

High School is Over ... Now What? Examining Students Plans for After High School

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A new group of Grade-12 students graduates from high school each year. This is an important time for young adults because they must make decisions for what life after high school will look like. The purpose of this study was twofold: (a) to investigate what decisions students in Alberta are making for after high school, and (b) to examine how such decisions are linked to students' motivation in the form of underlying causality orientations as articulated by self-determination theory (SDT). A total of 237 Grade 12 students responded to a survey with closed and open-ended questions about their plans for after high school. The results showed that all participants had some type of plan for after high school, with 79% planning to pursue post-secondary education. Their reasons could be categorized by causality orientation theory (COT) and revealed differences in reasons between students bound for post-secondary and those not. The paper concludes with suggestions for future research and avenues to aid students in their decision-making process during high school.

Chaque année, un nouveau groupe d'élèves de 12e année obtient son diplôme d'études secondaires. Il s'agit d'une période importante pour les jeunes adultes, car ils doivent prendre des décisions sur ce à quoi ressemblera leur vie après le secondaire. L'objectif de cette étude était double : (a) enquêter sur les décisions que les élèves de l'Alberta prennent relatives à leur vie après le secondaire, et (b) examiner le lien entre ces décisions et la motivation des élèves sous la forme d'orientations de causalité sous-jacentes telles qu'articulées par la théorie de l'autodétermination (TAD). Au total, 237 élèves de 12e année ont répondu à une enquête comportant des questions fermées et ouvertes portant sur leurs projets après leurs études secondaires. Les résultats ont montré que tous les participants avaient un certain type de plan après leurs études secondaires, 79 % d'entre eux prévoyant de poursuivre des études postsecondaires. Leurs raisons ont pu être catégorisées par la théorie de l'orientation de la causalité (COT) et ont révélé des différences de raisons entre les étudiants destinés à des études postsecondaires et ceux qui ne le sont pas. L'article se termine par des suggestions de recherches futures et des pistes pour aider les élèves dans leur processus de prise de décision au cours de leurs études secondaires.

Each year, a new group of students in Grade 12 graduate from high school. This final year of high school is an important one because students need to make decisions about life after high school. Will the student go to university? Will the student start an apprenticeship? Will the student enter the workforce? Will the student take a year off to travel and “find themselves”? Although researchers are often interested in what decisions are made, they rarely consider how students’

motivation relates to their post-high school decisions. According to Self-Determination Theory (SDT), *intrinsic motivation*, that is, motivation from within, is more adaptive (Deci & Ryan, 1985; Ryan & Deci, 2000), and thus could support greater persistence in the choice (Cerasoli et al., 2014). Alternatively, *extrinsic motivation*—which is based on factors such as rewards or avoiding punishment—requires more external control which could negatively impact persistence and performance (Cerasoli et al., 2014). The purpose of this study was twofold. First, we aimed to investigate what decisions students in Alberta are making for after high school; and second, we sought to examine how such decisions are linked to students’ motivation in the form of underlying causality orientations as articulated by SDT.

High School Students in Alberta

There are currently more than 67,000 students in Grade 12 in Alberta (Government of Alberta, 2020). More and more of those students will choose to enrol in post-secondary education (PSE) after high school. Indeed, since 2000, the number of Canadian students choosing to register at postsecondary institutions have increased steadily (Duffin, 2020a); now 62% of Canadians aged 25 to 34 have a bachelor’s degree or higher, making Canada a world leader in rates of tertiary education (Duffin, 2020b). Despite high enrolment numbers, one in seven Canadian PSE students do not complete their degree (Millar, 2007). Moreover, a report by Maclean’s Magazine (2018) found that graduation rates range dramatically across universities from 89.5 to 44.2%, with Alberta universities having completion rates of roughly 80%. Said differently, one in five Alberta students drop out of PSE. Of course, PSE is only one of many choices for life after high school and often students who do not go on to PSE become the “forgotten half” (Rosenbaum, 2001) particularly in research studies.

Supporting Decision Making

In helping high school students make these choices, Alberta created the Career and Life Management (CALM) curriculum. According to the Alberta Education (Learn Alberta, 2002) website,

The aim of Career and Life Management (CALM) is to help students to make well-informed, considered decisions and choices in all aspects of their lives and to develop behaviours and attitudes that contribute to the well-being and respect of self and others, now and in the future (p. 6).

CALM is a required course for Alberta students during Grade 11 (Witko et al., 2005). The course curriculum is divided into three general outcomes: (a) personal choices, where students explore the notion of managing personal well-being; (b) resource choices, where students explore the use of finances and other resources; and (c) career and life choices, where students “develop and apply processes for managing, personal and lifelong career development” (Alberta Learning, 2002, p. 4). Under career and life choices, the program of study specifically mentions the transition from high school to PSE. This support is well intentioned; however, an article from CBC News reported that students who have taken CALM see it as “a waste of time,” “not very helpful or applicable to the real world,” and “sometimes feels useless” (Keeler, 2016). These comments are concerning because this is the formal portion of the curriculum designed to support students in making decisions about their futures. Indeed, Witko et al. (2005) have suggested a need for a more

comprehensive career curriculum, yet the program of studies for CALM remains unchanged since 2002 (Alberta Learning, 2002).

Over and above CALM, it is important to note that some high schools offer additional support for students in preparation for post-secondary education and career development. This assistance might come from high school personnel (e.g., counsellors, student service teachers) or from more formal structures such as apprenticeship programs or other educational opportunities. However, despite such offerings in select Albertan schools, CALM is the only required and consistent offering designed to assist the transition to post-secondary education. While such supports are designed to help students reach decisions, they do not consider the underlying motivations attached to or driving the decisions.

Theoretical Framework

Self-Determination Theory (SDT; Ryan & Deci, 2017) provides an excellent theoretical framework for understanding students' decisions for their post-high school plans. SDT consists of six mini theories. Of the six, we draw on the Causality Orientations Theory (COT), which examines individual differences in how people orient themselves towards environments and regulate their behaviours (Deci & Ryan, 1985; Ryan & Deci, 2017; 2019). There are three different motivational orientations that influence an individual's behaviour: autonomy, control, and impersonal (Ryan & Deci, 2017). According to the work of Vallerand (1997), motivation can be organized into a three-level hierarchy: global individual differences, social contexts, and specific situations. Applying these criteria to the current research, we focus on how students' causality orientations relate to the specific situation of making a decision about life after high school.

Autonomy Orientation

The autonomy orientation is described as behaviour oriented towards personal interests (Deci & Ryan, 1985; Legault et al., 2017; Ryan & Deci, 2017) and associated with a high degree of choice (Deci & Ryan, 1985). A student might say "I am going to university to become an accountant because I've always enjoyed math and that career interests me." An autonomy orientation is often linked to high levels of intrinsic motivation because it originates from within the self. Moreover, this type of motivation is associated with positive health and wellness outcomes (Ryan & Deci, 2017).

Controlled Orientation

In the controlled orientation, constraints or prompts regulate an individual's behaviour (Deci & Ryan, 1985; Legault et al., 2017; Ryan & Deci, 2017). These controls can be in the environment and serve as extrinsic rewards such as larger salary or higher perceived status. For instance, a student might say "I am going to university to become an accountant because they make a lot of money." These controls can also be internal, wherein the individual behaves in a certain way due to perceived expectations or pressures (Deci & Ryan, 1985). Here, a student might say "I am going to university to become an accountant because my parents said that would be a good career fit for me." Controlled motivation is related to more external and introjected types of motivation; that is, motivation towards a reward or to avoid negative judgement respectively, in addition to lower levels of intrinsic motivation (Ryan & Deci, 2017).

Impersonal Orientation

According to the impersonal orientation the individual perceives their life experiences to be beyond their personal control (Deci & Ryan, 1985; Ryan & Deci, 2017). Individuals who ascribe to this orientation are suggested to experience feelings of helplessness, ineffectiveness, and passivity (Vansteenkiste et al., 2010). For example, a student might say “I am going to university, but I don’t know what I want to do, so I’m just going to wing it.” These individuals are often associated with *amotivation*, described as lacking the intention to act or “going through the motions” (Ryan & Deci, 2000, p. 72). These causality orientations provide information as to how individuals orient themselves towards the environment. It is also important to recognize that COT suggests that varying levels of all three causality orientations can exist within an individual (Ryan & Deci, 2017; Vansteenkiste et al., 2010). Therefore, all three of these orientations are needed when examining causality orientations to study behaviours.

Applying COT To Post-secondary Education

In regard to decisions for attending PSE, there has been increasing pressure on students to attend postsecondary institutions, suggesting their decisions may be more rooted in a controlled than autonomous orientation. For example, Côté and Allahar (2007) discussed the external *push* for students to go to university, rather than the *pull*, or intrinsic motivation to attend. They identified various sources of pressure to attend postsecondary including government, parents, and teachers. Media reports echo these pressures: reports from the UK suggested that 50% of young people feel pressured to go to university (Brown, 2019), as do high school graduates in British Columbia (Sander, 2019). A study from Britain indicated that one-third of students felt they had no choice about their PSE plans, and almost 40% said they would feel like a failure if they did not continue to university (Hall, 2020). However, students’ descriptions of what and how they make their decisions for plans after high school have not been examined through a COT lens. With these pressures rampant in reports relating to the transition from high school to PSE and, although we were hopeful students’ explanations would contain evidence of autonomous orientations, we were particularly interested in students’ descriptions of the control orientation, and what controls high school students perceive as exerting pressure over their choices.

Alberta Research Initiatives

Recognizing this increasing pressure, in 2002 the Southern Alberta Centre of Excellence for Career Development within the University of Lethbridge Faculty of Education, the Chinook Regional Career Transitions for Youth Project, and the South-western Rural Youth Career Development Project undertook a collaborative project called the Comprehensive Career Needs Survey (CCNS; Magnusson & Bernes, 2002) to explore the career planning and needs of students in southern Alberta in Grades 7 to 12. Based on the CCNS data, Witko and colleagues (2005) examined high school students from Grades 10 through 12 regarding their career planning, including concepts like (a) how important students perceived career planning to be, (b) who they felt most comfortable approaching for help with career planning, and (c) what students believed would be most helpful for them to support their career planning. The students surveyed identified career planning to be either “very important” or “quite important,” and the significance placed on career planning increased with age. This result may suggest that additional transition supports

may be warranted in Grade 12 based on the importance recognized here, including greater integration of career planning into curriculum subjects in higher grades (Witko et al., 2005). Students felt most comfortable approaching parents for career planning help, followed by someone working in the field, and then friends. This finding is consistent with the work of Zhang and Barnett (2015), who found that students are most influenced by their parents, friends, and siblings. This is not surprising given the impact families and peers have on adolescents over the years (McMahan & Thompson, 2021). Lastly, students wanted more information to aid in their career planning including details about PSE and work experience. This is particularly imperative because, as Dietsche (2013) found, high school students in Grade 10 reported career planning to be quite difficult. Moreover, a longitudinal study by Malatest (2007) surveyed former high school students three years after graduation and found less than half indicated they had been provided with enough information to make good choices regarding their careers. Further, over a third (36%) felt that high school did not provide them with enough information to make good decisions about PSE.

Also using data from the CCNS, Bloxom and colleagues (2008) examined Grade 12 students' career plans and perceptions of high school career development services and curriculum resources. More than a third of students reported plans for being a post-secondary student the year after high school. Additionally, students provided a wide variety of occupational aspirations and rationales. There were 79.5% of students who identified an occupational aspiration that required PSE or training beyond high school. Moreover, when answering why students choose certain kinds of work, the students provided responses that were grouped into six themes. The most common theme was interest (24.9%), for example, "involves things I like to do; and working style (21.7%), such as "I like working with children/teens." Since the studies that concerned the CCNS, there has been no new research specifically examining Alberta students' plans for after high school. The current study updates this perspective while also taking a theoretical approach to explore decisions according to underlying causality orientations.

The Current Study

Despite an increasing number of high school students in Canada pursuing PSE, the number of students who drop out remains high. As such, it is timely and important to examine the decisions that students are making for their post high school plans. Therefore, the purpose of this study was twofold. First, we sought to investigate what decisions students are making for their plans for after high school. Second, we aimed to examine how the decisions students make for after high school fit the theoretical structure of causality orientations.

Method

Participants

We recruited from several high schools in Alberta, ultimately collecting self-report data from 237 Grade 12 students. The sample consisted of 121 boys, 111 girls, and 4 students who did not indicate their gender. The average age of the participants was 17.3 years ($SD = .64$). As per the school board's policies on data collection, no other demographic data were collected. Most participants (84%) came from one school that offers a variety of programs and options ranging from advanced placement courses to numerous Career and Technology Studies offerings (i.e., courses designed

to develop students' skills for employment after high school). According to public data, the school's neighbourhood has an average household income of approximately \$79,000, with two-thirds owners of their dwelling and one-third renters.

Procedure

In March 2017 information letters were sent home to the parents and guardians of the students, informing them of the study taking place, the opportunity to contact the researchers for more information, consent for their child to participate, and/or to remove their child from the study. We chose this time so that plans after graduation would be forefront in students' minds. The survey was available online hosted by SurveyMonkey® with data encryption. Each student provided implied consent when they chose to complete the survey. The survey required roughly 15–20 minutes to complete and was done either during the participants' own time or in-class time, depending on the school. As mentioned, the majority of students came from one school and were the respondents that completed the survey during class time. In addition to the items presented here, the survey also measured students' achievement goals and mindsets which are reported on elsewhere (see Goegan et al., 2020, 2021). Ethics approval for this study was obtained from the University of Alberta's Human Ethics Research Office and approval to work within the schools was granted by the Cooperative Activities Program.

Measures

Plan For After High School

Participants were asked questions about their plans after completing their high school education. First, participants were asked, "Do you plan on going to a postsecondary institution after high school?" If students answered "yes," they were provided with two additional open-ended questions: (a) "Where do you hope to attend?" And (b) "What type of program do you hope to begin?" If students responded "no," then they were presented with the open-ended question "What do you plan to do after high school?"

Reasons For Post High School Plans

Regardless of their plans for after high school, participants were asked to write a response to the following open-ended question: "How did you decide on your plans for after high school? There is no right answer. Please include any factors you considered in your decision."

Plan For Analyses

We conducted our analyses in four steps. First, we calculated descriptive information on students' plans for after high school. This included the percentage of students who identified the same response for each of the questions under the Plan for After High School section above. Second, we used COT to conduct a deductive content analysis (Nowell et al., 2017) for the students' responses about their decisions for their post high school plans. Third, in cases where there was substantial variety of comments within the results of the deductive analysis, we used an abductive analysis to identify more nuanced examples of the orientation. Fourth, we examined the percentage of the

responses for each theme separately. Here we assessed students planning to attend postsecondary after high school and those who were not, to explore differences in their orientations. Two raters familiar with SDT/COT coded the data manually and met regularly to discuss the process and their coding of themes to ensure agreement.

Results

Students Plans for After High School

Overall, 79% of students in Grade 12 were planning to go on to some form of PSE, while the remaining 21% had other plans for after high school. Of the students who were intending to attend postsecondary, most of them were expecting to stay within Alberta (88%). These students identified a variety of PSE programs including automotive service technician, business, carpentry, commerce, digital media, education, engineering, fine arts, law, nursing, psychology, and science. Alternatively, of the students not aiming to attend a postsecondary institution the following year, 40% proposed to upgrade their marks, 20% were arranging to work full- or part-time, 18% said they did not know what they were going to do, 8% said they were preparing to travel the following year, and 14% simply said they were taking a year off but were not more specific with their plans.

How Students Decide on Their Plans

Of the 237 participants who were surveyed, five students did not respond to the question about how they made their plans for after high school, and 15 students provided a response that was too vague to code as being rooted in a causality orientation (e.g., “go straight to postsecondary,” and “it makes the most sense”). This left a total of 217 responses to be coded, of which 169 represented responses from individuals intending to attend PSE and 48 were responses from individuals not preparing to attend PSE after high school. We used a deductive content analysis (Nowell et al., 2017) guided by COT to analyze the causality orientation(s) of students’ reasons. From the 217 responses, we coded 57.6% as autonomy, 81.5% as control, and 10.6% as impersonal. It is important to note that these percentages add to greater than 100% because students’ responses were often coded within more than one causality orientation. Moreover, the percentage of responses in each category differed considerably for individuals who were and were not planning to attend PSE after high school (see Table 1).

Autonomy Orientation

The main indication of reasons rooted in an *autonomy orientation* was how students linked their interests to their post-high school decisions. For example, one student who was planning to attend PSE after high school wrote, “based on my interests in computers and losing interest in chemistry I decided that something more computer oriented such as coding suits me long term.” “I considered what I was interested in and how I enjoy spending my time and found a program that will be a good stepping-stone to a career that I will enjoy,” was something a second student expressed, while a third indicated “I am very interested in active living and healthy eating and want to have the opportunity to work with professional sports teams later on.” Moreover, several of these students made comments about having an interest in their area of choice from a young

Table 1

Percentage of Responses ($N = 217$) within each Category for Yes ($n = 169$) and No ($n = 48$) groups.

Themes	Students planning to attend PSE after high school		Students not planning to attend PSE after high school	
	% of Responses	Sample Quote	% of Responses	Sample Quote
Autonomy	65.1	"Interest in the medical field; love of science; desire to work in a hospital in some way"	36.2	"I want to work on a cruise ship"
Control	81.1		91.5	
Competence	19.7	"Pick a degree in which I excel at in high school (not necessarily one I enjoy)."	46.5	"I like sciences but I don't have the grades... taking a year off just to try different things and to work."
Relationships	31.4	"One of my biggest influences were my parents, because they both went to University."	13.9	"I've talked to my student counselor and she has helped me choose a good path, I would like to start work either part time [or] all the time."
External Factors	14.6	"I thought about somewhere close, and my grades, requirements, how I would make money for living and school supplies, where id [sic] live and work"	27.9	"Take one year off and work a full-time job so that I wont [sic] have to loan any tuition money from the bank"
Future Considerations	34.3	"I came upon these plans mainly to acquire the right things for a better future"	11.7	"get a good paying job save my money and make smart investments so I can be wealthy"
Impersonal	6.5	"Not sure what I am doing...I am going into it blindly."	27.7	"I have decided to take a year off because I am unsure of what I want to do when I "grow up."

Note. numbers show percentages of responses within a theme. Bolded themes add to greater than 100% because student responses were often coded within more than one theme. The sub-themes within the control theme (shown in grey) add to 100 percent.

age, such as: "Ever since I was little, I wanted to be a pediatrician or something close to it," or "I've always wanted to be a doctor and so that's what led me to this decision." Similar statements were made by students who were not aiming to attend PSE after high school: "Just doing the things that I love to do" and "I want to find myself; not all people planned out what career to take after high school." Others were more specific in their interests, such as "I want to work on a cruise ship" and "I want to take a year or two off to travel and work then go back to school." It is noteworthy that students who were arranging to attend PSE made more comments related to autonomy than students who were not planning to enrol in PSE after high school (65.1% and 36.2% respectively). Overall, the statements within the autonomy theme demonstrated how the participant's decision was based on their own interests and personal choices.

Impersonal Orientation

Several students indicated that they “did not know” what they were planning to do after high school, and this was coded as part of the impersonal theme. Because students did not know what they were going to do, they were also unable to provide extensive comments on their reasons. The other indicator of reasons rooted in an impersonal orientation was how students expressed indecision about their ultimate career. This is evident from explanations provided by students who were intending to go on to PSE, such as, “I want to start post secondary as soon as I can, but I have yet to decide what I really want to do for the rest of my life. Just winging it,” “I don’t know exactly what I want to become yet,” and “Looked at my options. Not sure what I am doing” were other representative quotations.

Students who were not planning to attend PSE also commented on their indecision for their eventual careers but were often looking to figure that out before starting PSE. For example, one student said they would “take time to consider all my options.” For many students in this situation, their lack of a clear career path or PSE program led to a decision to take a year off. Another student wrote, “Although I do want to go to postsecondary after high school, I’m not sure what I want to go into yet so I’m taking a year off to travel.” Yet another student revealed that

I have decided to take a year off because I am unsure of what I want to do when I “grow up.” I see no point in diving headfirst into post secondary when I have to pay for it myself and I don’t know what I want to do.

Students who were not planning to register in PSE were more than four times more likely to make statements related to the impersonal theme than students who were planning to go on to PSE (27.7% and 6.5% respectively).

Control Orientation

The majority of students’ reasoning for their post-high school decision-making included some element of a control orientation. Thus, we used an abductive analysis to understand the types of controlled regulators influencing students’ decision. The raters identified four themes including competence, relationships, external factors, and future considerations. Overall, the interrater agreement was calculated at 94% and any discrepancies in coding were discussed amongst the researchers until a consensus was achieved.

When students’ decisions were influenced by their abilities in high school, often in terms of grades, we considered that as part of a *competence* theme. For example, students intending to go onto PSE and those not planning to enrol both wrote details explaining that their decision was based on “current high school marks” and “average to get into the class.” For students who were planning to attend PSE, their competence in a subject area was linked to their program of study; for example, one student said “[I] pick[ed] a degree in which I excel at in high school (not necessarily one I enjoy).” Several students who were not planning to enrol in a post-secondary institution after high school also commented on their need to develop more competence before going on to PSE. As one participant indicated, “I decided to go to [name of school removed] right after high school, so I can improve my grades in subjects that I require for university as it’s very competitive. And after that apply to university.” These comments about needing to upgrade are

related to the student's identified plans for after high school: upgrading was the most popular response among those who were not planning to register for postsecondary immediately following graduation. It is interesting to note that students not preparing to enrol in PSE were more than twice as likely to mention competence in their decision than students who were planning to attend PSE.

Statements within the *relationships* theme highlighted how important relationships with others influenced their decisions. In particular, students in both groups mentioned their families. For example, "I had influences from family helping me make decisions about my life after high school," and "with help from my family and planning things out" were recorded by participants. Of note, there were a number of comments made about parents and their influence, for instance "[my] parents thought it'd be good to go into engineering." Parental influence was at times seen as controlling. "Because my parents have a plan for me after high school so instead of going with my own ways, I follow their plan" was one illustrative response. Two others include "[I will] satisfy my parents request" and "my parents wanted me to go straight into post secondary." Other times, the parental influence was described in a more supportive manner: "I got advised from my parents" and "I talked with my parents to see which option would be best for me and my personality" are two such examples. Other individuals mentioned by students in their responses included friends, coworkers, teachers, and school counselors. Unlike the competence theme above, students who were arranging to go onto PSE made more than twice as many references to their relationships with other people than students not planning to attend PSE.

Students also commented on *external factors* that were impacting their current decisions to attend a postsecondary institution. Many of these remarks were related to requiring funds to pay for school, for example, students not intending to attend PSE after high school wrote that they needed to "save up money to help pay for school and the cost of living." Indeed, many of these statements around funding were related to their plan to work part- or full-time. Students planning to attend PSE discussed that "costs of living must be factored into the equation" and "the finance[s] for tuition" was needed. Students aiming to attend PSE also mentioned conducting research on options that were available to them after high school, such as "researching what courses I need to take." Moreover, these students also identified several logistics involved that influenced their decision making; for instance, "when the class starts," "length of courses," and "what courses are offered close to home." It is important to note that students who were not planning to enrol in PSE made more reflections related to external factors than students who were arranging to attend PSE.

Students also commented on *future considerations* that impacted their decisions. For example, many students expecting to go onto PSE made remarks that highlighted aspects of their future employment; in particular, the desire for a high salary. Students said, "higher education can help me get a higher salary in the future," "[I] looked at options that I could be employed in and have a decent salary," and "I need to go to college to have a well-paying job." Other considerations around their future jobs included, "job availability," "a steady income," and "high hiring rate." Within their future plans, many students also discussed their future lifestyles and families: "I want to be able to support myself and any future family" is one such example. Others include "being able to support myself and the life style [sic] in which I was brought up," and "I took into account the type of lifestyle I wanted to have." In both groups, those who were and were not planning to attend PSE, students vaguely referenced the future, for example, "it [PSE] just seems like it might be helpful later on in life" and "I came upon these plans mainly to acquire the right things for a better future." Therefore, many reports made by these students highlighted their

decision-making processes in relation to the futures they envisioned for themselves. Moreover, students who were intending to attend PSE made almost three times more comments about future considerations than students not going onto PSE.

Discussion

Our research examined the plans students in grade 12 make for life after high school. We focused on what choices these students were making and the underlying causality orientation of the decision. In this section we examine two things. First, we consider the decisions that students made for their plans for after high school, connecting our findings to previous research. Second, we outline how autonomy, control, and impersonal orientations of COT are evident in the plans students had for after high school, in those students intending to go to PSE in the fall and those who were not. In closing, we also provide the limitations of our study and some recommendations for future research.

What Decisions Students Made for Their Plans After High School

The results from our study provide an updated perspective on Alberta students' plans for life after high school. Although our sample is not representative of the entire population and is small relative to the CCNS, important information can be gained from the responses here. Based on the students surveyed, 79% of grade 12 students identified that they were intending to register for some form of PSE after high school. Of these, 88% said they wanted to attend a post-secondary institution in the province. This is similar to previous research of Bloxom and colleagues (2008), who found that 79.5% of students, when interviewed about their career plans, identified an occupation that required PSE or additional training. For the 21% of the students in our sample who indicated that they were not expecting to enrol in PSE, many of their plans were still related to going on to some form of PSE in the future. For instance, these respondents indicated they might go after upgrading their marks and/or after working full- or part-time to save money for tuition. Therefore, our results are in line with the levels from 2001, and also suggest that there is a substantial group of students who want to pursue PSE at some point in the future. This could be taken to suggest an increased emphasis on the importance of a postsecondary education (Boothby & Drewes, 2006).

Causality Orientations and Students' Plans for After High School

No research has used the Causality Orientations Theory (COT) as a way to understand the underlying motivation orientations of students' decisions for life after high school. Our research showed that COT was an effective framework for this purpose with autonomy, control, and impersonal orientations evident in students' decisions.

Autonomy And Impersonal Orientations

Responses within the autonomy orientation highlighted students' decisions were often based on personal interest and enjoyment. Decisions related to autonomous reasons were nearly twice as likely for those planning to go on to PSE after high school compared to those choosing not to attend PSE.

The opposite ratio was noted in terms of the impersonal orientation: students aiming to enrol at a PSE indicated an impersonal-orientation in 6.5% of their responses, whereas this percentage was more than four times higher (27.7%) for students not planning to attend PSE. The differences found here could be taken to suggest that students who do not aim to pursue PSE directly after high school perhaps need more support or resources for making these decisions. This number also represents an increase since Bloxom and colleagues' (2008) study, where 5.5% of participants identified that they did not know what they would be doing or did not have a career plan. This increase in students who are detached from their choices, or as one student put it, "winging it," is problematic.

The Prominence of The Control Orientation

Overwhelmingly, most students' decisions had some element reflecting a control orientation to either attend or not attend PSE. In their responses, students identified several factors that impacted their decisions such as competence, relationships, external factors and future considerations. To explain these results, we turn to a different mini-theory in self-determination theory: Basic Psychological Needs Theory (Ryan & Deci, 2017). According to Basic Psychological Needs Theory, motivation starts to become internalized when the needs of competence, relatedness, and autonomy are met. Competence was an important feature in student decisions for life after high school particularly for students not planning to attend PSE. Competence is defined as an individual's perception that they are capable, or able to accomplish a task (Ryan & Deci, 2000). Believing that one is capable appears to have impacted the student decisions in this study, in terms of majors selected, or needing to take additional courses before applying to PSE. Students have a need to feel efficacious in their environment. If high schools help students to improve and grow in their domains of interest, they will feel more competent and better equipped to take on the new challenges PSE presents.

Our participants highlighted important relationships they had with others when it came to making their plans for life after high school. Similar to previous research (Witko et al., 2005; Zhang & Barnett, 2015), our participants identified several important individuals when it came to their decision-making. Indeed, Witko and colleagues (2005) found that students felt most comfortable talking to parents for career planning help. The responses from the participants here frequently mentioned parents when asked about how they made their plans for after high school. Likewise, through examining open-ended responses to study the controlling-orientation further, students' comments reflected some supportive and controlling qualities. These remarks suggest variability in parent-child interactions when it comes to making their decisions. Future research should examine the intricacies of how parents are influencing decisions for life after high school. Moreover, to shift relationships from the control-orientation to a more autonomy-orientation, teachers and parents could offer their support and encouragement throughout the planning process, being especially intentional and mindful around offering advice.

Students also mentioned external factors and future considerations when it came to their plans for life after high school: contextual realities that might influence how autonomous a student feels about their plan. Importantly, students who were not planning to attend PSE after high school were more likely to mention external factors that limited their current ability to go to PSE, and students who were intending to go to PSE after high school were more likely to mention future considerations that reinforced their autonomy to act now for future benefit. This could be an interesting area for future research that could incorporate constructs like the future time

perspective of students. Indeed, time provides individuals with a point of reference to make sense of the world around them (Kooij et al., 2018). Further, McInerney (2004) suggested that several factors influence individuals' time perspectives including "perceived opportunities that need to be planned for" (p. 142) which could comprise devising a life after high school.

Looking Across Orientations

Many of the students' responses were consistent with more than one of the three orientations, suggesting that individuals can be oriented through various means concurrently in the decisions they make. This finding is in line with previous research which outlines that individuals can be motivated by each of the three orientations to varying levels. Vansteenkiste and colleagues (2010) reasoned that although people have a leading motivational orientation, a variety of situational cues can serve as triggers that bring out otherwise dormant orientations and impact perceptions and corresponding behaviour. Other researchers have examined the efficacy of unconsciously priming orientations in participants before engaging in a task. Researchers have shown autonomy-primed individuals to demonstrate more openness in intrapersonal functioning and enjoyment on subsequent tasks than those primed with a control orientation (Levesque & Pelletier, 2003). Control-primed participants showed decreased levels of self-worth and increased self-limiting behaviours (Hodgins et al., 2006). These priming effects demonstrate how malleable motivational orientations can be and provide promise that students have the capability for adaptive orientations to be activated when making high-stakes decisions such as post-secondary plans, correspondingly pointing to an area of potential intervention.

Implications For Theory, Research, And Practice

The results discussed herein have important implications for theory, research, and practice related to supporting Grade 12 student decision making. In terms of theory, this research underscores the importance of bringing theoretical frameworks to bear to help understand not just what decisions students make, but also their underlying motivation orientations for such decisions. This is particularly important because the motivation orientation may be related to eventual success in the chosen plan. This theoretical implication leads into an important direction for future research in which students are followed after high school to see how the causality orientation is associated with persistence and success. If indeed the underlying causality orientation is more predictive of success than the decision itself, this then opens many new avenues to support students in identifying the decision that is rooted mostly in an autonomous orientation. Such research would likely need to be longitudinal as well as mixed methods to capture a full sense of what it means to be "successful" in the path chosen after high school.

Focusing on the motivation orientation associated with a decision can be particularly important because students who do not begin PSE right after high school are 64% less likely to complete a bachelor's degree than their peers who begin their PSE immediately following Grade 12 (Burke, 2020). Pragmatically, this means that local colleges/universities need to reach high school students and promote interest (Swanson et al., 2021). One way of doing so is through the implementation of campus visits. Campus visits provide important messaging about academic/trade programs and related careers that might not be accessible to students through teachers, curriculum, or family support systems alone. Kitchen and colleagues (2020) found that the presence of college professors at college campus visits positively influence high school

students' career goals. Despite their short duration, their impacts can be long lasting. It is common for career opportunities to be presented to students well into their college enrolment but having campus visits at the high school level can serve as early support in an effort to influence positive transition experiences before any big decisions are made.

These types of opportunities can also help Grade 12 students become active participants in their post high school planning (Bloxom et al., 2008). A "student for the day" initiative can help shift students from a passive to an active role. For this to work well, partnerships between high schools and potential postsecondary institutions becomes essential. This might entail sitting in on courses of interest, meeting currently enrolled students, getting a feel for campus life, and talking to academic advisors about matters such as requirements and fit. By providing students with this opportunity, it could help them view PSE as an autonomously-oriented decision. Goegan and Daniels (2020) deemed this to be particularly important for students with learning disabilities. Open communication between high schools and colleges could help students prepare in advance for the knowledge and skills they would need to be successful in this transition. Moreover, this type of early preparation might circumvent the high number of students whose responses fit within the impersonal-orientation (discussed above). For students making their post high school plans, this might also support their feelings of competence derived from control orientations and in turn could give them further confidence in their decision-making.

These opportunities are important to augment the CALM course that is designed to prepare them for post high school planning. Particularly because students have commented that it lacks applicability and is not a good use of their time (Keeler, 2016), it may be advantageous to add real-life opportunities as described above as well as to integrate career planning into discrete curricular areas (Witko et al., 2005). Moreover, previous research has found that senior high school students indicated that they would like to have more assistance in utilizing information that is already available (Witko et al, 2005). Therefore, further research is needed to examine the barriers students face in using the existing information, as well as factors that would facilitate this process, as this might be related to the high proportion of students who are feeling helpless and detached in their plans for life after high school.

Limitations And Directions for Future Research

Our findings provide important information on what students' plans are for after high school and how they make those decisions. There are three important limitations that should be noted. First, we were unable to follow-up with participants regarding their decision to attend PSE, and if they indeed followed through with this. Therefore, COT is a useful classification scheme, but it would be valuable to extend our findings here to see how the components of COT relate to success in their arrangements/lack thereof for after high school. For example, do autonomy or control orientations promote better implementation of decisions? Previous research would suggest that decisions made from the autonomy causality orientation would relate to more adaptive outcomes long-term (e.g., Kwan et al., 2011).

Second, the participants in our study were largely a homogeneous group of Grade 12 students, from one mid-sized Canadian province. Thus, to extend our findings here, future research could consider different age groups, ethnicities, or types of high schools (e.g., private or religion-based). We chose Grade 12 students because of the proximity of needing a plan for after high school, but this preparation may start much earlier. Furthermore, assessing the decisions of students from various ethnic backgrounds could be important. Alberta has students from across the globe and

it is possible that students coming from collectivist cultures might make decisions that better align with the control orientation as doing what is best for society, the community, and one's family is highly valued (Guess, 2004). As such, future researchers might take a closer look at such cultural implications even within Alberta. Examining a more heterogeneous group of individuals could provide important additional information for our findings and help to generalize our implications.

Third, this data was collected before the COVID-19 pandemic and its related interruptions to schooling and life more broadly. It is possible that the economic, travel, and health ramifications to COVID-19 may influence the type of decisions high school students might make. However, one of the advantages of using a theory-based deductive analysis, is that even if Grade 12 students' specific reasons are shifted due to COVID-19, the underlying causality orientations may not.

Conclusion

We investigated student decision making for life after high school, looking both at what decisions students made and the underlying causality orientation of the decision. The results showed that the decisions students were making could be categorized into autonomy, control, and impersonal orientations. The control orientation was further categorized into competence, relationships, external factors, and future considerations. These categorizations provide researchers, school personnel, parents, and students with important information to support decision making for life after high school for future generations of Grade 12 students.

Acknowledgements

This work was supported by a Social Sciences and Humanities Research Council of Canada (SSHRC) Insight Development Grant (430-2020-00560) awarded to the first author. Please direct all correspondence to the first author: Lauren Goegan at lauren.goegan@umanitoba.ca

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