GRADUATE STUDENT PERCEPTIONS OF THE EFFECTIVENESS OF INDIVIDUAL DEVELOPMENT PLANS

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Abstract

Individual development plans (IDPs) are increasingly being used in higher education to provide personalized guidance to students that can foster a more purposeful and productive education experience. In this study, we document the graduate student's perspective on the effectiveness of the IDP based on responses from students in course- and thesis-based masters and doctoral programs in science and social science. Informational interviews and mentor meetings were seen as the most useful components of the IDP. Students also felt that the IDP had helped them with many career development activities, but they also highlighted several challenges. Findings from a content and thematic analysis provide insight for those interested in implementing the IDP at their own institution.
Keywords: individual development plans (IDP), professional development, skills training, graduate students, informational interview

Résumé

Les plans de développement individuel (PDI) sont de plus en plus utilisés dans l'enseignement supérieur pour fournir aux étudiants des conseils personnalisés susceptibles de favoriser une expérience éducative plus utile et plus productive. Dans cette étude, nous documentons le point de vue des étudiants diplômés sur l'efficacité des PDI, en nous basant sur des réponses venant d'étudiants de programmes de maîtrise (professionnelle ou recherche) et de doctorat en sciences et sciences sociales. Les entrevues d'information et les rencontres avec les mentors étaient considérées comme les éléments les plus utiles des PDI. Les étudiants ont également estimé que les PDI les avaient aidés dans de nombreuses activités de développement de carrière, mais ils ont aussi souligné plusieurs défis. Les résultats fondés sur des analyses de contenu et thématiques fournissent un aperçu à ceux qui souhaitent mettre en œuvre des PDI dans leur propre établissement.
Mots-clés : Plans de développement individuel, développement professionnel, acquisition de nouvelles connaissances, étudiants aux cycles supérieurs, entrevue d'information

INTRODUCTION

An individual development plan (IDP) is designed to help a person align their activities with their short- and long-term goals for personal growth and professional development. It has also been called a portfolio, learning plan, or professional development plan (PDP), depending on the context in which it is used (e.g., Beausaert et al., 2011a; McCormack et al., 2006). The IDP has commonly been used in professional settings where it helps employees identify and engage in professional development training that can serve both the person and the organization they work

for (e.g., Beausaert et al., 2011a, 2011b). In this professional environment, the plan provides an overview of competencies the employee has and will be working on, facilitates conversation between an employee and their supervisor about their performance, and can ultimately be used to design a training plan and/or for more formal performance evaluation and promotion.

The IDP is increasingly recommended in higher education to support student success, assist graduate and postdoctoral students with meeting their personal, professional, and/or academic goals, and prepare them for increasingly diverse career paths (Gough & Denicolo, 2007; Fuhrmann et al., 2011; Hobin et al., 2014; Marcus, 2016). Based on a survey of US and Canadian institutions targeting thesis-based graduate degree programs, the American Council of Graduate Schools reported that 45% to 48% of respondents are encouraged to complete an IDP and/or meet with their advisors annually to discuss their IDP (Denecke et al., 2017). Several professional academic or funding organizations have provided IDPs to their sector (e.g., MyIDP and ImaginePhD). In Canada, some universities have made it mandatory for all graduate students and postdoctoral fellows university-wide (e.g., University of Alberta), whereas others have made it widely available, being mandatory in only a few academic programs or units or for only a subset of postgraduate students (e.g., only PhD students or postdocs).

Others still are considering adopting the IDP as universities are increasingly expected to prepare students for postgraduate opportunities beyond academic postings (Rose, 2012) and IDPs are seen to be one way to guide students to develop professionally while attending to their research and other academic responsibilities (Hobin et al., 2012). In the Australian context, IDPs were used to provide structured and personalized learning plans for doctoral students whose projects and academic background were so varied (Ayers et al., 2018). Studies also suggest that ultimately, deliberate planning, goal-setting, and reflection—activities that are key components of IDP—can lead to greater career success, job satisfaction, and improved performance (e.g., Beausaert et al., 2011b; Harkin et al., 2016; Hobin et al., 2012; Moeller et al.,

2012; Morisano et al., 2010). However, studies demonstrating the IDP's efficacy in providing those supports that will ensure the professional development of transferable skills are limited.

This research aims to identify students' perceptions of the effectiveness of the IDP based on data collected over a two-year period. The article focuses on describing what the experience of learning is for the student consistent with Hutchings's (2000) "what is" approach in the scholarship of teaching and learning. This approach was undertaken to understand the student's experience with the IDP since, ultimately, this is a student-centred activity that needs to serve their needs. This approach was also deemed important because the perception of the IDP by the end user is a key determinant of its efficacy (e.g., Ayers et al., 2018). Our initial content analysis of the quantitative and qualitative data reveals the experiences of the students and their perceptions of the IDP. The second thematic analysis goes beyond the "what is" and examines some of the key factors that shape the students' experiences. This study will be of interest to university administrators and faculty who are considering using an IDP with their students to gauge their usefulness from the student's perspective and to identify elements that are key to its successful implementation.

BACKGROUND

In the higher education context, an IDP can take various forms depending on the goals of the plan. Some are designed as a learning plan, with a focus on goal-setting and academic and professional skills development that will primarily guide coursework and thesis/research (e.g., McCormack et al., 2006; Ayers et al., 2018), or development of specific personal attributes such as self-awareness and leadership (e.g., Rubens et al., 2018). Others are developed as a career exploration and planning tool to help students focus on what activities are needed to meet their career aspirations; while others still are even more formalized and comprehensive through specific academic and professional skills training activities from year to year to meet both in-program and postgraduate aspirations (e.g., Western's

PhD Own Your Future program). They can also vary in terms of structure, ranging from simple and open-ended five-question prompts to more structured stepwise models (UCSF Office of Career and Professional Development, 2020). A plan that takes a whole-person approach, which considers personal, academic, and professional goals, was thought to be most useful when providing career counselling for graduate students considering they tend to have more responsibilities outside of school compared to undergraduates and are starting to consider their career possibilities more concretely (Luzzo, 2000).

Benefits, Efficacy, and Perceptions of the IDP

There are various benefits to using an IDP in a higher education context. The IDP is thought to increase research productivity while students or postdoctoral fellows are in their program (Davis, 2009; Fuhrmann et al., 2011). Specifically, postdoctoral fellows that have developed a plan in collaboration with their faculty advisors were more likely to submit papers to peer-reviewed journals, publish first author papers, and submit grant proposals (Davis, 2009). An IDP fostered strong relationships between postdoctoral fellows/graduate students and faculty advisor (Davis, 2009; Hobin et al., 2014; McCormack et al., 2006), a key component of research and academic success (Scaffidi & Berman, 2011; Sverdlik et al., 2018). Those who completed IDPs were also less likely to report that their advisor did not meet their initial expectations (Davis, 2009). In another study, the IDP was part of a program designed to increase diversity and persistence of under-represented students in biomedical research careers (Byars-Winston et al., 2011). Findings showed that the IDP was the second most important component in increasing diversity and persistence of these students behind meeting with career coaches and research advisors. Vincent and colleagues (2015) found that the use of IDPs motivated and empowered students and advisors and had a positive impact on overall performance while in graduate school. More recently, researchers have pointed to social and emotional wellness benefits (Hardy et al., 2021; MacEachern & Thauvette, 2022).

The efficacy of the IDP in promoting professional development is thought to depend on several factors. First, mentoring and feedback through conversations with one's supervisor or mentor is viewed as an essential part of the IDP (Mittendorf et al., 2008; Beausaert et al., 2011a; Eason et al., 2020). Second, the format of the IDP is important. This refers to the ease of navigation (e.g., online portal, PDF, or Word document) as well as whether the questions asked are open-ended enough to allow it to remain highly individualized to accommodate the range of background and stage of professional development of the person completing the IDP (Ayers et al., 2018). Third, the support of the supervisor who encourages the IDP process and fosters a culture of ongoing professional development is critical for IDP completion and engagement in career professional development (Beausaert et al., 2011a; Hobin et al., 2014).

The efficacy of the development plan was also affected by the student or employee's perception of the plan as demonstrated in both professional (Beausaert et al., 2011b; Eisele et al., 2013) and educational settings (Ayers et al., 2018; McCormack et al., 2006; Mittendorf et al., 2008). In the workplace context, employees engaged in more learning activities to support their professional development if they felt that the development plan was truly an exercise in personal growth and reflection, rather than a performance evaluation tool to be used by their supervisors (Beausaert et al., 2011b). A similar perception issue arose in vocational schools if teachers used the development plan as part of their assessments of the student's performance (Mittendorf et al., 2008). Hobin and colleagues (2014) reported that IDPs were seen as helpful by both postdocs and mentors in identifying careers, facilitating communication, and assessing one's skills against what was needed for their research and their professional career.

In the higher education setting of Australia where learning plans have been used by doctoral students to guide their achievement of learning outcomes, negative perceptions were associated with the mandatory nature of some development plans (Ayers et al., 2018) and the resulting impression of the development plan as an additional administrative hoop to jump

through. Other negative responses to development plans include feeling unqualified to complete a self-assessment, as well as feeling that the plan took time away from their main purpose of being in graduate school—namely, their thesis research (McCormack et al., 2006). Both studies focused on learning plans in the Australian doctoral context; few studies have otherwise documented the perceptions of graduate students, and particularly for those development plans that include a career exploration component, or ones filled out by master's-level graduate students.

Current Study: IDP Structure and Context

The IDP used in the current study was designed to help graduate students align their academic as well as extra/co-curricular activities while in program with their career goals in mind. Inspired by existing and publicly available IDPs across the Canadian and American post-secondary sector, the resulting IDP is a 30-page Microsoft Word document consisting of six steps: (1) professional and academic skills assessment; (2) career exploration, which involves identifying job postings as well as carrying out an informational interview; (3) goal-setting; (4) meeting with a mentor to discuss their IDP; (5) recording accomplishments; and lastly, (6) skill and achievement translation and updating/creating a résumé, LinkedIn profile, website, or elevator pitch video.

The skills assessment step involved scoring one's ability along a Likert scale, from no training or experience to significant training and experience for five to 10 specific skills under seven different categories, namely, communication; leadership, management and entrepreneurship; career management; personal effectiveness and wellness; research; critical thinking; and digital literacy/communication. The informational interview for the career exploration section involved finding and interviewing someone in a position that they aspire to be in to gain insight into that sector and company and to test out their assumptions about this type of work. The mentor was meant to be a different person with whom they could discuss their IDP; the mentor could be an academic supervisor, a career advisor, or

someone in the academic, public, non-profit, or private sector. Students were encouraged to seek out a senior mentor based on the benefits over a peer or one-step-ahead mentor (Ensher et al., 2001). To record their accomplishments, students were encouraged to think broadly using prompts such as academic, co-curricular, work, or volunteer opportunities and personal and wellness endeavours. Lastly, students were prompted to write accomplishment statements for their final deliverable (e.g., résumé) using an action verb that conveyed what task they achieved, the skills and competencies they used, and what results came from their work.

Students had to complete steps one through six at least once, though some students were required to repeat sections one, three, four, and five several times during their program. All students were encouraged to revisit their IDP midway through their program, as well as when they were nearing the end of their program. Written instructions and links to additional resources (e.g., how to find a mentor, informational interviews, goal-setting, and professional and academic skills training opportunities) were provided throughout the IDP. During the rollout of the IDP, participating classes were introduced to the IDP and were given context as to its purpose and benefits.

The IDP was piloted with an inaugural cohort of 19 students who were all in a course-based master's program. The first cohort IDP involved a goal-setting exercise that described and encouraged students to format their goals using the acronym SMART (Specific, Measurable, Attainable, Realistic, Timely). For this cohort, the students were also provided with mentors by the program advisor. Feedback from the initial cohort suggested the SMART goals format was too simplistic, and the mentors provided were not always a good fit. As a result, students in subsequent cohorts wrote long-term strategic goals and short-term action goals. They were also given supports on how to find their own mentor and were encouraged to find an individual that fit with their future goals. With all students, completing the IDP was embedded in a course that is required for the student's program, with completion of the IDP assigned a pass/fail grade. Approximately half of the students com-

pleted the IDP over two to three semesters with touch points in each semester, whereas others completed the IDP in a single semester.

Another important contextual component is that 46% of respondents felt the COVID-19 pandemic impacted their use of the IDP. Comments focused on how COVID affected their ability to have in-person meetings and how it was more stressful to juggle time, think about the future, and manage multiple demands amidst all the uncertainty. The pandemic also affected the recruitment of students who had completed the IDP in fall 2019 and winter 2020 for the survey and focus groups; these cohorts were recruited via email rather than through in-class visits. In the end, due to low turnout, the focus groups operated like semi-structured interviews, with two participants in each of the two interviews.

METHOD

Sample

The IDP was piloted in a small number of departments at a mid-sized (just over 3,000 graduate students out of 30,000 students in total) English-speaking, research-intensive, and learner-centred university in Ontario. Students had to complete the IDP as part of required courses they were taking. The IDP is known to have been used by 160 students in a range of graduate degree programs (course-based master's, thesis-based master's, and doctorate) and disciplines (environmental sciences, sociology and anthropology, criminology and criminal justice policy, and social practice and transformational change) over the study period. Graduate students who completed the IDP were invited to complete our online survey and participate in focus groups through participating department listservs and classroom visits. The IDP was also available on the university's graduate and postdoctoral professional development online portal, such that students in other programs may have used the IDP and completed the online survey, a link to which is included in the IDP document. In the end, 65 students completed the survey and four participated in semi-structured interviews. Personal demographic data was not collected from the students, but we did collect data about discipline and graduate degree programs (Table 1). Most students are either from the social sciences (23%) or agricultural/environmental sciences programs (74%), and, notably, about half of the students are in course-based master's degree programs (56%).

Table 1

Education Demographics* (N = 57**)

	Frequency	Percentage
Discipline/College		
Biological Science	1	2%
Social and Applied Human Sciences	13	23%
Agricultural and Environmental Sciences	42	74%
Veterinary Studies	1	2%
Degree type		
Doctoral degree	4	7%
Master's degree (course-based)	32	56%
Master's degree (major research paper)	7	12%
Master's degree (thesis)	14	25%

*Frequency totals will not always add up to 100% due to rounding.

** Eight respondents did not reply to the discipline or degree type questions.

Feedback and Exit Surveys

The first cohort in 2018 included students from a one-year course-based master's program. They were provided with time during class to complete the "feedback" survey. In this first cohort, all 19 course-based master's students filled out the survey. The authors created the survey questions to collect feedback on the IDP document and overall process, aiming to enhance the IDP for future cohorts while also evaluating its effectiveness in helping students' professional skill development and career advancement. Students responded to questions about how useful the different IDP components were for improving their professional and career development skills. They were also asked to comment on their biggest challenge when completing the IDP, and about how the IDP process helped them achieve several professional and career development outcomes. Last, the students were asked to comment if they would recommend the use of IDPs in future years and were provided with space to provide written feedback.

In subsequent cohorts, where students from various degree programs completed the surveys, the survey underwent a transformation, shifting from an in-class feedback survey to an online "exit" survey. Additionally, a few minor adjustments were made to the survey in response to changes implemented in the IDP (e.g., goal-setting exercise). The "exit" survey included mostly the same questions as the "feedback" survey; as noted in the results section of this article (specifically, Tables 2–5). The changes captured the shift to differentiating between long- vs. short-term goals as opposed to using SMART goals; giving students the opportunity to pick the top challenge rather than multiple challenges, and providing more options under lack of time to determine what aspects of the IDP they didn't have time for. In the second and subsequent years, students were not provided with time in-class to complete the survey and students were recruited via email. While having slightly different questions between the first and subsequent cohorts is not ideal from a methodological perspective, the changes made to the IDP did improve the IDP and the process

for the students, and allowed us to better understand the nature of the time challenge involved in completing the IDP.

Semi-Structured Interviews

Two semi-structured interviews were conducted, with each interview involving two student participants. During the research design phase, the authors initially chose to utilize focus groups because they facilitate access to "hidden" or "unexpected" insights and emphasize the "interaction between participants," enabling participants to draw upon each other's ideas and share with greater confidence (Liamputtong, 2013, p. 94). However, due to the limited number of participants, the focus groups functioned more like semi-structured interviews. While it would have been ideal to have a larger sample size, the semi-structured interviews still allowed the authors to gather additional qualitative and in-depth information about students' experiences with the IDP. The interview transcripts were used alongside the open-ended survey responses in subsequent analyses.

During the semi-structured interview, participants were asked about the most beneficial components of the IDP and the components they like the least. Further, participants were asked how they would improve the IDP and if they would complete it if the process was not mandatory. The first interview was held in-person on campus. The second interview was held virtually due to the 2020 COVID-19 pandemic. Both interviews were recorded and lasted about one hour. They were transcribed by one of the authors for the qualitative analyses.

Analysis

Data from close-ended survey questions are presented in descriptive tables. The quantitative data from these close-ended questions only included categorical variables such that no statistical analyses were completed. Missing data was reported in each table by providing the number of respondents for each question ($N =$). Alongside the descriptive tables, the data from open-ended survey questions were analysed by

both authors using content analysis (Bengtsson, 2016). There was a total of 141 open-ended responses from the feedback and exit surveys from approximately three to five open-ended questions (e.g., "What aspect of the IDP did you enjoy the least? Please share why."). Separately, both authors coded all 141 qualitative comments into "most enjoyable/least enjoyable" for each component of the IDP (e.g., skills assessment, informational interview, job posting analysis/career exploration, goal-setting, mentor meeting). All open-ended responses could be coded into multiple categories. The authors compared their individual content analysis results, and when differences arose the authors had an open discussion about differences in coding. To provide additional context to the descriptive tables and content analysis, the open-ended survey quotes were also used to help readers understand *why* certain elements of the IDP were most useful for certain participants.

The qualitative open-ended responses from the survey and the semi-structured interview transcripts were also analyzed using a thematic analysis (Braun & Clarke, 2006). Like the content analysis, both authors separately coded the open-ended survey responses and the interview transcripts. The authors followed the process laid out by Braun and Clarke (2006) as they started by transcribing the recording, then reading and re-reading the written text to get a sense of codes that emerged. Separately, both authors highlighted and coloured the transcripts and the open-ended survey comments into several different codes. Once the codes were created, each author collated their codes into themes. The two authors met several times and compared differences in their themes. When differences emerged, the authors went back to the transcripts and open-ended survey data, discussed their codes, and grounded their decision in the data to create a finalized list of themes. The findings from the thematic analysis are used to connect to the descriptive and content analysis findings. The results from both provide insights to institutions considering implementing an IDP.

RESULTS

Quantitative Data and Content Analysis

Out of the various components of the IDP, students felt that the informational interview and mentor meetings were the most useful, with 51% and 52% of respondents finding them very useful or extremely useful (Table 2). This is consistent with the content analysis of open-ended survey responses to "What aspect of the IDP did you enjoy the most? Why?" that explained the benefit of the informational interview and mentor meeting (20 and 23 responses respectively, see Table 3):

> The informational interview was the most useful and enjoyable because I got to speak with a professional in a field that interests me greatly and gain insight on what got them to the place they are at now. (Survey respondent)

> I enjoyed the mentor meeting aspect of the IDP the most because it allowed me to ask questions that informed my choices to move toward my future desired career path. I found it very useful to be able to receive advice on aspects of career and education choices that I have not previously gotten. It allowed me to look more critically at whether continuing education or starting in the workforce is the right choice for me. (Survey respondent)

The two quotes highlight an important finding from all the open-ended responses—that the informational interview and mentor meeting provided students with a clear and tangible pathway for them to pursue. In addition, other open-ended responses indicated that the informational interview and mentor meeting gave students more clarity on short-term and long-term career and education decisions and built their confidence to network in the future. The responses of those who were coded as not finding the informational interview and mentor meeting beneficial shared that they found it time-consuming, it was out of their comfort zone, and they did not get useful information from the conversation.

Table 2

*How Useful [insert IDP activity] was at Improving Your Professional and Career Development Skills**

	Extremely useful	Very useful	Moderately useful	Slightly useful	Not useful at all	Not applicable
Skills assessment (*N* = 65)	5%	22%	40%	18%	15%	0%
Career exploration (*N* = 46)	15%	30%	17%	11%	22%	4%
Informational interview (*N* = 65)	14%	37%	23%	17%	8%	2%
Goal-setting (short-term) (*N* = 46)**	2%	20%	35%	22%	22%	0%
Goal-setting (long-term) (*N* = 46)**	2%	15%	30%	33%	20%	0%
Goal-setting (SMART goals)** (*N* = 19)	5%	42%	32%	21%	0%	0%
Mentor meeting (*N* = 65)	23%	29%	22%	12%	12%	2%
Documenting achievements and successes (*N* = 65)	8%	17%	23%	29%	23%	0%
Writing accomplishment statements (*N* = 46)	13%	17%	24%	17%	24%	4%
Deliverable assignment*** (*N* = 65)	25%	23%	22%	6%	18%	6%

*Frequency totals will not always add up to 100% due to rounding.

**The goal-setting exercise changed based on student feedback after year one. In the first cohort, students participated in a SMART goal-setting exercise. In subsequent cohorts, students formulated short-term and long-term goals.

***The deliverable assignment could be a résumé, curriculum vitae, Linkedin profile, one-minute pitch video, or personal website.

Table 3

Summary Frequency Table of Content Analysis for Open-Ended "Feedback" and "Exit" Survey Questions (N = 141 Comments across all Open-Ended Questions)

IDP Components	Student's comment indicated they enjoyed or benefited	Student's comment indicated they did not enjoy or benefit
Skills Assessment	6	12
Informational Interview	20	4
Career Exploration	3	0
Goal-Setting	5	6
Mentor Meeting	23	6
Tracking their Successes	4	2
Completing Accomplishment Statements	0	2
Updating/Completing Résumé/CV/Cover Letter	4	2

Career exploration, goal-setting, and creating a résumé/CV were also deemed useful, with 45% to 50% of respondents finding these aspects very useful or extremely useful (Table 2). In contrast, students felt that long-term goal-setting and documenting your successes and achievements were only slightly useful to not useful at all (24 of 46 students, or 53%, and 34 of 65 students, or 52%, respectively; Table 2). The content analysis uncovered that three open-ended survey responses highlighted the benefit of the career exploration, five indicated the benefit of goal-setting, and four responses stated the creation of a résumé/CV was most beneficial (Table 3). The content analysis further indicated that students found that the skills assessment was the least enjoyable to complete. Students also took issue with the format of the IDP; open-ended answers suggested that an online and more user-friendly format, a shorter and more flexible document, and a separate document for sections that should be completed later in their degree would improve the experience.

Overall, the students perceived the IDP process as having helped them in most aspects of career development activities (>60% somewhat or strongly agree; Table 4), from identifying skills gaps, setting goals, completing training, articulating their skills to employers, and helping them make connections between their coursework and their future career or with professionals in their field. The area where students felt the IDP process did not help them as much was giving them confidence about life after graduation (51% somewhat to strongly disagree).

A range of challenges to completing the IDP were identified, from finding resources and contacting/booking mentors to lack of time to complete the IDP or engage in training opportunities (Table 5).

The difference in results between the first and subsequent cohorts may be attributed to changes in the format of the question (select all that apply vs. select the top challenge), or the additional options for "lack of time" in the exit surveys of year two and subsequent years. In addition, based on first cohort feedback, efforts were made to provide more information around training opportunities in the IDP and through an online portal for subsequent cohorts. The availability of these resources in year two may have contributed to the decrease in the difficulty students felt in finding training opportunities, which was the biggest challenge for students in year one. The challenge faced by most students in

Table 4

Students' Perceptions on the Benefits of the IDP Process: The IDP Process...[insert statement].*

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree	Not applicable
Helped me better define my goals (*N* = 64)	14%	52%	14%	8%	13%	0%
Helped me to identify knowledge and skills gaps (*N* = 63)	25%	49%	13%	0%	13%	0%
Encouraged me to complete professional skills development (*N* = 63)	22%	46%	14%	8%	10%	0%
Helped me articulate my skills to employers (*N* = 63)	17%	46%	16%	10%	10%	2%
Helped me connect coursework to my future career (*N* = 19)**	0%	79%	21%	0%	0%	0%
Improved ability to connect with professionals in my field (*N* = 45)***	24%	38%	11%	11%	16%	0%
Made me feel more confident about life after graduation (*N* = 45)***	11%	20%	16%	31%	20%	2%

*Frequency totals will not always add up to 100% due to rounding.

Question asked for year 1 cohort, which was replaced with * questions in the second and subsequent years.

Table 5a

What Was/Were the Most Significant Challenge(s) to Completing the IDP?

First Cohort/Feedback Survey (*N* = 19, *select all that apply*)

Challenges	Frequency/Percentage
Contacting/booking meeting with mentor	8 (28%)
Finding someone for the informational interview	5 (17%)
Finding resources or training opportunities to fill your skill gap	10 (34%)
Finding time to complete the IDP	6 (21%)

Table 5b

What Was the Most Significant Challenges to Completing the IDP?

Second and Subsequent Cohorts Exit Survey (*N* = 45, *select top challenge only*)

Challenges	Frequency/Percentage
Booking meeting(s) with mentor	5 (11%)
Completing the informational interview	1 (2%)
Finding someone for the informational interview	6 (13%)
Finding your mentor(s)	2 (4%)
Difficulty finding training opportunities	6 (13%)
Lack of time to participate in training opportunities or lack of time to finish the IDP (due to academic or non-academic)	24 (53%)
Other	1 (2%)

subsequent cohorts appeared to be lack of time, and this is consistent with an article that studied the barriers to wellness for graduate students (El-Ghoroury et al., 2012).

The other significant challenges identified by the students were related to making connections with professionals (28% for booking a mentor in cohort 1 vs. 11% for booking a mentor meeting and 4% for finding a mentor in subsequent cohorts) and finding someone for the informational interview or completing the informational interview (17% in cohort 1 and 13% in subsequent cohorts). Interestingly, these responses suggest that switching to a process where students must find their own mentors (subsequent cohorts) did not necessarily make it more challenging for the students. While mak-ing connections with professionals was perceived by some students as burdensome in terms of time, we feel that trying to schedule a meeting with a busy person is actually a valuable soft skill for students to learn, for success both in graduate school and in networking for future careers. The feedback does suggest the IDP could be improved by providing students with strategies for doing so effectively.

Overall, while the study revealed areas where students felt there could be improvements to the IDP, 59% of the students felt we should continue (probably or definitely) with the IDP process, whereas only 19% felt we should not continue (probably or definitely) with the IDP process (*N* = 64).

Thematic Analysis of Qualitative Data

Several themes emerged from the qualitative open-ended survey answers and structured interviews. The first was diverging opinions around the IDP being mandatory. Several students who completed the exit survey discussed how they only completed the IDP to "get the course credit," and due to this they did not take the "time to actually get the most out of it" (Survey participant). One student wrote:

> I think because it seemed like an assignment and school was associated with it, people had more negative feelings towards it because it is an assignment… if it wasn't for a course and if it was just separate from school, I think people that are more passionate about it would complete it. (Interview participant)

Students felt the IDP should be readily available for them to use (e.g., on a course management system) and "without deadlines" (Survey participant). While several students disliked the mandatory nature of the IDP, several students in response to the open-ended survey questions identified benefits of the IDP and specifically acknowledged that they would not have gained these insights without doing the IDP (e.g., see above quotes about the informational interviews). Another student focused on their meeting with a career advisor:

> The good thing about it being mandatory was that it did get us thinking about some things and I don't know if I would have gone to the career advisor if it wasn't required and I gained a lot from that meeting with her and thinking about things in different ways. (Interview participant)

The students from one of the interviews shared that the IDP and subsequent meetings with their faculty advisor, mentor, and/or career advisor, changed the trajectory of not only their career goals, but their program goals. One student switched from a course-based program to a research-based program so they would have the appropriate skills to apply to a job post-graduation, and the other found the meeting helped them "solidify" their research topic. In the other interview, students mentioned they would have "slacked" if the IDP was not mandatory and at the end they were "happy" they kept going, and that embedding it made sure they prioritized it. This suggests an interesting tension in students' perception of the IDP: on the one hand, they dislike that it is mandatory, but on the other hand, once they see the benefit, some are grateful that it was mandatory.

A second theme that came up in qualitative data was related to the lack of time. The following quote from an exit survey participant captures the majority of the qualitative responses to a question about additional feedback regarding challenges: "While I see the value in these types of exercises, it often took a backburner for me because I prioritized coursework and work for my thesis. This is something I heard from many other students as well." Others mentioned that while they had set goals related to professional development training, it was hard to find time for this on top of their academic requirements and work.

The importance of human connection and feedback was also a theme that strongly emerged from both the open survey answers and the structured interviews. Many participants commented on the value of the exchange with professionals during the informational interview and mentor meetings. They appreciated the insights on the job and the sector, hearing about their career trajectory, and gaining insights about critical skills to have, as well as how to attain such a job. As one respondent wrote:

> Having conversations with people actually in professional careers provides so much more and different information compared to what you see in job ads. Human conversation is much more honest than the polished, precisely worded job descriptions. (Survey respondent)

The participant group as a whole also commented on the opportunity to establish a new professional network connection, which many understand to be an important part of getting a job after graduation, but something they also find challenging. Interestingly, one interview respondent and several survey respondents also

suggested that the process would have been improved with additional feedback and guidance from university faculty.

Lastly, some students identified issues, not only with the mandatory format, but also with the content of the document, specifically sharing that the IDP document and process were inflexible, how it did not fit the needs of all students, and that it poorly recognized the prior experience of the graduate students. For example, some students stated:

> The aspect of the IDP I enjoyed the least was its similarity to the undergraduate CO-OP introduction course. As a student that completed this course in my first year here at the University of [xxx], I found the majority of the IDP to be very repetitive of what I previously completed 6 years ago. (Survey respondent)

> Having returned to graduate school after having been in the workforce for a while, this process was less useful for me than it would be for graduate students who have not yet had to search for jobs in their field. Many of the exercises and tools were things I had already done. I tried to make the most of it, but it often felt more like busy-work for me rather than being truly useful. (Survey respondent)

In contrast, several comments from other students who responded to the open-ended questions within the surveys pointed to a realization of personal growth and self-efficacy. As one survey respondent stated, "I liked updating my LinkedIn page. It allowed me to boost my confidence by recognizing what I have already done and encouraged me to continue to pursue more achievements." When reflecting on having to complete the informational interview and mentor meeting, another survey respondent observed that "it is not something I would have done otherwise, and it opened my eyes to a new way of getting information about potential career options." The latter was echoed by several other students who overcame their initial hesitation and dislike of "cold-calling" professionals. One respondent, who initially identified the informa-

tional interview as the aspect they least enjoyed, ended their statement with "Although it did bring me out of my comfort zone," suggesting that this was a good learning experience after all.

DISCUSSION

Mandating the IDP

One theme that is often debated amongst career development professionals is whether or not one should mandate professional development and the IDP. The tension around this theme was also evident in the student qualitative responses. Mandating the IDP should be done with caution, as some students appear to reject the IDP and its value because they were forced to complete it, consistent with previous studies (Ayers et al., 2018; Beausaert et al., 2011b). Although mandating may affect one's reaction to the IDP and motivation, Lacerenza and colleagues' (2017) study of leadership training in a workplace context also suggests that making training mandatory reached more people, which improved outcomes for the company, whereas making training optional reached fewer people who were more likely to apply what they have learned in new situations.

Hobin et al. (2014) reported that 45% of postdoctoral respondents said the primary reason they did not complete an IDP was because they were not required to do so, suggesting that mandating an IDP would significantly increase participation and subsequent unexpected positive learning experiences, like those identified by the students in the current study.

The seemingly contradictory finding of the current study—that students both dislike the mandatory nature of the IDP and yet appreciate having to do it due to the benefits it brings and that they would not have otherwise gotten—will be of interest to those trying to implement an IDP. The finding suggests that the negative perception around mandating the IDP may be outweighed by the eventual benefits for the students. While the student's perception of a mandatory IDP is important, the ultimate decision for a university to mandate an IDP will also include external factors such as resourcing issues, centralized vs. decentralized approaches to student

support in one's institution, wanting to signal that the institution values this type of activity, and having the support of university leadership to do so.

Lack of Time

While the IDP was embedded in the graduate curriculum, students still felt that the main challenge was lack of time to complete the work (Table 5; 21% in the first cohort and 53% in the second and subsequent cohorts); this finding is consistent with McCormack et al. (2006). This suggests that it may be worth emphasizing how the IDP empowers the student to set very personalized goals and prioritize them in line with their career goals, rather than responding to some perceived notions of what is required of them as graduate students. Personalized goals can make competing demands less overwhelming (Eason et al., 2020), and their response to those demands more intentional and appropriate. The students who commented on this in the survey open-ended questions prioritized their coursework and thesis (see above quote in analysis). For those considering implementing an IDP at their institution or within their research group, making the IDP mandatory in this context and apportioning time outside of required coursework or thesis research signals that the institution values this activity and provides justification or rationale for students to make time for the IDP. With the support of both the institution and the faculty, this prioritization can normalize this planning activity as part of the graduate experience (R. Polzhein, personal communication, November 3, 2022). Brandt et al.'s (2021) findings that participation in career and professional development does not impact time to completion or research productivity should also be widely shared with students.

The Importance of Feedback, Human Connection, and Faculty Involvement

One aspect that was evident from both the qualitative and quantitative results was the students' need for feedback and interaction with others. This finding was evident when students felt that

the informational interview and mentors were the most useful components of the IDP (51% and 52%, respectively, found them useful to extremely useful; see Table 2) and is consistent with previous studies that stressed the value of getting feedback from people in one's desired career path (Beausaert et al., 2011a; Eason et al., 2020; Mittendorf et al., 2008).

The comments about wanting feedback from faculty is consistent with past studies, which found that the mentoring and feedback from supervisors were critical to the effectiveness of the IDP process (Beausaert et al., 2011a; Eason et al., 2020; Mittendorf et al., 2008; Vanderford et al., 2018). Flood et al. (2021) also suggested that this was helpful for faculty in their efforts to mentor their graduate students. Together with the notion that faculty support of the IDP and of professional development activities (Beausaert et al., 2011a; Hobin et al., 2014) in general is important, this suggests that faculty, or program advisors in the case of course-based master's students, should ideally be a part of the process to optimize success (e.g., Vincent et al., 2015). This finding is an important consideration for those implementing IDPs as it underscores that institutions cannot solely rely on the feedback and human connection of external mentors or informational interviewees.

Flexibility and Growth Mindset

Given the IDP in this study is a static document that follows a structured step-wise model (UCSF Office of Career and Professional Development, 2020), it is challenging for the document to meet all students where they are in their career and life journeys. This inflexibility can result in students feeling like the IDP is "busywork" rather than meaningful or useful work. Institutions looking at adopting the IDP within courses or mandating it across campus should be aware of this potential limitation and, where possible, infuse flexibility without necessarily creating multiple IDP versions (e.g., master's vs. doctoral) (see Eason et al., 2020 for suggestions). One model that has worked at some institutions is to add multiple touch points rather than having the IDP activity within a one- or two-semester course. While this may be more

difficult to staff and/or fund, this may allow students to complete activities when it feels like a good fit and may allow some modifications to the requirements on a case-by-case basis.

Some of the student comments related to "fit" also suggested a certain level of rigidity and fixed mindset (Dweck, 2006). While one mentioned "it is still good to practice," some student comments (as demonstrated above) suggest they felt they had already learned all there was to know about goal-setting, networking, and career searching. It will be important to set the stage in future years to promote a life-long learner mindset and underscore the need for ongoing career development activities considering the dynamic nature of most sectors and of specific workplaces (Dweck, 2006). Fostering a growth mindset could be valuable to bring skeptical students along on the IDP journey.

Personal growth and self-efficacy that comes with a growth mindset are certainly valued in the workplace post-graduation and yet these are rarely explicitly taught within disciplinary programs. For many students, the informational interview and mentor meeting was an opportunity for growth as they overcame their reluctance and realized their ability to engage in networking. While personal growth and self-efficacy are often presumed to be outcomes of the post-secondary experience, having students engage in the IDP process may provide more tangible opportunities for personal growth and the development of self-efficacy.

Implications for Practice

The findings of this study have implications for those considering implementing the IDP at their own institution. Firstly, while IDP components can vary across institutions, the informational interview and mentor meeting are the two components that were most enjoyable and helpful for the students. Indeed, the feedback from and human connection with faculty and external professionals are critical components of completing an IDP. Resources should be allocated to allow for this type of interaction to occur within the university. This may include providing training to encourage faculty engagement. Secondly,

making the IDP mandatory will have many positive impacts on its effectiveness: It will normalize this type of activity for the students, it will signal the importance of making time for this activity amidst other student responsibilities, and, lastly, it will allow them to reap the unexpected (to them) benefits of completing these professional and career development activities. Thirdly, when creating an IDP, it is important to infuse flexibility in the IDP process to meet the needs of students with diverse prior professional and career development and circumstances. Lastly, letting students select their own mentor is most beneficial and is not overly burdensome for students.

Limitations of the Study

One weakness of this study is that demographics data was not collected to allow analysis of the perceptions of the IDP by equity-deserving students, nor was the IDP document developed with an equity-diversity-inclusion lens. Additional research should be completed to better understand how the IDP is perceived by Indigenous (First Nation, Métis, and Inuit), Black, LGBTQ21A+, students of colour, and international students, and how it can be modified to better serve the needs of diverse students (e.g., Eason et al., 2020).

CONCLUSIONS

This study explored graduate students' perceptions of the IDP and whether it was a useful tool to help them engage in planning and career development activities during their graduate studies. Surveys and semi-structured interviews were used to gather responses from 160 students who were known to have used the IDP as part of their graduate program requirements. A range of program type and disciplines were included in the sample population, including science and social science students from doctoral and professional and thesis-based master's programs. The IDP was perceived as helpful in terms of engaging in professional and career development opportunities. Key challenges identified were lack of time in general and connecting with mentors. The most useful elements of the IDP were deemed to

be the informational interview and mentor meetings, whereas long-term goal-setting and documenting your achievements were seen as less useful. Insights gained from this analysis can benefit institutions looking to implement IDPs through consideration of what elements are most useful, whether to make the IDP mandatory, EDI, as well as specifics around format, mentor selection, and the importance of feedback and human interactions during the process.

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