After completing the training, students are matched, based on individual characteristics and interests, with local adult and youth clients from the community. Student coaches offer three financial capability workshops to provide clients with financial knowledge and skills and six financial coaching sessions to help clients plan a path for realizing their self-selected goals.

The material covered in the adult workshops include topics such as visualizing and setting goals, money beliefs, managing money, understanding and managing credit, protecting money, and identity theft. The workshops for high school and first year college students focus on setting goals, managing money, financial aid & student loans, credit cards and identity theft.

Coaching sessions follow the *COACH* model used by Neighborworks America. The model includes the following steps to support client behavior change: *C*: Client-driven goal setting—coach guides client to identify the financial goal that matters most to her; *O*: Ongoing Assessment of Current Situation—coach guides client to identify where she is with respect to her goal; *A*: Action Planning—with the support of the coach, client identifies the steps she needs to take to achieve her goal; and *CH*: Checking—client selects mechanisms to keep on track, a timeframe for reaching her goal, and a system to be accountable to the client-coach partnership.

Goals selected during coaching depend on individual client priorities and needs. Most adults focus on paying down debt, rebuilding credit, creating an emergency fund, or saving for a down payment. Youth clients frequently select goals such as saving for a car, saving for college, or opening a bank account.

Students are supported in their coaching experience by faculty, experts in their respective fields and trained to deliver financial coaching for vulnerable populations, FCC staff, financial counselors from

local partners, and financial industry expert volunteers. Most importantly, coaches support each other at biweekly coaches meetings, where they share insights, concerns and lessons learned. Teams of students further support the FCC with management, research, and marketing and outreach responsibilities. Students dedicate 15 hours per week to financial coaching, research, meetings, and center support activities.

CLIENTS AND PARTNERS

Given the financial inclusion mission of the FCC, the program targets financially vulnerable households from the surrounding community. Most of clients are from the City of Lawrence, MA, an immigrant community with a predominantly Hispanic population (79.1%), a median household income of $39, 627, and with 24.2% of persons living in poverty (United States Census Bureau, 2018).

Most of the FCC clients are women (82%) of Hispanic descent (94%). More than half of clients do not speak English and require the support of an interpreter. Seventy percent of the clients have a high school diploma and 13% have a college degree. By program design, all clients belong to low- to moderate-income households. The median household income is $22,410 and 35% of clients have incomes below the federal poverty line. Only 15% of clients are homeowners.

To effectively deliver its services in the community, the FCC partners with local non-profits. The role of the partners is to support outreach and logistic efforts. Most importantly, given the deep roots that local partners have in the community, they also support coaches in their communications with clients and in the acquisition and development of cultural competences and sensitivities. Long term partners are ACT Lawrence (a community development corporation), the Lawrence High School, Bread and Roses Housing (an affordable housing agency) and Merrimack College's Hands to Help (a local resource Center).

RECRUITMENT OF COACHES AND STAFFING

Every semester, the FCC offers a 4-credit elective titled "Fieldwork in Financial Coaching" that also counts as internship. The course is an elective for finance and management students and an open elective for other majors. Students in the marketing team are in charge of recruiting students for the following semester by presenting in classes and organization meetings across campus. Interested students are required to submit a resume and undergo an interview process run by former coaches and staff. Selection is based on past academic performance, interpersonal skills, expressed motivations, and related experience.

The staff is composed of the Founding Director of the Center and Associate Professor of Finance, and two graduate assistants from the M.Sc. in Accounting and the Master in Community Engagement programs. Graduate assistants dedicate 20 hours per week to the FCC for two consecutive semesters. Senior coaches, 3-4 former coaches invited to come back based on their past performance, also support the training of new coaches and have leading roles in the marketing, tax and research teams.

TRAINING OF COACHES

The curriculum includes a personal finance and a coaching component. Students learn age-relevant personal financial management techniques and how to adapt the lessons to the reality of clients. Bi-weekly class meetings, organized in the form of workshops, cover interrelated financial behaviors such

as setting goals, maximizing income, budgeting, spending control, saving, managing debt, etc. The coaching component includes training in listening skills, asking powerful questions, creating awareness, facilitating behavior change, developing cultural competences, and accountability. Students practice coaching techniques between themselves before they meet with clients. Faculty from the finance, management, psychology, health, and world cultures departments participate as co-instructors and guest speakers. Industry and community experts are invited to talk about the target audience and specialized financial topics such as the credit report and score.

Regular assignments are required throughout the course for students to create awareness of and work on their own personal financial values, beliefs, limitations and behaviors before they meet with clients. For example, one assignment requires students to track income and expenses for a month following a weekly budget and report back on the discrepancies between the projected and real budgets. Students then reflect on their spending leaks and set plans to control unintentional spending in the future. Other assignments target the development of communication and facilitation skills necessary for coaching. For instance, in one assignment students are required to videotape a mock coaching session where the coach is only allowed to ask powerful questions (making statements, providing advice, or asking closed questions is not allowed). Students reflect on this experience and report back to the class. The purpose of this assignment is for students to understand the power of being genuinely curious and how asking direct and open-ended questions facilitates communication and connection with others.

Students and senior coaches also have coaches meetings where they share their personal finance progress and that of their clients with other coaches and graduate assistants. The purpose of these informal gatherings is to share insights, lessons learned and concerns that come up during coaching. Students also have formal meetings with the lead course instructor to report on the clients' progress and share concerns. This progress is also recorded in standardized forms every time a coach meets with clients.

Final client reports are assigned at the end of the course. The report includes clients' goals, action plan, challenges they faced with their clients, a summary of the meetings with the client, clients' outcomes, client recommendations from the coach, and coaching outcomes (i.e., what the coach got out of being a coach and part of the program). The purpose of this assignment is for students to reflect on their experience as coach and how it has impacted them at the personal level.

NEW INITIATIVES

Since foundation, the FCC has tested new programs to better serve students and clients. In these initiatives, undergraduate and graduate students have played a pivotal role in the development of ideas, and in the design, implementation and evaluation stages. The innovations are described below.

In order to serve more people and take advantage of client-to-client support, the FCC evaluated a pilot group coaching program. In an interdisciplinary research project with finance, management and psychology faculty, a field-based experiment was implemented to compare the effectiveness of individual and group coaching (Silva et al., 2018). Students leading the groups received additional training and support. Readings regarding group coaching techniques were discussed in coaches meetings. In addition, a co-coach was present during coaching to provide support and observe group dynamics. The results of the study provided support for the effectiveness of group coaching. Students

reported they reflected on their experience significantly more when they were coaching in a group setting. Through more reflective behavior, group coaching helps coaches feel more confident in their abilities (Cockerham, 2011). As a consequence, the FCC has moved to offer coaching in a small-group setting.

Given the interrelations between personal financial and health conditions and outcomes (Marmot et al., 2008; O'Neill 2005, 2015), the FCC partnered with the school of Health Sciences to integrate health into the curriculum. Guided by health and finance faculty, a team of graduate and undergraduate students from both disciplines collaborate to explore the connections between financial and health behaviors.

Finally, the FCC is exploring the implementation of a peer-to-peer financial and health coaching program where freshman experiencing academic or other retention issues are invited to participate as "clients" for a semester. The coaches in the peer program are trained upper-class students. Given the close interaction that coaches and "clients" will have as a result of the experience, the expectation is that the newly created relationships will support the adaptation to college life of the younger students. This model will also help with recruitment, since students that prove to be responsible "clients" will be invited to come back as coaches during their sophomore or junior years.

IMPACT OF THE FCC

In order to measure the impact of the program on financial behaviors and outcomes, both student and adult clients take part in a survey that consists of six validated financial scales adapted to the target audience. Results indicate that coaches and clients benefit from increased financial knowledge and wellbeing and positive behavior change. They also show an increase in self-efficacy and in the ability to cope with money related difficulties.

As part of the course, students reflect at different points in time on their experience. Based on these reports, students perceive an improved ability to communicate with and relate to people from different backgrounds and life experiences. For many students, this is the first opportunity they have to communicate with someone that does not speak English. As noted by one of the coaches, increased cultural sensitivity is an outcome of this program:

> Concluding the program with "J", I developed interpersonal and cultural competences. I was aware of other cultures before the program, but I never took into account or considered that someone like "J" could be struggling to make ends meet here because he had to send so much money home to his parents. The wage gap is so big between the two countries and "J" has to support his family so he does not have a choice on how much or when he sends them money if they are in need. I came into the program thinking the clients would have bad spending habits I did not consider they have important fixed costs that were not being fairly considered.

Students also perceive increased financial awareness regarding their money beliefs, spending habits, and student loans. As one coach reports:

> After going through this course I'm now more aware of how to handle my debt and … Knowing more about my student loans gives me the confidence that I'm fully in charge of my finances and where my money's going. Overall, I am more aware of my current financial situation and can plan for the future so that I can become financially stable.

Coaches usually express a sense of personal satisfaction and increased communication skills:

> ... I really learned to adapt and communicate to my audience, in this case Spanish speaking adults, which has benefited my ability to articulate my thoughts and ideas in ways that are easily understandable. My words are much more concise when I speak, making my voice more impactful.

Finally, most students believe the program opens up career opportunities:

> Being able to work with real clients is something that most college students do not get the opportunity to do. Every time that I mention this program during job interviews, the interviewer is extremely impressed with all that this program offers.

DISCUSSION

The FCC incorporates the Eight Principles of Good Practice for All Experiential Learning Activities, including: 1) *Intention*—all parties involved, students, clients and community partners, know why financial coaching is the experience chosen in this program and the learning and outcomes that are expected to result from it; 2) *Preparedness & Planning*—includes coursework and coach training in personal finance, coaching techniques and cultural competences; 3) *Authenticity*—the coaching experience has a real impact on the life of clients and it is designed in concert with partners that have a deep knowledge of community needs; 4) *Reflection*—reflective activities are weaved into the different phases of the program, starting with self-awareness of students' money beliefs and behaviors and ending with self-reported student and clients' outcomes; 5) *Orientation & training*—background information about clients and community partners is provided before students meet with clients. Community members support the initial training of students; 6) *Monitoring & continuous improvement*—evaluation tools and feedback opportunities are used to monitor the progress of students and clients throughout the program. When changes are needed, these are determined in conjunction with students, clients and community partners; 7) *Assessment & evaluation*—outcomes are measured and program evaluation reports are produced and shared internally and with the community, and 8) *Acknowledgement*—opportunities are created throughout the program for all parties, students, clients and partners, to recognize and celebrate accomplishments.

Regarding the AAC&U Value Rubrics, the authors highlight below three important characteristics of learning: civic engagement, intercultural knowledge and competence, and integrative learning.

Community engagement is at the heart of the program. In addition to directly serving local clients, the program allows the non-profit partners to offer intensive human capital and high impact programs to their target audience without utilizing their limited resources. Partners also gain additional recognition for their services and are able to use impact reports created by students to secure funders' support. There are reciprocal benefits to both the students and the community; the members of the community at-large benefit from the coaches' expertise and the students gain knowledge in personal finance, cultural competence and develop important communication skills.

Students are exposed to a diverse community of people when they work in the field as financial coaches. As a result, students are gaining intercultural knowledge, competence and fluency. These are competency values expressed by the AAC&U and NACE. Soria & Johnson (2017) concluded that, "students who participated in several high-impact educational practices…and courses involving

themes related to diversity or global learning had a significantly higher perceived development in leadership and multicultural competence."

It is important to create a scaffolded approach to learning where students can integrate their knowledge over time, while incorporating curricular and co-curricular knowledge, both within their academic community and in the community-at-large. The program allows for such learning to take place by gradually incorporating knowledge, skills and practice from different disciplines and by allowing experienced coaches to return to the program as senior coaches with advanced responsibilities.

Finally, the FCC incorporates several of the AAC&U high-impact educational practices, including: collaborative projects, undergraduate research, diversity learning, service learning, and internship experience. As an example of a project where these practices are applied, the FCC is currently running a random control trial to measure the impact of coaching on clients' financial wellbeing. Students are trained to support the collection of client data as well as to perform qualitative and quantitative analyses. The assignment requires students to work in teams to generate a program impact report that is shared with the community.

CONCLUSION

The Financial Capability Center is a robust experience that does not fit neatly into one experiential learning category. Providing a transformational community engagement experience for college students is a core part of the program. According to Myers, Myers & Peters (2019), "significant influence" of undergraduate community engagement experiences "persisted into adulthood suggesting that individuals carry their curriculum involvements into their post-college transitions including that of being engaged in their communities." The authors anticipate doing a longitudinal study of students after graduation to measure persistence in community engagement after college.

The work of the FCC in the community, however, has just started. As a case in point, with 24% of families in the neighboring community living in poverty, effective financial capability programs that support the difficult management of scarce resources and provide opportunities for financial inclusion and economic empowerment are more important than ever.

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Pioneering a city student studio: Emerging work-integrated learning environments

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ABSTRACT

This paper describes a pioneering city-centered studio for tertiary students to pursue projects and for the contributing organizations to develop a professional incubator culture and environment. A Polytechnic, a City Council, and a University collaborated together to set up a City Student Studio (CSS) in the central business district (CBD) of Napier, New Zealand as a working studio for students and for downtown businesses to request projects. The space, a vacant retail shop in the center of the city with street-side frontage and pedestrian walk-in access, was partly a city revitalization project (the council perspective), partly a desk-share workspace for Polytechnic and University students, and also served as a service center inviting city organizations to request business and information technology (IT) projects to be undertaken by students.

This venture has allowed students and academic staff to use the CSS as a working environment while working on various small projects that have been offered via the CBD marketing organization. Some students incorporated these projects within their academic projects or internships, while other students have simply taken on these projects as non-credit work experience. The CSS has also provided a free working space for any students who wish to work on their master's thesis, academic projects or simply hang out in a vibrant studio together with other students and industry representatives.

The studio concept adds another component to the strong work-integrated learning (WIL) philosophy and portfolio of the Schools of Business and Computing at the Polytechnic and the University and the success of the trial has led to securing funding for another summer iteration of the City Student Studio in 2019/2020.

INTRODUCTION

The City Development Manager, Paulina Wilhelm, from the Napier City Council visited the City Studio in Vancouver in 2017 and was inspired to develop a similar environment for the city of Napier, New Zealand (NZ). She collaborated with staff from the local Polytechnic: the Eastern Institute of Technology (EIT), and the Napier Director of the University of Waikato (UoW) to investigate whether a student centered studio or environment could be set up in the city center. Napier has a population of approximately 55,000 with a similar sized sister city Hastings within 12 kilometers and a surrounding region of 150,000. The Napier City Council (NCC) have been driving a series of strong city revitalization projects across many different areas including street changes for tourism, redesigning outdoor spaces and highlighting the famous Art Deco aspect of the city. The city vision outlined by the NCC includes seeking ecological excellence, building a strong cycling culture and fostering entrepreneurship which all fit into the CSS concept (Napier City Council City Vision, 2019).

The City Student Studio (CSS) in Napier city operated over the New Zealand summer period of November 2018 to February 2019 and functioned as a hub of student research, projects and digital business services for Napier Central Business District (CBD) businesses. The CSS was a collaboration between the Eastern Institute of Technology, Napier City Council and the University of Waikato to provide students with space to concentrate on work-based projects that are either part of their degree requirements or summer research scholarship assignments. The studio at Dalton Street (a former retail shop) was open on weekdays from 10am to 4pm and was managed by an EIT School of Business, Bachelor of Business Studies Intern student. The role of the student intern coordinator was to coordinate the use of the co-working space, greet visitors, deal with public enquiries about study options at EIT and the UoW, and schedule bookings for the shared spaces and equipment. The coordinator also compiled lists of suitable business and IT projects from downtown organizations (aided by EIT Internship coordinators and the Napier Inner City Marketing group) and then matched these small projects to suitable students who had volunteered to participate in the CSS. The student coordinator was assisted by the EIT School of Business internship coordinator, the EIT Assistant Head of Computing, and the University of Waikato Napier Director.

The studio as a co-working space was well utilized by EIT and UoW students who undertook a range of web development, social media, and event management projects to members of Napier Inner City Marketing. Several students worked on specific projects for businesses and non-profit organizations. Four specific desk and workstations with laptops were available for any student or visitor. A large dining table with seating was set up for meetings and additional work spaces. While couches and lounge style seating was clustered around a coffee table to allow a more relaxed environment for discussions and breaks. The space was also used as a base by University of Waikato (the UoW main campus is located in another city, Hamilton) summer research students. These UoW students were selected through a competitive application process, and the students conducted the 10-week research projects in collaboration with Napier City Council, Hawke's Bay Regional Council and the Department of Conservation/Cape to City team. These projects included topics in environmental planning, ecology and education. UoW students used the City Student Studio for stakeholder meetings, completing data analysis and other desk-based work. "The idea had been percolating for 18 months and I'm delighted to finally see it in place in Napier. I hope it will become an annual event" (EIT, 2018, p.1). The EIT student coordinator collected data on visitor numbers, projects completed over the summer, and monitored various usage to form a picture of the overall usage. This data will be used to justify and present a business case to stakeholders to raise finance for the next summer iteration of the CSS.

The studio was open from late November, 2018 and completed operation on February 22, 2019. The stakeholders have pledged to open the studio again for the 2019/2020 summer period. Practical aspects to initiate the CSS included securing finance from stakeholders, signing a short-term lease with the landlord (EIT took the responsibility of the lease overall), developing Health and Safety procedures, organizing electrical power to the site, and setting up Wi-Fi (both EIT managed WIFI for seamless staff/student access to EIT IT systems, and open WIFI for non-EIT users). Furniture and equipment was supplied by the Napier City Council. While staff from UoW (the Director of Napier UoW) and the EIT School of Business Internship coordinator donated coffee, tea, milk and kitchen utensils. A morning tea launch was held initially and attended by staff from NCC, EIT and UoW along with a number of interested students from EIT and UoW. Interestingly, a number of students from other universities –

who were home from distant universities for the summer – also attended and expressed interest in being involved. It is hoped that the CSS will develop as a hang-out space for any interested tertiary students over the summer regardless of which University or Polytechnic they are associated with.

LITERATURE REVIEW AND OTHER STUDIO EXAMPLES

There are other examples of the student centered city studio concept, often with a broader focus, including the Vancouver City Studio which aims for "real-world experiential learning, collaboration, co-creation, community engagement and change" (City Studio Vancouver, p.4, 2018). The City Studio in Vancouver was established in 2011 to promote sustainability in higher education and provide students with direct opportunities to work in and with the city on urban challenges. It was seen as an integral part of Vancouver's goal to become the greenest city in the world by 2020 and is a collaboration between the local council and a number of tertiary institutions. The City studio has evolved beyond sustainability and now includes The Healthy City for All, City of Reconciliation, Engaged City, Renewable City, and New Start strategies (City Studio Vancouver, 2019).

Another similar phenomenon is the various city incubators which, although they may or may not include students, aim to gather budding entrepreneurs together in a co-working space while offering a leased workspace for people to work from. O'Neal (2016) discusses the development of a university-based technology incubator which is another example of a student driven environment which allows industry focused projects to be undertaken by university students in a specific environment.

Victoria City Studio collaborates with The City of Victoria (Council), Royal Roads University and University of Victoria. It is once again an example of an innovation hub where staff, students and city stakeholders collaborate together on various city projects. Their vision is also to build relationships with tertiary providers, the community and the city aiming to help create an improved city environment in all aspects of human life (City Studio Victoria, 2019).

An example in Australia includes the QUT Design Lab (Queensland University of Technology) which is made up of a team of research staff and students who use design thinking and research to attempt to solve major social problems in their city and beyond, guided by the values of Communities & Resilient Futures, Health & Wellbeing and Technologies of Tomorrow (QUT Design Lab, 2018).

The Design Factory is a global network of innovation hubs in universities, polytechnics and research organizations throughout the world. Their "mission is to create change in the world of learning and research through passion based culture and effective problem-solving. "Design factories" are effectively a platform for all kinds of experimentation, action, and co-creation" (The Design Factory, 2019, p.1). The interesting feature of utilizing an incubator or studio environment for work-integrated learning (WIL) experiences, projects or internships is that more responsibility is given to students to setup their own environment, search and secure industry projects or opportunities for themselves, and create their own working environment and define their weekly practice times. This requires more planning and initiative than a more traditional WIL experience, for example, where students are placed by a university coordinator in a nominated company and then the student simply attempts to adapt into that defined environment and responds to being given a set of tasks and projects. Dreyer (2015) reinforces the special nature and reward of students operating within their own developed environment off-campus offering professional services to real clients (Dreyer, 2015). This type of co-working and informal environment

is also seen as more friendly and accommodating than a typical formal workplace and participants sense the freedom to be themselves without pretense, while students especially enjoy the freedom, for example, to sit on the couch and have coffee in a relaxed manner within a work environment (Kojo & Nenonen, 2014).

OBSERVATIONS AND DISCUSSION

The use of a student intern to act as the fulltime coordinator for the CSS was particularly effective for the day to day operation of this Napier studio (CSS) under investigation. Without the student coordinator it would have been difficult to be able to commandeer enough staff from EIT and UoW to fulfil such a necessary fulltime equivalent role. There were 300 visitors who signed into the CSS over the 3 month period of operation, with a daily average of 7 – 8 visits. The visits could be divided into marketing enquiries (walk-ins), structured meetings arranged by internship supervisors, industry representatives meeting project students, client/student meetings to scope projects and display progress, and some tertiary students and EIT/UoW staff using the space as an alternative work or study location.

There were a number of observable benefits that were derived from the student centered City Studio. From the viewpoint of the Napier City Council's City Manager the benefits included the city activation aspect within the CBD as there has been a recent shift in city CBD usage with retailers moving out of the CBD and more services/professional companies moving in which has changed the pedestrian and citizen usage of the central city areas. The CSS is seen by NCC as a counter development to this trend of CBD diminishment of retail and pedestrian activity.

The NCC subsidizes the role of the UoW Napier Director and has the aim of opening up opportunities for the University to partner with the city of Napier as there is currently no campus presence in Napier. The CSS project has brought NCC, EIT and UoW closer together in partnership for better collaboration and has provided a platform for future developments. The CSS has improved youth engagement with Council activities by having students participate in Council projects and understand Council processes. Although Napier and the Hawkes Bay region does not have a University, the CSS has encouraged positive education outcomes for students who could participate in real Council and CBD retailers/business projects (planning, engagement, and delivery). So the tertiary students (from EIT, UoW or students from other universities who are home for the summer) have a channel to work on city projects to benefit Napier.

Another benefit of the CSS is that students participating in city projects may open up pathways for future employment for themselves or other students. Businesses in the Napier CBD area have been exposed to students managing their projects and gain insight into their capabilities and suitability for employment. The NCC are able to gain low-cost access to student resources who were able to help deliver Council projects. Many of these NCC projects have been approved in principle but have not been financially resourced in terms of labor cost and so have been in a backlog. The benefits for the participating students include the potential to gain credits in their studies from participating in research/ practical projects. As Bosco and Ferns (2015, p.285) discuss in the context of the demands on universities to provide all students with authentic work-related learning experiences "to replicate the workplace experience and to provide authentic learning opportunities, WIL may take many forms and

comprise diverse tasks" and environments such as the CSS investigated in this article provide an alternative WIL environment.

CONCLUSIONS AND IMPLICATIONS

After reflection of the recent operation of the City Student Studio there appears to be a need for more students to be involved, and particularly a need for more information Technology (IT) students with their expertise as many projects submitted from the city were related to web development, social media campaigns and e-commerce related advice. The extension of this type of work-integrated learning environment offers an alternative to the traditional campus environment, and also offers the students an alternative to the traditional commercial industry environment as the city center studio environment is more attractive for students to 'hang out', meet informally with other students and industry representatives and gives them a stronger sense of ownership. When industry representatives, students, & academics meet at the studio students reflected that they perceived the environment as a more democratic non-hierarchical experience for all parties. Once the CSS was setup it became a popular place for internship supervisors to make appointments for student intern presentations (even if some students were interning elsewhere embedded in industry) and student feedback indicated that they felt more comfortable presenting in this environment as the CSS felt closer to an informal industry setting to them than a traditional university classroom or projects room in a larger campus.

Another interesting phenomenon was that once the CSS was setup more WIL opportunities appeared spontaneously through the studio channel as businesses near the site made enquiries and then initiated project requests. Other organizations in Napier also made email or phone requests having heard that the CSS was accepting project requests. These opportunities would not have arisen if the CSS had not had a physical presence in a central city location. There are typically barriers for an industry representative to communicate with large tertiary institutes as organizing a face-to-face interaction with a WIL coordinator may entail a drive to a large suburban campus, find a park, and then try to find an appropriate internship coordinator or WIL director compared to the ease of walking into a small retail space in the city – the CSS - and immediately speak to a coordinator who can connect them to student resources. In conclusion, the City Student Studio in Napier, NZ was successful in meeting its goals of completing several city projects for the Napier City Council, enhancing the student experience in work-integrated learning for the Eastern Institute of Technology and the University of Waikato by providing a city co-working space, while challenging conventional tertiary education environments. This model could be expanded into multiple disciplines and diverse projects for the current stakeholders, and this model could also be considered by other tertiary institutes in conjunction with their respective city stakeholders.

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Integrating career education across the liberal arts curriculum

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ABSTRACT

Over the last decade, national discourse about the value of a liberal arts degree in higher education has ranged from highly critical to assuredly validating. Critics of the liberal arts call for a modernization of the curriculum to increase the return on investment for college students taking on mountains of debt. Supporters of the liberal arts point to compelling data from employers who consistently report that the most highly valued skills for prospective employees are those that cut across the disciplines such as communication and critical thinking—hallmarks of a liberal arts education. In this paper, we present an in-progress case study from the University of Cincinnati, where experiential learning and career education are embedded in the culture of the university. As the founding institution of cooperative education, UC is nationally recognized as a career-focused university. While that culture is prevalent among the professional colleges, that career-focused culture had not yet reached the College of Arts and Sciences. This paper discusses our innovative and systemic approach to integrating career education across the liberal arts curriculum that began in 2015. We present multiple strategies for curricular and cultural reform in the liberal arts, such as developing university-wide career education learning outcomes, cultivating mutually-beneficial inter-campus partnerships, and developing flexible curricular models to navigate structural barriers and support students' career exploration. Finally, we discuss ongoing challenges and plans for continued implementation and assessment of career education in the liberal arts disciplines.

INTRODUCTION

If I'm going to take money from a citizen to put into education then I'm going to take that money to create jobs. So I want that money to go to degrees where people can get jobs in this state. Is it a vital interest of the state to have more anthropologists? I don't think so.

– Florida Governor Rick Scott (Anderson, 2011)

Fast forward to 2019. In a nation obsessed with the state of the economy, Governor Scott's remarks, along with similar remarks made by other well-known politicians including former President Obama, serve as a poignant reminder that many people, including our elected leaders, still openly question the value of a liberal arts education. Governor Scott's remarks serve as a stark reminder that higher education is still seen by many as a means to an end that is more difficult to achieve through a liberal arts education, with the end being gainful employment and a salary sufficient to sustain modern life. Despite the fact that the unemployment rate for those with humanities degrees was only 4.3% in 2015 and that an overwhelming majority of workers with humanities degrees (87%) report being satisfied

with their job (American Academy of Arts and Sciences, 2018), the story of the philosophy major turned full-time barista remains a foreboding narrative as students choose their path of study. In addition, the cost of higher education is up 400% since the early 1980's (Mitchell, 2017), increasing the pressure for faculty and administrators to demonstrate the return-on-investment for a liberal arts degree.

And yet, despite the negative discourse surrounding liberal arts education, news outlets from *Forbes* to *The Washington Post* have published essays espousing the values of liberal arts education. Recent studies show that employers most value skills that transcend disciplines, such as written and oral communication skills, complex problem-solving and critical thinking, all of which can be fostered through an effective liberal arts education (Hart Research Associates, 2018). Still, perceptions of the value of a liberal arts degree are slow to change and universities must ensure that liberal arts majors graduate with the skills necessary to succeed in the workplace and thrive beyond graduation.

At the University of Cincinnati—a large, public, urban research university—the College of Arts & Sciences is the largest academic unit with over 7,700 students enrolled in more than 40 different majors. It sits amongst a collection of other colleges such as the College of Engineering and Applied Science and the Lindner College of Business that have a long-standing culture of preparing students for career-oriented, professional paths. The university's historic support of experiential learning as the founder of cooperative education in 1906 and the integration of experiential learning across the curriculum has been traditionally focused on the professionally-oriented colleges. Historically, few resources were directed to help students in the College of Arts and Sciences develop professional identity and skills. The perceived unwieldy nature of so many students with so many different career goals made any type of integration of career education feel overwhelming and seemingly impossible.

However, in the past five years, the university has taken significant steps to create a culture where career education is valued, integrated into the curriculum of every baccalaureate program, and supported through appropriate infrastructure. In the sections that follow, we discuss our efforts to systematically integrate career education in the College of Arts and Sciences providing an overview of the strategies we have employed thus far, the challenges we face, and the outcomes of our efforts.

ESTABLISHING A CAREER EDUCATION INITIATIVE

At the University of Cincinnati, all baccalaureate students are required to participate in at least one transcribed form of experiential learning (EL) before graduation. We define EL as an intentional and complex learning and pedagogical framework that includes cooperative education (co-op), internships, service learning, undergraduate research, UC Forward (interdisciplinary course-based projects), study abroad, student teaching, peer education, clinicals, performances and juried exhibitions, practicums and clinics. These forms of EL at UC are strategically incorporated into the culture of our institution. EL pedagogy is intentional, learner-centered and holistic, collaborative and contextualized, and personalized.

Building on the institution's focus on experiential learning, the Office of the Provost appointed a task force in 2015 comprised of high-level administrators from several colleges, including the dean from the College of Arts and Sciences. Together with career education faculty (then housed in the Division of Professional Practice and Experiential Learning), the group's charge was to design an ambitious campus-wide "Career Education Initiative" with the goal of assessing the quality and structure of

career-oriented curricular and service offerings. A second task force was also appointed, which included Associate Deans from stakeholder colleges, to plan the implementation. Out of this planning process, the Division of Experience-based Learning and Career Education (ELCE) was created and situated under the umbrella of Undergraduate Affairs, combining the Division of Professional Practice and Experiential Learning (an academic affairs unit) with the Career Development Center (a student affairs unit).

One primary finding of these assessment efforts identified a need for curricular infrastructure that adequately prepares students for professional experiences, supports their abilities to integrate those experiences into their learning and articulate the value of their knowledge and skills. This challenge is most certainly not unique to UC; in a study of co-op students at Northeastern, Ambrose and Poklop (2015) found that most students were unable to articulate their experiences. This strategy is supported by DuRose and Stebleton (2016), who argue for the expansion of offerings and requiring career-oriented coursework, advocating for "a more campus-wide, collaborative effort to support students' understanding of how transferrable competencies can be translated to the world of work and beyond (p. 273)." Furthermore, Stebleton and Diamond (2018) identify career-life planning as a high-impact practice in the first year curriculum. Thus, one of the core recommendations of the task force was to integrate career education into the general education requirements for the university with explicit learning outcomes.

Incorporating career-oriented learning outcomes signifies more than just a change in the general education requirements; it represents the university's commitment to adequately prepare students for life after graduation. This effort is intended to meet the increased demand from both students and parents that a college education launch students' careers and prepare them for sustained success (Young, 2016)—a compelling shift in higher education that presents both challenge and opportunities, especially in the liberal arts.

It was important that a centralized academic unit such as ELCE develop outcomes focused on career education; most faculty, especially among the liberal arts, have areas of expertise aligned with a specific discipline. One challenge that we faced in this effort was determining how to design the outcomes in a way that they are specific enough to be meaningful but flexible enough to be relevant to a multitude of disciplines. Additionally, in order to establish legitimacy among faculty approval bodies, it was also crucial that the outcomes be grounded in the literature. Therefore when drafting the student learning outcomes, we used the following sources: AAC&U's Employer Survey and Economic Research Trend Research (Hart Research Associates, 2015), National Association of Colleges and Employers (NACE, 2015) career-readiness competencies, aggregate student-performance data collected from UC co-op employers over several decades, and faculty expertise from the centralized unit on campus focused on experience-based learning and career education (ELCE).

Another key consideration in the development of these outcomes was how to scaffold the outcomes in order to span the course of the students' baccalaureate education. To address this challenge, we developed the outcomes to align with the university's general education touch-points—first-year, mid-collegiate and capstone—to ensure continuity and progression. After we drafted the outcomes, we began the 18-month process of routing them through a complex, multi-layered governance process. The approved career education learning outcomes are listed below:

Touchpoint 1: FIRST YEAR

(1) self-assessment and understanding
    a. Students will begin articulating their aptitudes, strengths, weaknesses, preferences and values as they relate to professional development
(2) exploration of professional possibilities and goals
    a. Students will identify potential professional paths
    b. Students will explore their short and long term professional goals
(3) identification of professional habits
    a. Students will identify professional behaviors related to oral and written communication and workplace etiquette
(4) introduction to cross-cutting professional skills
    a. Students will recognize the importance of the following cross-cutting skills in the context of the workplace:
        i. Oral and written communication
        ii. Critical thinking
        iii. Leadership
        iv. Teamwork, collaboration and problem-solving in diverse groups and settings
        v. Ethical judgement and decision-making
        vi. Innovative approaches

Touchpoint 2: MID-COLLEGIATE

(1) development of professional tools and artifacts
    a. Students will effectively communicate their skills and experiences through the development of appropriate professional tools/artifacts (resume, portfolio, CV, interview skills, etc.)
(2) development of cross-cutting professional skills through experience-based learning
    a. Students will demonstrate the following cross-cutting professional skills through appropriate experience-based learning:
        i. Oral and written communication
        ii. Critical thinking
        iii. Leadership
        iv. Teamwork, collaboration and problem-solving in diverse groups and settings
        v. Ethical judgement and decision-making
        vi. Innovative approaches
    b. Students will draw from experience to provide examples of the impact of these cross-cutting professional skills in professional settings
(3) continued self-assessment and articulation of goals
    a. Students will draw from experience to reassess their aptitudes, strengths, weaknesses, preferences and values as they relate to professional development
    b. Students will develop specific short- and long-term professional goals which will serve as the basis for a post-graduation career plan taking into account necessary training and credentialing

Touchpoint 3: CAPSTONE/SENIOR YEAR

(NOTE: If experience-based learning is part of the capstone, outcome from mid-collegiate can be moved/added at the capstone level)

(1) connections between theory and practice
    a. will use innovative problem-solving
(2) formalization of post-graduation plan
    a. Students will finalize their post-graduation career plan
    b. Students will learn how to conduct an effective job/graduate school search

These outcomes provide a framework for colleges to implement career education into their undergraduate programs. For some colleges, these outcomes are already embedded into the curriculum through mandatory cooperative education programs. On the contrary, the College of Arts and Sciences required significant support to embed these outcomes across the liberal arts curriculum and as discussed in the following sections, would not have been possible without a sustained, mutually-beneficial partnership with ELCE.

CREATING CONDITIONS FOR CHANGE

As described in the previous section, developing Career Education Learning Outcomes and moving those outcomes through the faculty governance process was not an easy task. In our experience navigating this change process, we identified several strategies that support incremental change within the larger university system that we describe in more detail in the sections that follow.

Nurturing Relationships of Trust and Respect

Before pushing any agenda for institutional change, university leaders must nurture relationships to build trust and create opportunities for mutually beneficial collaboration. For ELCE and the College of Arts and Sciences, building trust and respect had begun in early 2015, when a new dean and senior assistant dean were hired. Their eagerness to participate in the task forces was evidence that the largest college was ready for improved career preparation. Early conversations were positive and exciting as both offices prepared to deliver new curriculum and services from ELCE to students, even before the new outcomes went into effect.

These early efforts were almost undone by the budgeting model in place. UC's model of budgeting assigns credit for tuition revenue to a student's "home" college; revenue is split if a student enrolls outside of the home unit. While the dean and other key leaders were enthusiastic about implementing new curricula and services, that positive outlook did not trickle down to individual department and faculty. They were reticent about sending enrollment (and tuition revenue) to another unit. This skepticism made it especially difficult to foster collaboration across colleges or departments. Pressure to increase enrollment within one's academic unit was often a silent barrier to creative solutions that would put the student learning experience at the center of decision-making. This is an ugly but honest truth in higher education institutions such as ours and it is necessary for administrative leaders to explicitly and openly acknowledge these barriers. This requires leaders to communicate directly about conflict and focus on enhancing the student experience as the primary objective. Leaders must celebrate small wins in order to build momentum for large-scale change. We continue to bring ourselves back to the core question: "What is best for the students?" even as we navigate these challenges today.

Aligning Institutional Priorities and Grassroots Action

In the early phases of this work, there was a felt disconnect between top down institutional priorities and department-level movement. At best, this disconnect can lead to momentary confusion and at worst, this disconnect can trigger deeply rooted cynicism about the initiative itself. Faculty often feel overburdened by administrative "asks", and if the top down communication does not match up with conversations between individual administrators and faculty on the ground, this can undermine efforts to build trust and buy-in. University leaders should start small, remaining purposeful and focused in

their work. This requires perseverance and a commitment to stay the course even when progress feels minimal. In order to create alignment, there must be intentional, repetitive and transparent communication from all levels of leadership.

Within the Career Education Initiative and with the explicit support of the College of Arts and Science's leadership, we began a "listening tour," meeting with department heads and undergraduate directors. The intention of each visit was to learn about career-related courses and programming within each discipline. We came in asking many questions and sharing a consistent message with each department to convey our vision and strategy with openness and appreciation for the uniqueness of each department. Messaging from the dean, as well as facilitation from the senior assistant dean, contributed to the building of trust and respect among all stakeholders.

Additionally, we involved the advising community early and consistently as we forged these partnerships, requesting support and offering our time to engage in dialogue about the initiative. Advisers are a vital stakeholder in student success and their engagement was crucial in on-going implementation plans.

Implementing Mutually Beneficial Changes in Infrastructure

The old adage "actions speak louder than words" is particularly relevant in driving institution-wide change. In order to support the first two conditions described above, university leaders must follow their verbal and written commitments with tangible changes in infrastructure that advance and support the vision of the change initiative. At our institution, one way that we put our words into action was by inviting our respective collaborators to participate in several search committees to hire new leadership whose primary responsibilities would be to support the Career Education Initiative. In the College of Arts and Sciences, leadership prioritized the creation of a new staff position, "First-Year-to-Career," specifically designed to coordinate curricula and service delivery to Arts and Sciences students. Likewise, ELCE faculty participated in the search process to fill this newly created role. This new position was important to the infrastructure changes because a principal point of contact and liaison to ELCE housed within the college was desperately needed for the initiative to gain traction and reach a high volume of students.

In terms of curricular infrastructure, Arts and Sciences and ELCE worked together to identify places where career-related courses could be embedded within the curriculum. Arts and Sciences majors at UC have 21-34 hours of free electives, in addition to their major coursework and their liberal arts requirements, so it was determined that career-related courses did not have to be major-specific; they could count towards degree requirements without impacting a curriculum change to an individual major. Through the close Arts and Sciences-ELCE partnership, it was determined that career-related courses could be inserted into all first-year learning communities to ensure that all first-year students receive the career-related learning outcomes regardless of their major.

IMPLEMENTATION – CURRENT STATE AT UC

The Career Education Learning Outcomes described earlier in this article will be embedded and assessed in the general education requirements for all baccalaureate students by the start of the 2019 academic year. As a step toward full implementation, the first year learning outcomes are embedded into professional development courses during the 2018-2019 academic year for all Arts and Sciences

students. All first year Arts and Sciences students will take at least one professional development course during the academic year; most of these courses are embedded in first-year learning communities.

During the fall 2018 semester, 183 undecided Arts and Sciences students were enrolled in a 3-credit hour course called "Exploring Professional Paths." The aim of the course was to support students in meeting the first year career education learning outcomes and our colleagues collected data about this student population to assess the pilot. In a pre- and post-assessment survey, a subset of 102 students reported a significant increase in major and career clarity after completing the course (Buford & Nester, in press). Additionally, 93% of those students agreed that the course positively impacted them. Specifically, students cited "having the opportunity to reflect on their goals/career decisions (19%), taking personality assessments (16%), and finding internships/job search skills (15%) as the most impactful components of the course," (Buford & Nester, in press, p. 3). Buford and Nester (in press) also analyzed data based on students' results through the CliftonStrengths and Myers-Briggs assessments and concluded (perhaps not surprisingly) that undecided students "lack a structured process for *individually* reflecting on their needs" which supports "the value of a course-based intervention, where students can engage in this process in a setting removed from their usual social influences" (p. 6). The second half of the pilot year is currently underway and our course offering is focused on students in Arts and Sciences who have declared a major. Data on this subset of students will be forthcoming and analyzed at the conclusion of the pilot year.

As we plan for next year's full implementation of the career education learning outcomes, we continue to navigate challenges related to the university budget structure. Because of the performance-based budgeting model, growth in ELCE enrollment through Arts and Sciences students translates to enrollment loss for the College of Arts and Sciences. Trust, respect and open communication are essential as we navigate these sensitive issues. We must return to the question "what is best for the students?" over and over again. We are also working together to develop consistent messaging and materials to support advisers as they guide students through the new general education requirements. We envision facilitating annual adviser training with representation from both offices to ensure cooperation and coordination and reduce confusion. Additionally, we plan to convene a core Arts and Sciences Career Education working group in order to build mutually-beneficial infrastructure without redundancies.

CONCLUSION AND FUTURE DIRECTIONS

As we have discussed in this paper, we are energized by the demonstrated and potential impact that the Career Education Initiative will have on liberal arts students at the University of Cincinnati. Another exciting yet challenging aspect of the inclusion of career education outcomes into general education will be development of adequate assessment tools and strategies. Currently, general education outcomes are assessed for cohorts of students by faculty in each discipline. This begs the question of whether or not faculty so closely associated with a specific discipline will have the resources or expertise to assess student learning and development related to professional competencies and skills across the disciplines. We may look to replicate models used at other universities who have engaged in similar efforts such as the University of Minnesota twin-cities who developed a career readiness faculty fellows program and a web-based career readiness assessment tool to support the initiative (Koerner, 2018).

Students' post-graduation destination (employment, continuing education or other path of their choosing) is another significant measure of impact, but can be difficult to track. While it is relatively simple to collect outcome data from graduating seniors and students one year out, the task becomes more painstaking the farther these students progress in their career. For liberal arts graduates specifically, collection of long-term data showing career trajectory will be important to understanding the true impact of the university's career education curriculum.

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Give us room to grow using participatory research to understand the experiences of co-op students

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ABSTRACT

Employers view a cooperative education program as an opportunity to develop their pipeline to full-time employment, with the hopes that their cooperative education (co-op) students will transition into full-time employees upon graduation. However, we see that often students who participate in mandatory co-op programs will choose to change co-op employers during their undergraduate experience.

The university participating in this study offers a mandatory cooperative education program for all students within the College of Engineering. These students will complete five semesters of full-time co-op prior to graduation. Students alternate semesters of class and work; eligible to job change after two terms with the same employer.

We often see that students choose to change employers at some point during their five semesters of co-op, allowing them to experience multiple organizations/employers prior to graduation. Through this research project we sought to understand 'What factors contribute to a student's decision to job change?'

Group Level Assessment (GLA), a qualitative and participatory methodology used for large groups, was utilized to better understand the experiences of students on co-op. Through this participatory process students generate data, analyze data, and ultimately develop action steps for future implementation. Within the context of the GLA the participants are the knowledge experts of their co-op experiences; this expertise helps inform the action steps moving forward. Our hope is that by better understanding the experiences of students on co-op we can work with employers to create more meaningful co-op experiences for all students.

INTRODUCTION

In our work with engineering college students enrolled in mandatory co-op, a type of Work-Integrated Learning (WIL), at a large public university in the United States, we have noticed that students frequently desire to change employers. The term co-op will be used to describe the WIL program of interest throughout this study. Employers expect students to remain with the company for multiple work terms. Many employers desire to develop students into full time employees, because they see co-op as an investment in their talent pipeline. We intend to examine the factors influencing students' decisions to change employers. With over nine hundred universities worldwide providing WIL educational opportunities (Cedercreutz & Cates, 2010) understanding this phenomenon will be of great benefit to the field of experiential learning.

In this paper we examine the benefits of co-op to students and employers. Next we review studies on *turnover* in the general adult population, and then the available literature on turnover in student WIL experiences. The literature shows that very little has been published on turnover in student WIL experiences. This gap provides the opening for our study of students in co-op who want to job change.

BENEFITS OF WORK-INTEGRATED LEARNING (WIL) FOR STUDENT PARTICIPANTS

Previous literature has suggested that there are compelling benefits to student participation in WIL. Drysdale, Frost and McBeath (2015), in their study of "major changers," found that students who work for several different companies may have work experiences that broaden their knowledge about careers available in their field of study, allowing them to become cognizant of many possible occupations. Phillips (1978) found that students who participated in the company's co-op program received promotions and pay increases at a faster rate than their non-co-op peers and promoted to higher levels than non-co-op employees.

In his study Eames (2000) found that graduates of co-op programs indicated that their co-op placements developed the following skills/knowledge; technical skills and knowledge, general workplace skills (writing reports, research, and design), interpersonal skills and time management, organizational knowledge (culture, operations, career path).

Vandergrift (1968) reported that students expressed the following benefits of their co-op program: experience, helped firm career decision, educational value of industry exposure, development of skill in human relations, financial aid, higher salary after graduation, and increased maturity. Of note is the fact that Financial Aid is ranked significantly below other factors by these senior engineering students.

BENEFITS OF WORK-INTEGRATED LEARNING (WIL) FOR EMPLOYERS

Phillips (1978), in a major study for Lockheed-Georgia analyzing the employment of 428 co-op employees over 21 years using data from personnel files and interviewing students, employers and university partners, found that, after accounting for military service, graduate school and working for a different company, 53.5% of co-ops returned for full-time employment. This is above the national average of 38% reported by Wilson and Lyons (1961).

Phillip's study catalogued additional benefits for the company (1978, pp. 116-118):

- excellent source of permanent professional manpower.
- excellent source of temporary manpower to handle peak work-loads...
- Co-op trainees have been used to relieve higher paid personnel of relatively minor tasks...
- can provide many ideas and viewpoints which can be refreshing and stimulating.
- effective recruiting tool...
- provides a screening process for high potential ...employees
- a mutual industry-university relationship is enhanced...paved the way for joint projects...
- the company receives a large amount of work [while enabling] students, who otherwise couldn't afford to go to college, [to] achieve their degrees...

- Industries... have a social obligation to expose students to...equipment and processes that could never be duplicated on campus.
- can be a significant tool in selecting minority students at a formative level and training and developing them...

JOB TURNOVER OR RETENTION - GENERAL EMPLOYMENT OF ADULTS

In order to study the factors that influence students to change employers in WIL settings it is important to review the literature on job turnover in the general employment of adults as well as the literature on job turnover and retention in students. This section will review job turnover in the general employment of adults.

Price (1977) defines turnover as movement of members across the boundary of an organization. Price (2001) characterizes turnover research, as focusing on those members who voluntarily leave the organization. Callister (1997) analyzed employee *turnover* and defines it as the "net change in employment over time (p. 46)." Callister's study showed that younger people, in lower paying jobs, account for the majority of turnover in these countries, with men and women equally represented.

Factors that Influenced Employees to Leave

A meta-analysis of human services employees by Mor Barak, Nissly and Levin (2001) finds that the main factors influencing a human services employee to leave were not related to work-life balance or demographics, but are "organizational or job-based (p. 625)." They surmise that knowing this, employers may be able to have some impact on potential turnover by intervening with those most likely to have intent to leave such as young employees and those with less training. Interventions might be conducted regularly and include: "new-employee orientation programs, the development of peer-support groups, or the teaming of new employees and more experienced colleagues (p. 656)."

Factors that Influenced Employees to Remain

Callister's analysis (1997) shows that compensation package was the most common factor in remaining with the company. Hausknecht, Rodda, and Howard, in their study found "job satisfaction, extrinsic rewards, constituent attachments, organizational commitment, and organizational prestige" were the most cited factors that influence employees to stay at their jobs. Ellet, Ellis, Westbrook and Dews (2007) found that participants in their study cited "internship experiences or an internship before employment" as a personal factor influencing them to remain in the field. Mor Barak et al (2001) note that human services employees in their study tended to remain if they felt satisfaction with their work and commitment to the organization.

In summary, most of the research has been conducted on the general workforce, not on students in WIL jobs. The research does indicate generally that younger workers have higher job turnover, but that these moves are often related to improved opportunities. This literature also highlighted that internship, or WIL, experiences impacted employee's decisions to stay with their employer. This may be of interest in the study of students in WIL jobs.

JOB TURNOVER OR RETENTION – EMPLOYMENT OF STUDENTS IN WIL

This section will review job turnover in the general employment of adults particularly the factors that influence students to leave. There was no literature available specifically on factors that influenced students to remain with their employer.

Factors that Influence Co-ops to Leave

Mincer (1988) found that movement between jobs decreased in frequency over time. While it tentatively found (with reservations about data errors) that the cost of separating from the firm becomes greater as time goes on, the pattern may also be able to be applied to students in co-op programs who change jobs more frequently early in their career and settle in as they progress.

Callister (1997) reports that high turnover is concentrated among young people. The study also found that changes may be beneficial when people are first in the labor force, allowing for wage growth and other positive factors. Phillips (1978) found that the probability of the student returning reduced as the distance between the company and the student's school increased.

Vandergrift (1968), in a survey of 166 graduating engineering students at a large land-grant university, using questionnaires, conducted the most recent published study of engineering students regarding their decision to return to their co-op employer. In that year 37% of students returned to their previous employer. The reasons students stated for not returning in Vandergrift's survey were: inadequate salary (14%), graduate school (13%), inadequate challenge (12%), no offer (8%), military services (5%), undesirable location (5%). poor likelihood of advancement (4%), change in career goals (2%).

STUDY OF EMPLOYER CHANGE FACTORS FROM STUDENT PERSPECTIVE

Although many studies have been conducted on employer turnover for full time employees (Callister, 1997, Ellet, et al, 2007, Hausknecht et al, 2009, Maertz et al, 2004,Maertz et al, 2012, Mitchell et al, 2001, Mor Barak et al, 2001, Price, 1997 & 2001) only one study (Vandergrift, 1968) was found to examine the factors that influence students in WIL programs to job change. Vandergrift's study, conducted 50 years ago, came from an employer perspective. This offers an opportunity to study employment change factors from the student perspective in order to better serve today's students, employers and universities.

METHODOLOGY

Participatory action research (PAR) challenges us to look at research differently than traditional research methodologies. Using PAR methods allows for appropriate solutions and recommendations within the context of the population participating, by allowing for the issue or problem "to be defined from the group's perspective" (Vaughn, Jacquez, Zhao, Lang, 2011).

For this study, we choose to use Group Level Assessment (GLA) as a mechanism to better understand why students choose to job change, or change employers. Group Level Assessment (GLA) is a participatory action research method designed for large groups. GLAs allows for the timely collection of data, where the participants collaboratively analyze the results to develop action items for future implementation (Vaughn, Jacquez, Zhao, Lang, 2011). This methodology is participatory throughout the entire seven step process. The GLA includes: climate setting, generating, appreciating, reflecting,

understanding, selecting, and action. For the purpose of this paper we have described each of these steps as we facilitated them for this study.

Through this process we completed three GLAs. Two GLAs were facilitated with students who chose to job change. The final GLA was facilitated with students who chose to complete all five of their co-op rotations with the same employer. Our goal was to compare the reasons students choose to job change with the reason that students choose to stay. Our hypothesis is that we expected to see similar themes.

Three GLA's were conducted during Spring (11 students), Summer (13 students), and Fall (13 students) semesters. During the spring and fall GLA's students were invited that chose to job change, to allow us to better understand their reasoning for changing employers. During the fall GLA students were invited who had chosen to complete all five of their co-op rotations with the same employer, to allow us to understand why they chose to stay with the same employer even when given the option to job change. Our hypothesis was that the themes for these GLA's would overlap. Student's eligibility to participate was identified through an internal online co-op tracking system; they were then sent an email asking for interest. We received a small grant to assist with the facilitation of this study, therefore we were able to incentivize student participation by providing a small $20 gift card to participants.

Although we facilitated three GLA's, the process for each was the same. Prior to students entering the room the GLA prompts were written on large posters around the room. We also printed each student a page of all the GLA prompts to ensure they were able to reflect on each question independently.

Step One: *Climate Setting.* During this phase we reviewed our interest in this study and mentioned to participants that they were the content experts and we appreciated their willingness to share their knowledge with us. After explaining the study we did introductions and an icebreaker to ensure students felt comfortable to share their opinions in the space.

Step Two: *Generating.* Here we modified the traditional GLA process slightly. Typically participants walk around the room and write their responses to the prompts directly onto the large posters hanging around the room. However, we modified the process slightly to allow for students to sit at their seats and individually respond to each prompt on a sticky note. Then students were asked to put their corresponding sticky note response on the larger posters around the room. We believed that participants would share their opinions about sensitive topics more honestly if their response was truly anonymous.

Step Three: *Appreciating.* We asked participants to do this step in conjunction with putting their sticky notes on the larger posters. Here we requested that they validate other students' responses that resonated with them, by putting a check mark on any sticky note that spoke to them. This helps to later to identify salient responses from the group.

Step Four: *Reflecting.* Here participants are asked to take a moment to reflect on the experience thus far, as well as what they saw on the posters

Step Five: *Understanding.* Here participants are beginning to analyze the responses. Students were placed into smaller groups, 4 or 5 participants per group (the number of groups varied based on total number of participants). Each group was given 4 or 5 of the prompts and asked to find the themes from the responses. It is important to note that we needed to continue to remind students that they were looking for themes across the prompts. Each group was asked to come up with 4 or 5 salient themes.

Next, each group was asked to report out to the larger group their themes. During this report out discussion, the facilitator took notes on the board.

Step Six: *Selecting.* During the selecting phase the facilitator guided the students through a discussion of consolidating and condensing themes where appropriate. The group then had a conversation about what were the most important and salient themes for the group.

Step Seven: *Action*. From the list of themes developed during step 5 and 6 students were then asked to develop action items. This is the most distinct feature of the GLA, asking participants to be involved in future planning. During this discussion participants began to suggest action items for various stakeholders in this process, including co-op advisors, co-op employers, co-op supervisors, and students themselves. At the end of the GLA process, students were given small dots and asked to put them on the action items they felt were the most crucial for implementation. This helped us to determine the most salient action items, to ensure we passed on this information to key stakeholders.

RESULTS AND DISCUSSION

During step 5-6 students develop themes and action items as a participatory and collaborative process. For the purpose of demonstrating how the themes can be turned into action items by the participants, we will share the themes and the action items. However, keep in mind the main benefit of using GLA's is that it allows for action items to be developed from the perspective of participants. The three main themes from our three GLA's included: (1) work environment/culture, (2) meaningful/challenging work, and (3) management/supervision.

Work Environment and Culture

Within this theme students discussed the importance of the actual work environment within the organization. They paid close attention to their employer's organizational culture, mentioning they appreciated an environment that was respectful and where coworkers were friendly and welcoming. Participants also highlighted that they enjoyed a more social atmosphere at work, where they had the opportunity to get to know their coworkers and when coworkers were willing to help when needed. Organizations that provided students a mentor, in addition to a supervisor, allowed for the student to feel additionally supported in their work and in their professional growth.

Meaningful and Challenging Work

In all of the GLA's students mentioned the importance of having meaningful and challenging work. Many students highlighted the ability to have a variety of work and projects allowed them to be more invested in the organization. Participants expressed a strong interest in taking on more responsibility within the work, however they described that this can be difficult as a co-op, but that they appreciated when they were given the opportunity to take ownership of their work. Having projects more clearly defined appeared to be common, as it allowed students to be more confident in staying on track. It was also noted that from the co-op standpoint, they should also be willing to speak up and ask for more challenging work and projects. They also noted that students should be willing to get out of their comfort zone and challenge themselves through the co-op process.

Management and Supervision

Participants discussed the importance of those first few weeks on co-op, mentioning that it was extremely important for the organization and supervisor to have a plan once the students arrived. They also highlighted that it would be beneficial if their supervisor asked them their interests and what they were hoping to get out of the experience, specifically taking a person interest in the student's work and their growth throughout the co-op experience. Continuous in-person feedback was also noted as something that was valuable, as it allows the student to improve their skills and abilities. One group specifically mentioned they would have appreciated if there supervisor would have asked if they were enjoying the work.

ACTION ITEMS

From the themes students developed action items for various stakeholders in the process. Action items were developed for employers, co-op advisors, and students. The action items developed are from the perspective of the students, which help us to understand their experiences, but also their desires within a co-op position or organization.

Participants developed action items specifically for students on co-op. They mentioned that co-ops must be more intention of the direction they are going by constantly reflecting. It was also noted that students need to be proactive and take more ownership of the co-op search process by searching for companies outside of the traditional method facilitated by their co-op advisor. While searching, students should also be more transparent with their co-op advisor when they have issues. Participants highlighted that while on co-op, students must be willing to seek out more work for coworkers and be vocal about not having enough work.

Supervisors should get to know their co-op students, was mentioned as an action item specifically for employers. Providing a co-op structure at the organization and plan for the student's co-op experience is helpful. It was also mentioned students should be allowed to take ownership of their work. Assigning a mentor and supervisor to each student would be helpful in ensuring a student's success. Providing higher level and relevant work and projects to co-op students. Continuous feedback from supervisors was noted as an action item, rather than only receiving feedback at the end of the semester, which appeared to be a common experience for many students. Participants noted, employers should provide students the opportunity to collaborate with a variety of people on co-op, to allow them to get a variety of work. Supervisors can show value of the co-op experience, by allowing the students to see the bigger picture of their work and the value they are contributing to the organization.

Participants developed action items for co-op advisors as well. They mentioned that co-op advisors should ensure that co-op employers have a structure or plan for students once they arrive. Students mentioned that the internal database of jobs needed to be kept accurate, noting it would be helpful if the job descriptions were accurate and up to date. Participants noted that co-op advisors should emails to employers explaining the usefulness of providing feedback to co-op students. Teaching students how to take ownership, was suggested as an action item for co-op advisors. It was also noted that email reminders should be sent to students while on co-op encouraging them to ask questions.

DISCUSSION

Cooperative Education is designed to provide students the opportunity to gain relevant industry skills, try out their field of choice, and develop professional skills. As cooperative education professionals we hope that our students see cooperative education as a learning experience. Through this research we came to understand that is exactly how our students view co-op—as a learning experience and an opportunity for them to explore their preferences within the field. It should be noted that students mentioned that employers should not see a choice to job change and go to a different employer as a negative thing. For many students, they noted that they see the opportunity to job change as a way to develop new skills, to ensure more marketability after graduation. Participants truly saw the co-op experience as an opportunity to grow and explore within the field of engineering. Students see co-op as opportunity to explore and experience industry prior to making a firm employment commitment after graduation. Students seemed focused on ensuring that their co-op terms were learning experiences, in line with goals of the co-op program. The findings of the study were helpful in allowing us to better understand the experiences of our students while on co-op, but also allowing us to see where there still may be gaps and opportunities for improvements within our program.

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Incarceration, decarceration, recidivism and employment

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INTRODUCTION

Since the 1970's, the number of people incarcerated in the U.S. grew exponentially. This fact is familiarly referred to in the literature as mass incarceration and the numbers represent a time when criminal justice policies focused on "getting tough on crime" through punishment. In fact, from 1980 until its peak in 2009, the total prison population of the United States climbed from about 330,000 to more than 1.6 million – a nearly 400% increase (Schranz, DeBor, & Mauer, 2018).

During the same time frame and nestled within that explosive growth are buried a substantial population of women. Since 1980 the number of women in U.S. prisons increased by more than 700%, at a rate nearly double that for men (E. Carson, 2018) Indeed, nationally, the number of women in state and federal prisons increased nearly eightfold between 1980 and 2001, from 12,300 to 93,031 (Covington & Bloom, 2003).

For a host of reasons, criminal justice policies are now supporting a movement from mass incarceration to reentry (returning to the community from incarceration) and decarceration (policies aimed at reducing either/or the rate of imprisonment or the number of persons imprisoned). Evidence of this can be found in the numbers – from 2009 through 2016 the U.S. national prison population decreased by nearly 113,000 (6%) (Schranz et al., 2018). The decrease is attributable to U.S. policy changes to sentencing and corrections that promote an increase in the number released from detention (reentry) and cutbacks in arrests. Some of these policy changes can be found in recent enactments such as the Second Chance Act of 2007 and the First Step Act of 2018, both representing strategies to reduce the sheer number of those incarcerated and to reduce recidivism rates. Unfortunately, on the whole, women are also reentering and decarcerating at lower rates than men (Sawyer, 2018). Both cutbacks in arrests and increases in release are more pronounced for men (down 22.7% in 2014 as compared to 2005) than for women (down 9.6% in the same time period) (Fact Sheet on Justice Involved Women, 2016). The proof - in 2014, over 1.3 million women were arrested in the U.S. and women in local jails increased 44% between 2000 and 2013 (Fact Sheet on Justice Involved Women, 2016).

Nonetheless, these increases in reentry and decarceration, regardless of the trajectory or asymmetry, are both encouraging yet ladened with myriad other concerns. Recidivism is one of the major concern. Recidivism has come to be known as "the revolving door" in and out of prisons and is one of the most troubling statistics in criminal justice. Recidivism refers to a person's post-incarceration relapse into criminal behavior and subsequent return to prison Incarceration alone has a negative effect on social and economic mobility, with fiscal consequences not only for the formerly incarcerated but their families and communities as well. Recidivism further compounds these problems by eroding social relationships and perpetuating social and economic instability. Unfortunately, the bulk of information

on U.S. recidivism rates are almost always based on a Bureau of Justice Statistics (BJS) study of 405,000 prisoners released in 30 states in 2005 (Durose, Cooper & Snyder 2014). According to that study 68% of those released were rearrested for a new crime within three years of their release and 77% were arrested within five years.

Recidivism rates for women maybe even more perplexing than that for men. The primary reason for the perplexity is that the incarceration of women often carries the collateral consequences of broken families and children negatively affected by absent mothers who also usually serve as the primary caretakers. Recidivism rates for women are as despairing as their incarceration, reentry and decarceration rates. According to the National Resource Center on Justice Involved Women, about one-quarter of women released from prison fail within 6 months (i.e., recidivate or have an arrest for a new crime), one-third fail within a year, and 2/3 fail (68.1%) five years out from release (Fact Sheet on Justice Involved Women, 2016). According to the BJS and other studies the major factors contributing to recidivism are economic, family and psychological problems.

The literature cites a variety of reasons for these numbers – reasons that affect both male and female returnees alike, including: employment and income instability, lack of education, lack of employment training, housing and unstable living conditions, mental illness, substance abuse, arrest and offense history. These factors routinely cause great difficulty for returnees. Though these same factors affect women, women are additionally affected by the inability to resolve upsets to family structure, including separation from and unfortunately loss of children to fostercare or adoption by strangers. However, for both men and women a few factors seem pivotal for successful reentry: education, job specific training and soft skill development. The development of these skills seem to help returnees to more effectively negotiate life's problems and avoid many of the other issues that retard reintegration and increase the probability of recidivism.

Hour Children is a faith-based, residential reentry program located in New York that has developed a model with a long history of successfully addressing these issues for returning women. Hour Children's program is designed for a very specific population, for very specific reasons – to keep incarcerated mothers and their children together. The program was started in 1986 by Sister Theresa Fitzgerald ("Sister Tesa"), a nun from a local New York Diocese. In the beginning Sister Tesa converted some empty rooms in a little-used convent to bedrooms for six children of incarcerees soon to be released from a local New York prison. The residence that Sister Tesa created for these families was lovingly called "Mother's House". The Program's name "Hour Children" was chosen to draw attention to the hours of visits and telephone calls that incarcerated mothers were able to have with their absent children while in prison (Ryan, 2013). The majority of the women who come to Hour Children have children below the age of 18. Some of these are infants born during incarceration and allowed to live with their mothers in a nursery at the facilities where they were incarcerated. More than 25 years later Hour Children operates five residences that provide 12 units of permanent housing and 40 units of transitional housing. These units become residences for approximately 60-80 women and 85-100 children each year (Charity Navigator 2013). Hour Children has recently added a totally new facility with a beautiful stone façade protected by ornamental iron gating. This new building houses Hour Children's administrative offices as well as a number of full apartments available on a sliding scale only to ex-offenders and their families. Most of the residences of the new facility are Hour Children graduates. An important component of the Hour Children model is a program called the "Hour

Working Women Reentry Program." Hour Working Women was designed to support female ex-offenders by offering the skills training and employment placement support pivotal to obtaining meaningful, livable-wage jobs. These jobs provide the income and stability these women need to achieve self-sufficiency and provide for their families. The resulting statistics are favorable and the Hour Children story bears telling (Charity Navigator 2013)

HOUR CHILDREN'S HOUR WORKING WOMEN REENTRY PROGRAM

In response to the significant challenges facing women returnees seeking permanent employment, Hour Children's Hour Working Women Reentry Program was specifically designed to support this population by providing skills training and employment placement support to obtain meaningful, livable-wage jobs. To meet this goal, the Hour Working Women Reentry Program delivers highly personalized, one-on-one attention, which enables rolling entry and exit for participants and allows each client to develop a time frame that suits her needs and abilities. Following a comprehensive assessment period that confirms readiness to participate in the program, the Hour Working Women Reentry Program is divided into four distinct phases:

> Phase 1: Employment Assessment and Skill Development – Workshops, seminars, and classes that provide training and education in the hard and soft skills needed for livable-wage employment (i.e., basic and advanced computer skills training, resume writing, professional writing and communications, and time management).
>
> Phase 2: Experience – External and internal internship placement.
>
> Phase 3: Job Search – Referrals to a broad network of employers willing to hire ex-offenders in office administration, customer service, retail sales, and building maintenance.
>
> Phase 4: Job Retention – Intensive support to ensure job retention, including case management, therapeutic support, mentoring, and even sick-child care.

Most women complete the various stages of the Hour Working Women Reentry Program within a year, although there are no set time frames or deadlines. The Hour Working Women Reentry Program staff help participants to plan for their professional future, which includes setting expectations and developing a set of attainable goals that realistically reflect a woman's interests, educational level, and wage requirements, while remaining mindful of the realities of the job marketplace. Group and one-on-one mentoring helps provide an additional layer of support and ensures that women get the pro-social skills that help facilitate their development as a professional.

In the past year, 231 women benefited from the Hour Working Women Reentry Program. Of that number, 56 completed the Program. Below are some of the corroborating statistics:

FY 2018 Results for 56 Women	
100%	Successfully completed Phase One and related training
89%	Successfully completed internships
75%	Applied for and secured permanent employment
64%	Retained permanent employment for more than 180 days
64%	Retained permanent employment for more than 240 days
43%	Are enrolling in college or advanced training
100%	To date have avoided further involvement with the criminal justice system

Though cause and effect are difficult to confirm, participation in the Hour Working Women Reentry Program seems to help make program participants more qualified for livable-wage jobs. In addition, only 3.5% of the women in Hour Children's programs returned to prison (versus a statewide average of 39%). This means that women in the Hour Children programs are 10 times less likely to return to prison. Even more encouraging, however, is the fact that 100% of the 56 women participating in the Hour Working Women Reentry Program have avoided any further involvement with the criminal justice system. Still more encouraging is that of the 56 women involved in the Hour Working Women Reentry Program, 64% have been able to maintain permanent employment, keep their children with them and provide for their families on their own. Finally, as it costs about $60,000 to incarcerate someone in a New York State prison, this lowered recidivism rate saved the state of New York more than 1.3 million dollars.

Still committed to reinventing itself, the Hour Working Women Program is currently in the process of hiring a Re-Entry Specialist who will be responsible for facilitating a 12 week curriculum to further support participating women to transition from government assistance to work and/or further education. They also diligently continue to broaden their network of local businesses willing to offer permanent employment to program participants. All-in-all Hour Children has developed a model that works. There are many layers of the program and the people involved with the program's delivery that contribute to its success. The why how of these connections bears further investigation to share information on what works and how but also maybe for replication. (Joanna Flores, Director, Hour Working Women Program).

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Guideline of work-integrated education in higher education of Thailand

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ABSTRACT

The guideline of Work-Integrated Education in higher education of Thailand were developed by using qualitative and quantitative research methodology. The research objectives were to develop guidelines, indicators and good practices in Work-Integrated Education that are suitable for Thailand context. Data collection and brain storming obtained from the target groups were from 10 experts, 10 specialists with more than 10 years of experience in applying Work-Integrated Education. Guidelines were drafted by 37 people from higher education institutes, workplace and network organization after which the draft was criticized by 311 university lecturers from all subjects and graduated stakeholders all over Thailand.

Research Results

Work-Integrated Education guidelines in higher education of Thailand emphasizes the learning outcomes of learner derive from the link between knowledge in the classroom and working experience in real environment that were systematically designed throughout curriculum. These guidelines extend scope of learning place in real environment that are learning experience by working, such as workplace, community, role model, geographic area and working on internet which are different from education institute atmosphere, therefore, the guidelines have great flexibility in practicing, openness, options and freedom that depend on identity of curriculum, study field, education institute context and real environment. Students will be able to creatively apply knowledge in the real situation and emphasize assurance of overall result that emerge excellence in each Student. Work-Integrated Education guidelines in higher education of Thailand consist of components, guidelines, indicators and best practices: (1) Learning arrangement contains guidelines for education institute, curriculum, lecturers, learners and real environment for learning. (2) Learning period consist of learning and teaching process guidelines. (3) After learning period consist of learning evaluation guidelines. (4) Learning measurement and assessment consist of learning outcome measurement and assessment guidelines and guidelines for curriculum measurement and assessment. (5) Monitoring learning process consist of monitoring learning process guidelines and guidelines for continual improvement of Work-Integrated Education operation. The results from the critical analysis of guidelines in case of implementation that

carried out by lecturers and graduate stakeholder all over Thailand showed the high possibility (4.15), high appropriateness (4.27) and high benefits (4.22) of developing Work-Integrated Education in Thailand.

Keywords: work-integrated education guideline, work-integrated learning, learning and teaching in real environment guideline

INTRODUCTION

Thailand present and future policies have clearly promoted Work-Integrated Education (WIE) and Work-Integrated Learning (WIL) both in vocational education and higher education levels that are put into policies and plan of all levels. First of all, Thai government comprise WIE and WIL in economic and society development plan no. 12 (2017-2021) which promote working together between education and industry by developing staffs in industry and prepare readiness in personnel to engage in industry through dual system and cooperative education (Coop Ed.). (Office of the National Economic and Social Development Board, Prime Minister's office, 2016) The important targets of national education plan in 2017-2031 is education for job and job creation. The target for this plan is to promote educational institutes to educate student by dual system, Coop Ed. and school in factory curriculum with identified standards. Educational development plan of Education Ministry no. 12 (2017-2021) presented educational trend in the future of manpower development for country by accelerating coordination with private sectors to support education management such as dual system and WIE in the workplaces. According to the information above, we found that Thailand have promoted guidelines for WIE seriously and systematically and have criterion of curriculum standard in bachelor degree B.E., 2558 (2015) that allowed higher educational institutes to create joint curriculum program with other organizations, which are non-educational institutes such as public organization and private companies that registered in stock exchange market of Thailand (Ministry of Education, 2015) However, We should seriously determine the quality and readiness of the workplaces that offer cooperation if they are willing to learn and teach by following the WIL or WIE standard or not. From the survey to find problems of WIE in 80 education institutes and workplaces with experience of more than 10 years on August, 2017, found the top 4 problems were (1) student task at the workplaces were of low quality, (2) Workplaces lack people to advise students clearly, (3) Workplaces lack controlling and monitoring students progress between learning periods and lastly (4) Workplaces lack collaboration between other staffs who are related. (Yawai, A. and other, 2017) That issues must have specific guidelines how to solve the problem, especially for students, who are working in the workplaces. We have to ensure with workplace that students will not be replaced for cheaper labor. That means WIL and WIE educational will be wasted and incapable to fulfillment of national education plan.

Since 2002 Office of the Higher Education Commission (OHEC) announced Coop Ed. policy with financial support to educational institutes that offer Coop Ed. program. It provided unit cost budgets for 17 universities where teaching and learning Coop Ed. Curriculum, by using Suranaree University of Technology model. From academic year 2008-2017 the number of higher education institutes, workplaces, curriculum, and students have been increasing steadily, In the academic year 2017 it's found that 40,914 student graduate in 1,530 Coop Ed. curriculum from 118 institutes and coordinated with 16,224 workplaces. According to the result showed that many students practiced in other fields including professional practices such as medicine, nursing, pedagogy etc. have their own standards and

guidelines clearly. Other than this, these students were following standards as their institutes have defined. In addition, the plan to promote Coop Ed. in higher education of Thailand 2013-2015 concluded the problems and obstacles from higher education institutes that reported in period of 5 years between 2008-2012, Top 1 in 4 issue found that administrations and lecturers are out of focus on Coop Ed. so it had to meet the problems and obstacles in promoting the Coop Ed. (Office of the Higher Education Commission, 2013)

In Thailand, Thai Association for Cooperative Education have created Coop Ed. standard and quality assurance in 2009 (Thai Association for Cooperative Education, 2009) for Coop Ed. placement guideline of higher education institutes of Thailand. It was the first WIE standard of Thailand but other WIE model doesn't have standard guideline for operation. Thus, Thailand has to create WIE guideline to cover all fields in Thailand. However, WIE does not cover professional fields which have standards or guidelines of experiential practices in their fields that are controlled by professional organizations. This WIE guideline will point to main concepts, which comprises of sub-indicators and best practices. In addition, this guideline can benefit to higher education institutes all over Thailand to arrange and operate their experiential practices process for success in the future.

RESEARCH OBJECTIVE

1. To investigate Work-Integrated Education guidelines that were created in Thailand and abroad.
2. To create guidelines, indicators and good practices of Work-Integrated Education operation.
3. To create quality manual for Work-Integrated Education operation.

RESEARCH SCOPE

Scope of Content

WIE have to manage the research contents based on following nine areas consist of Pre-course Experience, Sandwich Course, Cooperative Education, Cognitive Apprenticeship or Job Shadowing, Joint Industry University Course, New Traineeship or Apprenticeship, Placement or Practicum, Fieldwork and Post-course Internship.

Targets Group of Study

The target groups were purposely selected from the group from higher education institutions, workplaces, network organizations consist of following:

- experts with more than 10 years of experience in applying WIE.
- specialists with more than 10 years of experience in applying WIE.
- 37 representative personals persons from nine professional groups in higher education institutes and workplace, and specialists with experience in applying WIE.
- 311 representative personals with experience in applying WIE from nine regional cooperative education networks, nine professional groups in higher education institutes and workplaces, multilateral networks such as The Federation of Thai Industries, The Thai Chamber of

Commerce and Board of Trade of Thailand, The Board of Investment of Thailand, National Science Technology and Innovation Policy Office. The data collection was separated by proportion of the number of representative personals.

RESEARCH METHODOLOGY

This research is qualitative and quantitative research that deeply study WIE guideline, indicators and best practices that cover 9 types of WILs, by using a focus group interviewing method via unique sample. And quantitative research using questionnaire for understanding WIE guideline by the representative who involved in WIL nationwide. The process of this research is as following:

1. Study principles and concepts of guideline

   1.1 Study principles and concepts framework of WIE guideline by content analysis from text books and research papers are related as follow:

      1.1.1 Principles and concepts of WIE.

      1.1.2 Principles, concepts and pattern of guidelines, indicators and educational quality assessment criteria

      1.1.3 Thailand qualification framework of higher education.

      1.1.4 Curriculum standard criteria of Bachelor's Degree B.E., 2558 (2015)

   1.2 Interview 10 experts regarding concept of guideline from the one who have experience in work-integrated education and administration for more than 10 years. Semi-structured interview method is used for future research. Interviewer must be aware in providing their data. Before interviewers answer the questions, they must review their idea as follow: (1) optimistic-realistic scenario (2) pessimistic-realistic scenario and (3) most-probable scenario. Researchers would ask for permission to make the voice recording of the interview in order to transcribe and summaries the points that are relevant only and send it to interviewer in reviewing for content validity.

2. Draft Guideline

   2.1 Creating draft of guidelines, Following are the indicators and best practices of WIE that cover 9 areas

      2.1.1 Pre-course Experience

      2.1.2 Sandwich Course

      2.1.3 Cooperative Education

      2.1.4 Cognitive Apprenticeship or Job Shadowing

      2.1.5 Joint Industry University Course

      2.1.6 New Traineeship or Apprenticeship

      2.1.7 Placement or Practicum

      2.1.8 Fieldwork

2.1.9Post-course Internship

2.2 Bring the draft of WIE guideline from 2.1 which are document and summarizing short note from experts of focus group consisting of 10 specialists with more than 10 years of experience in applying WIE.

2.3 Study 3 WIE national research are as follows:

2.3.1 Studying work-integrated learning model in higher education that is suitable for each professional field in Thailand phase I.

2.3.2 Studying work-integrated learning model in higher education that is suitable for each professional field in Thailand phase II.

2.3.3 Developing of work-integrated learning in higher education, Office of the Education Council. Study WIE standards both in Thailand and international that comprises of standards, indicators and quality assessment criteria from pre-learning, between the learning, post learning and learning assessment.

2.4 Inquiry of the guideline by using focus group discussion of 37 representative persons from 9 professional group in higher education institutes and workplace from International Standard Classification of Education: ISCED list are as follows 1) health sciences 2) physical science 3) engineering 4) architecture and town planning 5) agriculture forest and fishing 6) business administration, commerce, account, management, tourism, economics 7) education 8) art, fine arts and applied art 9) social science and humanities and specialists with experience in applying WIE. They have to meet for considering of the guideline, drafts are comprised of 5 items:

2.4.1 Determine subjects and objects that needs their idea through focus group.

2.4.2 Determine frame work and concepts in focus group by dividing to sub concepts for inquiring of each idea that comprise of discussion outline, discussion frame work and conclusion.

2.4.3 Determine and select focus group member from 37 representatives' who are willing to present their ideas in this research and focus group participation. They must have experience to manage WIE or the other WIE models.

2.4.4 Conduct focus group meeting by moderator who present WIE concepts and then focus group members discuss in all fairness. No one dominates their opinions or makes all the decisions, everyone have to express their ideas, and actively participate.

2.4.5 Sum up and conclude the discussion by making a summary of the whole discussion, let the members put of questions or add up on ideas, comments or reviews on discussion.

2.5 Arrange draft of guideline, indicator and best practices from group discussion

3. Comments on Draft of Guideline

   3.1 Representatives with experience in applying WIE from 9 regional Coop Ed. networks, 9 professional group in higher education institutes and workplaces, multilateral network such as The Federation of Thai Industries, The Thai Chamber of Commerce and Board of Trade of Thailand, The Board of Investment of Thailand, National Science Technology and Innovation Policy Office. They will all brainstorm to set the questionnaire that is comprised of guideline indicators and best practices in each item as follows:

      3.1.1 The possibility of WIE to implement in teaching and learning in higher education

      3.1.2 The suitability of WIE to implement in many workplaces, each different contexts and various professions in Thailand.

      3.1.3 The impact will perhaps have both positive and negative feedback when WIE is implemented.

      3.1.4 Compatible with other standards such as National Qualification Framework and Curriculum Criterion of Bachelor Level 2015 and other professional standards.

4. Create WIE quality assurance manual for management.

5. Present WIE guideline for assessment with working committee of research project.

RESEARCH EQUIPMENT

Document Analysis

Collect interesting facts and data from many different sources such as textbooks, journals, research results, websites. Check for the credibility of the data from all the resources, records, content analysis, grouping and conclude everything as a source for later reference.

Semi-Structured Interview

Researcher prepares important interview questions and add more questions on the topics that are unclear or need more information. Before interviewers answer the questions, they must make sure that their answers are falling under the following criteria (1) optimistic-realistic scenario (2) pessimistic-realistic scenario and (3) most-probable scenario. Researcher would ask for permission to record the voice while the interview is taken, after the interview the summarize voice recording with the relevant points would be sent to the interviewer.

Focus Group Discussion

Select group members who have qualification consist of objective research, WIE experiences and interested WIE. In the process, moderator would prepare items and contents, to create a good atmosphere for discussion and let all member present with their ideas.

Questionnaire

This will need a big sample group from all over Thailand, for respondants to give out their comment and ideas. It is comprised of 3 categories, 1. appropriateness, benefit and impact of WIE guideline and

divided into 2 copies, one for higher education institutes and second copy for workplaces. Likert Scales are used for rating scores by respondent that can choose suggestion levels that they highly agree, agree, not so sure, don't agree, highly don't agree and score setting is 5, 4, 3, 2, and 1 respectively. Questionnaires would be sent by e-mail, google form and registered post depend on the respondent's need.

RESULTS

WIE in higher education of Thailand emphasized the learning outcomes of learner to be derived from the linkage between knowledge in the classroom and working experience in real environment that were systematically designed throughout curriculum and consist of Thailand Qualification Framework: TQF. Focusing on the connection and readiness of education institutes and real environment places, this partnership of the system towards same direction would be systematically monitored.

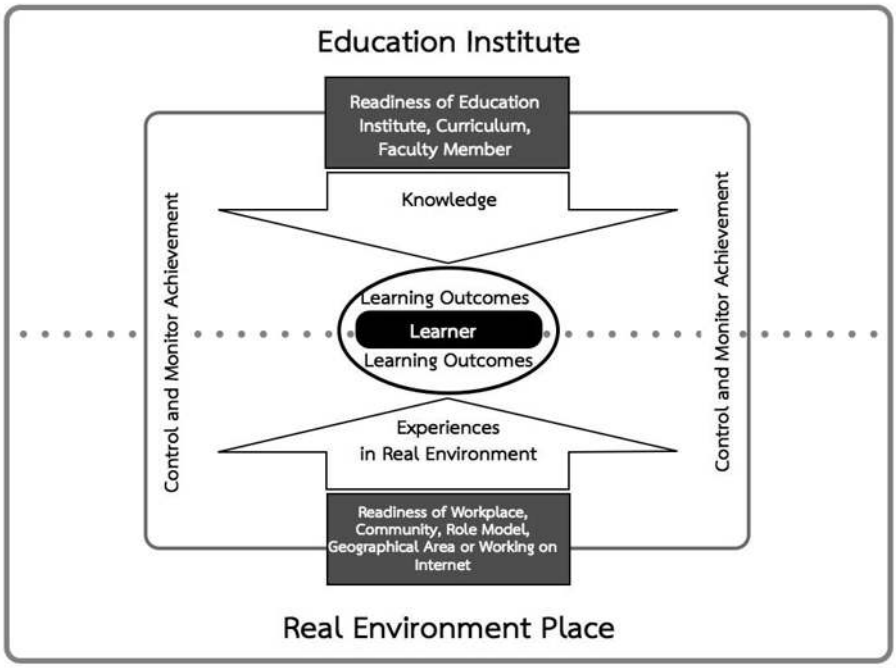

FIGURE 1: Concept of work-integrated education

From Figure 1, WIE concepts emphasize assurance of learner so that learning outcomes is achieved. Education institutes, curriculum, faculty members, and real work environment which include members in the workplace, community, role model, geographic area or working on internet must have readiness in WIE teaching and learning and capable in monitoring learners in their context that depend on nature of their study fields. This model must be able to promote and support learners to apply knowledge creatively in real environment and achieve their learning outcomes both characteristic and competency that were designed in curriculum. Teaching and learning of the designed curriculum must be independent to each institute that are in different educational field, context, area and readiness.

Education institutes and real environment places must control and monitor WIE achievements including preventive and corrective problems that might happen.

CONCEPT OF WIE GUIDELINE IN THAILAND

WIE guideline are arranged for great flexibility in practicing, openness, options and freedom that depend on identity of curriculum, study fields, education institute contexts and real environment. Concept of WIE guideline must have 4 essential elements as follows:

1. Learning of learner must undergo real working environment of their study field.
2. Learner's must apply knowledge to work that are related to their study background.
3. Arrangements of the activities must be done according to the learner's curriculum.
4. Learner's job descriptions must be related to their study fields, so that the job could be able to develop learning outcomes for the learner.

Education institutes can use WIE in various different names, however Institutes should consider 5 essential elements mentioned below completely.

1. Preparation before learning

1.1 Education Institute guideline. Indicator: Education institute must have readiness, including policy, curriculum, lecturers, staffs, budget and facilities for Students who would learn and be taught under WIE process, so that they will be able to achieve learning outcomes which were determined to be achieved.

1.2 Curriculum guideline Indicators:

1.2.1 To assure curriculum responds to manpower of graduate user, learner or professional organization's needs.

1.2.2 Learning outcomes of learner would be determined by the curriculum.

1.3 Faculty members guideline Indicators:

1.3.1 Faculty members must have readiness and competency for WIE

1.3.2 Faculty members must have knowledge and experiences regarding business operation of real environment place.

1.4 Learner's guideline. Indicators:

1.4.1 Learner must have readiness and competency in WIL

1.4.2 WIE must determine learning outcomes of learner both individual and overall.

1.5 Real environment for learning guideline. Indicators:

1.5.1 Real environment for learning such as workplaces, community, role models, geography areas, and working on internet must have readiness in WIE which will effect learners achievement as determined.

1.5.2 Persons in the workplace, community, role model, geography area, and working on internet that relate to learner study fields must have WIE knowledge and understanding and that they are able to control, follow and monitor learners to achieve their learning outcomes.

2. Learning period. learning and teaching process guideline. Indicators:

   2.1 Learner is able to apply knowledge in real environment creatively.

   2.2 WIE process must have many details of guideline that drive learner to achieve learning outcomes that were defined.

3. After learning period. learning evaluation guideline. Indicators: Learner must present themselves successfully that how they have achieved learning outcomes from WIL.

4. Learning measurement and assessment

   4.1 Learning outcomes measurement. Indicators: Learning outcomes measurement of learners are defined and practical in using.

   4.2 Curriculum measurement and assessment guideline. Indicators: Curriculum outcome measurement are defined and practical in using.

5. Monitoring learning process

   5.1 Monitoring learning process guideline. Indicators: Learning process and results were effectively monitored for preventing and correcting any problems that may happen.

   5.2 Guidelines for continual improvement of WIE. Indicators: Continual improvement of WIE are defined for both education institute and real environment place.

CONCLUSION AND DISCUSSION

The old version of education system, institutes managed teaching and learning by themselves for their students. At present time when the technology is very rapidly changing by the use of internet. This condition has affected to a development of the country from an agricultural country to an industrial country and from a middle-income country to a high-income country which makes an effort to create innovation as well. Not only business or industry organizations can drive country but manpower also have to be developed to obtain high performance and cognitive skill as well. Higher education is very important to develop country manpower for responding to country's needs meanwhile technology and internet rapidly progress which create many learning resources for learner who can study in anytime from anywhere. Educational institutes are not only the main resources for learning anymore and knowledge that is taught and given in an institute may not be appropriate for working in the future. Knowledge that is taught in institutes maybe out of date by the time students graduate. At the same time, lecturers should understand that there is a change in the students' needs in education so therefore there is need to make and design new curriculum that coordinate with new students by opening learner experience and knowledge that could be applied in the real environment and feedback could be given to lecturer about quality of students that if they have enough knowledge, skills and experiences for working or not. If the Contents and teaching method of lecturers are still up to date and effective or not.

If educational system of Thailand doesn't change to respond to development of the country it will have a great impact on budgets, time and toward the competitiveness of Thailand.

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How living profiles can serve as the bridge between education and workplace

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ABSTRACT

Today, most high school students do not actively consider their higher education options until their junior year, when they begin completing college applications. A similar lack of planning affects the college-to-workforce transition — soon-to-be graduates only begin focusing on job applications, and collecting what is needed to impress potential employers, long after they have completed the projects that could have demonstrated their employability.

What would life be like for students, their parents, and their teachers; colleges and universities, both undergraduate and graduate; and employers if we all started earlier, creating a "Living Profile" of student work and related success from the very beginning?

In this paper, Dr. Nancy Zimpher, professor at the University of Albany and senior fellow at the Rockefeller Institute of Government, and George Haddad, founder and CEO of leading admissions solution provider Liaison International, will explore the need for comprehensive profiles of student work and success, specifically covering:

- How the workplace has changed in recent decades and how it will likely change over the next decade.
- How higher education institutions and workplaces have historically intersected and how they will need to intersect in the future.
- Which tools admissions, teaching, and hiring professionals need to build a better workforce together.

Dr. Zimpher and Haddad will explore how Living Profiles can serve as pathways to better connections to industry. They will emphasize how these tools, which will leverage proven, existing technology, can help colleges and the marketplace develop today's students for tomorrow's workplace.

INTRODUCTION: IMPROVING STUDENT TRANSITIONS FROM HIGH SCHOOL TO COLLEGE TO CAREER

America's educational and employment sectors are setting goals on college completion and career attainment, but we are not moving the dial.

Our nation needs many more college graduates to promote economic growth. That is why, in 2009, President Barack Obama set a goal for the United States to lead the world in college attainment by adults

ages 25-34 by 2020 (Obama Administration, 2016). Though steady progress has been made, we remain far short of former President Obama's goal (Fry, 2017).

There are multiple disconnects in the education pipeline, including artificial separations between early childhood development and kindergarten readiness as well as middle school to high school graduation and college entry, let alone gaps in our transfer policies and secured entry into a career. Hence the shocking figure, according to a Hechinger Report analysis of U.S. Department of Education data, that over 19 percent of full-time freshmen at four-year academic institutions do not return to that college for a second year (Marcus, 2018).

Current college workflow looks like this: applicants substantially invest in creating comprehensive applications to college but use that accrual of experience late in their high school journey — too late to capture significant course planning, course completion, and any applied learning experiences they might have accrued along the way. Just as students accrue hours in preparing applications to college, so do the receiving institutions. But sadly, upon matriculation, the student-college relationship gets reset and the application is archived, with little or no future use. Students create additional applications during the college years to apply for scholarships, internships, and jobs during and after their pursuit for a degree, each time starting anew.

What would life be like for students; high school counselors, parents, and teachers; colleges and universities; prospective employers; and graduate schools, if there were created early on in the education pipeline a "Living Profile" of student work and success — a lifetime application? That is our proposal: a systematic and effective pathway for students and schools that begins with matriculation in high school, through college, to employment, and beyond. Living Profiles serve as pathways to better connections from the world of education to the world of work.

In this paper, we will illustrate how the changes in America's workplace in recent decades as well as the growing disconnection between education and employment necessitate the creation of the Living Profile as the tool that unifies the sectors of higher education admissions, student learning, hiring, and employee development. We will articulate how the Living Profile leverages and integrates existing tools in all those sectors in order to help colleges develop today's students for tomorrow's workplace, and to help companies hire best-fit employees and continually foster their lifelong learning.

PREPARING FOR TOMORROW'S WORKPLACE

America's workforce is on the move. According to Gallup's 2017 "State of the American Workplace" survey, 35 percent of employees in the U.S. have changed jobs within the last three years (Gallup, 2017).

America's workforce is also experiencing a morale crisis. Gallup found that less than half of employees "strongly agree" with the following statements:

- At work, they have the best opportunity to do what they do best every day (4 in 10).
- They have the materials and equipment to do their work right (3 in 10).
- There is someone at work who encourages their development (3 in 10).
- The mission or purpose of their company makes them feel their job is important (4 in 10).
- In the last year, they have had opportunities to learn and grow (4 in 10).

If the labor force is so dissatisfied, will society get the productivity it needs out of professionals and industries? Later, we will explain how the Living Profile responds to the needs of an evolving employment landscape by addressing gaps in the education-workplace connection.

HOW HAS THE WORKPLACE CHANGED?

Given how the American workforce has become increasingly educated during the last quarter-century, it is clear that a primary expectation which modern-day employers have of their employees is that they possess a college degree, or at minimum a high school diploma. The Bureau of Labor Statistics (BLS) reported that from 1992 to 2016, the proportions of the workforce with a bachelor's degree or an advanced degree (meaning a master's, professional, or doctoral degree) rose by 7 and 5 percentage points, respectively, and that by 2016 two-thirds of the workforce had completed at least some college (Brundage, 2017).

In 2016, labor force participation for men and women without a high school diploma stood at 58.1 percent and 33.3 percent, respectively, and for men and women with a professional degree, those rates were 79.9 percent and 75.1 percent, BLS found.

The unemployment rate in 2016 was at its highest — 7.4 percent — for Americans possessing less than a high school diploma, but only 2.7 percent for those with a bachelor's degree, according to BLS. Median weekly earnings were $504 for Americans without a high school diploma, $1,156 for those with a college degree, and $1,380 for those with a master's degree, BLS said.

WHERE IS THE WORKPLACE IS HEADED?

BLS projected employment will increase at a rate of 0.7 percent per year during the 2016-2026 decade, exceeding the 0.5 percent annual growth from 2006-2016 (Bureau of Labor Statistics, 2017). However, an aging population means that labor force participation will decline to 61 percent in 2026 from 62.8 percent in 2016, BLS estimated.

How much is employment costing the country? During December 2018 — the most recent month for which official labor force figures are available — BLS said roughly 5.9 million hires were made nationwide, translating to 70.8 million hires over the course of a full year (Bureau of Labor Statistics, 2019). With U.S. companies spending $4,000 per hire on recruiting (Bersin by Deloitte, 2015), recruitment costs the country more than $283 billion annually when using the December 2018 BLS hiring figure as a benchmark. That $283 billion does not factor in employers' costs of initial and continued training, nor does it reflect whether job seekers and employees possess the skills required to meet employers' needs.

To reduce America's hiring and education costs, we need a more integrated path from college applications to employment in which employers nurture future workers while they are still in school and then over the course of their careers. This pathway will be forged by the Living Profile.

SEARCHING FOR THE MISSING LINK IN THE EDUCATION-WORKPLACE CONNECTION

We have already covered how Americans' employment rates and earnings both rise as educational attainment increases. But why is education so strongly associated with the workplace?

Although postsecondary education has never been a requirement in the U.S., many experts now consider a college degree the de facto "new high school diploma" (Farrington, 2014).

The formula is relatively straightforward: education increases productivity for employees, and more productive and higher-paid workers drive prosperity in societies at-large. The Economic Policy Institute found the following outcomes on the U.S. state level: a workforce's educational attainment and median wages are strongly correlated, states can build a strong foundation for economic success (including their ability to grow and attract high-wage employers) by investing in education, and investing in education benefits a state's fiscal health because higher-income workers contribute more taxes during their lifetimes (Berger & Fisher, 2013).

Yet a report by the Georgetown Center on Education and the Workforce (CEW) projects that America's higher education system will fall 5 million academic degrees short of producing the number of qualified employees the country needs by 2020 (Carnevale, Smith, & Strohl, 2013).

What is the missing link, then, in the education-workplace connection? What builds the academic environment that ultimately builds a better workforce? The Living Profile represents that missing link, transforming academia and employment from their current status as two distinct periods in a person's life into one coherent journey.

WHAT EFFECTIVELY PAVES THE WAY FROM EDUCATION TO EMPLOYMENT?

CEW found that the difference in median earnings with a bachelor's degree was $39,000 higher for those who majored in architecture/engineering than those majoring in education (Carnevale & Cheah, 2018). Choosing the right major can be the key step toward financial stability.

According to CEW, less education can also be worth more, as 28 percent of associate degree holders earn more than the average bachelor's degree holder and some BAs earn more than those with graduate degrees.

The key takeaway is that future employees should perform due diligence on the job market — particularly in their field of choice — to gain an idea of how much education they need to reach their professional goals, rather than accumulating degrees for the sake of educational attainment as an end in itself. One practical tool that prospective employees can use is ExploreHealthCareers.org, an online gateway to over 100 health professions that provides vetted, free career information to the public about the growing health care field.

HOW DO EDUCATION AND THE WORKPLACE NEED TO INTERSECT MOVING FORWARD?

Focusing on Skill Development and Knowledge Domains

CEW reported that the skills which are most valued in today's economy include leadership, communications, and analysis — with 96 percent of occupations considering critical thinking and active listening to be either very important or extremely important to success (Carnevale, Smith, & Strohl, 2013). Additionally, CEW found that 70 percent of occupations deem mathematical knowledge very important or extremely important to success, while over 60 percent prioritize oral comprehension and expression as very important or extremely important.

Are academic institutions appropriately focusing their curricula on infusing the country's future workforce with the skills and knowledge domains that employers value the most? In this paper's next section, we will cover how Liaison International's Centralized Application Service (CAS™) equips

colleges and universities with the technology and tools to transform admissions into a more transparent process when it comes to the skills, knowledge, and other attributes of applicants — empowering institutions to build more diverse incoming classes which produce the next generation of employees in a better-prepared, more motivated workforce.

Responding to Demand in the Job Market

Higher education institutions could respond to the economy's increased demand for workers in specific fields by devoting more program resources to the academic disciplines whose graduates enter those professions.

BLS projects that during the decade from 2016-2026, the 10 fast-growing occupations will be solar photovoltaic installers, wind turbine service technicians, home health aides, personal care aides, physician assistants, nurse practitioners, statisticians, physical therapist assistants, software developers, and mathematicians (Bureau of Labor Statistics, 2017). That list could encourage academic institutions to examine whether they are sufficiently addressing the growing demand for STEM graduates.

Driving Diversity Through Research

Newcomers to a scientific field often ask the foundational research questions which spark innovation in that discipline — for instance, when women increasingly entered medical research in America in the 1980s and 1990s, researchers as a whole began paying greater attention to women's health issues such as heart disease, breast cancer, and autoimmune diseases (Gewin, 2018, para. 3).

Colleges and universities, therefore, have a unique opportunity to cultivate workplace diversity by encouraging the participation of diverse populations in research initiatives.

THE LIVING PROFILE'S COMPONENTS: ADMISSIONS, LEARNING, HIRING, EMPLOYMENT

We tend to view education and employment as segmented processes, considering each phase distinct and chronological, then moving on to the next step while filing away the diploma, degree, or job which was just completed.

What if we instead thought of schooling and careers as one lifelong, integrated journey in which each step never loses its relevance? What if we used the same tool to optimize the process for individuals and institutions at every phase, from college admissions to student learning to hiring to employee development?

That tool is the Living Profile, a transformative platform for a lifelong learning and working journey — a living, breathing, lifetime application.

As we will cover later in this section, we believe the ideal technological platform for hosting the Living Profile is Liaison's CAS. But first, what are the features, capabilities, and outcomes we want from this tool?

WHAT TOOLS ARE NEEDED TO SUPPORT COLLEGE ADMISSIONS?

The 1990s brought the emergence of three central developments which have indelibly influenced the college admissions process:

- In the early 1990s, Liaison's founding helped higher education institutions begin to identify, recruit, and enroll students with admissions management and marketing automation software and services.
- In 1998, the Common Application went online and streamlined undergraduate admissions.
- In 2017, Liaison worked with the Common Application to develop an application which takes into account the unique circumstances of transfer students.

These developments have all added up to a more streamlined, efficient admissions experience. That said, many admissions offices continue to face obstacles, including:

- **Inefficient application processing and review processes:** Surprisingly, many of the same admissions officers who use the latest smartphone technology still process thousands of applications without the most advanced admissions tools. Our Lady of the Lake University's Department of Communication Disorders offers a great example of what happens when outdated technology plays an integral role in admissions. Before the Department implemented a CAS, its admissions team needed at least two weeks after their application deadline to continue processing paperwork, receiving transcripts, and creating folders for each applicant. Faculty reviewers received applications weeks after the deadline — leaving each reviewer only one week to review 60-75 applications before sending interview invitations. The school's manual processes resulted in lost information, human error in GPA calculations, and inefficiencies in sending interview invitations and acceptance letters.
- **Lack of time to dedicate to strategic thinking:** Today's admissions staffers cannot afford to get bogged down in the logistics surrounding admissions. They need to take a step back and focus on the bigger picture — to think strategically about a school's profile, curriculum, program offerings, use of technology, approach to diversity, and all the other factors that attract best-fit students. But these staffers do not have the time to take the long view if they are constantly caught up in cumbersome operations.
- **Lack of diversity:** Despite wide-scale efforts to improve ethnic diversity in the four decades since the Supreme Court's *Regents of the University of California v. Bakke* ruling, which allowed race to be one of several factors in college admissions policy, African Americans and Hispanics are more underrepresented at top colleges than they were 35 years ago (Ashkenas, Park, & Pearce, 2017).

The Solution for Admissions Obstacles: CAS

CAS, Liaison's cloud-based recruiting and admissions solution, is the tool of choice for more than 31,000 academic programs on over 1,000 campuses in pursuit of growing and shaping enrollment, while reducing effort and costs. This single solution — CAS — addresses the obstacles of time-consuming application processing and review, lapsed enrollment deadlines, dwindling applicant pools, the failure to meet goals on diversity, and more.

CAS physically receives and scans application materials and supporting documentation, helping schools go paperless without the effort of scanning themselves. This speeds packaging completion and related decision times.

When applicable, CAS can conduct a thorough review of every application, reviewing for completeness and accuracy. This involves verification of coursework entry, transcript authentication, and GPA calculations.

By promoting their programs in a centralized directory, CAS empowers university administrators to reach a larger pool of prospective applicants, securely access application data to target and diversify applicant pools, and conduct trend analyses for forecasting and benchmarking through onboard reporting and visual analytics.

Further, Liaison has learned that partnering with professional associations — not just one school at a time — amplifies CAS's impact. Liaison partners with over 30 professional associations across more than 40 academic disciplines to bring admissions offices an improved way to recruit, enroll, and admit best-fit students. Each CAS discipline is structured to collect data and supporting documentation relevant to the profession.

Later, we will explain how the CAS technology — already a game-changer for college admissions — can similarly transform the hiring and employee development sectors, while integrating those sectors with admissions and with each other, through the Living Profile.

CAS's Application to the Living Profile

Just as it has streamlined college admissions through the creation of a centralized repository, CAS powers the Living Profile by serving as the central meeting point for individuals' lifetime achievements, experiences, school applications, and job applications — a platform where admissions officers, human resources professionals, and workplace managers can gain a complete and continuously evolving picture of any student or employee.

WHAT TOOLS ARE NEEDED TO FACILITATE STUDENT DEVELOPMENT AND TRANSITIONS?

Given the importance of the education-workplace connection, it would stand to reason that American society would possess a systematic and effective pathway to help ensure student success from high school, through college and graduate school, to the workforce. Sadly, it does not.

High school students devote significant time and resources to college applications, mirrored by higher education institutions' investment in the exhaustive admissions process. Yet admissions should not be an end in itself. Admission is followed by classroom learning, personal growth, and preparation for employment.

What tools do students and institutions have which can maximize student development, while setting up smooth and successful transitions to the workforce? Traditional elements like guidance counselors, academic advisors, extracurricular activities, internships during the school year and/or summer vacation, standardized testing preparation courses for those planning to pursue graduate school, and more are all part of the picture. But in an increasingly wired world, technology is, not surprisingly, taking a more prominent role in the student development process.

The Solution for Student Success: E-learning

While online tools are not a substitute for a brick-and-mortar classroom learning experience, they can increase engagement. Engaged concentration is positively associated with learning, while boredom leads to poor learning outcomes, explains a University of Pennsylvania study which demonstrates that blended learning can offer impressive student engagement rates compared to traditional instruction (Mulqueeny, Mingle, Kostyuk, Baker, & Ocumpaugh, 2011).

From Coursera and Saylor, which provide free courses on a wide range of subjects, to iHomework, a mobile app that facilitates more efficient completion of assignments, a complete toolbox for student development basically already exists. Yet as we noted at the start of this paper, while campuses and E-learning systems are working hard to improve America's rates of college completion, the disconnect in the education pipeline remains. The materials resulting from student learning and development — in the classroom, through the usage of online tools, in extracurricular and internship settings, during the creation of college and graduate school applications, and more — are archived upon completion and have little or no tangible impact on the employment process. For their transition from academics to employment, students start from scratch.

This is precisely why we are proposing the Living Profile — a centralized repository for the accomplishments students have collected, and continue to amass in the workforce, throughout a lifetime of studies. That is the missing piece in the education-workplace connection.

E-Learning's Application to the Living Profile

The Living Profile combines CAS with cutting-edge tools in the E-Learning space in order to make this new platform maximally relevant and effective for a current generation of students who are being raised with the pervasiveness of the internet, social media, and mobile technology. Students at all levels and in all disciplines are directed to the best free E-Learning tools, have a way to document their achievements with these tools, and receive scholarships or subsidies for the usage of paid tools.

WHAT TOOLS ARE NEEDED TO CLOSE THE GAP BETWEEN HIRING AND EMPLOYEE SATISFACTION?

As we mentioned earlier, Gallup found that while 60 percent of employees say the ability to do what they do best in a role is "very important" to them, just 40 percent of employees say they actually possess the best available opportunity to do what they do best every day.

Employees want to be fulfilled and satisfied, while employers want to hire motivated and productive workers. Yet most of the time, the proper match is not made.

With the advent of the internet, job websites like Monster and CareerBuilder were the initial technological solution beginning in the 1990s. Later on, LinkedIn, launched in 2003, amplified the significance of online networking. In fact, RiseSmart has found that 95 percent of recruiters use LinkedIn as a major tool for finding prospective employees, making it their most popular platform for research into candidates (Fertig, 2017).

Yet a LinkedIn profile is developed post-degree. It does not address collection of credentials along the journey, nor the ever-important forecasting desired by both higher education and employers relying on insights for curriculum planning and hiring forecasts.

The Solution for Employee Satisfaction: A Streamlined, Comprehensive Hiring System

LinkedIn helps you network online in order to find and land a job, while helping human resources professionals find top talent. Yet the gap in employee satisfaction remains. The hiring process is still not making the right matches over half the time. What tool can improve this outcome?

One possible solution is SlideRoom. Although it is largely used for college admissions, SlideRoom is just as applicable to hiring, offering a streamlined way to accept and review applications, reference letters, portfolios, and work samples in one secure location. A growing number of institutions use the platform to manage their hiring for professorships, including Carnegie Mellon University, the Cleveland Art Institute, the Pratt Institute, and The Cooper Union.

Within SlideRoom, job applicants are directed to a custom domain, are greeted with an employer's messaging, and have access to a live directory of opportunities. Employers can create customized application and reference forms with SlideRoom's drag and drop form builder; answers to application questions can later be used to segment pools of applicants and control how data is exported. Letters of reference can be collected directly from third parties. Finally, SlideRoom accepts images, audio, video, 3D models and environments, and embedded media to bring applicants' abilities to life more effectively and vividly than a simple resumé.

SlideRoom's Application to the Living Profile

Within the Living Profile, SlideRoom's technology matches best-fit applicants with the jobs and companies that uniquely meet their skills, passions, and ambitions.

WHAT TOOLS ARE NEEDED FOR EMPLOYEE DEVELOPMENT?

A student has graduated college (and/or graduate school) and is ready to enter the workforce. The student — now a candidate for employment — conducts a job search and secures a position. Now what?

Even with a thorough, sophisticated hiring process that makes a company confident it has hired the right person, there is no guarantee the hire will work out. Job performance still hinges on continued learning, given that learning is, after all, a lifelong process.

What tools, then, can help ensure that 21st-century employees thrive in their current roles through the support provided by a strong learning environment?

The Solution for Continued Employee Development: LMS

Much like the admissions and hiring landscapes, employee development has evolved alongside progress in modern technology. A rapidly growing tool in this space, particularly with the rise of e-learning, is the Learning Management System (LMS): a software application for the administration, documentation, tracking, reporting, and delivery of educational courses, training programs, or learning and development programs.

Common attributes which businesses and companies seek from an LMS include web conferencing capability, a user-friendly interface, mobile accessibility, advanced analytics, ample storage space in the cloud, blended learning capability, customer support, customization, global accessibility in different languages, automated class scheduling, easy creation of online training content, discussion boards, and the ability to share content through social media.

LMS's Application to the Living Profile

The Living Profile partners with leading providers of LMS software to offer companies discounted access to employee development tools, in addition to offering employees free online courses that will foster lifelong learning in their professions. CAS offers a way to centralize documentation about completed courses and earned certifications and specializations.

HOW DOES THE LIVING PROFILE BRING ADMISSIONS, LEARNING, HIRING, AND EMPLOYMENT TOGETHER?

Powered by successful tools that already exist — CAS, E-Learning, SlideRoom, LMSs, and others — the Living Profile is society's first seamless integration of admissions, hiring, and employee development. It is an unprecedented tool for lifelong learning as well as continuous personal growth and achievement. Much like the platform already functions in the college admissions space, CAS is the centralized repository which unites all of these tools on one platform and serves as the cloud-based, continuously updated lifetime application for Living Profile users.

From entry into high school and throughout the lifecycle, students keep building their Living Profile by adding cognitive and noncognitive data as well as experiences gained through their time in school and into their career. This profile includes entries with multimedia elements and examples of achieved competency. Teachers and faculty members, preceptors, internship supervisors, and others, use specialized tools for validation and feedback. Students select areas in the Living Profile to be private or public. With the right technology — particularly the maximally customizable CAS platform — the possibilities are endless.

College admissions officers, and ultimately employers, have access to the Living Profile network to view designated public portions of a student's profile. College advisers and employers track student progress and nurture students for future employment opportunities. And in the world of cooperative education, paid internships, and all work-integrated learning opportunities, there is a documented and validated record of achievement throughout these experiences. In turn, employers communicate necessary skills and abilities required to enter and succeed in a preferred career. The ultimate use of a Living Profile is to place students in increasingly sophisticated career opportunities, leading to successful work experiences in college and of course, employment upon degree completion.

Employers can proactively identify prospects through the Living Profile, recruiting them into jobs and giving them access to continued education for career advancement. SlideRoom helps the Living Profile match best-fit applicants with positions that uniquely meet their passions and skills sets, improving employee retention and performance as well as reducing America's costs of hiring, training, and education.

For campuses, this Living Profile serves as the pathway to better connections to the world of work, both for faculty assigned to place students in work-integrated learning experiences and to guide curriculum development as colleges and the marketplace work together to define courses and experiences that meet the cognitive and noncognitive skills and abilities that students need for quality life skills and advanced career opportunities. This profile also presents the college and student with a lifelong resumé of learning and work experiences, to be additive as a student's career advances. This continuous connection with the network of students beyond graduation also helps colleges address the evidenced-based outcomes

of their curriculum and the identification of early indicators of success. Further, this process allows schools to nurture their graduates to re-engage in continuing education and employee development.

With the Living Profile, the college application process can begin as early as 9th grade and extend exponentially into future careers. The proposal herein suggests that systems partner in the design phase of the Living Profile instrument, using pre-existing technologies that already have a proven track record of utility and fidelity. Such technologies include or are provided by Liaison's CAS, SlideRoom, LMS, Kira Talent, ETS, Liaison's Enrollment Marketing Platform (EMP), higher education-focused CRMs World Education Services (WES), and Parchment.

CONCLUSION: THE LIVING PROFILE DRIVES PROSPERITY BY LINKING EDUCATION AND WORK

To date, American society has implemented distinct, segmented solutions for the various challenges it faces in the worlds of academia and employment. The Living Profile offers the missing piece: the continuously updated lifetime application which ensures that no phase of lifelong learning, working, and achievement goes to waste.

With the wealth of information provided by the Living Profile, academic institutions and employers receive a full picture of each applicant in order to enroll best-fit students and hire best-fit employees, while applicants to schools and jobs are equipped with the confidence and resources to achieve their ambitions at each step of the lifelong education-workplace journey. Liaison's CAS serves as the technological foundation of the Living Profile, and solutions pioneered by Liaison's various partners serve as supplementary components. With this in mind, the technology and platform necessary for the Living Profile already exist.

America can have a more satisfied, fulfilled, productive workforce and citizenry, whose contributions drive companies and organizations to new heights in their output and achievements. The Living Profile is the enduring, all-encompassing tool that will help us achieve this more prosperous shared future.

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