Experiential High School Career Education, Self-Efficacy, and Motivation

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Abstract

Students' perceived self-efficacy and motivation in the context of experiential high school career education was examined through an exploratory mixed methods case study of an elective experiential career education class offered in Saskatchewan public schools. Data were generated by having students ($N = 14$) complete two measures at the start and end of the semester: the Career Decision-Making Self-Efficacy Scale—Short Form (CDMES-SF) (Taylor & Betz, 1983) and an adapted motivation questionnaire (Kerner, 2011). Classroom assignments, curriculum documents, and interviews with the instructor and two of the students provided further sources of data. Qualitative data were analyzed thematically and quantitative data were analyzed using dependent-t-testing. Significant differences in CDMSE-SF scores were identified and common themes emerged across the qualitative data. Findings are discussed as they relate to social cognitive theory, self-determination theory, and implications for practice and future research.

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Keywords: career education, self-efficacy, social cognitive theory, decision making, motivation

Résumé

L'autoefficacité et la motivation perçues des étudiants dans le contexte de la formation au cheminement de carrière expérientiel au secondaire ont été examinées par le biais d'une étude de cas exploratoire utilisant des méthodes mixtes et portant sur un cours optionnel de formation en cheminement de carrière offert dans les écoles publiques de la Saskatchewan. Les données ont été générées en demandant à des étudiants (N =14) de prendre deux mesures, au début et à la fin du semestre : le Career Decision-Making Self-Efficacy Scale – Short Form (CDMES-SF) (Taylor & Betz, 1983) et un questionnaire adapté portant sur la motivation (Kerner, 2011). Les affectations en classe, documents de curriculum et entrevues avec le formateur et deux étudiants ont fourni les autres sources de données. Les données qualitatives ont été analysées de façon thématique et les données quantitatives ont été analysées en utilisant des tests T dépendants. Des différences significatives dans les pointages CDMSE-SF ont été identifiées et des thèmes communs sont ressortis des données qualitatives. Les résultats sont analysés en fonction de la théorie sociale cognitive, de la théorie de l'autodétermination et des implications pour la pratique et la recherche future.

Mots-clés : formation professionnelle, l'auto-efficacité, théorie cognitive-sociale, la prise de décision, motivation

Introduction

Career planning has become a focal point of high school programming in Canada (Gibbons, Borders, Wiles, Stephan, & Davis, 2006). The completion of mandatory school-to-career transition courses has become a near omnipresent requirement in Canadian secondary schools. Perspectives on this trend vary. Some describe secondary school career education as a proactive way to help students see the connection between their academics and real-world outcomes (e.g., Truong, 2011). Others criticize it as a reactionary measure that prepares students to participate in an intensely competitive, neo-liberal economy (e.g., Hyslop-Margison & McKerracher, 2008) based on a human capital approach to learning rather than on principles for democratic learning (Hyslop-Margison & Graham, 2001). Although an analysis of these compelling arguments exceeds the scope of this article, it is clear that the motivations for, approaches to, and outcomes of high school career education have become pertinent areas of research.

Recent American studies show that many factors influence the ultimate impact of career education (see Whiston, Tai, Rahardja, & Eder, 2011 for a recent review), while similar Canadian research (e.g., Benjamin, 2009; Kerner, Fitzpatrick, Rozworska, & Hutman, 2012) remains in its infancy (Hiebert, 2010; Roest & Magnusson, 2005). To date, Canadian studies indicate that career decision-making skills and post-secondary transition plans remain underdeveloped after high school for many students. For instance, the Canadian shift toward a knowledge-based economy means that a majority of students consider post-secondary training (Truong, 2011) and many decide to go to university. A 2010 Statistics Canada report, however, estimated that 50% of Canadian university students fail to finish their first degree within five years (Finnie, Mueller, Sweetman, & Usher, 2010). Hiebert (2010) speculated that this finding is associated with students changing majors, presumably as they discover that the program they selected was not what they expected and/or that another degree was more appealing. Supporting this notion, an Alberta study (Bardick, Bernes, Magnusson, & Witko, 2004) found that many students are under-informed when planning for post-secondary education. According to Bardick et al. (2004), only 30 to 41% of 3,562 surveyed junior high students reported that they would be comfortable discussing their career of interest with someone employed in that field. A subsequent American study (Gibbons et al., 2006) indicated that although 98% of 222 students reported having already made a post-secondary decision, just 60% had spoken

with anyone working in that area, 40% had job shadowed, and 30% had volunteered in a related field.

If students are not initiating first-hand career exploration, they are likely pursuing careers with only a cursory understanding of what they entail. While educators hope that career education coursework will enable students to make more deliberate and meaningful career-related decisions, it is debatable whether current programming achieves these outcomes. With this in mind, we studied an innovative career education curriculum being implemented in Saskatchewan.

The Case, Focus, and Theoretical Framework

Career and Work Exploration 30 (CWE30) is one of a three-course series described on the Saskatoon Public Schools (2013) website as blending "theory-based and experiential learning components in a career development continuum of awareness, exploration, and experience." CWE30 integrates classroom learning with hands-on experience and intends to expose students to various careers. The experiential components include both job acquisition tasks, such as career research, resume and cover letter development, and interviewing, as well as job shadowing and employment in a chosen field. In addition to providing students with hands-on experience in an area that interests them, the course also exposes students to the career exploration and employment process. Thus the course provides an appropriate case to explore the potential relationship between career decision-making focused experiential learning and two associated factors: motivation (Deci & Ryan, 1985) and self-efficacy (Bandura, 1977). Because of the heterogeneity of students' on-the-job experiences, we focused on in-class activities and experiential exposure specific to job acquisition.

Motivation

Motivation was conceptualized using Deci and Ryan's (1985) self-determination theory (SDT). Much research associated with SDT has focused on classroom learning and academic engagement (e.g., Domene, Socholotiuk, & Woitowicz, 2011). Ryan and Deci (2009) criticized modern North American schools as prioritizing evaluation and control rather than development and support. Controlling classrooms are characterized by

teachers who maintain order through the use of rewards, criticism, directive statements (e.g., use of "should" or "have to"), and evaluation, with students typically receiving little formative feedback and having few options for proving their abilities. Conversely, supportive classrooms are those in which teachers value student input and offer meaningful assessment choices and plentiful group work. According to SDT, three experiential factors encourage intrinsic motivation: competence, autonomy, and relatedness (Deci & Ryan, 2012). Competence refers to whether a person believes that they are good at a given task; autonomy is operationalized as the perception of choice; and relatedness is conceptualized as the feeling of belonging. Deci and Ryan (2012) proposed that intrinsic motivation develops when these three needs are fulfilled. While controlling classroom practices are believed to restrict students' feelings of relatedness, autonomy, and competence, supportive practices foster these feelings.

Based on SDT descriptions of supportive versus controlling classrooms, Kerner, Fitzpatrick, Rozworska, and Hutman (2012) used a single person case study to evaluate the effectiveness of a program designed to encourage student motivation in career exploration by fostering autonomy, competence, and relatedness. Predicting that intrinsic motivation would be compromised if students felt seeking out post-secondary information was merely a class requirement (e.g., counted for class credit), the program was designed to encourage student input and included activities that supported the development of group cohesion in order to increase student engagement. Multiple sources of data (e.g., videos, questionnaires, observations, interviews, and artefacts like drawings) generated by a participant who completed the program were triangulated. Findings supported the theory that three SDT factors increase intrinsic motivation career exploration. Group work, positive facilitator and peer feedback, and sharing appeared to contribute to feelings of relatedness and competence. Autonomy was largely facilitated by allowing students to help develop the activities. As evidenced by questionnaire and interview responses, the student's self-reported motivation flourished under these conditions.

Self-Efficacy

Self-efficacy is a term that originates from social cognitive theory (SCT), and refers to the confidence that one can perform a given task (Bandura, 1977, 1986). Whether or not a person believes that they will be successful in completing the task is related to the

strength of their self-efficacy (Bandura, 1977). Bandura (2012) identified four sources of information that influence self-efficacy: (1) performance; (2) vicarious learning or modelling; (3) verbal persuasion; and (4) emotional and/or physical response. Self-efficacy about a particular task is improved or reduced by (1) successfully or unsuccessfully performing it, (2) seeing someone else succeed or fail at it, (3) being verbally encouraged or discouraged, or (4) feeling heightened or lowered anxiety at the prospect of engaging in it. Information from these experiences is theorized to produce three intertwined types of behaviour: (1) approach versus avoidance, (2) domain performance, and (3) task persistence (Bandura, 1977). *Approach* behaviours are related to high self-efficacy and involve engaging in tasks even when they are difficult (e.g., task persistence). These behaviours generally improve *performance in the given domain*. Theoretically, self-efficacy and performance become a self-perpetuating system of positive reinforcement and practice. Conversely, *avoidance* behaviours entail avoiding tasks and giving up if efforts are met with difficulty. This typically results in less practice and consistently poor performance. Low self-efficacy is said to correlate with avoidance behaviours.

Research over the years has supported the important role of self-efficacy in learning. A 1991 meta-analysis by Multon, Brown, and Lent reported strong evidence that self-efficacy plays a role in both academic achievement and task persistence. More recently, Hsieh and Schallert (2008) examined the relationship between self-efficacy and university students' achievements in foreign language classes. When compared to perceived skill stability, personal/external control, locus of control, and previous test scores, self-efficacy was the strongest predictor of subsequent test scores. Specific to career exploration, Speight, Rosenthal, Jones, and Gastenveld (1995) found that when Grade 9 students interested in medicine were given the opportunity to perform relevant tasks and interact with medical professionals, the students' self-efficacy related to pursuing a medical career increased.

Subsequently, a sub-concept of self-efficacy—career decision-making self-efficacy—was introduced by Betz (2001). Inspired by Bandura's work, career decision-making self-efficacy refers to a person's confidence in their ability to complete tasks related to making career decisions (e.g., self-assessment of skills or resume writing). Bandura's approach/avoidance, performance, and persistence behaviours were foundational to Betz's theory. For instance, someone with low career decision-making self-efficacy was

predicted to quickly give up if they found that a job required extra training, evidencing a tendency towards lack of persistence.

Guiding Questions

Although the Career and Work Exploration 30 (CWE30) curriculum does not explicitly incorporate SCT (Bandura, 1977) or SDT (Deci & Ryan, 1985), it includes features relevant to both. Students *perform* career decision-making tasks (e.g., interest inventories), have them *modelled* (e.g., via the teacher), receive evaluation or *competency feedback*, and ideally feel a sense of *relatedness* within their classroom and decreased anxiety (e.g., *emotional arousal*) about investigating careers on their own (Saskatchewan Learning, 2002). The following research questions arose as a result of the perceived links between SCT, SDT, and CWE30:

- Is there a relationship between CWE30 completion and career decision-making self-efficacy?
- Is there a relationship between CWE30 completion and career exploration motivation?
- Are there implications for the CWE30 curriculum that will encourage career exploration both during and after the class?

Methodology

The use of a case study methodology is an appropriate way to conduct an exploratory study in a natural setting where manipulation or accurate measurement of all relevant variables is impossible (Yin, 2014), such as the complex and unpredictable reality of a typical high school classroom. Our case was a one semester CWE30 class offered in 2014. In order to generate as comprehensive an understanding as possible, both quantitative and qualitative methods were implemented. Similar to previous studies investigating the effectiveness of career interventions (e.g., Betz & Schifano, 2000; Speight et al., 1995), a pre-post design was used to examine the possible impact of students' participation in CWE30. Qualitative and quantitative data were collected to more accurately represent curriculum implementation, assignments, and student perspectives.

Because the study was carried out in a school, ethics approval was acquired through the affiliated university and school district, and the district's Coordinator of Research and Measurement contributed to the development of the research protocol. Parental consent was inferred via an opt-out process wherein parents were notified about the details of the study one week before data collection and offered the chance to decline their child's participation. No parents opted out. Because of their age, students were judged able to give informed consent at the time of testing.

Data Collection

Two measures were administered at the beginning and end of the semester: the Career Decision-Making Self-Efficacy Scale–Short Form (CDMSE-SF) (Taylor & Betz, 1983), which served as the quantitative measure, and an adapted motivation questionnaire (Kerner et al., 2012). Additionally, semi-structured individual interviews were conducted with two students and the CWE30 teacher at the end of the semester and curriculum documents and blank copies of all assignments were collected. This data evidenced how the curriculum was being implemented in the classroom, providing a fuller picture of the CWE30 experience.

The Career Decision-Making Self-Efficacy Scale—Short Form (Betz, Klein, & Taylor, 1996; Betz & Taylor, 2012) was adapted from the original Career Decision-Making Self-Efficacy Scale (CDMSES) (Taylor & Betz, 1983), which was developed to assess five areas: (1) accurate self-assessment, (2) ability to acquire occupational information, (3) goal setting abilities, (4) planning skills, and (5) problem solving skills. Based on testing with 184 university students (Betz, Klein, & Taylor, 1996), the short form demonstrated strong internal reliability alpha ($\alpha = 0.73–0.83$) and very high overall reliability ($\alpha = 0.94$). Over the years, both long and short forms of the CDMSES have been shown to be reliable measures of self-efficacy in this area (e.g., Blustein, 1989).

The motivation questionnaire was adapted from the Amotivation Questionnaire used by Kerner et al. (2012) to investigate the views of students who were disengaged from career education. While the original questionnaire items were phrased negatively (e.g., "When you think about career exploration, what is it that doesn't feel interesting and motivating to you?" [p. 211]), the adapted items were worded positively (e.g., "When you think about career exploration, does it seem motivating and interesting to you? Why

or why not?"). This procedure was followed for all but one question, which was omitted because of its specificity to the original study (Kerner et al., 2012).

Semi-structured interviews were used as an adaptable, exploratory measure that allowed the participants to potentially take the study in unforeseen directions. Interview transcripts were audio recorded and fully transcribed. They were also edited to remove identifying information and participants were assigned pseudonyms.

As is common in case studies (Yin, 2014), analysis involved triangulating the four sources of data (interviews, CDMSE-SF, motivation questionnaire, and curriculum/assignment documents) and was informed by theory: SDT (Deci & Ryan, 1985) and SCT (Bandura, 1977). Though there were variations, the findings were not inconsistent in such a way as to indicate that the methodology was unreliable. For instance, students reported differing levels of enthusiasm about the program as a result of different placement experiences. This difference reflected limitations of the curriculum in its current form and informed recommendations for improvement. On the whole, it is believed that the findings of this research offer a truthful glimpse of the participants' CWE30 experiences.

The Case Participants

Participants were Grade 11 and 12 students enrolled in a CWE30 class at a high school in Saskatchewan. Although ethnic and socio-economic data were not gathered, the general school population was highly diverse. Because the school was located in a new development between a lower-income neighbourhood and a nearby rural town, students were drawn from a variety of backgrounds. Sixteen students (n = 9 females; n = 7 males) who ranged from 16 to 18 years old consented to participate. Two of these students volunteered to be interviewed individually (one female and one male). Their teacher was also interviewed. Only 14 students provided sufficient information to be included in the pre-post analyses of the quantitative data. Information from students who completed only the first or second set of measures was included in the analysis of the motivation questionnaire responses.

Results

Career and Work Exploration is a three-course, blended program designed to provide valuable workplace experience supported by foundational skills developed in the classroom (Saskatchewan Learning, 2002). Career and Work Exploration 10 and 20 (CWE10 and CWE20) focus on career awareness and exploration, respectively, while Career and Work Exploration 30 (CWE30) emphasizes experience. Table 1 depicts the required components of each and, notably, there is some clear content overlap. The most common required components are Workplace Hazardous Materials Information System (WHMIS) training, work study preparation and follow-up, and labour standards. The main difference between the courses appears to be the grade weighting of the assignments and the placement (e.g., 65% assignments and 35% work placement assessment in CWE10 and 25-50% assignments and 50-75% work placement in CWE30) as well as the number of hours the students spend at their placements.

Table 1. Saskatchewan Learning core curriculum guidelines for Career and Work Exploration 10–30

	CWE10	CWE20	CWE30
Required Modules	An Introduction to Career Development	Portfolios	Work Preparation and Follow-up Activities
	Portfolio Building	Work Study Preparation and Follow-up Activities	Work Placement
	Understanding Transferable Skills	Work Placement	Occupational Health and Safety
	Career Information	Occupational Health and Safety	WHMIS
	Work Study Preparation and Follow-up Activities	Labour Standards	Career Decisions
	Work Placement	Self-Awareness and Success	Labour Standards
	Reflections	WHMIS	
	Occupational Health and Safety	Recognizing Hazards	
	Labour Standards	Labour Market Information	

	CWE10	CWE20	CWE30
	WHMIS	Employability Skills and the Changing World of Work	
		Exploring Educational and Career Pathways	
		Job Search Skills, Tools, and Strategies	
Grade Weighting	65% Classwork 35% Placement	50% Classwork 50% Placement	25-50% Classwork 50-75% Placement
Placement Hours	40-60	50-70	75

The CWE30 class commenced in February of 2014 and placements were expected to begin within two and a half weeks of the beginning of class. In the first week, students ranked their top 10 preferred prospective employers from a list compiled by the teacher. Then the CWE30 teacher matched students with employers. CWE teachers are also responsible for contacting selected employers and initiating the work terms. The teacher explained that problem solving around student placements—contacting employers, helping students arrange transportation, etc.—took up a lot of time. Because of the short timeframe of the course, this added tension as some requests were difficult to accommodate (e.g., working in technical fields). For example, one of the students interviewed, Alexis, originally wanted to work with children but according to her,

> She [the teacher] was like, "Well why don't you work here [a position with adults]?"… But I didn't really want to do it. And so she's like, "Well we can't find anything else, just go here," and we had to like have our placements soon anyway, so she just kinda like picked it.

Conversely, Dave, another student, described his first choice employer as "a little slow to reply," but stated that "once they did everything was pretty smooth."

The teacher also commented on the different motivations of students taking CWE30. She explained,

> Kids will choose a place because they want to work there after [after school] as opposed to somebody that says, "Hmm…I really like animals. I think I would like to try working at a pet grooming place or at a veterinarian's office."

So while some students may use their placements to get a job at a restaurant or store, others see them as an opportunity to explore a possible future career.

The students completed assignments throughout the semester, many of which contributed to a portfolio due at the end of the term. Most assignments involved an explanatory handout or sample and a paper-based assignment. A recurring theme in students' feedback was that they found the course material repetitive and too similar to previous career education courses. As mentioned, CWE30 is an elective course with no prerequisites, which makes it difficult to change the implementation from one course level to the next. According to the teacher,

> You've got kids who have taken…maybe two career ed credits before they even get to the 30. And then you've got people who are brand new to it. And so you don't know where to start with everyone. You've got to take some right back to the beginning of what are your interests? What are your values? What's your personality? And the rest of them are just ready to soar.

While the issue of repetitious curriculum content resonated with the teacher and students, there is no obvious solution. Many students use the 30-level course to get a Grade 12 credit toward graduation. Convincing them to take three CWE classes may be difficult, even if it means more unique content in each level.

The students clearly preferred time spent at the placements over their time in the classroom. When asked what, if anything, she would change about CWE30, Alexis responded "that you would be able to do more hours," and Dave said "more volunteer work time." Regarding the types of students who tend to take CWE30, the teacher said, "I find traditionally the kids that take this class are ones that need to be out working as opposed to sitting in a desk."

Some students found it difficult to balance the demands of their placements with school and their personal lives. Motivation questionnaires included responses such as "I didn't find [career exploration] challenging, however for many of us it was an issue with our school and employment." Others wanted some sort of pay for the work that they

did. When interviewed, Dave recommended partial pay so that students would not have to work around their part-time jobs. These responses suggest that external factors, like financial stability, may compromise students' engagement in career exploration.

Motivation Findings

Responses on the first round of the motivation questionnaire indicated that most students were already quite intrinsically motivated about career exploration. Sample responses when asked why they took CWE30 were "I wanted to figure out what I want to do. Learn about careers" and "I wanted to see what it is like out on the job." Only a couple of responses seemed extrinsically motivated, such as "It would get me more job experiences, and the school counsellor said it would be a good class for me." We anticipated that the sample would show high intrinsic motivation towards career exploration, since they had opted to take an elective career education course. Another trend, however, involved concerns about making difficult and seemingly permanent choices about their future careers. For example, one student wrote, "It's hard because you either don't know what you want to do or there's too many things you would want to do and it's hard to pick."

Competency building is theoretically achieved by starting with an easy task and then gradually increasing the difficulty until an ideal level of challenge is reached (e.g., Bandura, 1986). The general organization of the CWE30 curriculum appears to foster competence: students submit resumes and cover letters for approval, then submit these documents to employers, attend an interview, and acquire a position. Within the course, however, only the assignments related to interviews adopted a sequence of preparation tasks designed to heighten confidence: e.g., explicit interview guidelines, a research activity, practice questions, and a live mock interview.

Autonomy and relatedness seemed neglected considerations in both the CWE30 curriculum and students' experiences with the course. In regards to autonomy, while some students, like Dave, presumably chose their placements, others, like Alexis, were unable to try out the roles that they wanted to. Students accepting undesired roles seemed to be a result of multiple factors: limits on the teacher's time (i.e., about two weeks to place 15 students), the restricted access to some workplaces (e.g., schools, hospitals), and the resources required to work in some industries (e.g., steel-toed boots for construction). The

teacher, however, mentioned that if she cannot get a student an interest-specific placement, she tried to at least get them a day or two of job shadowing, though how often this proved possible was unclear.

The issue of choice impacted coursework as well. Only one assignment offered a choice, negligible as it might be: students could choose to complete a skill chart by hand or on the computer. All of the other assignments seemed to be structured without much room for student adjustment or input. The instructor explained,

> Lots of it is work sheets because, you know, the kids in this class their attendance is quite poor. And so the traditional worksheets are still used because one day you might have four out of sixteen kids there and so they've just got to be able to pick up and carry on when—without much instruction.

Poor attendance could be associated with students' experiences of relatedness, which is one's sense of belonging or being cared for by others (Ryan & Dec, 2002). Attendance issues make it difficult for group cohesion to develop, so, while the students likely had a relationship with at least one other person in the course, the brief time spent in the classroom, low attendance, and largely individually focused assignments presumably compromised relatedness, and by extension negatively impacted motivation.

Self-Efficacy Findings

The CDMSE-SF results were analyzed in *SPSS* using a standard dependent t-test comparing students' first set of responses to their second. As seen in Table 2, there was a significant difference between first and second CDMSE-SF scores. More specifically, the paired-samples t-test showed that the mean total score on the CDMSE-SF before students took the class ($M = 3.72$, $SD = 0.56$) fell just within the *good confidence* range (3.5–5.0), closer to *moderate confidence* (2.5-3.5) (Betz & Taylor, 2012). At the end of the course, mean scores ($M = 4.09$, $SD = 0.57$) fell well within the good confidence range, indicating a significant positive shift in career decision-making self-efficacy ($p < .05$). That said, the very small sample of students represented by this data must be considered and the results interpreted with caution.

Table 2. CDMSE-SF scores pre- and post- CWE30 completion

Outcome	Pre-test		Post-test		*N*	95% CI for Mean Difference	*r*	*t*	*df*
	M	*SD*	*M*	*SD*					
CDMSE-SF Score	3.72	0.56	4.09	0.57	14	0.57, 0.18	0.81*	4.07*	13

* $p < .05$.

Qualitative findings suggested that the CWE30 curriculum varied in how successfully it incorporated the four sources of self-efficacy information: feedback (diagnostic, formative, and summative), modelling, reduction of emotional arousal, and performance. Students received written or verbal evaluations of all of their assignments from their teacher as well as from their employers. As described by Saskatchewan Learning (2002), this feedback took the form of diagnostic, formative, and summative evaluation. Diagnostic evaluation informed the implementation of the course, formative evaluation occurred throughout the semester to outline students' progress, and summative evaluation culminated in final grades and employer evaluations.

Modelling of career exploration mainly occurred via the instructor, but the worksheets completed by the students also offered a modelling experience. Coursework usually included a sample item and, according to Bandura (1986), written examples can have a similar impact to human models as both provide opportunities for observational learning.

Reduction of emotional arousal seemed to vary with each student. Dave, for example, was very animated during his interview, particularly when explaining how his confidence grew as a result of his placement. He clearly was not anxious about starting to work in the area in which he had been employed. Other students, however, expressed anxiety about career decision-making, both at the beginning and the end of the term. After completing the course, one student wrote that career exploration "means I have to grow up and I'm honestly scared."

The fourth and most powerful source of self-efficacy information is performance, which was the cornerstone of CWE30. Not only did students perform by completing classroom assignments, they were also given the opportunity to experience acquiring employment and working. Though the students did not compete for these positions, as they were secured by the teacher, this remained an opportunity for them to have a positive performance experience, and improve self-efficacy.

Discussion

An exploratory investigation of the potential relationship between CWE30 completion, motivation, and career decision-making self-efficacy was the core objective of this case study. The overall findings indicated that the CWE30 curriculum offers a promising start for developing effective secondary school career education. Heightened sensitivity to developing and supporting intrinsic motivation and self-efficacy would strengthen its implementation.

Viewed through the lens of SDT, a number of features of CWE30 could be improved to better foster intrinsic motivation. For instance, autonomy did not appear to be consistently encouraged by either the assignment structure or the placement process. Circumstances such as placement availability, workplace hazards, and restricted access hindered some students' choices. All assignments appeared to be mandatory and only one offered an alternative method of completion. Furthermore, erratic student attendance and varying levels of previous knowledge led the teacher to assign tasks requiring little teacher–student interaction to complete. Consequently, autonomy and relatedness were compromised, unlike the Kerner et al. (2012) intervention in which these characteristics were emphasized and credited for its success.

Conversely, some aspects of the class appeared conducive to intrinsic motivation. For instance, students could choose to pursue a variety of career areas, which supported autonomy. The majority of student follow-up responses on the motivation questionnaire indicated that they remained intrinsically motivated about career exploration. Even those who had complaints about the class seemed to see the value in continuing their exploration, saying, "I like looking at different jobs and occupations" and "You got to figure out what you don't like/want to do before you figure out what you want to do." Fostering this curiosity is key to ensuring that students are prepared for a potentially unpredictable job market (Hiebert, 2010). Furthermore, students acquired competency experiences in exploring, applying for, and working in different fields, experiences which they described as being practical and enjoyable features of the course. According to SDT (Ryan & Deci, 2002), these features of the class would facilitate intrinsic motivation.

SCT was the second piece of the theoretical framework adopted in this study. The course was analyzed for its provision of Bandura's (1977, 1986) four sources of self-efficacy information. In relation to the course material, this was operationalized as (1)

consistent feedback on students' career exploration abilities (feedback); (2) an authentic job-seeking experience (competency experience); (3) gradual exposure to career search procedures to reduce decision-making anxiety (emotional response); and (4) the teacher as a model of positive exploration behaviours (modelling). First and foremost, the results of the CDMSE-SF, though limited by low participant numbers, suggested a relationship between career decision-making self-efficacy and completion of the CWE30 class. This is in line with previous findings by Betz and Schifano (2000) wherein females who were interested in male-dominated career paths were able to increase their associated self-efficacy through completion of related tasks of increasing difficulty. Though gradation of task difficulty was not consistently applied in CWE30, performing career exploration tasks in general likely increased students' perceived self-efficacy. Teacher modelling coupled with assignment examples provided opportunities to observe successful performance. Overall, the CWE30 curriculum seemed to include activities and practices that improved self-efficacy.

Nevertheless, the four sources of self-efficacy information could be more strongly incorporated. For instance, emotional arousal was comparatively unaddressed by the CWE30 curriculum. Although a positive relationship between course completion and career decision-making self-efficacy was apparent, three students mentioned preoccupation with the permanence of career decisions in their motivation questionnaire responses (e.g., "It's hard to pick [a career] because how will you know if you made the wrong choice?"). This suggests the need for more explicit discussion of career decision-making, both in terms of resilience and adaptability (Heibert, 2010) and, more broadly, of individual agency in role creation and economic restructuring (Hyslop-Margison & McKerracher, 2008).

Strengths and Limitations

The primary strength of the present research was that the case study methodology offered an in vivo look at an already implemented curriculum that could encourage the development of self-efficacy and intrinsic motivation in career exploration. Research that focuses on the potential relationship between a particular class and increases in relevant skills and tendencies is extremely valuable given the emphasis on evidence-driven practice in schools.

Limitations reflected the shortcomings commonly associated with studies grounded in the "real world," which included the lower level of control the research could exercise over the research design. For example, we were constrained by (a) low participant numbers for the statistical analysis and the qualitative interviews; (b) a self-selectivity bias inherent in testing participants in an elective class; (c) the absence of a comparison group; and (d) an inability to do in-class observation because of school board confidentiality and teacher workload concerns. At the time of the study's development, it was not possible to know the final enrolment numbers for the class. Although numbers were ultimately lower than ideal for a statistical analysis, quantitative outcomes with small samples can reveal large effect sizes (Sauro, 2013). Findings in these cases should be interpreted cautiously and the study subjected to replication. More interviews or a focus group were not feasible given the reticence of students to be involved past the end of the course. Regarding self-selection, students' high levels of career decision-making self-efficacy (e.g., the average falling within the *good confidence* range) at the beginning of the term may have indicated that they were unusually motivated and knowledgeable about career exploration. Another potentially confounding factor was students' likely participation in career-related activities outside of class or previous job shadowing or work experience that were not reported by students. A richer measure of these experiences would have improved the reliability of the findings.

Implications for Practice

While the results of this preliminary study support a positive relationship between CWE30, motivation, and career decision-making self-efficacy, they also indicate areas in which the course could be improved. One recommendation would be to turn Career and Work Exploration (CWE) into a prerequisite based sequence. Because many students take advantage of the accessible 30-level course to acquire last-minute Grade 12 credits, however, an alternative method to customize the class, suggested by Reeve (2002), would be to survey students to identify knowledge gaps and areas of most interest to them. Options could be offered for each type of assignment, with increasing specificity for students with career paths that are more fully developed. For example, beginners could complete skill inventories while more advanced students research post-secondary training in their field of interest. These options would serve the dual purpose of allowing some student

autonomy (Ryan & Deci, 2009) and making sure that advanced students were not discouraged by repetitive class work.

More broadly, careful attention to classroom structure will ensure that it is informative and autonomy-supportive rather than controlling and therefore limiting of intrinsic motivation (Ryan & Deci, 2009). For example, student input could be sought regarding the assignments and their effectiveness (e.g., Kerner et al., 2012); relatedness could be developed among class members through student engagement in group projects and discussions; and verbal feedback and qualitative evaluations could replace and/or supplement traditional grading. Reeve (2002) suggests that tasks that are not intrinsically interesting can be made more appealing by providing meaningful rationales. For instance, a student who was struggling with motivation to complete the Workplace Hazardous Materials Information System (WHMIS) handbook may benefit from acknowledgement that the memorization can seem arduous and a discussion about the many workplaces in which this training is required.

Recommendations aside, current features of the CWE30 curriculum clearly provide an effective framework to support students' career explorations. Although there is room for improvement, a positive relationship was shown between career decision-making self-efficacy and motivation and course completion. Students clearly appreciated the integration of experiential and academic components within CWE30.

Future Directions

The presented case study opens avenues for further investigation. A logical next step would be comparing CDMSE-SF and motivation questionnaire data from students who did and did not take CWE30. This would offer clearer answers about the potential impact of CWE30. Students also reported changes in job-specific self-efficacy that could be more thoroughly examined, particularly given that experiential component of CWE30 was most consistently praised by the students. Future research could also benefit from the inclusion of younger students in the sample. Studies have shown that occupational ambitions tend to be stable from Grade 8 through to Grade 12 (Rojewski & Yang, 1997). Finally, another relationship worth examining would be that between reported career decision-making self-efficacy and actual exploration. Given that self-efficacy has been found to play a role

in performance in a variety of areas, further research as to the specific behavioural outcomes would be a valuable support in garnering further interest in CWE programming.

Conclusion

The core finding of this case study was a positive relationship between CWE30's experience-based curriculum, intrinsic motivation, and career decision-making self-efficacy. While it seems that many students select CWE30 because they are already intrinsically motivated by career exploration, career decision-making self-efficacy significantly increased during the semester within this small class sample. Overall, this supports much of the previous research related to SCT (Bandura, 1977, 1986) and SDT (Deci & Ryan, 1983, 1985) as well as Taylor and Betz's (1983) and Betz, Klein, and Taylor's (1996) work on career decision-making self-efficacy.

As pointed out by Hiebert (2010), today's rapidly changing job market is a reality that makes it unlikely that students will end up in the career that they plan for in high school. Thus, it is paramount that, instead of pressuring students to make a specific career choice, educators and counsellors focus on encouraging exploration. CWE30 seems to offer a promising model for curriculum developers and educators. We hope that future research will continue to examine the ways in which career education can be improved. The results of this study suggest that including experiential learning opportunities could be an effective and engaging start.

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