CANADIAN JOURNAL OF **CAREER DEVELOPMENT**

REVUE CANADIENNE DE **DÉVELOPPEMENT DE CARRIÈRE**

By/Par CERIC + MUN

22

VOL 21/ NO 2

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Canadian Journal of Career Development/Revue canadienne de développement de carrière
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Canadian Journal of Career Development
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ISSN 1499-1845 (Print)/ISSN 1499-1853 (Online) Printed in Canada/Imprimé au Canada

CANADIAN JOURNAL OF **CAREER DEVELOPMENT** | REVUE CANADIENNE DE **DÉVELOPPEMENT DE CARRIÈRE**

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FROM THE EDITOR'S DESK

Dr. Robert Shea, Founding Editor

Hello and welcome to the last issue of 2022! First, we want to express our deepest thanks to our reviewers and authors for their time and patience since the start of the pandemic in 2020. As we come to the close of this year and two years out from the pandemic, we are still dealing with time and reviewer availability constraints. We are also starting to see an increased submission rate for the Journal and our reviewers are doing their best to help keep reviews to our standard time-frame.

Bonjour et bienvenue au dernier numéro de 2022 ! Tout d'abord, nous souhaitons exprimer nos plus sincères remerciements à nos réviseurs et auteurs pour leur temps et leur patience depuis le début de la pandémie en 2020. En cette fin d'année et deux ans après la pandémie, nous sommes toujours confrontés à des contraintes de temps et de disponibilité des réviseurs. Nous commençons à voir une augmentation du taux de soumission pour le Journal et nos réviseurs font de leur mieux pour aider à maintenir les révisions dans notre délai standard.

As you can see above, our associate editor is working hard to be able to provide communications in both official Canadian languages. Where we accept & publish articles in both official languages, Diana Boyd wants to be able to provide the same service in our social media and communications. She apologizes for the mistakes she will make as she learns this new language.

Comme vous pouvez le voir ci-dessus, notre rédacteur adjoint travaille dur pour être en mesure de fournir des communications dans les deux langues officielles du Canada. Lorsque nous acceptons et publions des articles dans les deux langues officielles, Diana Boyd veut être en mesure de fournir le même service dans nos médias sociaux et nos communications. Elle s'excuse pour les erreurs qu'elle fera en apprenant cette nouvelle langue.

This issue contains four articles and one book review for your reading pleasure. Each focuses on a different topic ranging from international students and work experience, use of artificial intelligence, career mentoring of surgical trainees, and priming job seekers responses to job postings. The book review of 'Outcome-Based Experiential Learning' was submitted by an up-and-coming author and practitioner in the field.

Ce numéro contient quatre articles et une critique de livre pour votre plaisir de lecture. Chacun se concentre sur un sujet different allant des étudiants internationaux et de l'expérience professionnelle à l'utilisation de l'intelligence artificielle, en passant par le mentorat de carrière des stagiaires en chirurgie et l'amorçage des réponses des demandeurs d'emploi aux offres d'emploi. La critique de livre de 'Outcome-Based Experiential Learning' a été soumise par un auteur et praticien prometteur dans le field.

In closing, we thank our readers, reviewers, authors, potential authors, for your time in helping our Journal prosper. If you have any questions about the Journal, or ideas of things we could implement please contact associate editor Diana Boyd. We hope that the closing of 2022 brings you all some much needed stress relief and a return to more normality.

En conclusion, nous remercions nos lecteurs, réviseurs, auteurs, auteurs potentiels, pour le temps que vous consacrez à la prospérité de notre Journal. Si vous avez des questions sur le Journal ou des idées de choses que nous pourrions mettre en œuvre, veuillez contacter la rédactrice associée Diana Boyd. Nous espérons que la clôture de l'année 2022 vous apportera à tous un soulagement du stress bien nécessaire et un retour à plus de normalité.

Cheers/salutations,

Rob Shea

Editor-in-Chief

Diana Boyd

Associate Editor

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Careering magazine is a resource by and for career development professionals in Canada, with analysis and reflection of the latest theories, practices and resources.

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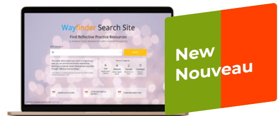

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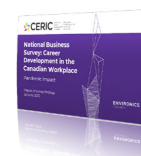

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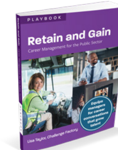

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CANADIAN JOURNAL OF CAREER DEVELOPMENT | REVUE CANADIENNE DE DÉVELOPPEMENT DE CARRIÈRE

Priming Jobs as Skill Development Opportunities and Responses to Job Postings

David Drewery, T. Judene Pretti, & Jamie Nettinga
University of Waterloo

Abstract

Many inexperienced job seekers adopt a focused job search strategy in which they disregard job postings that seem unrelated to their interests. Yet, many of the jobs that they disregard during their job search could have been relevant to such interests because they offer opportunities for skill development. Counterintuitively, an exploratory job search can help such job seekers find and pursue more relevant jobs. In an experiment (N = 122), we examined the effect of priming seemingly irrelevant jobs as skill development opportunities on inexperienced job seekers' responses to job postings. Compared to those who did not receive the prime, those who received the prime reported higher perceived job relevance and, in turn, perceived job attractiveness for subsequently viewed job postings. The results suggest that career educators could use peer-to-peer learning, or public reflection, to encourage students to share insights with each other, reframe the meanings of job relevance, and pursue more relevant jobs.

Keywords: AHSS, priming theory, person-job fit, experiment, perceived job relevance, job attractiveness

Many post-secondary education students become job seekers near the end of their first academic year. When they embark on their job search, they adopt a job search strategy, a way of finding and pursuing job opportunities (Crossley & Highhouse, 2005). Most inexperienced job seekers rely on a focused job search strategy, one in which they think about their career interests and try to find jobs that match those interests (Crossley & Highhouse, 2005; Fang & Saks, 2021). Those who use this strategy aim to short-list jobs that seem highly relevant to their interests and disregard jobs that seem unrelated to such interests.

Intuitively, this job search strategy seems helpful for securing a desirable job. However, research suggests that adopting a narrow view on which jobs are relevant to one's interests at such an early stage in one's career might inadvertently lead inexperienced job seekers to overlook desirable jobs. Some jobs that may appear unrelated to one's interests during a job search may later become relevant (Drewery & Pretti, 2021). And, as the job becomes more relevant to the individual, it also becomes more satisfying (Hur et al., 2019). Yet, few job postings provide enough evidence for job seekers to understand how the job may be relevant to them (Drewery et al., 2022).

Consequently, it may be useful to encourage inexperienced student job seekers to adopt a more open-minded job search strategy, one that is less dismissive of jobs that seem unrelated to one's interests. Such a strategy has been called an exploratory job search strategy (Crossley & Highhouse, 2005). It involves pursuing a wide array of jobs, even those that may not initially seem linked with one's interests. Greater use of an exploratory job search strategy can result in more job offers (Crossley & Highhouse, 2005; Koen et al., 2010) and greater job quality (Okay-Somerville & Scholarios, 2022). This suggests that pursuing jobs that seem unrelated to one's interests may help job seekers stumble upon excellent opportunities that they may have otherwise overlooked.

While previous research demonstrates the importance of an exploratory job search strategy to desirable job search outcomes, it offers little insight regarding how career education might encourage inexperienced student job seekers to "keep an open mind" during their job search. In response, this paper seeks to understand how career education might help students pursue jobs for which they are qualified and that may become

relevant to their interests but that are typically overlooked. Drawing from priming theory (Bargh, 2016) and the importance of skill development to perceptions of job relevance (Drewery & Pretti, 2021; Nevison et al., 2017), we designed an experiment to test the proposition that reminding job seekers that jobs which seem unrelated to one's interests may become relevant to them because they offer opportunities for skill development will enhance perceived job relevance and job pursuit intentions for subsequently viewed job postings.

Perceived Job Relevance and Job Pursuit

Perceived job relevance is the extent to which an individual perceives that a given job is relevant to their interests, such as the careers to which they aspire (Nevison et al., 2017). The closer the match between a given job and the characteristics of a job to which one aspires, the more relevant that job (Larkin et al., 2007). Perceptions of job relevance are linked with the quality of a given job. It is positively associated with job satisfaction (Hur et al., 2019), work engagement (Drewery et al., 2016), sense of meaning in one's work (Nevison et al., 2017), and intention to remain in one's job (Ju & Li, 2019). Such associations may be explained by person-job fit theory (O'Reilly et al., 1991) which proposes that the greater the match between one's interests and their job, the more positive their work experience.

Given these previous findings, it is not surprising that perceptions of job relevance influence job seekers' job pursuit. The greater the fit between one's interests and their expectation of a given job, the more likely they are to pursue that job (Chapman et al., 2005). Relatedly, when job postings suggest an experience that is more aligned with job seekers' interests, such job seekers report greater willingness to put forth their best effort during a job application (Drewery et al., 2022). This is consistent with research that shows job seekers are more interested in jobs that are aligned with their career aspirations than those which are not (Cunningham et al., 2005; Petry et al., 2021). These findings suggest that job seekers are most attracted to jobs that they perceived to be highly relevant to their interests.

Although most job seekers seem motivated to find a job that is relevant to their interests, many end up in a job that they report is unrelated to their interests (Larkin et al., 2007). This is concerning because the greater the gap between one's job characteristics and career aspirations, the lower their work motivation over time (Muldoon et al., 1995), a sign of a poor work experience. This may have negative implications for individuals' well-being and career success over a longer term. We suspect that this gap is due in part to the job search strategies enacted by inexperienced job seekers. Some may use strategies that inadvertently remove high-quality jobs from the list of jobs to which they might apply.

Perceived Job Relevance During the Job Search

The job search is the process through which job seekers identify job opportunities and make decisions about ones to which they will apply (Crossley & Highhouse, 2005). When done right, it is a self-regulatory process in which individuals set goals and direct behaviours to achieve such goals (Wanberg et al., 2020). Such goal-directed behaviour has been described in terms of job search strategies (Crossley & Highhouse, 2005). There are two such strategies that fall under a self-regulatory framework: focused and exploratory. A focused job search strategy involves identifying and pursuing jobs that match one's specific interests. An exploratory job search strategy involves pursuing a wide array of jobs that may not meet such interests.

Most inexperienced student job seekers use a focused job search strategy more often than they use an exploratory one (Crossley & Highhouse, 2005; Fang & Saks, 2021). Intuitively, this should result in a greater chance of ended ending up in a job that is relevant to one's interests. Surprisingly, the opposite is often true (Okay-Somerville & Scholarios, 2022). An exploratory job search strategy "casts a wider net" on the job opportunities available in the labour market. Some such opportunities may offer an experience that is highly relevant to the

job seeker but that may not appear that way during the job search. As such, those who use a focused job search strategy may mistakenly overlook jobs that, unbeknownst to them, could be highly relevant to their interests.

Our interest in this paper was to understand how career education might address this problem. Given that the job search strategy involves self-regulation, it seems that job search strategies are malleable. Yet, previous research has focused mostly on socio-demographic variables (Fang & Saks, 2021) or labour market conditions (Okay-Somerville & Scholarios, 2022) that influence job search strategies. We do not yet understand how to encourage job seekers to adopt an exploratory job search strategy, one that seems counterintuitive. We argue that one approach career educators may take to address this is to introduce the notion that some jobs that seem irrelevant to one's interests may actually be relevant learning opportunities. We explore this argument in the following section through the lens of priming theory.

Priming Jobs as Skill Development Opportunities

In interviews with students who had completed work-integrated learning experiences, Drewery and Pretti (2021) found that students' perceptions of job relevance evolved throughout their work experience. Some students worked in organizations or industries that seemed unrelated to their academic programs and career aspirations. Yet, as the experience progressed, they realized that the job was more personally relevant that once thought. Skill development seemed central to this evolving perspective. When students who worked in seemingly irrelevant jobs developed new skills, they perceived that the job advanced them toward their career aspirations. This study suggests that opportunities for skill development may help to transform low job relevance into high job relevance.

This insight also suggests that evidence of learning opportunities providing in job postings could influence job seekers' perceptions of job relevance and, ultimately, their job pursuit plans. Unfortunately, most job postings provide limited evidence of such learning opportunities (Moore & Khan, 2020). Many jobs offer individuals opportunities to develop their knowledge, skills, and abilities. Yet, such opportunities are not mentioned in recruitment materials. For job seekers, especially inexperienced ones, the challenge then is to develop a sense of how the job offers opportunities for learning based on very little (if any) helpful information. Consequently, many job seekers seem likely to overlook jobs whose postings do a poor job of communicating opportunities for learning.

Priming theory suggests that job seekers could be encouraged to look beyond the job positing posting, to think of jobs as opportunities for skill development, and that this could influence their assessments of subsequently viewed job postings. Priming refers to a process through which a concept becomes salient and, because of such salience, influences responses to one's environment (Bargh, 2016). More specifically, priming typically involves the administration of instruction, either explicitly or implicitly, to think or feel a certain way about something. The instruction then facilitates some action. In a classic example, participants who received subtle cues (i.e., implicit instructions) related to the concept of old age walked slower than those for whom the concept was not primed (Bargh et al., 1996, Experiment 2).

There is already some evidence that job seekers' responses to job postings can be subject to their receipt of primes. Walker et al. (2011) found that the presence of technologically advanced website features primed inexperienced job seekers to think of organizations as more innovative. Similarly, depictions of racial diversity primed job seekers to think of organizations as more stylish. The presence of visual cues acted as primes that were assimilated into subsequently assessments of the organization. The prime was associated with such assessments in a way that saw a greater reflection of the prime in how participants viewed the organization.

This study provides initial support for the notion that inexperienced job seekers' responses to job advertisements can be primed. As mentioned in the introduction of this paper, our interest was in understanding whether such job seekers could be primed to pur-

sue jobs that might initially seem unrelated to their interests but that could offer excellent experiences. Consistent with this priming theory perspective, and given the role of skill development in perceptions of job relevance (Drewery & Pretti, 2021), we expect that those who are primed to think of jobs as opportunities for skill development may perceive job postings to be more relevant than those who are not primed. That is, job seekers primed to think about jobs as opportunities for skill development may report subsequently viewed job postings to be more personally relevant even if those job postings provide little evidence of development opportunities. This is reflected in our first hypothesis:

Hypothesis 1: priming inexperienced job seekers to think of jobs as skill development opportunities will encourage such seekers to report greater perceived job relevance for subsequently viewed job postings.

Similarly, given the link between perceived job relevance and job attractiveness (Drewery et al., 2022; Chapman et al., 2005), we expect that those who are primed to think of jobs as opportunities for skill development may perceive job postings to be more attractive than those who are not primed. Job seekers primed to think about the skill development opportunities within seemingly irrelevant jobs may be more attracted to subsequently viewed jobs. Perceptions of job relevance may also mediate this difference such that the prime influences perceptions of job attractiveness because it enhances perceptions of job relevance. Below, we offer two hypotheses related to this.

Hypothesis 2a: priming inexperienced job seekers to think of jobs as skill development opportunities will encourage such seekers to report greater job attractiveness for subsequently viewed job postings.

Hypothesis 2b: perceived job relevance will mediate an indirect positive association between receipt of the prime and job attractiveness.

Method

Design

Our aim was to examine the effect of priming jobs as skill development opportunities on inexperienced job seekers' responses to subsequently viewed job postings. We designed a between-subjects experiment to achieve that aim. Participants were randomly assigned to a no prime condition or a prime condition. We then measured responses to job postings.

Participants

Participants (n = 122) were undergraduate students enrolled in their second academic term in arts, humanities, and social sciences (AHSS) programs (e.g., psychology, sociology, history, economics, dramatic and fine arts, English) at a Canadian university[1]. Such students were of interest for two reasons. First, these students were of interest for their involvement in the job search process. At the time of the study, many of these participants were likely in the process of searching for a summer job. Second, the link between AHSS programs and job opportunities is ambiguous (Okay-Somerville & Scholarios, 2022). Such ambiguity leads to job search strategies that are not helpful to finding a relevant job (Okay-Somerville & Scholarios, 2022). Thus, AHSS students may be most at-risk of overlooking jobs that would be relevant to their interests. On average, participants were 18.5 years old (SD = .82), and the majority (77.6%) were female.

Procedure

Following approval from an institutional ethics review board, participants were recruited to a web-based study through their university email. After providing informed consent, participants were asked to complete three tasks. The

1 Participants were from the following academic programs: Anthropology (n = 1), Economics (n = 20), English (n = 6), Fine Arts (n = 2), French (n = 2), Global Business and Digital Art (n = 12), History (n = 2), Liberal Studies (n = 2), Music (n = 1), Psychology (n = 43), Sexuality, Marriage, and Family Studies (n = 1), Social Development Studies (n = 21), Sociology (n = 4), Speech Communication (n = 3), Theatre and Performance (n = 1)

first task was to complete a demographic questionnaire. This was used to characterize the sample. The second task was to read and respond to a written text. This text was an opportunity to prime the notion of jobs as skill development opportunities. The third task was to read and respond to six job postings. After each job posting, participants were asked to report their perceptions of job relevance and job attractiveness. They were also asked to provide a brief written explanation for their reports of perceived job relevance, but these are not included in this article. After completing these measures, participants were debriefed about the purpose of the study. All participants were offered nominal remuneration for their time.

Priming Jobs as Skill Development Opportunities

Participants were instructed that a goal of the study was to understand whether written reflections are indicators of students' experiential learning outcomes. They were asked to read such a reflection and report the extent to which it was relevant to its author's learning outcomes. Specifically, they were asked to rate how relevant the reflection was to the development of job-related skills. Unbeknownst to participants, the written reflections were fabricated. They served as an opportunity to introduce the prime.

The prime was a written message attributed to a senior peer named Sam. Sam was tethered to participants' own program. For example, if the participant had reported on the demographic questionnaire that they were a psychology student, then Sam was a psychology student in the final year of that academic program. This was important to positioning Sam as an influential peer whose experience could be relevant to participants' own job search processes. The decision to introduce the prime through a peer's reflection was informed by the literature on social influences during the job search. Job seekers frequently share experiences and seek out advice on the job search from each other (Van Hoye & Lievens, 2009). Students, especially, seem likely to connect with each other to discuss jobs and job search strategies. Such connection can influence attitudes toward a given job (Lent et al., 2000; Van Hoye & Lievens, 2007, 2009).

There were two versions of the reflection[2] (see Table 1). The version that participants received depended on the condition to which they were randomly assigned. Those in the no-prime condition received a version that about Sam's academic program. This was meant to be entirely unrelated to the core concept of the prime, which again was that some jobs that seem unrelated to one's academic program might later become relevant because of skill development opportunities. In the prime condition, the written reflection suggested that jobs that first seem unrelated to one's academic training and career aspirations can become relevant through the application and development of skills (Drewery & Pretti, 2021).

Job Postings

Consistent with previous research on response to job postings (Jones et al., 2006), we crafted six postings. Each contained the same categories of information: job title, organization name and information, job responsibilities, and recommended skills (see Table 2). The content was borrowed from job postings that had been filled by AHSS students at participants' university. We selected content that seemed somewhat ambiguous so that perceptions of job relevance would vary. We also selected somewhat junior-level jobs with required skills that were appropriate for these participants. This suggested that participants were reasonably qualified for such jobs. The required skills were mostly consistent across job postings, but each one contained something unique (see Table 3) to simulate a more realistic job search. Participants were instructed to imagine that the pay and location for each job was desirable and equal across jobs. This instruction was meant to control for the possible effects of pay and location on job

2 As part of a larger study, there was a third condition. That condition involved a message about career development. It was atheoretical and exploratory analyses suggest that it has no effect on outcomes in the experiment relative to the control condition. We excluded this from the present article but mention it here for the sake of transparency.

Table 1

Content of Written Reflections by Condition

No Prime Condition	Prime Condition
In my first year, I wasn't sure what major to choose but I really enjoyed the variety of courses I was able to take. As it turns out, I talked to students in upper years and TAs from different majors and they were really enthusiastic about chatting with me and helping me to discover what I was most passionate about. Looking back, I'm really glad that I reached out to others because it helped me to develop a better idea of what I want to do and I'm really happy with my choice of major.	For my first co-op job I worked as a Guest Service Assistant for Brydson Group Ltd. At first, it seemed totally unrelated to my program, but I was just happy to have a job. As it turns out, I was able to develop my problem-solving skills, and took the initiative to do an extra project where I was able to apply some concepts I had learned in class. Looking back, I realize that it was relevant because I developed a lot of skills that have helped me to be successful with my subsequent co-op jobs. I learned that some jobs might seem unrelated to my program but still offer a great opportunity to develop useful skills.

Note: Co-op (co-operative education) is a form of work-integrated learning in which students alternate between academic terms and paid work terms. All students who participated in this study were familiar with co-op because the University they attended had a large co-op program.

Table 2

Example Job Posting

Job title	Research Analyst
Organization	University International Department
Organization Info	• Supports a university's internationalization activities and goals and leads innovative international projects. • Organizes and manages international agreements, delegation visits and briefs, and safety abroad
Job Responsibilities	• Generate research reports to support the work of the University International Department in the areas of internationalization of higher education, strategic partnerships, and mapping of a university's international activities • Prepare agenda updates and briefings as well as provide support during delegation visits
Recommended Skills	• Strong research and information management skills • Strong verbal and written communication • Ability to learn quickly and work under tight timelines • Ability to work independently and in teams

Table 3

Skills Included in the Recommended Skills Section of Each Job Posting

	Job Postings					
Skills	1	2	3	4	5	6
Common Skills						
Communication	X	X	X	X	X	X
Attention to detail/organizational skills	X	X	X	--	X	X
Ability to work independently and/or with others	X	--	X	X	--	X
Ability to learn	--	X	--	X	X	--
Specific Skills						
Ability to meet deadlines	X	--	--	--	X	--
Social media skills	--	X	--	--	--	--
Customer service skills	--	--	X	--	--	--
Research skills	--	--	--	X	--	--
Problem solving skills	--	--	--	--	--	X

Note: X indicates that the skill was included in the recommended skills section of that job positing

attractiveness (Lievens & Highhouse, 2003).

Measures

Manipulation Check

After reading the written passage, participants were asked to report on the relevance of the message to the message author's skills ("How relevant is Sam's experience to developing their job-related skills?"). Responses were provided on a seven-point scale anchored with 1 = "Not at all relevant" and 7 = "Completely relevant."

Perceived Job Relevance

For each job posting, participants were asked "How relevant is this job to you?" Responses were provided on 10-point scales anchored with 1 = "Not relevant at all" and 10 = "Completely relevant." A perceived job relevance score was obtained by averaging the response to all six job postings.

Perceived Job Attractiveness

Perceived job attractiveness was operationalized as intentions to apply for the job (Chapman et al., 2005). For each job posting, participants were asked "Would you apply to this job?" Responses were provided on seven-point scales anchored with 1 = "Definitely not" and 7 = "Definitely yes". A perceived job attractiveness score was obtained by averaging the response to all six job postings.

Results

Preliminary Data Checks

Two preliminary data checks were performed prior to the main analyses. First, the data were checked for random assignment. As expected, an independent samples t-test showed that there was no significant difference in participants' age between the no prime condition (M = 18.38, SD = .66) and the prime condition (M = 18.56, SD = .92), $t(119) = 1.19$, $p = .24$. Similarly, an independent samples t-test showed that there was no significant difference in the proportion of females to males between the no prime condition (M = .74, SD = .44) and prime condition (M = .77, SD = .43), $t(119) = .37$, $p = .72$.

Second, the data were checked for efficacy of the skill

development prime message.
It was expected that perceived relevance of the message to the message author's skill development would be higher in the prime condition than in the no prime condition. As expected, an independent sample t-test showed that perceived relevance of the message to the message author's skill development was higher in the prime condition (*M* = 5.72, *SD* = 1.25) than in the no prime condition (*M* = 4.36, *SD* = 1.76), *t*(120) = 4.92, *p* < .001, *d* = .84, 95% CI [.52, 1.26].

Hypothesis 1

Hypothesis 1 stated that priming inexperienced job seekers to think of jobs as skill development opportunities will encourage such seekers to report greater perceived job relevance for subsequently viewed job postings. This was tested with an independent samples t-test. The results of that test showed that perceived job relevance was higher in the prime condition (*M* = 5.72, *SD* = 1.57) than in the no prime condition (*M* = 5.01, *SD* = 1.38), *t*(120) = 2.64, *p* = .009, *d* = .48, 95% CI [.12, .84]. These findings support Hypothesis 1. Figure 1 illustrates the result.

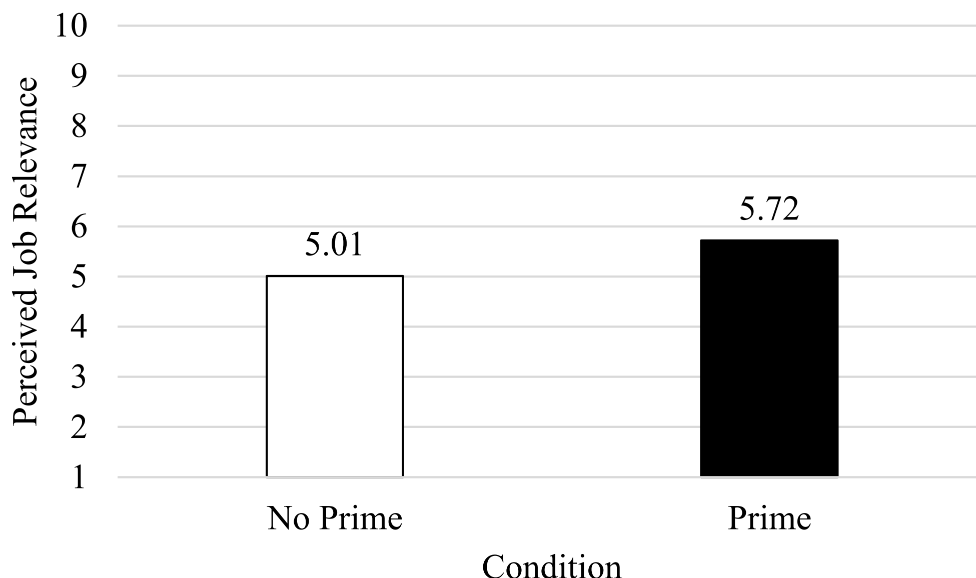
Hypothesis 2

Hypothesis 2a stated that priming inexperienced job seekers to think of jobs as skill development opportunities will encourage such seekers to report greater job attractiveness for subsequently viewed job postings. This was tested with an independent samples t-test. The results of that test showed that perceived job attractiveness was not significantly different between the prime condition (*M* = 4.94, *SD* = 1.01) and the no prime condition (*M* = 4.66, *SD* = 1.08), *t*(120) = 1.45, *p* = .15, *d* = .26, 95% CI [-10, .62]. Thus, Hypothesis 2a was rejected.

Hypothesis 2b stated that perceived job relevance will mediate an indirect positive association between receipt of the prime and job attractiveness. This was tested with a conditional process analysis using the SPSS PROCESS macro (Hayes, 2017; Model 4 with 5,000 bootstrapped samples). The study conditions were coded such that 0 = no prime condition and 1 = prime condition. Perceived job rel-

Figure 1

Illustration of Significant Difference in Perceived Job Relevance Between No Treatment and Treatment Conditions



evance was specified as a mediator of the relationship between study condition and perceived job attractiveness. The analysis showed that study condition was positively and indirectly associated with job attractiveness through perceived job relevance. Those who received the prime reported greater perceived job relevance, and, in turn, perceived job relevance was positively associated with perceived job attractiveness. Study condition was not directly associated with job attractiveness. This suggests an indirect-only association between the prime and job attractiveness (Zhao et al., 2010). These findings support Hypothesis 2a. Figure 2 illustrates the results.

Discussion

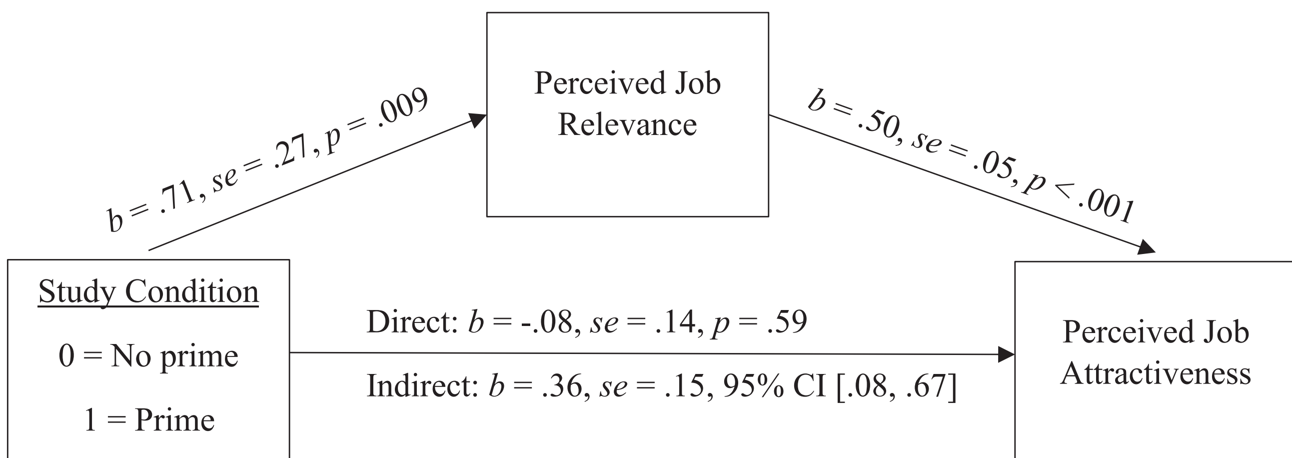
When post-secondary students become job seekers, most adopt a focused job search strategy in which they disregard job postings that seem unrelated to their specific interests. Yet, some jobs that are disregarded might have become relevant due to skill development opportunities present in most jobs. Although it is counterintuitive, adopting an exploratory strategy may result in greater likelihood of securing a job that matches such interests. Previous research had demonstrated the importance of an exploratory job search strategy during the job search but had not examined career education interventions that encourage students to "keep an open mind" during the job search. The present study examined and found support for one such intervention based on priming the concept of jobs as skill development opportunities.

The data seem to support previous findings that most inexperienced job seekers are likely to adopt a focused job search strategy in which they are likely to disregard job postings that seem unrelated to their specific interests (Crossley & Highhouse, 2005; Okay-Somerville & Scholarios, 2022; Fang & Saks, 2021). Participants in the no prime condition reported middling perceptions of job relevance and job attractiveness. These participants were from AHSS programs, whose link with various job opportunities is often ambiguous (Okay-Somerville & Scholarios, 2022). We presented them with job postings that were not clearly relevant to their academic programs. Not surprisingly, many were unsure about how these jobs were relevant to them, and they indicated that they would be only somewhat likely to pursue them in a job search.

Responses to the job postings were different for those who were primed to think about such postings as opportunities for skill development. Participants who read a reflection ostensibly writ-

Figure 2

Illustration of the Direct and Indirect Associations Between Study Condition, Perceived Job Relevance, and Perceived Job Attractiveness (n = 122).



ten by their peer about the ways in which jobs became relevant through skill development reported greater perceived job relevant for subsequently viewed job postings. This is consistent with the literature on social influences during the job search. When job seekers are exposed to insights shared by close others, their subsequent reactions to recruitment materials become informed by those insights (Van Hoye & Lievens, 2007, 2009). This is also consistent with the view that peers influence how job seekers identify and make career choices (Krumboltz et al., 1990; Lent et al., 2000). Further, it confirms that responses to job postings are malleable and subject to priming intervention (Walker et al., 2011).

In addition, this result supports our expectation that skill development opportunities are central to perceptions of job relevance. Consistent with the literature (Drewery & Pretti, 2021), we found that assessing jobs for their potential as learning opportunities rendered those jobs more relevant. Even for these students who were otherwise unsure about the relevance of the jobs they reviewed, focusing on opportunities for developing skills encouraged a more open-minded or exploratory job search strategy. More specifically, the data indicate that those who received the skill development prime would be less likely to discard job postings just because such postings did not seem related to one's interests.

The results also support the expected link between perceived job relevance and perceived job attractiveness. On average, the more relevant the jobs were perceived the stronger the intention to apply to such jobs. This is consistent with person-job fit theory (O'Reilly et al., 1991) which predicted that job seekers would be more attracted to jobs that they perceived to be personally relevant. It is also consistent with previous research which suggests the importance of relevance to a more positive work experience (e.g., Nevison et al., 2017). The present study extends such earlier research into the job search. It suggests that perceptions of job relevance developed during the job search may have implications for individuals' job search strategies.

Implications for Career Education

The findings presented in this paper may have practical implications for career educators. As previous research suggests, the challenge for such educators is to encourage inexperienced job seekers not to adopt too narrow a view on which jobs are more relevant and which are less so. One way to meet this challenge is to introduce notions of jobs—even those that seem unrelated to one's interests—as skill development opportunities. In many cases, jobs offer skill development opportunities that are not advertised in a job posting (Moore & Khan, 2020). Reminding job seekers of this may help lead to a more exploratory job search strategy that short lists desirable jobs.

In this study, we introduced or "primed" this notion in the form of a peer's written reflection. This may suggest an opportunity for career educators to leverage peer relationships toward more effective job search strategies. Career educators have long understood that the job search is socially constructed. What students think they know about their job or career preferences is situated in social context and influenced by social interaction (Gibson, 2004). Peers can influence job search dynamics in several ways (Parker et al., 2008). Building from this perspective, educators could encourage students to share insights with each other to reframe the meanings of job relevance. They can help each other think more critically about what a relevant job looks like during such an early stage in their career, which could lead to better job search outcomes.

In practice, this peer-to-peer learning could take the form of what Attard (2012) called public reflection. Public reflection is the practice of unpacking experiences in a social context. In this case, it refers to sense-making about previous work opportunities. When public reflection about such opportunities takes places in a social context, more senior individuals may become role models. They could remind less experienced job seekers that jobs that seem unrelated to their education or career aspirations are opportunities to apply and develop skills they are they building toward.

Limitations and Directions for Future Research

The generalizability of the results presented here are limited to components of the experimental design. Perhaps most important, results were dependent on the reflections that we crafted for the study. As mentioned, we took several steps to create written reflections that were plausibly written by participants' peers. Yet, such reflections were presented in the context of a study. Participants' responses were not private which may limit the generalizability of the results to real-world employment settings. To address this limitation, future research might rely on a field experiment or secondary data to extend the present results. For example, social media sites such as *Glassdoor* provide a space in which individuals post reviews of various jobs. Typically, such reviews are focused on working conditions, such as the quality of pay and management. It may be possible to embed messages from others and examine the effect of such messages on job seekers' application behaviours.

Also, the study was limited to the specific job postings that were presented to participants. Based on our knowledge of students' jobs at this institution, we knew that the job postings included in this study were reasonably relevant to AHSS education. We note, however, that all six job postings included in the study were quite ordinary, and some may have had a dubious connection to students' academic training. They featured job titles such as "Research Analyst" and "Supply and Helpdesk Assistant." Current trends in the labour market suggest a proliferation of new roles. For example, we observe that many organizations now have people in roles such as "Director of Future of Work." The relationships between AHSS students' education, career aspirations, and such roles seems highly ambiguous. Thus, it would be useful to replicate the present study with job postings that are even more representative of emergent trends in the labour market. This could be useful both to career educators and organizational recruiters.

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Louis Cournoyer (UQAM) assure la coordination du projet de traduction et de révision francophone de l'ouvrage, avec la collaboration de Patricia Dionne (Sherbrooke) et de Simon Viviers (Laval), ainsi que le soutien d'une équipe universitaire internationale de personnes réviseures.

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Career Mentoring Surgical Trainees in a Competitive Marketplace

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Abstract

Resident trainees in Canadian Otolaryngology–Head & Neck Surgery (OHNS) programs have cited job prospects as the biggest stressor they face. Increased numbers of residency training positions combined with decreased employment opportunities have worsened competition for surgical positions. The purpose of this inquiry was to explore gaps in resident career planning and examine how leadership can prepare graduating residents to optimize employability. This mixed-methods prospective study was completed in two phases. A combination of online surveys and two focus group sessions were used to gather information from academic and clinical staff surgeons, resident trainees, and administrative leadership. Eleven of the potential 12 resident participants responded to the initial survey, seven of the 13 staff surgeons, and one administrative leader. Each of the resident and staff focus groups had five participants. This comprehensive inquiry led to the development of a conceptual framework describing domains of concern important to OHNS residents. Themes included lack of career mentoring, complex systemic limitations, inadequacy of exposure to community-based surgical practice, and a potentially stifling organizational culture. OHNS residents face significant stress regarding potential employability following residency. Solutions to address concerns must be collaborative in nature and begin with the existing leadership structure.

Residents in Canadian Otolaryngology – Head and Neck Surgery (OHNS) training programs have cited job prospects as the single biggest stressor they face (Brandt, Scott, Doyle, & Ballagh, 2014). Despite increasing demands by the growing and aging Canadian population (Department of Economic and Social Affairs, 2015), the delayed retirement of senior surgeons and hiring freezes have created increasingly competitive employment markets (Patchen Dellinger, Pellegrini, & Gallagher, 2017; Silver, Hamilton, Biswas, & Warrick, 2016). Increased numbers of residency training positions combined with decreased opportunities for employment have worsened competition for available academic surgical positions in North America (Fréchette et al., 2013; Iglehart, 2013). Compounded with the uncertainty and potential employability consequences related to the COVID-19 pandemic, trainees find themselves under precarious circumstances (Satiani & Davis, 2020). While debate exists on action needed on a national level, the lack of local formal career mentoring to guide residents in planning their futures may hinder their competitiveness.

Absence of clear employment planning creates stress for OHNS residents planning their lives following graduation. Moreover, the perception, and often reality, of scarce employment disincentivizes medical students in pursuing surgical training (Austin & Wanzel, 2015). The significance further relates to success of the residency program committee (RPC) in its aim to prepare residents to be competitive for employability. The core goals of the RPC are oversight of surgical training, evaluation of trainees, and guiding the transition to independent surgical practice. As part of this, a lack of adequate employment strategies negatively impacts resident morale, which can lead to further attrition of medical students and decreased appeal of the surgical specialty (Austin & Wanzel, 2015).

Mentorship, both formal and informal, has been a mainstay feature of surgical training since the advent of medicine as an apprenticeship (Patel et al., 2011). Increasingly, as academic surgical

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education has evolved into formal team-based educational programs, that intimate relationship, which would have included mentorship on matters of career and other life coaching, has largely been replaced by didactic training, neglecting issues extraneous to surgical practice (Patel et al., 2011; Teman, Jung, & Minter, 2019).

Contemporary academic surgery has seen increasing service and time requirements coupled with a lack of resources, rendering mentorship a lower priority for surgical educators (Teman et al., 2019). Over time, the efficacy of informal mentoring has deteriorated because of the increased clinical, research and administrative demands faced by the modern surgeon and the modernization of the medical career framework (Patel et al., 2011). Sinclair et al., surveyed 565 academic medical trainees in the United Kingdom and found formal mentorship lacking, 51.3% had no surgical mentor, but 89.7% expressed a desire to have one, and 94.9% prioritized career planning as the primary motivator for seeking mentorship (Sinclair, Fitzgerald, Hornby, & Shalhoub, 2015). In OHNS, formal mentorship programs may serve to alleviate debilitating stress and burnout amongst resident physicians (Zhang, Isaac, Wright, Alrajhi, & Seikaly, 2017). Despite this, the role of formal and informal mentorship and its utility in guiding residents in a competitive employment market is not clear. As the surgical employment market is a complex entity influenced by many external factors, it is necessary that residency programs equip their trainees with the tools to be successful.

The goal of this inquiry was to explore and better understand ideas as they pertain to employment concerns facing graduating residents in OHNS. Moreover, the research question addressed was: How can leadership in the Division of OHNS optimize graduating resident employability in a competitive marketplace?

Methods

As the inquiry was specifically contextual, with the data being subjective and inductive, a mixed-methods approach was employed. A systematic approach of investigation was utilized to find effective and inclusive solutions for this organizational leadership project (Norton, 2018). This involved stakeholders actively participating in organizational change through research targeting employment of graduating residents in OHNS. The study was conducted from January to June 2018. Ethics approval was obtained from the Health Research Review Board at the University of Alberta (Pro00064354) as well as the Research Ethics Board at Royal Roads University.

Study Design & Participants

The overarching methodology was a multi-method prospective approach, with separate data collection tools utilized for each participant group. Data were collected in two phases: survey and focus groups. The survey data informed the focus group questions. The inquiry team was involved throughout the data collection process in reviewing themes and anonymized data to better ensure ownership of the recommendations generated through the inquiry. The inquiry team included an external research coordinator and authors DC and AH. The research coordinator had no affiliation with the University and vetted survey questions for sources of bias. Moreover, the external coordinator facilitated the focus groups – with the authors removed from the process in order to avoid introduction of undue bias.

Stakeholder participants were divided into three groups: (a) the resident group, who were invited to participate in an online survey as well as a peer focus group; (b) the staff surgeon group participating in residency teaching, who were invited to participate in the survey as well as a focus group; and (c) the administrative leadership group from Alberta Health Services (AHS) and the University of Alberta's Faculty of Medicine, who were invited to participate in the survey.

Phase 1 – Initial Survey

Potential study participants in each of the three groups were contacted via email by the research team. After informed consent was obtained, an online survey comprised of ten questions was sent to consenting participants (Appendix). This was hosted by FluidSurveys©. Questions were vetted by the study team and were

inherently wide-ranging by design. The external research coordinator reviewed all survey questions. Responses were anonymized, with the only identifying feature being what study group the participant belonged to.

Phase 2 – Focus Groups

Following the survey, the research team contacted potential participants by email to invite them to a focus group. Two focus groups were held: one for OHNS residents and the second for OHNS staff surgeons. All invited participants who accepted and confirmed participation received a copy of the questions three days in advance (Table 1). The focus group sessions were digitally recorded on a password-protected recording device, anonymized, and electronically transcribed by a member of the study team. The research coordinator reviewed the transcripts to ensure accuracy.

Data Analysis

Quantitative data (i.e., ratings, multiple choice, and demographic data) were analyzed through descriptive statistics inherent to the survey software (NVivo 11.0, QSR International Pty Ltd, 2018). Qualitative data from the surveys were coded for theme development into major themes using the methodology as described by Bogdan and Knopp (2003), whereby the typed data are ordered, initially coded, and the focus coded by the inquiry group (Bogdan & Knopp, 2003). The inquiry team conducted qualitative data analysis as a group, whereby the printed qualitative data were coded and themed separately by members of the inquiry team, and then a group discussion by the team generated key themes. These were then used to generate questions for the focus groups.

Focus group data were used to triangulate preliminary conclusions derived from the survey data. Trustworthiness and authenticity were addressed, with this study design employing triangulation and member checking. Member checks were incorporated into the format of the focus groups at the end, which ensured that the participants and their ideas were being represented accurately. Transcribed raw data from the focus groups were coded for theme development as was done with the survey data and regrouped into overarching themes. Each of the de-identified transcripts were analyzed by a grounded theory approach. Line-by-line coding was employed. Using the software (NVivo 11.0, QSR International Pty Ltd, 2018), each member of the research team went through the manuscripts, assigning pertinent codes to excerpts. Codes were then examined across all transcripts, and relationships within the data were identified. A group discussion amongst the study team aided

Table 1

Focus Group Questions

Focus group questions
1. How important do you feel the issue of employability is to OHNS residents? 2. How important do you feel is the issue of employability to OHNS residency training program? 3. Whose responsibility is it to guide graduating residents to find the fellowship and employment opportunities? 4. Is the status quo adequate? 5. What changes could be made to improve the preparation and employability for the OHNS residents? 6. What could happen if changes aren't made to address these issue?

Note: This set of questions was employed in both sessions – involving the resident cohort and the staff surgeon cohort.

in classifying themes within a conceptual framework.

Results

Eleven of the potential 12 resident participants responded to the initial survey, seven of the 13 staff surgeons, as well as one administrative leader, for a total of 19 responses. The 120-minute resident focus group had five participants. The 110-minute staff surgeon focus group also had five participants. This comprehensive inquiry led to the development of a conceptual framework describing domains of concern that are important to graduating OHNS residents facing issues of employment (Figure 1). Order of importance of each domain was established by evaluating the number of participants that identified a particular theme as a concern and the total number of times the theme was mentioned amongst all participants. A total of four themes arose from the inquiry.

1. Career mentorship programming is a missing link in the ability for residents to find employment upon completion of residency training.

In both phases of data collection, participants from the resident group and staff surgeon group identified the lack of a formal career mentorship program as a contributor to stress inherent to the inquiry topic of concern regarding employment upon completion of residency training. This was a recurrent theme despite not being explicitly asked about in the survey or focus group. When asked about the validity of the assertion that employability is the single biggest stressor that residents face, 18 of 19 survey respondents felt that this was either somewhat or extremely valid. This was echoed within the focus group. When asked to identify the source of stress regarding employment, one resident felt that the "lack of a system or supports to help residents find jobs" was a significant contributor to the problem. Eight of the 19 of survey respondents, expressed the opinion that formal career mentoring should commence as early as post-graduate years (PGY) 1 and 2, while the remaining 11 respondents, preferred PGY 3 year as the appropriate time to commence formal career mentoring.

2. Systemic components external to the Division of OHNS affect the ability for residents to be job ready and for positions to be available.

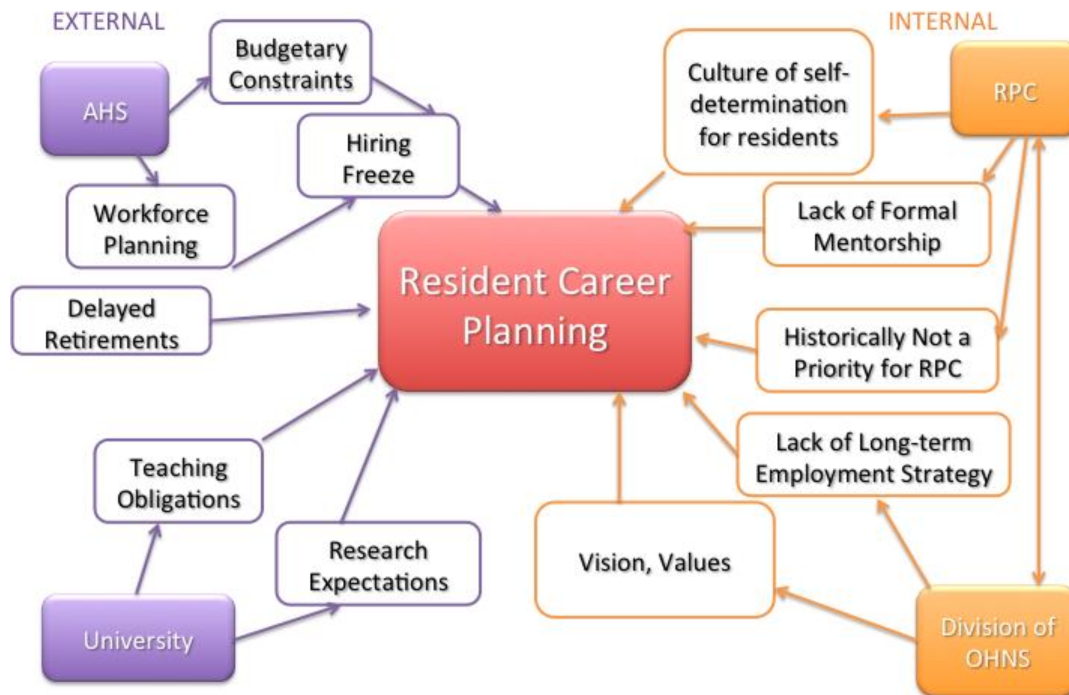
Participants identified many perceived levels of administration as responsible for the current climate for employment, which included government, ministries of health, the Royal College of Physicians and Surgeons of Canada, and residency training programs across the country. In addition to what resident participants felt to be "an overproduction" of Otolaryngology graduates in Canada, specific systemic factors included "older surgeons not retiring," impediments in American Board eligibility creating barriers to working in the US and the "limited existing resources within the Canadian system." Participants in the focus groups also expressed frustration with the absence of a centralized provincial source to identify job opportunities and the lack of transparency with hiring practices, both in the organization as well as across the country. This, combined with an expressed belief that "nepotism and favouritism" play a significant role in "job positions being filled even before they are advertised" made all participants feel as if the "deck was stacked against" them. One staff surgeon participant noted if residents cannot expect "transparency and honesty with hiring practices in [their] own program, how can they expect more from positions elsewhere".

3. Inadequate exposure to community and non-academic opportunities worsens the perception of lack of employment opportunities.

A recurring concern in both participant groups was that throughout their medical and surgical training, residents are by and large exposed exclusively to large urban academic centres and are instructed by clinical teachers and staff surgeons in large urban academic centres. The perceived fixation on employment opportunities in academic centres by graduates was discussed in the staff surgeon focus group as a shortcoming of the current training process: "The Royal College is asking us to train community Otolaryngologists but instead what we do is expose

Figure 1

Domains of Concern Displayed as a Systems Analysis Diagram of Internal and External Factors Affecting Resident Career Planning. [AHS = Alberta Health Services, RPC = Residency Program Committee, OHNS = Otolaryngology – Head and Neck Surgery].



them to subspecialty training in an academic centre." Respondents in the survey also noted an absence of "networking with community hospitals that have no academic affiliation" as a contributor to the perception that opportunities are scarce. One staff participant in the focus groups noted, "We don't expose [the residents] to enough community practice and the jobs that they will likely end up doing".

4. Organizational culture may hinder success of any change strategy.

While much agreement was seen between resident participants and staff surgeons in the first three findings, when broaching the topic of whose responsibility it is to solve this issue, there appeared to be a disparity of opinion expressed by resident participants and staff. Participants in the staff focus group acknowledge that the concern regarding employability is "the most striking thing in [the residents'] minds". However, one participant felt that "it is our responsibility to guide residents through the job or fellowship preparation process, but not to get them the jobs". Another participant phrased it similarly (Table 2a).

Of the staff respondents to the survey, three felt that the responsibility for identifying and obtaining employment was equally shared between the resident and the program, whereas four expressed that the responsibility was mostly or exclusively that of the resident trainee.

Staff surgeon participants expressed ownership for inadequately managing from the outset the "unreasonable expectations" on the part of the residents: "We failed the residents because we haven't made it clear to them that you may have to go somewhere else to find a job—not necessarily the place you want to go". Participants in this group felt that the source of this employment perception problem stems from

the residents "being able to meet their own expectations for employment—living in the city they want to live in and having the type of practice they want—as opposed to actual stress of general unemployment". Another staff surgeon participant expressed an explanation of the apparent disconnect between the resident and staff perceptions (Table 2b). These sentiments appear to be in opposition with those expressed by the resident focus group participants (Table 2c). Participants feel that the stress of career planning "affects their learning and this issue is poorly addressed by the training program as it gets more and more as [they] get more senior". Some even proposed as a solution whereby "current staff need to be willing to share resources with incoming staff". Delayed retirements of surgical staff were also identified as a cause of employment stresses for residents. Resident participants recommended a variety of solutions, including suggested age of retirement for operating surgeons, creating incentivization for retirement, and creation of a senior surgeon program to facilitate transition to retirement.

Discussion

The employment market for Otolaryngology – Head and Neck surgeons in Canada is a complex entity influenced by many internal and external factors. Within our study, both OHNS residents and staff surgeons echoed that employability is undoubtedly the biggest stressor residents face – the opinion of whether that is valid or not was divergent between the groups. The four major themes that arose from this study may help inform advocacy and contribute to the creation of programs that aim to address these concerns moving forward.

While mentorship often exists in surgical departments for residents to achieve success during residency training, a program focussed exclusively on planning, job identification, and career guidance would address the perception by residents that the current situation leaves residents with "lack of a system or supports to help [them] find jobs" – as stated by a resident focus group participant. Such a program of formal career guidance and mentorship should include professional and career goals, research interests, develop-

Table 2

Quotes from the Focus Groups.

Staff Physician A	"Getting a job right now in Canada is a combination of the right training at the right time in the right set of circumstances. . . . It usually comes down to a little bit of luck, a little bit of hard work, and a little bit of people advocating for you. Those three things come together, then you sort of can get a job. One thing I think is that some [residents] don't realize that they might not be able to get a job in the place that they want to work."
Staff Physician B	"I can't think of a single unemployed Otolaryngologist in the country. So if you want my perception of it, it's that yes, this is an issue. It's something to be concerned about. We need to plan on future employability for our residents, but I think the residents perceive it as a much bigger issue than maybe—and I think they perceive it as maybe a different issue than what staff do because I agree that there's—I think if you ask. "Will I be able to get a job in the place that I want to live and have my family?", that's a much different question than the question of: "Will I be able to get a job?" I think everyone who graduates out of these programs will get positions in Canada. The question is: "Are they going to get the position they want in the spot that they want?", and that is certainly more difficult now than it was when I came up."
Resident C	"Between research and managing [the staff's] clinical practice and working in their ORs, we have no time to devote to finding employment. Therefore, the staff owe it to us to prepare us and help us find job opportunities—not necessarily getting us set up with a job, but at least finding us the opportunity to compete for one."

ment as physician, teacher and/or investigator, and work–home balance (Rustgi & Hecht, 2011). This would serve as an exemplar of a residency program's commitment of shared ownership over the career planning for its residents. In addition, such a program would ameliorate the specialty's ability to attract the best students. A commitment to ongoing faculty development of mentors and mentorship-specific skills would be beneficial for the future of the program.

Most resident respondents recommended that discussions about career planning and post-residency life should start early in training during PGY 1 or 2. A career mentor could discuss career strategies, identify suitable fellowship opportunities if applicable, and identify patient needs in communities with resources for recruitment of academic or community-based surgeons. Such a structured system would allow for inclusion of appropriate subspecialty faculty, depending upon the career interests of the trainee, as well as monitoring and assessing the career guidance and mentorship with existing administrative infrastructure.

One area that was consistently identified as a significant contributor to the perceived lack of available full-time positions for surgical graduates is the possibility of too many training positions given the patient needs and rate or retirement of senior surgeons across the country. The supply of new trainees is disproportionate to the demands of communities. This sentiment has been echoed within other small-sized surgical programs including vascular surgery (Cooper et al., 2015), cardiac surgery (Mewhort et al., 2017), and plastic surgery (Morzycki et al., 2018). Whilst the determination of the number of trainees accepted into a specialty is a complex issue, each respective surgical department may identify over-training and advocate for their current residents. Moreover, given the recent policy change enabling Canadian graduates to be Board-eligible under the American Board of Otolaryngology (ABO), another pool of potential job opportunities has arisen.

While positions in major urban, academic programs are limited and highly competitive, respondents amongst staff feel that opportunities in community-based surgical practice in smaller urban centres are inadequately identified and optimized by graduating surgical trainees. As exposure to this nature of practice and locale is limited, one recommended solution proposed by respondents in the survey and staff focus groups was inclusion of a mandatory community-based rotation in General Otolaryngology. As the intent would be to introduce the idea of a community-based practice while residents are still formulating options for their career pathways, it is suggested that the exposure take place earlier in training, such as PGY-1 or PGY-2. While Easterbrook et al., found that Canadian graduates with rural background were more likely to choose practice in rural communities (Easterbrook et al., 1999), Dunbabin and Levitt noted that amongst Australian medical trainees, rural exposure during training was also a strong indicator of a trainee's willingness to work in smaller and more remote settings (Dunbabin & Levitt, 2003). This would suggest value in providing formal exposure for graduates to rural surgical practice where employment opportunities may be more readily available. Including community-based or rural rotations also provides trainees with exposure to a previously inaccessible group of surgeons who can provide invaluable career advice and mentorship.

There are limitations inherent to the study that merit discussion. This project was conducted in the Division of OHNS at the University of Alberta. This is a unique entity exercising in a very specialized academic environment supporting the non-profit government-run health care environment of Alberta Health Services. The system is further characterized by decreasing access to resources, government funding, and highly skilled personnel. Generalization to other divisions and departments may not be feasible due to this as well as the small sample size of participants. In addition, given the inherent sensitivity of the subject matter, surgical trainees may not have felt comfortable expressing their genuine concerns. As trainees who participated in this study were still enrolled within the residency program, they may have found it challenging to raise concerns that they felt were unjust, due to fear of retribution. Although this was

addressed by re-affirming anonymization and ensuring privacy, this limitation still exists.

Conclusion

OHNS residents face significant stress regarding potential employability following residency. Lack of career mentorship, limited understanding of what community-based opportunities are available, and organizational culture may act as impediments to securing employment. These internal factors combined with various external factors may contribute to the worsening perception of an already competitive job market. Future work to directly evaluate each of these components would be instructive in generating evidence-based solutions that begin with the existing leadership structure.

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Artificial Intelligence and Résumé Critique Experiences

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Abstract

Where résumés are concerned, student supports tend to include tactical feedback that addresses issues in students' writing and strategic feedback aimed at coaching critical self-reflection. However, there is not always time to cover all that could be offered by both kinds of feedback in a single résumé critique. Given demands on staff time, many career services administrators are considering opportunities to leverage artificial intelligence-based (AI) products that might offer tactical feedback and allow staff to focus on offering strategic feedback. In a field experiment, we explored how novice job seekers' use of an AI-based résumé critique product influenced their subsequent face-to-face résumé critique experiences, especially the kinds of feedback offered and learning outcomes that resulted from this. As expected, the AI offered substantial tactical feedback and less strategic feedback. Students' use of the AI did not result in greater opportunity for strategic feedback and associated learning outcomes. Rather, the AI rendered issues in students' writing more salient. In turn, this invited more attention to tactical aspects and less attention to strategic aspects of students' résumés. Further, students and staff perceived that face-to-face résumé critiques enhanced students' preparedness for writing a résumé regardless of whether students used the AI prior to their critique. Use of the AI did not influence students' perceptions of service quality. These results suggest that the AI did not provide greater opportunity for staff to provide strategic feedback. The usefulness of the AI seems limited to situations in which the student has already undertaken a critical self-reflection process and the goal is specifically to acquire tactical feedback.

Keywords: career services; knowledge and skills; co-operative education; experiment

Acknowledgement

The authors wish to thank the following individuals in the Centre for Career Action at the University of Waterloo for their assistance in the study: Katie Schafer, Alicia Flatt, Jayne Hayden, Eva Skuza, Jay Michaud, and Phil Miletic.

Brief résumé critiques are common to many career service settings. Typically, they feature face-to-face interactions between students and staff that are approximately 15-minutes long. Such interactions are opportunities to offer coaching and feedback to students. Two kinds of feedback are common to such critiques: tactical feedback and strategic feedback. Tactical feedback refers to feedback about the specificity and quality of students' writing, and identifies errors and content that could be clarified. Strategic feedback refers to feedback about the bigger picture of the job search process. It involves facilitating students' critical self-reflection. This includes helping students identify their strengths and interests and clarify how to share their career story with, or tailor it to, particular employer audiences

Both kinds of feedback are generally helpful to students. Tactical feedback may help students identify and address issues in their writing. Addressing such issues is important to student employability. After all, recruiters prefer well-written résumés over poorly written ones (Shore et al., 2021). Strategic feedback is helpful, too. It can help students reflect on their résumés. Such reflection can open a "window into the life story of a client" (Toporek & Flamer, 2009, p. 4). This is important to the development of students' self-analytical skills and career identities (McDow & Zabrucky, 2015; Stevens et al., 2019; Toporek & Flamer, 2009). Ultimately, both kinds of feedback facilitate positive career education outcomes.

Unfortunately, there is not always time to offer both kinds of feedback to students in the space of a single résumé critique. Further, students can only absorb so much feedback in a single critique. Certainly, this issue could be addressed by offering multiple résumé critiques. However, it is often already challenging enough for students to access a single résumé critique. Indeed, résumé critiques are among the most demanded career services (Gallup, 2016; Makela et al., 2014). At many institutions, there are simply not enough staff resources to meet such demand. Asking that students attend several critiques may exacerbate the issue. As a result, many career services administrators are interested in understanding how to supplement staff resources to enhance students' access to tactical and strategic feedback.

Artificial intelligence-based (AI) résumé critique products may offer a solution to this issue. Such products are now commercially available and increasingly common in everyday use by students, employers, and educators. Hundreds of post-secondary education institutions offer AI-based résumé critique products to interested students, and many more are likely considering doing so. The appeal of such products may be tied to AI's ability to provide tactical feedback with expediency. It may provide feedback that helps writers communicate more clearly (e.g., Razack et al., 2021). This suggests that AI-based résumé critique products could complement staff resources. They could offer students a wealth of tactical feedback, and thereby allow staff to focus their résumé critiques on coaching students through the more complex strategic pieces of self-reflection and résumé writing.

In this study, we sought to understand how adding an AI-based component to a typical face-to-face résumé critique might influence students' résumé critique experiences. We were most interested to understand how students' use of an AI-based résumé critique product would influence subsequent student-staff interactions. Critically, we wanted to know whether conversions between staff and students who used (versus did not use) the AI included more (versus less) strategic feedback. Ultimately, the goal of our research was to inform career services administrators' decisions about offering AI-based résumé critique products.

Background

Résumé Critique Feedback

Résumé critiques are offered by most career services centres and most students will participate in a résumé critique before graduation (Gallup, 2016). The demand for such services is not surprising. Though on the surface they appear simple, résumé critiques can have a powerful impact on students. Résumé critiques not only offer opportunities to identify issues in students' writing, they can transform how students think about themselves, their value to employers, and the job search process. They can contribute to students' knowledge and skills associated with preparing high-quality résumés (Crozier & Lalande, 1995; Lalande & DeBoer, 2012; McDow & Zabrucky, 2015), including self-analytical skills that are important to career education (Toporek & Flamer, 2009). Feedback theory (Hattie & Timperley, 2007) suggests that the feedback students receive during a résumé critique influences such desirable critique outcomes.

Feedback is information about a one's performance with the intent to improve such performance (Hattie & Timperley, 2007). In the context of a résumé critique, such feedback may focus on tactical aspects of the résumé, such as spelling, grammar, formatting, and word choice (i.e., writing mechanics). Résumé critiques may also offer strategic feedback that helps students reflect and make sense of their experiences, skills, and how best to communicate these to employers, including tailoring their content for different industries and job types. When students receive such feedback, they ideally become better able to craft and tailor high-quality résumés (McDow & Zabrucky, 2015).

Staff and AI-Based Feedback

For decades, career services like the résumé critique were driven exclusively by trained staff. Such staff would meet with students in one-on-one or group settings. Discussions between staff and students provided opportunity

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for offering feedback. Recently, AI has been used to simulate such interactions. For example, AI-generated chat bots now offer career-related advice (Lee et al., 2019). Other AI-based products help students identify career interests (Nguyen et al., 2018) and skill development opportunities (Barney & Madigan, 2019). As mentioned, several AI-based résumé critique products are also now available. Indeed, AI-based products are transforming post-secondary education in a variety of ways (Aoun, 2017; Cox, 2021), including the administration of career services.

Given the emergence of AI-based résumé critique products, it seems useful to consider differences in feedback offered by AI versus that offered by staff. Intuitively, one might expect feedback generated by AI to focus on tactical aspects of students' writing. It is well known that AI is remarkably able to identify issues such as spelling errors. Anyone who has used a word processor program to write knows that the software can capably spot and provide feedback on such issues. Some AI products do however offer strategic feedback, too. For example, we are aware of one product that suggests skills learned or demonstrated based on individuals' previous work experience. Overall, the AI offers learning outcomes by analyzing what the student has written and comparing this to what others in similar contexts have written in their résumés.

Staff can identify tactical issues with students' writing, too. Indeed, all career educators should be equipped to guide students toward improving their ability to represent themselves in their documents. Yet, a critical strength of staff-driven résumé critiques lies in the offering of strategic feedback that can extend well beyond the student's written work. Skilled staff are generally equipped to support students in reflecting on what they've experienced, who they are, and what they are aiming to try next. Moreover, skilled staff can pace and scaffold such feedback so as to intentionally foster student agency and confidence within the context and time demands of the job search. It is these strategic elements of student-staff interaction that seem less easily addressed via AI-driven feedback. With this in mind, the value proposition of an AI-based résumé critique is arguably its ability to offer tactical feedback in ways that open up opportunities for staff members to focus their time with students on strategic feedback.

What remains unclear is whether feedback offered by an AI-based résumé critique product will indeed provide these greater opportunities for staff to focus on strategy. If AI-generated feedback does help students identify, address and move past tactical issues, staff could focus all their attention on offering strategic feedback such as on how students' experiences and identities connect to broader career possibilities and work environments. Yet, it is also possible that the AI will instead lead to even more questions about writing. Many people are uncomfortable with AI-based feedback (Tong et al., 2021) and want humans to help them make sense of that feedback (Luo et al., 2019). This alternate outcome would suggest that adding an AI-based component to an already effective résumé critique might even hinder opportunities for strategic feedback. We explored the potential outcomes of introducing an AI-based résumé critique product in the present study.

Method

Student Participants

Participants in the study were undergraduate engineering students at the University of Waterloo who were preparing for their first job search (n = 60). All the participants were part of a co-operative education (co-op) program. Co-op is an education program in which students seek employment as a requirement for graduation. Co-op students alternate between academic terms and terms of paid employment throughout their education. Such students were of interest because they represent typical users of career services who might be interested in résumé critiques. The students included in this study were mostly Asian (67%) or white (18%) and about half (47%) identified as female.

Procedure and Conditions

After ethics clearance (project # 41680), potential participants were invited by email to the study which took place in January 2020. The study occurred

on campus in a building associated with co-operative education and employment. As they arrived, students were provided study documentation and were randomly assigned to either a *traditional* or *AI-first* condition.

Students in the traditional condition participated in a traditional face-to-face résumé critique. Each critique lasted about 15 minutes long and was conducted by a trained career educator matched to students at random. All critiques were conducted in accordance with the best practices in career educating/advising regularly followed at the career centre. After their critique, students in the traditional condition were asked to complete a questionnaire about their experience (called the post-critique survey). Staff also completed a questionnaire in which they assessed student outcomes. Once questionnaires were collected, students were thanked for their time and optionally entered into a draw for one of three $50.00 gift cards. They could choose to remain at the study venue to use the AI and provide feedback about it, but some left at that time.

The procedure was identical for students in the AI-first condition, with two exceptions. First, prior to participating in a traditional face-to-face résumé critique, students in this condition were invited to use an AI-based résumé critique product. They were provided a brief introduction to the product and given instructions for how to use it by a knowledgeable career educator. They were then provided 45 minutes to use the product. The AI tool generated feedback within a minute of uploading a résumé, so students had ample time to review the feedback generated by the AI. After using the AI, students in this condition were asked to complete a brief questionnaire about their experience. As mentioned, students in the traditional condition were provided the same opportunity, after their face-to-face critique, but some passed on the opportunity. For students in the AI-first condition, the study proceeded to the face-to-face critiques and questionnaires as described above.

Measures

Feedback

At the end of each résumé critique, career educators within the University's career centre reported which of five topics were discussed: (1) grammar and spelling, (2) résumé format, (3) bullet content (e.g., proper action verbs), (4) skill identification, and (5) résumé customization (i.e., how to match the résumé to a specific job or industry). These topics were identified before the study by staff as the most common within critiques. Responses were coded as 0 = "not discussed" and 1 = "discussed". Responses were then transformed into two variables. The first three topics were merged into a variable called *tactical feedback*. This represented the extent to which discussion focused on writing-related issues. The final two topics were merged into a variable called *strategic feedback*. This represented the extent to which discussion focused on students' experiences, skills, and how to communicate these to employers through a résumé.

Depth of Discussion

Staff were also asked to report on the general depth of the conversation where 1 = "mostly surface" and 7 = "mostly deep". This variable was included to better understand the influence of the AI-based résumé critique on student-staff interactions.

Self-Reported Learning Outcomes

Students in the AI-first condition were asked to report as many as three learning outcomes associated with use of the AI-based résumé critique product. Examples of learning outcomes reported include "Don't overuse the same action verb," and "To change the font of my resume, so it can be more readable." Such learning outcomes were coded by the first author into categories corresponding to the kinds of feedback discussed in this paper (tactical and strategic). The goal was to explore the insights students gleaned from using the AI. Critically, we did not make efforts to include learning outcomes associated with use of the AI-based résumé critique product reported by those in the traditional condition, because some students in that condition left the study after their face-to-face critique. As well, those in the tra-

ditional condition who did use the AI did so for less time (between 20 and 30 minutes) than did those in the AI first condition (45 minutes). Thus, a fair comparison between conditions was not possible.

Additionally, all students were asked to report three learning outcomes associated with the résumé critique event. Such learning outcomes were used to identify insights students gleaned from face-to-face résumé critiques. Recall that half of the students participated in a face-to-face résumé critique without an AI component while the other half used the AI prior to their face-to-face critique. Thus, we were able to examine the influence of using the AI on subsequent learning outcomes of a face-to-face critique.

Such learning outcomes were coded by the first author and a research assistant. Each response was coded based on the kinds of feedback (tactical and strategic) to which they might correspond. Examples of statements coded as tactical are "I learned that I may use too many filler words," and "I need to incorporate more action words into my bullet points." Examples of statements coded as strategic are "More emphasis on soft skills," and "Balance in résumé between hard/soft skills is important." The intraclass correlation coefficient (ICC; Koo & Li, 2016) was used to examine agreement between the coders. Initial agreement between the two coders was sufficient for both variables (tactical: ICC = .99; strategic: ICC = .96). A second research assistant was consulted to resolve disagreements.

Knowledge and Motivation

On the post-critique survey, students were asked to self-report the degree to which they felt knowledgeable about preparing a résumé (1 = "not knowledgeable" to 6 = "very knowledgeable") and motivated to prepare a résumé (1 = "not motivated" to 6 = "very motivated"). They responded in terms of how they had felt before their face-to-face critique and how they felt after it. Staff members also completed the same measures in terms of their perceptions of student knowledge and motivation both before and after the face-to-face critique (where 1 = "not knowledgeable" to 6 = "very knowledgeable" for knowledge, and 1 = "not motivated" to 6 = "very motivated" for motivation).

Willingness to Recommend the Critiques

Students in the AI-first condition were asked to report their willingness to recommend the AI-based résumé critique to their friends. On the post-critique survey, students in both conditions were asked to report their willingness to recommend the face-to-face critique to their friends. Responses to both questions were provided on 10-point scales where 1 = "not at all likely" and 10 = "extremely likely." These questions were included in the study because willingness to recommend is a key indicator of service quality (Zeithaml et al., 1996).

Results

Feedback

Two-tailed t-tests were used to examine differences in feedback between the two conditions. Results suggest that tactical feedback did not differ significantly between the AI-first condition (M = .64, SD = .21) and the traditional condition (M = .56, SD = .18), $t(58) = 1.72$, $p = .09$. Similarly, strategic feedback did not differ between the AI-first condition (M = .76, SD = .31) and the traditional condition (M = .78, SD = .28), $t(58) = .32$, $p = .75$.

Depth of Discussion

A two-tailed t-test was used to examine differences in depth of discussion between the two conditions. Results suggest that the depth of discussion did not differ between the AI-first condition (M = 4.74, SD = 1.28) and the traditional condition (M = 4.55, SD = 1.64), $t(57) = .33$, $p = .65$.

AI Use Learning Outcomes

Self-reported learning outcomes of the AI-based critique for students in the AI-first condition were coded into three themes: tactical, strategic, and other. The results of the coding are shown in Figure 1. Twenty-eight students provided at least one learning outcome after using the AI. Most (39) responses were categorized

as tactical. They related to word choice (e.g., "Too many filler words," "Don't use the same word over and over," "Word overused") and formatting (e.g., "A lot of information about consistency and formatting that I couldn't have caught," "I need 2-3 lines for each bullet," "Page layout and spacing. There were some inconsistencies in my spacing"). Several responses (18) were categorized as strategic (e.g., "I could have used action verbs that were stronger than 'use' or "provided'," "Feedback about common skills that I have shown evidence of and some I haven't/could do more of," "I learned the good points about my resume (listing teamwork)"). Several other responses (11) were categorized as other (e.g., "AI has serious potential," "[The AI] was not able to identify software names like Solidworks and AutoCAD," and "Increased confidence due to detailed feedback").

Résumé Critique Learning Outcomes

Self-reported learning outcomes of the face-to-face résumé critiques were coded into two themes. Consistent with the main thrust of this paper, the themes were tactical (i.e., related to students' writing) and strategic (i.e., related to students' experiences, skills and communicating these). The goal was to understand whether such learning outcomes differed between conditions. Students reported 132 learning outcomes. The average number of learning outcomes reported did not differ between the AI-first condition (M = 2.81, SD = .40) and traditional condition (M = 2.66, SD = .61), $t(53) = 1.08$, $p = .29$. Results of two-tailed t-tests suggest that there was a significant difference between conditions in learning outcomes. Students in the AI-first condition reported more tactical learning outcomes (M = 1.62, SD = 1.17) than did those in the traditional condition (M = 1.00, SD = .93), $t(53) = 2.15$, $p = .04$. Also, students in the AI-first condition reported fewer strategic learning outcomes (M = 1.04, SD = .96) than did those in the traditional condition (M = 1.62, SD = .94), $t(53) = 2.27$, $p = .03$. These results are illustrated in Figure 2.

Figure 1

Frequencies of Learning Outcome Categories Based on Reported Learning Outcomes by Students in the AI-First Condition (n = 28)

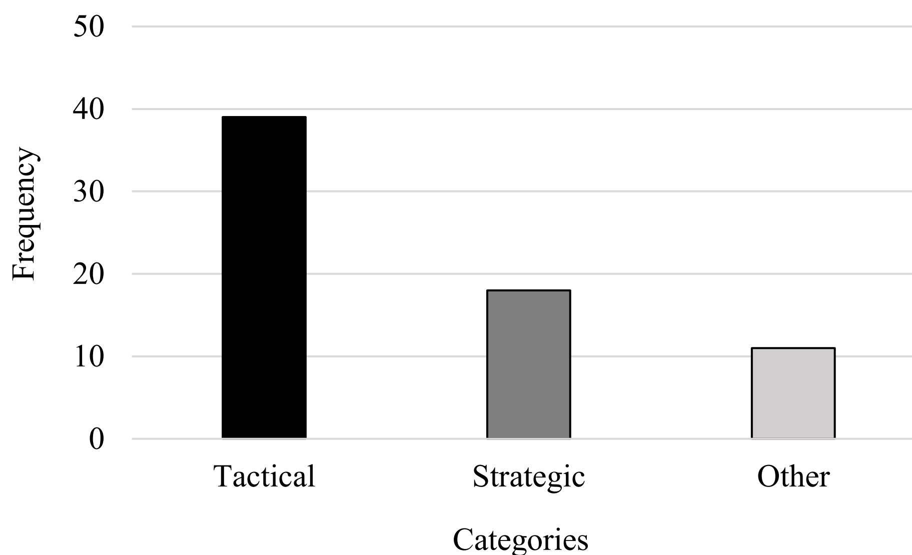

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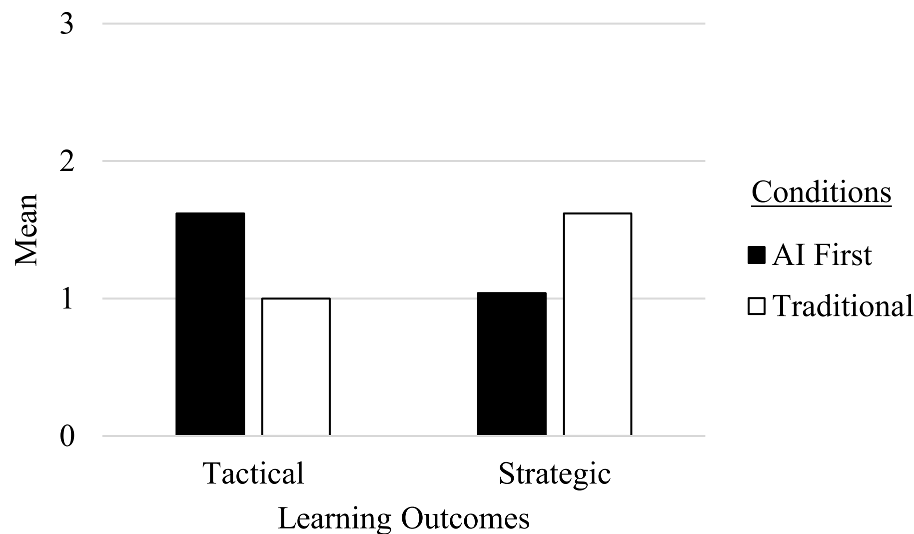
Figure 2

Mean Tactical and Strategic Learning Outcomes of the Résumé Critiques Between AI-first and Traditional Conditions (n = 60)



Self-Reported Knowledge and Motivation

Two-tailed t-tests were used to examine differences in self-reported knowledge and motivation between the two conditions. Table 1 summarizes the means and standard deviations associated with the analysis. Self-reported pre-critique knowledge did not differ between conditions, $t(58) = .29$, $p = .77$. Similarly, self-reported pre-critique motivation did not differ between conditions, $t(58) = .98$, $p = .33$. These results simply reflect that the students were randomly assigned to conditions.

More importantly, results suggest that self-reported post-critique knowledge did not differ between conditions, $t(58) = 1.75$, $p = .09$. Similarly, self-reported post-critique motivation did not differ between conditions, $t(58) = .66$, $p = .51$. These results suggest that use of the AI-based résumé critique product was not associated with self-reported knowledge and motivation resulting from a face-to-face résumé critique.

Staff-Perceived Knowledge and Motivation

Two-tailed t-tests were used to examine differences in staff perceptions of students' knowledge and motivation between the two conditions. Results were like those presented in the previous section. Staff members' perceptions of students' pre-critique knowledge did not differ between conditions, $t(57) = .68$, $p = .50$. Similarly, staff members' perceptions of students' pre-critique motivation did not differ between conditions, $t(57) = .12$, $p = .91$. Again, this reflects random assignment to conditions. More importantly, staff members' perceptions of students' post-critique knowledge did not differ between conditions, $t(57) = .41$, $p = .68$. And, staff members' perceptions of students' post-critique motivation did not differ between conditions, $t(57) = .73$, $p = .47$.

Willingness to Recommend

Two-tailed t-tests were used to examine differences in students' willingness to recommend the AI product and face-to-face critique between the two conditions. Results suggest that willingness to recommend the AI did not differ significantly between the AI-first condition ($M = 8.09$, $SD = 1.31$) and the traditional condition

Table 1

Means and Standard Deviations of Students' Self-Reported Pre- and Post-Critique Knowledge and Motivation (n = 60)

	Knowledge				Motivation			
	Pre-critique		Post-critique		Pre-critique		Post-critique	
Group	M	SD	M	SD	M	SD	M	SD
Traditional	3.97	.89	5.03	.67	4.57	1.30	5.47	.57
AI first	4.04	1.00	5.32	.57	4.24	1.28	5.51	.53

Table 2

Means and Standard Deviations of Students' Pre- and Post-Critique Knowledge and Motivation as Perceived by Staff (n = 60)

	Knowledge				Motivation			
	Pre-critique		Post-critique		Pre-critique		Post-critique	
Group	M	SD	M	SD	M	SD	M	SD
Traditional	3.70	1.12	5.40	.67	4.97	1.22	5.57	.73
AI First	3.90	1.11	5.33	.69	5.00	1.00	5.69	.54

(M = 8.39, SD = 1.20), $t(52)$ = .86, p = .39. Similarly, willingness to recommend the face-to-face critique did not differ significantly between the AI-first condition (M = 9.22, SD = 1.01) and the traditional condition (M = 9.07, SD = 1.05), $t(55)$ = .57, p = .57.

Discussion

Students' use of the AI rendered tactical issues with their writing more salient. More than half of the learning outcomes reported from the AI related to bad spelling, overused and filler words, and poor formatting. Students also reported that the AI encouraged them to think about choosing more impactful words to represent their skills to employers. This is also related to writing because writing is about communicating to an audience. Use of the AI seemed to help students think about which words they should use so that their writing appealed to employers. This suggests that the impact of the AI-generated feedback is mostly tactical. Students self-reported learning outcomes indicating that they paid more attention to the tactical feedback generated by the AI than its strategic feedback.

Our main interest was in understanding whether such tactical feedback would influence dynamics between students and staff during a subsequent résumé critique. Specifically, we wanted to know whether use of the AI would affect opportunities for providing strategic feedback. The results suggest that use of the AI did not afford such opportunities. The amount of tactical feedback and strategic feedback offered to students, according to staff reports, did not differ between conditions. Similarly, the staff-perceived depth of conversation, which is a proxy for opportunities for strategic feedback, did not differ between conditions. This is unfortunate because it suggests that introducing the AI did not enable staff members to offer more strategic feedback.

In terms of overall impact, there was clear evidence that the résumé critiques were useful. Post-critique knowledge and motivation were higher than pre-critique knowledge and motivation from the perspectives of both students and staff. This is

consistent with previous research on the benefits of résumé critiques for student job seekers (Crozier & Lalande, 1995; Lalande & DeBoer, 2012; McDow & Zabrucky, 2015). From the perspective of feedback theory, it may be that such critiques offer feedback that is useful to the development of knowledge and skills. Students and staff then perceive that such feedback encourages greater knowledge and motivation for writing a résumé. However, whether an AI-component was included in such critiques seemed to have little effect on desirable critique outcomes.

We were also interested in understanding how the AI might influence learning outcomes associated with résumé critiques. Results suggested that the AI did influence students' learning outcomes. This influence was not consistent with the interest to provide staff more time for strategic feedback. In the traditional condition, students reported more strategic learning outcomes than tactical learning outcomes. Meanwhile, the AI-first condition did not amplify such outcomes, but rather achieved the inverse effect. Those who used the AI first learned more about tactical aspects of their writing and less about strategic aspects of the job search in their in-person critique compared to those in the traditional condition. Of course, tactical learning outcomes are important to students' résumé quality; however, the hope was that the AI would take care of tactical matters and provide more opportunity for staff-led strategic feedback, leading to even greater strategic learning outcomes. This was not the case.

Use of the AI had no influence on students' perceptions of service quality. Such perceptions were measured in terms of willingness to recommend the résumé critiques to others. Students' recommendations help career services centres reach yet more students. If the AI enhanced willingness to recommend, even if it did not influence learning outcomes of the résumé critiques, then it could serve as a useful promotional tool. Yet, the results suggest that students who used the AI were not more likely to recommend the service than those who did not use it. Further, students were more willing to recommend the face-to-face component of their experience than they were to recommend the AI itself.

These findings provide deeper insight into the role of AI in providing feedback. Previous research (Tong et al., 2021) suggests that students' responses to AI-generated feedback may be more negative than responses to feedback provided by a human. Students in this study seemed to respond more positively to feedback offered by staff members. This seems consistent with research that suggests feedback provided by humans is often preferable even when feedback from an AI is technically advantageous (Glikson & Woolley, 2020). This highlights the importance of the support that staff can offer. Career services staff may provide feedback in ways that help focus attention on more strategic than tactical feedback. Such feedback may signal advocacy and support (Toporek & Flamer, 2009) in ways that the AI cannot. This seems to be a critical difference between the AI and supportive career services staff.

Implications for Career Services Educators and Managers

The present research suggests that career services managers should think critically about offering AI-driven feedback as part of résumé critiques. AI may be appealing to such managers because of its scalability and capacity to provide comprehensive information in only a few seconds. Yet, in the present study we did not find evidence that adding an AI component to an established staff-led résumé critique improved students' experience. As well, it did not provide staff members greater opportunity to shift attention from tactical feedback to strategic feedback. This is important to consider given that most career services centres are looking for ways to offer both kinds of feedback with limited staff resources. The evidence suggests that the AI offers substantial tactical feedback, but receipt of such feedback does not help students and staff focus on issues that are deeper than students' writing.

To be sure, the results suggest that offering the AI has merits that may resonate with some educators. Specifically, the AI identified issues in students' writing. This may be relevant to service delivery because identi-

fying issues in students' writing can be a significant challenge when time is limited, and some aspects of such feedback may also fall beyond the intended scope of staff members' roles. Indeed, copy editing can raise ethical issues within post-secondary education, especially when students' résumés are submitted for course marks. If students receive proofreading services, ownership of intellectual property becomes less clear; this is problematic when students are being evaluated. In such cases, AI-based critiques could be the appropriate vehicle for providing students with feedback on writing mechanics.

However, there are risks to focusing on writing mechanics too soon in the résumé development process. Before concentrating on *how* students communicate their experiences and competencies, there is immense value in first identifying what is of most value to share, under what circumstances, and why. Supporting a student to uncover what they are capable of and in what ways that could be viewed within various settings can have an immense impact on employment outcomes. Thus, focusing on strategy can be a better investment of (particularly early) student time in preparing for applications and interviews. If students leave their critique focused on spelling and formatting, they may be missing the bigger picture of the résumé's purpose and how the story it tells can inform interview and networking choices as well. As such, their efforts from that moment forward may be misguided, resulting in poorer performance in the job search process. Ultimately, this could easily result in a lack of regard or even loss of trust in the career centre and institution. This suggests that even though tactical feedback holds obvious appeal, it is not necessarily the best place to focus one's efforts.

Considering these results, AI-based résumé critiques may be most appropriate when learners already have experience reflecting on who they are and what they want, and when students are seeking work in well-defined settings where they are uniformly expected to conform to certain résumé standards. We note, for example, that many MBA programs report expecting students' résumés to look a certain way and asking students to provide specific types of details in their résumés. When this is the case, the AI-driven critique may be desirable because it provides common feedback about the mechanics of writing. In undergraduate settings, however, students may have a less developed sense of their strengths, and also be contemplating a broader labour market context, where standards for what constitutes an ideal résumé are less clear. When students require coaching in self-reflection and the guidelines for writing résumés are less prescriptive, the array of possible directions a student might take can be wide, which might not be a context well-steered by AI.

Future Research

This study highlights the important contributions of front-line career services staff. The positive experience of interacting with trained staff was not bettered by the AI-based résumé critique. Future research is required to better understand whether and how AI might complement staff resources. For example, future research could explore ways in which AI résumé critiques are useful when staff resources are not available. In that vein, a study could examine differences in self-reported readiness for creating a high-quality résumé between students who received no résumé guidance and those who used an AI-based résumé critique. This seems relevant given that growth in work-integrated learning programs across post-secondary settings may be on track to exceed the capacity of associated staff.

As well, the study focused primarily on students' subjective experiences within an hour of having been exposed to AI, including what they thought they learned and their willingness to recommend the service to others. Future research could use a similar research design but focus on objective outcome variables and different timeframes that might allow for more self-reflection. For instance, a study could measure pre- and post-intervention résumé quality and randomly assign students to use an AI or a control condition with no such AI. This would allow for an examination of the ways in which use of an AI can help students write better résumés.

This is clearly of interest given that the quality of students' résumés can influence their success in job search processes (Shore et al., 2021).

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It's Not as Easy as They Say: International Students' Perspectives About Gaining Canadian Work Experience

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Abstract

This study provides insights into international students' perspectives of preparing for entry into employment in the Canadian workforce. From a human capital perspective, international students are valuable resources for the Canadian labour market and for other countries with skilled labour shortages. However, most research on international students has focused on their initial transition experience, and available research on their employment experiences is often limited to the post-graduation transition. International students need to build their capacity for employment concurrently while they are studying, gaining local work experience. In this article we present an analysis of critical incidents collected from international students which highlights five key barriers in their experience of the Canadian work context, including policies and procedures, competition and economic conditions, challenges for navigating local cultural norms, language abilities, and their personal life circumstances. The discussion draws connections between international student recruitment and their longer-term goals for residency in Canada, with recommendations for bridging policies and services.

Keywords: international students; employability; Enhanced Critical Incident Technique; career development

In 2016, the former Canadian federal immigration minister John McCallum stated, "International students are the best source of immigrants, in the sense that they're educated, they're young, they speak English or French, they know something of the country. So we should be doing everything we can do to court them" (Donovan, 2016). This press statement signified the expanded policy shift to recruiting international students, referred to as international-born, non-Canadians, who have lived and studied in Canada (Statistics Canada, 2012), for their potential as future workers and permanent residents. During the past decade, the federal government has connected international student recruitment, employment, immigration, and international trade, most recently exemplified in the report, Building on Success: International Education Strategy, 2019-2024 (Global Affairs Canada, 2019). Between 2010 and 2020, the number of international students in Canada increased by 125%, with 530,540 reported in 2020 (Canadian Bureau of International Education [CBIE], 2021), positioning Canada as third in the world for market share following the United States and Australia. Canada continued to build market share during the Covid-19 pandemic, receiving 621,600 international students in 2021 (Crossman et al., 2022). At the onset of the pandemic, countries such as Australia shut their borders to new international students. Canada continued to welcome international students and strengthened its international reputation as a desirable destination country (ICEF Monitor, 2021).

Although international students generally perceive Canada to be a welcoming country (CBIE, 2021), the pathway from education to employment and permanent residency is not as easy as it might seem. International students need to gain local education and employment experience as mechanisms for building additional local credentials, and increasing their eligibility for pursuing permanent residency status (Woodend & Arthur, 2018). Indeed, the results of prior research suggest that international students face multiple barriers upon graduation when seeking to enter the local workforce such as employer attitudes, lack of local work experience, cultural differences in approaches to job search, and restrictions in visa processes

for employment and immigration rights (Dam et al., 2018; Nunes & Arthur, 2013; Nguyen & Hartz, 2020). To the earlier point, what appears to be seamless entry into the Canadian workforce is, in reality, a complex process, complicated by changing immigration policies and conditions in the labour market (Crossman et al., 2022). Although many international students make a positive transition to employment (Frenette et al., 2019), the notion of courting them as immigrants to Canada needs to be deconstructed, incorporating international students' views about what they identify to be challenging, and how they overcome those challenges.

In the current study, our overarching objective was to investigate the university to work transition of international students in Canada, while they were in their student roles. This direction expands on prior research that has examined international students' employment experiences as a post-graduation phenomenon, when students finish their education, and make the transition to the labour market (Germain & Vulture, 2016; Netierman et al., 2021; Nunes & Arthur, 2013). Rather than conceptualizing the transition from higher education to employment as sequential in nature, we aimed to cast a lens on international students' experiences as they started to engage with the Canadian labour market while concurrently in their student roles. We were particularly interested in the challenges that international students faced, when pursuing employment while they studied, and how they navigated those challenges in light of their future goals of securing employment and permanent residency in Canada.

Is Building Human Capital Enough to Overcome Employment Barriers?

To contextualize the current study, this section frames the career development of international students according to their human capital potential. Drawing on Human Capital Theory (Becker, 1993; Tan, 2014), international education is an investment made by individuals and by governments to increase both the qualifications of the future workforce and productivity in the organizations that hire international students. From this perspective, there are proposed 'win-win' advantages for international students to increase their employment prospects and for organizations to access valuable sources of human capital to maintain a well-qualified and productive workforce (Arthur, 2013). It is important to investigate the ways that international students build human capital while in their student roles, including how they navigate initial attempts to gain local work experience. In general, employability refers to gaining skills, knowledge, and experiences that increase qualifications for future employment (Nguyen & Hartz (2020). However, these capabilities are not cultivated at only one point in the transition experiences of international students; they require cumulative and progressive skill building experiences related to longer-term career goals (Woodend & Arthur, 2018).

Increasing the Human Capital of International Students

Many countries with developed economies and declining birth rates, such as Canada, rely upon skilled immigrant workers to expand their labour force and subsequently grow their economy (Dumont & Liebig, 2014). International students have been deemed 'preferable immigrants' because they have been identified as a valuable source of human capital to fill shortages in the skilled labour markets of destination countries (Berquist et al., 2019; Choi et al., 2021; Ziguras & Law, 2006). What makes international students a desirable source of skilled labour is a combination of their familiarity with the destination country, education credentials, and knowledge and contacts from their home countries (Crossman et al., 2021; Hawthorne, 2014). Even though their international experience is presumably an asset for the diversification of the local labour pool, gaining local workforce knowledge and experience are pivotal factors for enhancing their longer-term employment prospects (Arthur & Flynn, 2011). Aligned with positioning international students as an important source of skilled labour, governments have created immigration policies to incentivize international students to study and then work post-graduation. For example, in comparison to other countries (Berquist et al.,

2019), Canada has a positive reputation for post-graduate work permits. This enables many international students to work in Canada for up to three years post-graduation, depending on the degree and priority sectors, to secure valuable experience that supports their permanent residency application. The onset of COVID-19 disrupted the plans of many international students, although some accommodations were given, to extend work permits that had been delayed or had expired (Government of Canada, 2021).

Just as there are many motives for the destination country to pursue international students, there are also many motives for international students to pursue international education. One of the main reasons is to gain valuable credentials for pursuing future educational or employment opportunities (Arthur & Flynn, 2011; Berquist et al., 2019; Nilsson & Ripmesster, 2016). From a human capital perspective, international education is an investment both for individuals in terms of increasing their employability, as well as economic growth through adding skilled workers to the labour market. Accordingly, as international students gain additional knowledge and skills, they should obtain improved employment outcomes. Although this seems like a relatively straightforward ratio of investment and returns, there are many complex and intersecting influences on international students' pursuit of employment and longer-term plans for pursuing immigration in destination countries (Netierman et al., 2021). For example, the employability of international students' is not determined only by efforts to acquire new skills; there are other mitigating influences such as labour market conditions, access to work experience, and the attitudes of local people, including employers' hiring practices (Nguyen & Hartz, 2020).

Berquist et al. (2019) reported on results from surveys conducted with international students in OECD countries, noting between 60-80% of participants indicated their intention to work in the destination country post-graduation. Survey research from Canada showed similar results: 68% of international students, who study in Canada, intend to pursue permanent residency, and 65% would like to stay in Canada post-graduation to obtain work experience (Esses et al., 2018). However, it is important to clarify that such intentions are not always predetermined for international students when they arrive, and may shift over time. As international students gain more experience in the destination country, integrate into their academic programs, and establish local support; they may discover or deepen their commitment to pursuing employment, and permanent immigration (Nunes & Arthur, 2013). Conversely, disruptions to original plans to stay in destination may occur due to changing employment conditions and the perceived benefits from comparing opportunities between country contexts. Two additional Canadian studies illustrate the importance of considering the decision-making of international students as an evolving process, in which plans for employment are contingent on a variety of factors that shift over time (Germain & Vultur, 2016; Netierman et al., 2021). The experiences of international students in destination countries, while they are students, has a strong bearing on how they envision future employment pathways, in either the destination or home countries, or across both contexts.

The Current Study

From the available literature, it is clear that developing human capital is important to the objectives of international students and to employers who are seeking human resources to fill gaps in a highly skilled workforce. It is also clear that international students, although they have desirable human capital, face barriers to employment that impede these shared objectives, such as language ability, employer bias, and changing visa regulations (Dam et al., 2018; Nunes & Arthur, 2013). Given this disconnection, the university-to-work transition is a critical developmental period where key supports are essential for ensuring the employment success of international students. The focus of previous research has been on supporting the initial adjustment of international students to the destination country and their academic success once in a program, with fewer studies examining their readiness for employment (Khanal & Gaulee, 2019). What research does exist has focused on the bar-

riers students face, specifically in the post-study period (Dam et al., 2018; Coffey et al., 2018; Woodend & Arthur, 2018), and key challenges and limitations to service provision (e.g., alumni unable to access career services; ineligibility for some federal benefits, such as employment insurance). A long-term and ongoing consideration for international students' career development is their acquisition of human capital potential, including during their academic studies, in order to inform appropriate career support. As such, the current study focused on addressing the following research question: What do international students find challenging as they attempt to engage with employment in the Canadian work context, while in their student roles?

Method

We begin the discussion of the method with statements regarding the authors' positionality in relation to their identities and experience relevant to the topic of the research study. Next, the discussion turns to the Enhanced Critical Incident Technique (ECIT; Butterfield et al., 2009; McDaniel et al., 2019) as the approach that informed data collection and analysis. The recruitment context and demographic information of the research participants are also detailed.

Researchers' Positionality

The first author identifies as an able-bodied, cis-gendered White woman who has worked as a counsellor in higher education settings and as an academic in a counselling psychology program. Her research program has focused on the learning and employment transitions of newcomers, including international students in higher education, their accompanying partners, and younger international students in secondary schools. The first author has been a homestay parent to international students and has personally experienced living and working in another country.

The second researcher identifies himself as a cis-gendered, queer, able-bodied White man who has a doctoral degree and is an assistant professor in a counselling psychology program. The second author has professional experience, both in research and practice, with international career transitions including working with immigrants, and international students and their accompanying partners. Although the second author has personal experience and a family background of immigrating for career purposes, he does not have experience studying internationally.

The third author identifies as an able-bodied, cis-gendered White woman who has a master's degree in counselling psychology. She does not have lived experience working or studying internationally, with her main experience of transitions related to moving from rural to urban areas. The third author has worked extensively with international students as a counsellor in a post-secondary counselling centre, and as a researcher for this project and her master's degree thesis.

The fourth author identifies as a cis-gendered White woman who has a master's degree in counselling psychology and experience providing direct counselling with international students in higher education. In addition to research on this project, the fourth author was involved in a research project on the design of mentorship programs for international students.

The fifth author identifies as a cis-gendered second-generation Chinese Canadian woman, whose parents arrived in Canada in the 1970s as refugees. She has a Master's degree in counselling psychology and currently provides counselling services at a community agency. Her family background has informed her understanding of acculturation and cross-cultural experiences.

Data Collection and Analysis Using the Enhanced Critical Incident Technique

ECIT (Butterfield et al., 2009) was used to construct the study (e.g., interview protocols), and to analyze and interpret the data. ECIT is based on the Critical Incident Technique (CIT) (Flannigan, 1954), which helps to determine the critical tasks in a given profession that are needed for success. CIT research has been used in many disciplines (e.g., nursing, counselling), with a focus on providing first-hand accounts of a particular experience and what helps or hinders it. According to

Viergever (2019), CIT is a methodology that provides guidance to researchers throughout the research process including alignment of research goals and how to describe or explain the data. Viergever also noted that researchers are able to use CIT as a method that specifies ways to collect and analyze the data such as interviews and coding. CIT, and by extension ECIT, are based on the theoretical framework of pragmatism, where the purpose is to highlight solutions to problems, rather than to provide descriptions of them (Kaushik & Walsh, 2019).

Although CIT originated in research based in a positivist worldview and could include both quantitative and qualitative data, recent applications of ECIT have included research from a post-modern worldview, used with qualitative research studies (McDaniel et al., 2019). This post-modern, constructivist perspective is the one we adopted for this study. Specifically, we used ECIT to focus on critical incidents (CI) described by participants as either helpful, unhelpful, or wished-for events (Butterfield et al., 2009).

Design and Procedure

To understand international students' perceptions of preparing for the Canadian work context, the researchers recruited 18 international students in-study from a Western Canadian university. At the time of conducting the study, the university was located in a region of Canada that was experiencing an economic downturn and higher rates of unemployment. The researchers sent recruitment materials to university services (e.g., career services), who distributed them to international students. The researchers also invited participants to share the recruitment materials with other international students who may be interested. Data collection included one-on-one in-person or telephone, one hour-long interviews. A professional transcriber, who signed an oath or confidentiality, transcribed the interviews, verbatim. All participants were international students in an academic year prior to their final year of study and there were no exclusion criteria based on age, gender, country of origin, or field of study.

Overall, there were eight women and 10 men, with an average age of 27 (*SD* = 5.2; *min* = 20, *max* = 36). Five of the participants were studying at the undergraduate level, eight in master's programs, and five in doctoral programs. Twelve of the participants identified as being in engineering-related fields, three in health sciences-related fields, two in finance-fields, and one in urban studies. Participants' self-identified ethnicities included six Latin-American, five Chinese, five South Asian, and one each of Iranian and Somalian. The research interviews were conducted in English, as all participants had met the language requirements for university admission. Participants reported having spent an average of 2.08 years in Canada (*SD* = 1.62; *min* = 0.17; *max* = 5.00).

Data Analysis

The data analysis was an abridged version of ECIT. Specifically, instead of an initial and then follow up interview with the participants, the data analysis for this study uses the initial (i.e., only one) interview. Moreover, instead of grouping data into batches, the research team systematically reviewed each interview to extract CIs. The research team worked in pairs with the first researcher acting as lead coder, with the second researcher acting as a critical second reader. Any discrepancies or disagreements about the codes were noted; the researchers then met to reach complete agreement. Next, the transcript was sent to an independent review team (i.e., an independent judge and a content expert) not involved in the initial coding, to determine the soundness of the analysis. The review team noted any discrepancies or disagreement, and then returned the transcript to the coding team. Inter-rater agreement was calculated after the codes were finalized, total agreement reached, and an audit trail of incidents flagged for discussion documented. In line with ECIT standards (Butterfield et al., 2009), any incidents that did not have complete agreement between the reviews in the research team were dropped from the analysis. Researchers also kept a record of changes to how incidents were grouped based on discussions and reviews of the analysis.

Individual researchers conducted an initial reading of

the transcript to gain familiarity with the data; then they coded transcripts according to whether incidents were identified as helping, hindering, or wish-list items. Helping incidents (HE) included supports, resources, or personal qualities that aided participants in their career transition or helped them better understand the Canadian work context. Hindering incidents (HI) included experiences, resources, or other events that were unhelpful or blocked participants' career transition or adjustment to the employment culture in Canada. Finally, wish-list items (WL) were identified as resources, supports, or qualities that participants expressed would have aided them had they been available at the time, or would be helpful in the future.

Critical incidents, which included an example of the incident and the importance of the incident, were extracted and compiled into a separate spreadsheet. Researchers examined incidents and sorted CIs into categories based on how incidents aligned. Categories were required to reach a threshold of 25%, as described by Butterfield et al., 2009, to be considered viable and retained for analysis. This 25% minimum viability was used to indicate to the review pairs to reconsider the CIs and either group them with other, viable categories, or to group non-viable CIs together to possibly create a new viable category. Where appropriate, categories were further refined into sub-categories to capture nuances in participants' experiences and better organize the data.

As part of the data analysis process, the researchers engaged in the credibility checks noted by Butterfield et al. (2009). These credibility checks, highlighted in stylized text below, are important to provide an audit trail of the data analysis process, and the trustworthiness of the interpretations made. Specifically:

1. *All interview were recorded* to keep a record of the exact data that was analysed.

2. Interviewers were trained in the *interview protocol and followed it as closely* as possible, noting any potential noteworthy deviations.

3. The research team engaged in *independent extraction* (i.e., review pairs) of the CIs from the interviews.

4. The research pairs continued to review uncoded data until no new categories emerged (i.e., *exhaustiveness*), and subsequent interview CIs all fit under the initial categories.

5. *Participation rates* for the CIs and categories were calculated and noted (see below table) for transparency.

6. The CIs and categories were reviewed by an *independent judge* to check for it.

7. The CIs and categories were also reviewed by an additional independent, content *expert for their opinion* on the fit of the categories.

8. *Theoretical agreement* included two steps: a) denoting some of the key assumptions that the research team had when engaging in the data analysis (see research positionality statements); and, b) linking the CIs, categories and the write-up of the findings to the career development, international student, and human capital literature (i.e., noting key studies and situating the findings within them).

9. As the researchers used an abridged version ECIT that did not include follow up interviews with participants, the researchers also did not engage in *participant checks* of the CIs and categories, as this was not relevant to the current study. As such, the findings represent the interpretations of the researchers, based on the accounts of the participants.

Lastly, operational definitions for categories and their corresponding participation rates were compiled and categories were sent to the review team for confirmation. The categories are further described in the following section.

Findings

From the interviews, the researchers identified four main categories that captured international students' perceptions of the Canadian work context, including: (1) policies and procedures, (2) economy and competition, (3) culture, (4) language, and (5) life circumstance. The 18 participants described a total of 73 critical incidents, which the researchers derived using the ECIT protocol. Twelve of the incidents (16.4%) were described as helpful, 46 incidents (63%) were described as unhelpful, and 15 (20.5%) incidents were expressed as wish-list items. The critical incidents that met Butterfield and colleague's (2009) recommended minimum participation rate of 25% are demarcated below (see Table 1).

Policies and Procedures

Participants spoke of government, university, or organizational policies and procedures that affected the job search process in Canada. Of the 20 incidents in this category, about half were described as hindering, and the remaining were described as wish-list. Only one incident was endorsed as helping. This was the only category that met criteria to be included as both hindering and wish list CIs.

Regarding difficulties, participants spoke about policies and procedures impacting their attainment of work permits and permanent residencies. These were often described as a long and arduous process. According to Participant 16, this process impacted their own and others' ability to apply for work:

> [In] the beginning, [when] I came here, [with] the study permit [I was] holding I cannot work. Not even part-time...last summer I may have been getting a job with the co-op program, but unfortunately the [work] permit ha[s]n't come to my hands yet...I know some of my friends, they're graduating, and they couldn't get the working permit in time so they missed the job opportunity as well…once you wait, you like miss the perfect time to apply for a job.

The slow processing of work permits interfered with students' job search and caused many to miss employment opportunities. Other students commented that such policies and procedures interfered with their ability to obtain adequate funding while completing their studies, with some policies enforcing a limit to students' work hours, and others restricting the types of internships, job applications, and scholarship opportunities available to international students. This is illustrated in a quote provided by Participant 6:

> There's no full-time co-op or internship for graduate students and we could only work 20 hours a week… And I think, that's so unfair. Like I can't be [a] TA and I have [a] limited number of applications for internship. And that ma[de] me quite upset this morning...Yeah but after apply[ing], my cousin told me that [Master of Engineering]. student[s] don't have fundings, or they can't apply for the scholarships.

Participants also shared that they were unable to apply for jobs that required candidates to be a Canadian citizen or Permanent Resident, further reducing their pool of job prospects. These restrictions not only have the effect of reducing international students' ability to support themselves, but also decreases the opportunities to obtain relevant work experience, deterring potential international students from coming to Canada. According to Participant 10: "[I have] a lot of friends…who really would like to study here. They are pretty good academic[ally] and professional[ly]…[but] they don't have enough money…". Consequently, the participant noted financial barriers for studying in Canada.

The wish-list items that participants described corresponded with the difficulties experienced by international students. Such items included increased internship opportunities for international students, and additional assistance when applying for permanent residency or work permits. For example, Participant 4 suggested increasing the length of the

Table 1

Numbers of Incidents and Participant Rates per Category and Incident Type

	Critical Incident								
	Helping (*n* = 12)			Hindering (*n* = 46)			Wish-list (*n* = 15)		
Category	IN (*n*)	PA (*n*)	PA (%)	IN (*n*)	PA (*n*)	PA (%)	IN (*n*)	PA (*n*)	PA (%)
Policies & procedures	1	1	5.6	9	8	**44**	10	6	**33.3**
Economy & competition	0	0	0	8	6	**33.3**	0	0	0
Cultural challenges	3	2	11.11	14	10	**55.6**	3	3	16.7
Language skills	6	6	**33.3**	8	5	**27.8**	2	2	11.1
Life Circumstance	2	1	5.6	7	5	**27.8**	0	0	0

Note. Numbers in boldface type indicate categories with participation rates of 25% or greater.
PA = Participants (*N* = 18); IN = Incidents (*N* = 73)

post-graduate work permit and providing international students with an easier method to apply for permanent residency, given that they have lived in Canada for several years. Participant 16 requested that students be notified in advance regarding the time required to process permits, allowing students to plan and prepare accordingly. Lastly, Participant 7 explained the benefit of providing these opportunities to international students:

> …[W]e as international students come here to Canada, leaving behind our country, our family, I mean, well, the main reason is because we do want to get ahead. But we also, at the end of the day, we are going to work for th[is] country... because we are eager and we are willing to also help other people…I think that as long as the country, in this case Canada, opens more opportunities for international students—maybe we could help to make the country better.

As noted by Participant 7, international students are often prepared to work hard and motivated to succeed. Investing in such individuals would likely benefit Canadian society, through increasing the pool of skilled labour, particularly as economic conditions improve. Previous research highlights that international students report feeling deterred from working in Canada post-graduation due to confusing and inconsistent government policy (Nunes & Arthur, 2013); moreover, some employers have identified a reluctance in hiring international students due to confusing and unclear work permit policy and permit restrictions (Bond et al., 2007). International students are concerned about their work rights to gain local employment experience, and they would like increased access to the Canadian labour market.

Economy and Competition

The category of economy and competition reflected the state of the economy, its impact on job prospects, and the increased competition for work. Participants described all critical incidents in this category as hindering in the job application process. Many participants shared that they had heard from other students and their professors about the economic downturn in other provinces, leading to reduced job prospects for not only international students, but also domestic students, as illustrated by Participant 15:

> ...[T]he economy's not really good right now...because I think it's generally hard for people to get a job. Yeah. Because I know lots of Canadian people, like

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> local people, they spend lots of time to search a job but they cannot...So well if this happens, then it must be hard for international students as well.

Participant 17 shared similar sentiments, leading to concerns that they would be competing with more Canadian students for employment opportunities, thereby decreasing their chances of securing employment, and increasing pressure to enhance their applications:

> I think it's too competitive. So like I know my friends are exaggerating, but they say, like [employers] have thousands of resume[s] and then like employers just pick two or ten of them. So some, it's really possible that people just even don't see your resume...if I competitive with some Canadian student, I will have to give all the employers a reason, like strong reason, why they want me, not others.

The combination of an economic downturn, low job prospects, and competition resulted in changes to international students' attitudes that they may not have experienced back home. Participant 11 illustrated this point when they described differences in the market between their home country and Canada. They also emphasized a lack of job training in Canada, as well as the need to be more alert and hard-working in order to keep up with changing economic conditions between countries:

> Okay the market [back home] is very good right now. So yeah, we weren't very worried about if we'll get a job or not and everything. So over here the market is down right now...So I think most of the [international students] are more alert than they usually are...they weren't expecting that they'll be working so hard, right in the beginning…And what I've seen over here and what I observed back in 2009 also, here, if you want to do something, you have to go ahead and do it. And back home it's like, you are made to do it because...they want everybody to excel. So they are, like continuously training us.

Finally, participants also described feelings of fear and a sense of hopelessness regarding securing employment in Canada. Participant 6 shared: "I talk about job things with my classmates, but their advice is that the situation is quite not that good...And [I] don't think there's any hope to find a job in such a bad situation". Thus, the bleak view of the economy and limited opportunities led to a sentiment not only shared amongst participants, but also amongst their peers and community members. The challenges in finding employment have significant implications for international students wishing to stay in Canada post-graduation. Choi et al. (2021) found that 60% of international students who became permanent residents after study were employed during or shortly after graduation, suggesting that higher employment is linked to an increase in transition to permanent residency. The economic context can shift dramatically between the time of enrolling in university and graduation. These findings suggest a coordinated effort is required between post-secondary institutions, employers, and community agencies to offer alternative ways of gaining practical experience and entry into the employment market, especially during turbulent economic times.

Cultural Challenges

The category of cultural challenges encapsulates incidences and items that reflected participants' awareness and experience of Canadian culture within educational, workplace, and community settings. This category is comprised of 20 CIs, with 14 hindering, three helping and three wish-list items. The helping and wish-list items did not meet the 25% participation rate.

Among the hindering incidents, participants expressed concerns about being subjected to employers' biases, which may interfere with job prospects. Participant 6 expressed the following concerns with gender discrimination:

> And just for girls, there's

> glass ceiling in the industry...I guess if I really go to the industry like related to engineering, I will be surrounded by men...maybe they will look down at me. Yeah that's my worries...I mean maybe my employer would underestimate my ability. Yeah. I mean sometimes guys in the office will talk together and if others just [keep saying] girls come do this, girls come do that…[this] may affect my employer, or my colleagues' mind.

Concerns with biases related to a reduction in the quality of participants' work experience, generating fears of unfair treatment from employers. Participants also described worrying about employers' preferences for hiring Canadian students over international students, further decreasing their opportunities for employment. For Participant 14, personal experience with discrimination and racism while being employed at the university had significant consequences for their mental and emotional well-being, and changed their perception of the university:

> And that actually put me through a depression… university has the highest level of education in the world…they should ensure security to people, to students, and should be a global place…I'm paying tuition to study in this university. I should not be facing racism. I paid for this. This is not free to me… so I am very multi-cultural by traits and also by my looks...I didn't expect that at the University level, and which affected my career a lot.

Participants also described cultural differences and misunderstandings as impacting the international student living experience, further exacerbating concerns about the job search. This is illustrated in a quote from Participant 6:

> Because we were born in two different cultures… something you take for granted may seem strange to me… And we have different…way[s] of thinking. And that may cause some difference of our behaviour. And maybe that difference of behaviour will affect the attitude of my employers toward me. And maybe that will make me look strange in this environment. And especially if I go to an interview, if they ask me some questions I may think in a totally different way. And that comes out a different answer. And that may seem strange to you, and that may affect my ability, my opportunity to get a job.

International students' unfamiliarity with Canadian culture and mannerisms caused concerns related to their interactions with employers and ability to network. These concerns were compounded by students' unfamiliarity with the way Canadian institutional systems were structured, causing challenges in navigating educational and workplace settings. Illustrated by participant 13, they described a distinct difference in the way careers were structured in Canada and their home country, creating confusion regarding what to expect after graduation:

> So you know, when I am here, I don't know how, how the system is going to work when I graduate. But I think it is going to be very difficult—different—from the place I was working before. Because here you have to specialize in a thing, otherwise—because in, in back in our countries, you know, you get a general degree in a thing and you can just do different stuff. But here you have to specialize, you know, Bachelors, Masters, PhD, and even in that you have to like specialize in a particular thing. Yeah so I think that's very different.

International students' unfamiliarity with Canadian culture also lead to homesickness, which impeded some of the participants' academic progress and led them to reconsider whether they should remain in Canada. The foreignness of Canadian culture can cause anxieties and stresses that affect both the personal lives and

career-related experiences of international students. The quality of their interpersonal interactions is key for helping international students to gain a sense of belonging in the new cultural context and to manage perceived acculturation stressors (Walsworth et al., 2022). The degree to which international students are able to make new contacts and build their cultural and social capital is important for helping them pursue their career goals (Arthur, 2017; Nguyen & Hartz, 2020). Unfortunately, lack of understanding about cultural expectations, and negative experiences related interpersonal interactions, may pose as barriers that that deter students from remaining in Canada (Arthur & Flynn, 2011; Bond et al., 2007). Research in the UK also found that international students expressed plans to leave the country when they believed that employers were not interested in hiring international students or they expected significant language barriers for employment (Nilsson & Ripmeester, 2016).

Language Skills

In total there were 16 CIs relating to Language skills, six were helping, eight were hindering, and two were wish-list items. About a third of participants described the incidents in this category to be beneficial, most of which referred to the importance of practicing English through conversations with others or via attendance at workshops. Improved language skills enabled them to participate in their communities, to socialize with peers, and to network with professionals. Several participants spoke about the importance of practicing English across a variety of contexts to develop responsive and appropriate communication skills in Canada. Good communication skills were essential for navigating both personal and professional domains, as illustrated by Participant 1:

> [Y]ou need to go for example to a grocery store to buy things, and you need to communicate with people, you need to ask many things...[I]f you want to find, for example, a place to live...If you want to rent a basement apartment [you need to communicate]. [If] [y]ou want to find something good or have some good advice, you need to explain what do you want, what do you need. And also in the, here at the university, because when you start studying you need to, yeah, communicate with partners, all the professors, the people from the department.

In contrast, participants described a lack of English fluency as impeding their sense of preparedness for work, as it caused feelings of isolation from peers, anxiety in job interviews, and concerns of misunderstandings when communicating with others. Many participants recognized the importance of language ability in attaining jobs or academic positions, as well as in completing their academic requirements (e.g., writing reports). According to Participant 6:

> Last month there [was] a Career Fair at this university…and I asked about…recruiting students at the [company]. And she told me that they prefer students with better communication skills. And I ask[ed] them, do you have any specification, requirements, about their academic background? And she said, that's not that important because they would offer you training…the important thing is that you could communicate well.

Thus, communication was not only perceived to be important by international students, but also by potential employers.

Participant 3 also shared a similar experience when applying for a position with a professor:

> I talk with a professor here. And she told me, yes, okay, I like you, your profile, you have some experience. Okay, but when she asked me for my English, at that time I…[hadn't] got the score requirement to the department. And she [had] to hire other students…I missed that opportunity because I couldn't [get] the score…

In this case, the lack of English proficiency outweighed the other positive aspects of the student's application. Other participants described spending time with peers who spoke their native language as being an obstacle to learning English, suggesting that international students may need formal and informal learning opportunities to improve their English language ability given its critical role for securing employment. Research on international students has primarily focused on English language ability for students in their initial transition and ongoing academic experience (Khanal & Gaulee, 2019). These findings suggest that language skills are critical while studying, and through to the transition into the workforce as well.

Life Circumstances

This category was comprised of critical incidents about activities and events that affected the life balance of international students. With examples from 26% of participants represented, there were nine CIs in this category with only the seven hindering incidents reaching the threshold participation rate. Critical incidents in this category captured participants' descriptions of life in Canada and the interaction between planning for academia and planning for the workforce simultaneously. Overwhelmingly, international students discussed a multitude of issues they perceived as limiting preparation for their careers.

More than any other factor, participants deemed time to be a critical barrier in preventing international students from preparing for their careers. Many participants cited a need to excel in their academics, and that a strict focus on schoolwork meant they often sacrificed career focus. The following quote from Participant 2 exemplifies this struggle:

> The education itself is getting a little hectic and then you're very short on time…like, all the time, you're just concerned about that. There's very little time to think about what you want to do in the future, or else you lose what's now.

With limited time to commit to anything beyond the immediate demands of their academic requirements, international students reported feeling unable to begin the process of planning for life after school. This forced a focus on the present that made it difficult to engage in any form of employment preparation, leaving international students unsure of and feeling underprepared for the future. Previous research with student services professionals on supporting international students in their transition to work echoes the importance of finding time to complete academic work, while also gaining experiences, such as volunteering, to support a future job application (Woodend, 2018).

Discussion

Countries, such as Canada, who recruit large numbers of international students as part of intersecting education and immigration policies, have a lot to gain from ensuring that students have a positive educational experience, including transitioning into short and long-term employment opportunities (Esses et al., 2018). International students in this study described experiences of seeking employment in the Canadian context as a challenging process. Key barriers identified by participants included the poor prospects of the economy at the time of the study, fears of bias in the workplace, challenges navigating cultural and linguistic differences, and the limitations of work permits and subsequent earning potential. These barriers have significant implications for building the potential human capital of international students and for supporting them in gaining important employability credentials.

In contrast to the unhelpful experiences, participants described helpful and wish list experiences primarily in the context of how language proficiency could aid in their integration and achievement of future job prospects, as well as improved current resources and policies. The following paragraphs will contextualize these findings in the relation to existing literature and make recommendations for key stakeholders, including post-secondary institutions, employers, career practitioners, and government policy makers.

International students in the current study described the challenges of obtaining work permits and permanent resident status through highlighting factors that blocked or interfered with their ability to enter the Canadian workforce. In particular, students identified how current government policy regarding work permits interfered with their job search process and resulted in missed employment opportunities. Efforts to recruit international students to study in Canada requires reform of policies and procedures regarding visa requirements (Dam, 2018). Such barriers spill over to employers as major stakeholders, through reluctance to hire international students due to unclear work permit policy and permit restrictions (Bond et al., 2007).

These results correspond to research conducted in the top two countries that compete with Canada for international students. For example, employers in one study in the United States indicated that the lack of knowledge of work authorization was a primary barrier to hiring international students (Balin et al., 2016). In the Australian context, international students have reported that employers expressed concern about their visa status, lack of local work experience, and reported difficulties securing job interviews as a result (Coffey et al., 2018). The findings of the current study indicate that these employment policies and visa conditions could be further streamlined, and clarified, to ease international students' access to relevant work experience while studying; in turn, providing greater opportunity for them to remain post-graduation. Specialist advisors in international student services and career services offices are key personnel for providing up-to-date information regarding work permit procedures and addressing misinformation regarding permit requirements and restrictions.

Participants also described the negative impact of fluctuating economic conditions. This proved to be especially challenging when a downturn occurred when students were beginning their journey to secure employment. Previous research has found that positive perceptions about a better quality of life in Canada, combined with unmet expectations of better job prospects and a lack of work experience, contributed to difficulties in the job search process (Nunes & Arthur, 2013).

Improving career prospects is a main motivator for international students choosing to study abroad, with one study indicating 69% of participants identified it as a key factor (Nilsson & Ripmeester, 2016). Many international students in the current study identified opportunities for work placement or practical experience as important or very important when selecting a post-secondary institution. A potential solution worth considering includes employers and community agencies, in partnership with the university, creating and promoting volunteer experience. These positions may help international students to gain practical skills and experience necessary for a smooth transition into paid employment. The result of the current study also supported previous findings indicating international students require support to develop their professional networks, a significant contributing factor in successfully finding employment (Bond et al., 2007). Personnel in post-secondary institutions are key resources for connecting international students with personnel from industry (Arthur, 2017).

A positive finding worth highlighting as a best practice identified by international students included practicing English through workshops, and social events to build relationships, professional networks, and boost confidence. Social supports are a considerable influence on international students' transition experiences, with students identifying the significant positive impact of peers and mentors (Arthur, 2017). Moreover, students have indicated that building strong friendships influenced their decision to stay in Canada post-graduation, and that career decision-making did not just take place on an individual level, but a group one, with valued input from social relationships (Popadiuk & Arthur, 2014). These previous findings, in conjunction with the current study, highlight the importance of social supports for international students' school-to-work transition and presents an opportunity for universities to bring students together, both international and domestic, in a more casual social setting (e.g., campus-based networking, peer-to-peer mentorship programs).

Navigating the local culture was also associated with a number of identified barriers as part of the current study, most notably concerns regarding bias from potential employers, fear of being treated unfairly, unfamiliarity with Canadian culture, and reservations regarding remaining in Canada. Concerns about the perceptions of some employers seem warranted, given the results from previous research that has highlighted employers' reluctance about hiring international students (Bond et al., 2007). However, it is encouraging to note that concerns about work permit authorization may be the key for employers who raised fewer concerns concerns about international students' cultural differences, citing professionalism and career focus as key strengths (Balin et al., 2016).

Overall, participants in the current study described predominantly four times more hindering than helping experiences in regards to seeking employment while in study. This suggests that there are still opportunities for key stakeholders (i.e., employers, post-secondary personnel, faculty members and advisors, career practitioners, international students, and policy-makers) to connect and collaborate, with the common goal of supporting international students to gain valuable work experience and enhance their human capital potential.

Limitations and Future Directions

This study provides insights into the journey of international students preparing to enter the labour market and gain work experience while studying. There were two main limitations to this study. First, there were fewer helping CIs than there were hindering and wish list items. This is a limitation in that although participants' responses helped to elucidate problematic areas of their experience with the Canadian workforce, they do not provide as much understanding about solutions to these problems. Additional helping CIs would provide some indication of what international students, universities, governments, and employers can do to help with integration into the workforce. Although wish list items are a helpful starting point for creating future policy and programs to support international students, this study does not evaluate the efficacy of these items to determine if, when enacted, they are indeed helpful experiences.

A second and related limitation pertains to the timing of this study. Global market instability was a major factor for the Canadian economy and the province where the researchers conducted the study. It is possible that this economic insecurity created additional structural barriers to international students' perceptions of the Canadian workplace and thus resulted in a larger number of hindering CIs. Moving forward, future research could investigate international students' experiences during periods of economic improvement, to gain additional knowledge about what is helpful for entering the workforce.

Additional future directions include research that captures employer, university, and policy-maker perspectives, which would inform key influences and the interplay between various stakeholders. Future research could also build upon the perspectives of international students as they transition from being students into workers, and their longer-term trajectories as employees. This understanding will become more important as universities and governments alike seek to increase recruitment of international students as a valuable resource within higher education and within the Canadian workforce, respectively.

Concluding Comments

Although there are critical barriers to employment, it is important not to adopt a deficits-based perspective regarding international students' abilities (Jones, 2017). Despite barriers, approximately one in four international students are able to stay in the destination country long-term, indicative of their numerous skills and strengths (Berquist et al., 2019). One controversy that surfaces is the extent to which building human capital by emphasizing the preparation of international students can overcome persistent structural and social barriers to employment (Nguyen & Hartz, 2020). With few studies

exploring the in-study employment experiences of international students (Khanal & Gaulee, 2019), the current study provided critical insights into international students' early attempts to connect with the employment market.

Five key influences on efforts of international students to gain employment were highlighted in the results of this study: 1) the policies and procedures that facilitate or impede international students' search for employment, 2) the economy and competition into which they are transitioning, 3) their ability to navigate and negotiate cultural differences, 4) their actual and perceived English language ability, and, 5) the ways in which they manage their life circumstances. Findings suggest that governments need to engage in continuous improvements for equitable access to work permits so as not to impede international students' motivation to secure employment. In turn, university curriculum and integrated learning experiences could help bridge the gap between international students' theoretical knowledge and practical experience. For employers, the current findings suggest addressing biased practices and creating policies that welcome diversity. Finally, career practitioners require up-to-date information regarding the labour market and immigration/work permit parameters in order to help guide international students and employers through the workforce transition process. Without these understandings, international students may face barriers that impede them from gaining critical employment experience that is essential for their career development and for pursuing opportunities in the Canadian labour market.

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Book Review of "Outcome- Based Experiential Learning"

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Abstract

This review examines Carolyn Hoessler and Lorraine Godden's Outcome-Based Experiential Learning: Lets Talk About, Design For, and Inform Teaching, Learning, and Career Development. Their work is a practical guide for post-secondary experiential learning and work-integrated learning academics, professionals, and practitioners to design or improve programs using outcome-based learning. Hoessler & Godden's OBEL framework they propose for programs is also used to structure the book, a task which it mostly succeeds at. The review evaluates the authors' effectiveness in proposing the framework and process for developing an outcome-based experiential learning program.

Outcome-Based Experiential Learning: Lets Talk About, Design For, and Inform Teaching, Learning, and Career Development. Higher Education & Beyond. Hoessler, Carolyn & Godden, Lorraine (2021).

Being able to explain and replicate success as well as being able to improve upon it is at the heart of program evaluation and assessment cycles in post-secondary. A key aspect of this is ensuring that outcomes for programs are specific, measurable, and explainable. Often programs in post-secondary are run based on what has always been done, or based on governmental recommendations and requirements, this can lead to a lack of focus in the programs or ambiguity in knowing when the program has succeeded. When it comes to programs such as experiential learning and work-integrated learning that governments in Canada have been promoting as a way to improve students' skills development (Kalvapalle, 2019) it's important for post-secondary to be explicit about the purpose, goals, and outcomes, so that they do not become words-lacking-context applied to programs that don't have proper theoretical backing or support. Carolyn Hoessler and Lorraine Godden have put forward *Outcome-Based Experiential Learning: Let's Talk About, Design For, and Inform Teaching, Learning, and Career Development* into this context as a way for post-secondary institutions to improve experiential learning (EL) and work-integrated learning (WIL) by making it explicitly outcomes-based without losing the more holistic, intangible, or relational outcomes that are proven to improve their impact.

Carolyn Hoessler is a Learning and Faculty Development Coordinator at Thompson Rivers University and is an expert at curriculum development and researches the scholarship of teaching and learning. Lorraine Godden is a career development instructor at Carleton University and researches the intersection of career development and policy in both Canada and the UK. Their areas of expertise come together to produce this work.

Outcome-Based Experiential Learning is a short read, at fewer than 60 pages plus another 15 pages of templates, that gives a surprisingly in-depth overview of the concerns and methods for developing or improving a WIL or EL program in post-secondary education. Aimed at Canadian post-secondary professionals and academics involved in the design and implementation of WIL and EL programs it provides a framework that can be used by most institutions.

Broken into a simple four-part pathway and providing five "design factors" (Hoessler & Godden, 2021, p. 1) the framework provides a roadmap for practice that is scalable and robust. The book is laid out for the practitioner with the core questions of why, who, what, and how answered

early, followed by walking the reader through the framework in the same order a new program development process would follow, and the book is concluded with the research informing the design and development of the framework. Each section also provides helpful suggestions for how the same model can be used with remote work based on experiences during the pandemic. They refer to the use of the framework as a "scaffolded process" (p. 1) where three things need to be considered at all times, the stakeholders, the intended outcomes, and the context of the program.

The most striking thing about this book is how practical it is. Perhaps understanding that those who design and implement EL and WIL programs span a broad spectrum of post-secondary staff and faculty it takes little for granted and is very clear in its definitions. They are clear that WIL is a subset of EL that occurs "within the social context of an employment environment" (p.6) and also "includes escalating responsibility" (p. 6). It also embraces modern research on WIL by using as its definition of "career readiness" (p. 27) the gaining of broad skills and competencies including career development skills and embraces the use of EL and WIL to develop "transformational learning" (p. 35) opportunities.

The stakeholders chapter is clear, concise, and makes a strong case for who to involve and to what extent. It provides a good way of explaining stakeholders by categorizing them as direct, indirect, or system stakeholders and does a good job of explaining the difference between the influences on various people involved in the EL or WIL experience. By using stakeholder identification as the starting point, the book attempts to move readers from thinking of from how EL and WIL have always been done at their institution and toward more specific goals that the specific stakeholders are looking for.

Instead of recommending a DACUM style competency analysis the book recommends that each program works with the stakeholders to determine the key outcomes and provides a menu of 55 potential outcomes to start from that were validated with many career development stakeholders across Canada. For technical competencies it recommends referring to "specific field/discipline competency checklists" (p54). This list of outcomes is broken into sixteen categories among three groupings: "learner development" (p. 16) outcomes, "relational outcomes" (p. 16), and "tangible outcomes" (p.16). The including of seven relational outcomes is helpful for the future directions in WIL and EL theory (Drewery & Pretti, 2021; Kennedy et al. 2020). By working with stakeholders to determine the outcomes a WIL or EL program is able to improve their planning and assessment cycle in a way that better supports students and their future plans. The book also provides a template for creating a card-sort for developing outcomes.

There is a helpful section on transferable skills aligning various skills and competency frameworks. Unfortunately, the book was published just before some major revisions to the skills frameworks being used, with NACE putting forward their revised framework and OECD moving to the next phase of their Social and Emotional Skills project in 2021 as well as the new Canadian Skills for Success replacing the prior Essential Skills Framework with one that better includes transferable skills. It is my hope that the next edition will be able to take advantage of these new publications.

The brief section on Aligned Design seems tacked on and doesn't seem as integrated into the rest of the book as some of the other topics. It also feels oddly out of place in the order as it breaks from the process of following the method of a practitioner moving through the organizing framework. It would be better as part of the orienting sections of the book rather than being a stand-alone section in the middle of the framework.

This section helps connect the theories that support WIL with the design of the WIL experience and with the potentially linked outcomes. It's an important part of the book that makes it very appropriate for use as a guide for those new to WIL, EL, or Outcomes Based learning, as it ensures an appropriate scaffolding for any readers regardless of how they came to EL and WIL. Based on core theorists from Vygotsky to Kolb to Lave & Wagner to Mezirow and Kegan this chapter serves as both an introduction to key concepts in EL and WIL and also as a practical

guide in developing and improving programs.

Although assessment and evaluation are separate parts of the model, they are dealt with together in the same chapter. The book divides them based on assessment being the measurement of outcomes and feedback for learners while evaluation is the measurement of outcomes and feedback regarding the program or process. It goes on to provide a brief overview of good assessment and evaluation and how to design them for an outcomes-based program including how to assess different types of outcomes.

The book's concluding chapter provides a literature review and method from the research that underpinned the model. It provides a brief overview of the theoretical backing of the work, showing that it is firmly grounded in Experiential Learning theory within the Constructivist paradigm. The method section helps answer any questions that may be lingering regarding how the model and its suggested outcomes were developed and tested.

This book provides a strong and succinct guide for the development and improvement of experiential learning and work-integrated learning programs. It is written in a way that academics, professionals, and practitioners of all types can understand and utilize. The navigation through the book could be improved by relying more on the layout of the framework itself as a navigation tool as well as moving required understandings such as aligned design earlier in the book. Future editions will also likely take advantage of the recent research and publications on transferable or social and emotional skills. This book would be beneficial to all those overseeing, designing, or implementing experiential learning or work-integrated learning programs.

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The *Canadian Journal of Career Development* is a peer-reviewed publication of multi-sectoral career-related academic research and best practices from Canada and around the world.

This Journal was made possible through the generous contributions of The Counselling Foundation of Canada, CERIC, Memorial University of Newfoundland, and support by the Social Sciences and Humanities Research Council of Canada

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Cette revue est rendue possible grâce aux généreuses contributions de The Counselling Foundation of Canada, du CERIC, l'Université Mémorial de Terre-Neuve, et financée par le Conseil de recherches en sciences humaines du Canada.

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