

Integrating Career Education in Junior High School: Strengths, Challenges, and Recommendations

Annelise M.J. Welde
Kerry B. Bernes
Thelma M. Gunn
University of Lethbridge
Stanley A. Ross, Ross Consulting

Abstract

Intern teachers in Southern Alberta, Canada, completed two career education courses to prepare them to integrate career education projects into their mainstream junior high school courses. This non-experimental research used content analysis to examine the effectiveness of 11 career education projects and their corresponding career education interventions that were implemented by 11 intern teachers. Eleven project reports and 309 student evaluation surveys were examined to determine trends in project strengths, challenges, and recommendations for career education. Recommendations for future research and practice are discussed.

Résumé

Les enseignants stagiaires en Alberta du Sud, Canada, ont complété deux cours d'éducation de carrière pour les préparer à intégrer des projets d'éducation de carrière dans leurs cours d'école secondaire traditionnels. Cette recherche non expérimentale a utilisé l'analyse de contenu pour examiner l'efficacité de onze projets d'éducation de carrière et leurs interventions d'éducation de carrière correspondantes qui ont été mis en œuvre par onze enseignants stagiaires. Onze rapports de projet et 309 enquêtes d'évaluation des élèves ont été examinés pour déterminer les tendances de forces de projet, les défis et recommandations pour l'éducation de carrière. Recom-

mandations pour la recherche et pratique (future) sont discutées.

Career planning in this century needs to recognize the dynamic nature of the world of work and individuals' shifting career interests (Garg, Kauppi, Urajnik, & Lewko, 2010; Porfeli & Lee, 2012; Slomp, Gunn, & Bernes, 2014). According to Slomp et al., "career planning is not a one-time activity that relies exclusively on rationality and logic. Rather, it is a lifelong process of managing change and often involves capitalizing on serendipity and intuition" (p. 20). Similarly, Porfeli and Lee suggested that individuals may benefit from exposure to career education and exploration from a young age to allow them to develop career decision-making skills and thereby succeed in a world of work that is placing an increasing amount of pressure on its workers to shape their own careers and continually refine their vocational identities.

Garg, Kauppi, Urajnik, and Lewko (2010) highlighted the dynamic nature of career development during adolescence and early adulthood and summarized extant research to suggest that individuals in this age range are influenced by a variety of social networks, including peers, family members, schools, and communities. Young people are expected to consider information from multiple sources as they transition from school to work, make career-related decisions, and adapt to new work experiences (Garg et al.); this influx of information influences individuals' career interests and

causes them to shift over time. For these reasons, it is important that young people are able to engage in adequate self and career exploration to ensure a goodness of fit between their shifting career interests and ever-changing work opportunities.

Career Education and Junior High School

Career education is a process that teaches students about possible career choices and grants them skills to shape their lifelong career development (Super, 1975). At the junior high school level, career education should consider the transitional nature of students' development and emphasize exploration and planning processes (Garg, Kauppi, Urajnik, & Lewko, 2010; Herr & Cramer, 1996; Porfeli & Lee, 2012; Slomp, Gunn, & Bernes, 2014). Career education in junior high school should also allow students to recognize the consequences of curricular and course selection and discourage them from prematurely foreclosing potential career options (Herr & Cramer; Porfeli & Lee). If junior high school students are informed about course selection and how it may impact their post-secondary education options, then they are at an advantage to make curricular decisions that facilitate the attainment of their long-term career goals.

Student perceptions of career planning. Bardick, Bernes, Magnusson, and Witko (2004) found that junior high school students typi-



cally perceived career planning as a relevant process, and students indicated that they would appreciate assistance with career decision-making, course selection, and access to relevant information and support. Bardick et al. concluded that junior high school students benefit from career planning because they are able to recognize the relevance of career decision-making and the importance of exploring potential career paths rather than postponing this decision for the future. Similarly, Gibbons, Borders, Wiles, Stephan, and Davis (2006) found that ninth-grade students were open to exploring potential careers, and suggested that students at this level would benefit from access to accurate information about careers and post-secondary education before they started to eliminate potential career options based on inaccurate information. Even though junior high school students may not be ready to commit to career choices, they are still expected to make decisions, such as course selections, that may nonetheless influence their future career and education prospects (Orthner, Jones-Sanpei, Arkos, & Rose, 2013).

Problems with career planning in school. Despite the importance and relevance of career education in junior high school that has been highlighted above, studies in Alberta (Bardick, Bernes, Magnusson, & Witko, 2006; Bardick, Bernes, Magnusson, & Witko, 2004) have found that junior high school students are often dissatisfied with the availability and quality of career planning assistance that they receive at school. Students may have difficulty accessing career planning services, especially career counselling services, due to counsellors' high caseloads (Dietsche, 2013; Slomp, Gunn, & Bernes, 2014). Other sources of dissatisfaction pertain to

students' limited access to occupation-related information and career information (Slomp et al.). Slomp et al. described several solutions to help address student dissatisfaction with career support. These recommendations included making career services more accessible by integrating career education into academic curriculum, training pre-service teachers in the use of career interventions, and incorporating relevant career theories into this training process. The current project reports on the results of a pre-service teacher training program that was designed to use these solutions and help students experience enhanced career development.

Role of Teachers in Career Development

Teachers are situated in an advantageous position to assist students with career planning processes (Chen, 2005; Kozlowski, 2013; Perry, Liu, & Pabian, 2010; Perry & Wallace, 2012; Slomp, Gunn, & Bernes, 2014). Teachers are knowledgeable of classroom dynamics, communication needs, and have instructional experience (Chen); furthermore, they may be able to cultivate supportive and trusting relationships with their students that can support student development (Noddings, 2003). Teacher support has been identified as a contributing factor to adolescent career development (Kenny & Bledsoe, 2005; Metheny, McWhirter, & O'Neil, 2008; Perry et al.). Perry et al. discovered that teacher support had a notable impact on students' levels of school engagement and an even greater impact on students' levels of career preparation.

Integrated Career Education

To facilitate student career development over an extended pe-

riod of time, career practitioners recommend that career education be delivered to students across grade levels and academic subjects (Bernes & Magnusson, 2004; Gibbons, Borders, Wiles, Stephan, & Davis, 2006; Hiebert, 1993; Kozlowski, 2013; Orthner, Jones-Sanpei, Arkos, & Rose, 2013; Porfeli & Lee, 2012; Schultheiss, 2008; Slomp, Bernes, & Gunn, 2012; Slomp, Gunn, & Bernes, 2014). Career education may allow students to link academic experiences with future career and life aspirations (Orthner, Jones-Sanpei, Arkos, & Rose, 2013), which may in turn enhance students' educational and career experiences.

According to Perry and Wallace (2012), career programs that are implemented in schools may present cost-effective, sustainable, and impactful solutions to career service shortages that many schools face. Perry and Wallace suggested that integrated career education may be attractive for teachers, as career-based lessons can be aligned with the curriculum to serve student needs, enhance teacher autonomy, and provide seamless integration for career and academic development. Likewise, Kozlowski (2013) advocated for the incorporation of career counselling into routine teaching activities and suggested that course content would be enhanced through the incorporation of personal, social, and career education topics into classroom lessons.

Teacher Training in Integrated Career Education

The provision of integrated career education would be enhanced if teachers engaged in career development training to learn how to integrate career education into course content (Bernes & Magnusson, 2004; Millar, 1995; Schultheiss, 2008; Slomp, Bernes, & Gunn,



2012; Slomp, Gunn, & Bernes, 2014; Super, 1975). Two career education courses were created for intern Kindergarten to Grade 12 teachers and studied by intern teachers in Southern Alberta, Canada. Specific descriptions of these courses are provided in greater detail elsewhere (Slomp et al., 2012; Slomp et al., 2014).

In the first career education course, intern teachers learned about career and life planning processes and studied methods of integrating career and course content. Throughout the course, intern teachers learned strategies to facilitate a purpose-centred approach (Kosine, Steger, & Duncan, 2008) to career development with their adolescent students. Purpose has been defined as the “identification of [one’s] highly valued, overarching goals, the attainment of which is anticipated to move people closer to achieving their true potential and bring them deep fulfillment” (Steger, as cited in Kosine et al., p. 133). This purpose-centred approach was designed to engage students in developing their identities and career aspirations. Intern teachers were immersed in Magnusson’s (1995) five steps of career counselling to help their students develop a sense of purpose and learn career and life decision-making processes. Magnusson’s steps include *initiation, exploration, decision making, preparation, and implementation*. Intern teachers learned to use Magnusson’s steps to help students engage in self-discovery, identify areas of personal meaning, access career-relevant information, and learn decision-making processes that they could return to at future stages in their career development. As a culminating assignment in this course, intern teachers were required to design a career education project that could be integrated into their teaching areas and present this project to

their instructor and peers for feedback.

In the second career education course, intern teachers delivered the aforementioned career education projects during their 12-week practicum placements in junior high school classrooms for course credit and submitted project reports and standardized junior high school student evaluation surveys to describe each project’s effectiveness. These were the final practicum placements of the intern teachers’ undergraduate degrees, and intern teachers were responsible for providing instruction for half of each school day and delivering semester-long courses to junior high school students. Each career education project consisted of several career education interventions.

Description of Evaluation Project

In the evaluation outlined in this article, career education projects and student evaluation surveys from the courses described above were implemented at the junior high school level and subsequently analyzed. This analysis focused on several evaluation topics, which are described in greater detail below.

General characteristics and perceptions of projects. The projects were examined to assess general characteristics and junior high school students’ perceptions of their implementation. This included projects’ demographic information, characteristics that junior high school students liked most about career education projects, features that junior high school students felt could be improved in career education projects, interventions that were rated as most helpful by junior high school students, and junior high school students’ overall levels of agreement with four standardized learning outcomes.

Future directions for curriculum development and teaching strategies.

The projects and surveys were examined to identify future directions for career education. These directions included the common project strengths, challenges, and recommendations for future career education that were outlined by intern teachers’ project reports and junior high school students’ evaluation surveys. These recommendations were intended to enhance the development and delivery of integrated career education, thereby impacting future students’ long-term career and life outcomes.

Method

A non-experimental, descriptive, cohort-style approach was used to examine archival data that were collected at the conclusion of each intern teacher’s practicum placement. Content analysis was used to study the career education projects that intern teachers completed in fulfillment of their career education course requirements and the junior high school student evaluation surveys that were collected upon completion of these projects.

Sample

This evaluation examined the career education projects that 11 intern teachers were required to implement into their junior high school classrooms to fulfill their course requirements. Eleven projects consisting of approximately 31 types of career education interventions were completed between 2009 and 2014. Three hundred and twenty-five students were involved in these projects, and 309 of these students completed student evaluation surveys.



Instruments

Each of the coding frames that were designed for the current evaluation were developed deductively (Schreier, 2012) based on existing data, namely: (a) the format and content of the career education project assignment; and (b) the structure of the student evaluation surveys that junior high school students completed at the end of each project.

Project Coding Frame. A descriptive Project Coding Frame (Appendix A) was created to extract data from each career education project. The coding frame was designed to include quantitative and qualitative aspects of each project.

The first part of the coding frame covered (a) the context of the project's teaching environment, such as the grade level, number of students, and the course of implementation, (b) the delivery methods of the project, such as the number of lessons completed, duration of lessons, and types of interventions involved, and (c) cumulative student survey data, including the interventions that were rated most and least popular, overall participation rates, overall perceived helpfulness ratings, and overall perceived effectiveness ratings of the project on four learning outcome domains. The four standardized learning outcomes were assessed on the junior high school student evaluation surveys. These outcomes included the extent to which the project (a) helped students to learn a lot about themselves, (b) helped students to learn a lot about careers, (c) made students excited about what they could do with their lives, and (d) made students want to learn more about different careers.

The second section of the coding frame captured each project's strengths, challenges, and recommendations for future projects. Each

of these items were recorded verbatim from each report in the appropriate section on the coding frame.

Student Evaluation Coding Frame. A Student Evaluation Coding Frame (Appendix B) was derived from the mixed-methods student evaluation survey (Appendix C) that students completed after each project. This frame categorized students' responses and collected overall participation and intervention-specific perceived helpfulness scores for each student. Each survey was assessed with the coding frame, as the researcher selected the included intervention categories and recorded whether the student perceived each intervention as Not Good at All, Good, or Great. The rest of the coding frame captured students' verbatim open-ended comments about what they liked about each project and recommendations that they would make for project improvement. The last section of the coding frame assessed the perceived effectiveness of the project in relation to the four learning outcomes described previously, as students rated their agreement with each learning outcome and indicated "I don't agree," "I'm not sure," or "I agree."

Analysis

Content analysis is used to describe a phenomenon in a conceptual form (Elo & Kyngas, 2008). The researcher used deductive content analysis with the coding frames to capture each project's demographic information. Inductive content analysis (Schreier, 2012) was employed to create themes within the open-ended categories. These categories included project strengths, challenges, recommendations for future research, and students' open-ended survey responses. These open-ended categories were

deductively derived from the course assignment's instructions and their potential relevance to curriculum development. Themes and codes within these categories were created inductively as the researcher became immersed in the data.

Quantitative analysis.

Quantitative and categorical information from the Project Coding Frame (i.e., grade level, subject area, number of lessons completed, and types of career education) were entered into SPSS. Descriptive statistics were used to generate frequency tables to reflect frequency counts of categorical data and, in the case of numerical data, the mean, mode, and median results in each coding category. The Student Evaluation Coding Frame quantitative information was analyzed with SPSS to create frequency tables to describe students' overall levels of participation, perceived helpfulness of each intervention, and perceptions of effectiveness across all projects.

Qualitative analysis. Open-ended qualitative responses from the Project Coding Frame and Student Evaluation Coding Frame were imported into NVivo 10 for qualitative content analysis. Qualitative content analysis can be completed in three phases: *immersion, reduction, and interpretation* (Forman & Damschroder, 2008). In immersion, "the researcher engages with the data and obtains a sense of the whole before rearranging it into discrete units for analysis" (Forman & Damschroder, p. 47). When data are reduced, they are converted into codes to organize data in a manner that enables interpretation and uses categories that are analytically relevant to the study (Forman & Damschroder).

Coding frame generation.

Through inductive code generation,



several new coding frames were created to categorize emerging themes from each of the qualitative questions. These coding frames were comprised of lists of codes into which themes were then sorted during reduction. With the Project Coding Frame qualitative data, coding frames were generated to capture each project's Strengths, Challenges, and Recommendations. Two additional coding frames based on the Student Evaluation Coding Frame were generated to categorize students' responses regarding what they liked most about each project and how they felt each project could be improved.

Interpretation. During interpretation, the researcher used the codes that were generated during reduction to reassemble the data to "promote a coherent and revised understanding or explanation of it...the researcher [aimed to] identify patterns, test preliminary conclusions, attach significance to particular results, and place them within an analytic framework" (Forman & Damschroder, 2008, p. 56). The researcher interpreted inductive and deductive codes generated through the coding frames to describe features of successful projects, characteristics of projects that students liked, challenges for implementation, and future recommendations for practice.

Results

This section presents the quantitative and qualitative results of the evaluation questions. The results have been categorized based on the structure of the evaluation.

Part I: Demographic Data

This section presents the demographic data of the projects included in this evaluation. A more

detailed description is presented in Table 1. Overall, 325 students were involved in the included career education projects, and 309 completed student evaluation surveys at the end of the unit. The discrepancy between student number and evaluation survey count can be attributed to student absence and intern teacher error. The class sizes of projects ranged from nine to 75 students, with a mean class size of 30 students and median of 28.

The majority of projects ($n = 5$) were completed at the Grade 8 level, with four projects completed with Grade 9 students and one project with Grade 7 and 9 students. It was most common for career education to be implemented in conjunction with Health and Life Skills ($n = 5$), Information and Communications Technology ($n = 4$), Science ($n = 3$), and Second Language Studies ($n = 2$). Projects included between two and 10 lessons, with a mean, median, and mode value of six lessons. Three projects included six lessons. Lessons ranged from 30 to 120 minutes in length.

Part II: Evaluation Questions

The evaluation questions and their respective findings have been divided into two main categories: general perceptions of projects, and future directions for curriculum development and teaching strategies. Each of these question categories and their findings will be described in greater detail within this section.

General perceptions of projects. This section presents the general perceptions that junior high students reported upon completion of the career education projects. These perceptions include aspects of projects that students liked, recommended, and rated as helpful.

What do students like most about career education projects?

This question is answered by examining student responses on the Student Evaluation Coding Frame. Seventeen students (6%) did not comment on what they liked about the project. The remaining 292 students provided 464 response themes. The number of themes exceeds the number of students, as some students provided multiple themes in their comments. The top 10 themes, sample comments from students, and theme frequencies are presented in Table 2. The most common themes involved learning about careers ($n = 54$; 12%), researching careers ($n = 42$; 9%), and creating PowerPoints or presentations ($n = 41$; 9%)

What do students feel could be improved in career education projects?

Student evaluation survey responses were examined to answer this question. Twenty-eight students (9%) did not leave any recommendations for future projects. The remaining 281 students provided 332 response themes, as some students made more than one recommendation in their responses. Table 3 presents the 10 most common response themes, sample comments, and theme frequencies. Student responses typically reflected a desire for more excitement ($n = 25$; 8%), more time ($n = 24$; 7%), and more group work ($n = 17$; 5%).

What interventions are rated most helpful by students in junior high school? Two interventions, Values Inventory and Vision Board, were rated as 100% Good or Great by 22 and 24 students, respectively. In the Values Inventory, students completed a list or inventory to document their personal values, and the Vision Board intervention involved creating a goal-oriented



poster to highlight students' areas of personal significance and overarching life goals. The remaining most popular interventions, which were rated Good or Great by 93 to 99% of students, are ranked in descending order by number of students and presented in Table 4. In general, students tended to rate activities that involved goal formulation, class discussion, career research, and direct links to academic content as Good or Great in terms of helpfulness.

How did students rate their agreement with the four standardized learning outcomes? Students rated their level of agreement with four standardized learning outcomes at the end of their career planning units. The results of each outcome are presented in Table 5. The number of responses are inconsistent with the number of students who completed surveys (309), as some students failed to respond to each statement. Overall, 60% of students agreed that each learning outcome had been met. Students were most likely to agree that the projects had helped them to learn a lot about careers ($n = 207$; 67%) and made them excited about what they could do with their lives ($n = 195$; 63%).

Future directions: Curriculum development and teaching strategies. This section presents the results that were obtained from analyzing the Project Strengths Coding Frames. These results reflect project strengths, challenges, and recommendations that can be used to inform curriculum development and teaching strategies. What are common strengths across career education projects? The results from the Project Strengths Coding Frame were analyzed to answer this question. The most recurring strength categories, as reported in >20% of projects, are presented in

Table 6. Frequently recorded strengths include that the project taught career planning skills ($n = 10$; 91%), students gained awareness of their unique traits, skills, and abilities ($n = 10$; 91%), and students broadened their career expectations ($n = 10$; 91%).

What are common challenges across career education projects? The Project Challenges Coding Frame data were examined to answer this question. The most recurring challenge categories, as presented by >20% of projects, are presented in Table 7. A lack of time to complete interventions was identified as the most common challenge across projects.

What are common recommendations for improvement that are made for the future implementation of career education projects? The Project Recommendations Coding Frame data were used to answer this question. The most common recommendation categories, as reported by >20% of projects, are presented in Table 8. These recommendations typically reflect project strengths and challenges, as the top recommendation across projects was to allot more time for students to complete career education interventions.

Discussion

This article aimed to recognize aspects of career education projects that were useful and aspects that can be improved for future implementation. This contributes to career development literature as it presents practical recommendations that career educators can use to enhance the delivery of career education in their own classrooms. Accordingly, this discussion will focus on implications for practice, strengths and limitations of this

evaluation, and recommendations for future research.

Implications for Practice

A primary objective of this evaluation was to identify practical recommendations for educators and career practitioners to facilitate the delivery of integrated career education. To reach this objective, this section will describe a list of recommendations that were gleaned from the evaluation results.

Career education training. Based on the positive feedback from junior high school students and the content of intern teachers' project reports, the career education training appears to have successfully facilitated the integration of career education into intern teachers' courses. For example, the majority of projects reported that students had learned career planning skills ($n = 10$; 91%), lessons had been engaging ($n = 7$; 64%), academic skills had been taught in tandem with career education outcomes ($n = 5$; 46%), and school had become more relevant for students ($n = 6$; 55%). These findings correspond with Slomp, Bernes, and Gunn (2012) and Slomp, Gunn, and Bernes (2014), who found that pre-service teachers in this program had made considerable gains in their grasp of career development and strategies for integration into mainstream curriculum. Slomp et al. (2012; 2014) reported that pre-service teachers expressed confidence in their abilities to integrate career education into their practicum placements. This article has extended that research by presenting the outcomes of intern teachers' integration efforts at the junior high school level.

These results are promising when one considers that the intern teachers were relatively new to the field of teaching. If intern teachers



Table 1

Description of Included Projects

Project	Course of Implementation	School Context (Urban/Rural)	Number of Students	Number of Lessons	Duration of Lessons	Number of Interventions	Interventions Included	Participation Rate (%)*	Overall Helpfulness of Interventions (% Rated Good/Great)**
1	Blackfoot 7/9	Urban	18	4	Not reported	6	<ul style="list-style-type: none"> Personal definitions of success, failure, happiness Choose one of three epitaphs to describe life goals List of future accomplishment 	80	97
2	Science 7	Rural	75	8	45-90 minutes	9	<ul style="list-style-type: none"> Subject-specific activity Class discussion Subject-specific lesson connecting career development to course content Describe dream day in future Personality quiz 	96	92
3	Science 8	Rural	26	7	40-80 minutes	12	<ul style="list-style-type: none"> Interests/values/skills list Describe dream weekend Describe dream day in future 99 year old question Pride story Holland's codes worksheet/quiz 	97	89
4	Math 8	Urban	34	6	55 minutes	8	<ul style="list-style-type: none"> Collage of personal meaning Time management chart 99 year old question Interests inventory 	95	76
5	Math, Health 8	Rural	25	2	Not reported	6	<ul style="list-style-type: none"> Describe dream day in future Pride story List of future accomplishments 	83	94
6	Health 8	Rural	28	8	30-45 minutes	6	<ul style="list-style-type: none"> Description of future self List of future accomplishments Pride stories 	90	97
7	Spanish, ICT 8	Urban	9	5	Not reported	5	<ul style="list-style-type: none"> Holland's codes worksheet/quiz List of future accomplishments 	89	98
8	Health 9	Rural	18	4	60-120 minutes	6	<ul style="list-style-type: none"> Journal entry List of future accomplishments Pride story 	92	86
9	English Language Arts 9	Rural	28	6	Not reported	6	<ul style="list-style-type: none"> Video & discussion Pride story Career planning timeline 	95	94
10	Science 9	Rural	33	10	Not reported	7	<ul style="list-style-type: none"> Describe dream day in future Interests inventory Skills inventory Personal characteristics 	91	76
11	Social Studies 9	Urban	31	6	30 minutes	6	<ul style="list-style-type: none"> Title page Interests inventory Values inventory 	89	94

* Participation rate calculated by dividing number of students in class by number of students who completed each intervention and averaging the results across interventions.

**Overall helpfulness of interventions calculated by dividing number of students in class by number of students who rated each intervention as "Good" or "Great" and averaging the results across interventions.

Table 2

Student Responses: What They Liked About Projects

Student Response Themes: What They Liked About Projects	Sample Comment	Frequency* (%)
Learned about careers	I learned about different careers.	54 (12%)
Research careers	I liked researching careers and their requirements.	42 (9%)
PowerPoint or presentations	We got to speak in front of the class, and make a cool presentation about it.	41 (9%)
Helpful	It was really helpful.	36 (8%)
Fun or enjoyable	I liked this unit a lot. It was fun and interesting.	35 (8%)
Thought about future	I liked how we had a chance to really think about our future and what's good for yourself to do when you're older.	34 (7%)
Learned about self	[The project] made me think about the person I am and if I am happy with myself. It made me realize that I might need to change if I am to ever pursue these goals.	31 (7%)
Started planning for future	I liked being able to take my idea of being an EMT further and that I got to see what schooling would be ahead of me if I chose this career.	26 (6%)
Learned in general	It taught me many Spanish words and numbers that I didn't know before.	12 (3%)
Using the computer	I liked how we got to go do research on the computer.	12 (3%)

*Frequency of student responses; Total of 464 response themes provided by 292 students

Table 3

Student Responses: Project Improvement

Student Response Themes: How Projects Could Be Improved	Sample Comment	Frequency* (%)
No changes to be made	I think this [project] was fine and should be kept the same. I have no complaints.	49 (15%)
Don't know	I don't really know.	32 (10%)
More fun or exciting	Classes could have been more upbeat and fun.	25 (8%)
More time	The only thing I can think of that would make it better would be giving us a little bit more time to work on the project.	24 (7%)
More group work	Have more fun group activities. I like group activities!	17 (5%)
More or better explanation	The books were hard to follow. The instructions were blurry I didn't understand everything.	13 (4%)
Learn more about careers	Provide more information about different jobs.	12 (4%)
Less reading, writing, or both	Just not as much paperwork.	12 (4%)
More research	Something that would make this [project] better would be more projects involving career research.	11 (3%)
More activities	Maybe have more activities.	11 (3%)

*Frequency of student responses; Total of 332 response themes provided by 281 students



Table 4

Interventions Rated Helpful by 93-99% of Junior High School Students

Intervention	Description	Number of Students
Research careers	Conduct research using websites, books, or both to learn more about one or more careers of interest	191
Career presentations	Deliver presentations to classmates to describe identity, career aspirations, or both	108
Class discussion	Participate in class discussion pertaining to career education and personal meaning	83
List of future accomplishments	Create a list of accomplishments that would be completed over lifetime or by a specific age	81
Subject-specific lesson	Participate in lesson within career education project that corresponds with specific academic content (i.e., career roles are like niches in an ecosystem)	68
Research subject-specific careers	Conduct research as described above to learn about careers directly related to an academic course	67
Description of future self	Create written description of future self through sentence stems, questionnaires, journal entries, or a combination of these tasks	25
Video and discussion	Watch a career-relevant video clip and engage in class discussion	23

Table 5

Student Agreement with Standardized Learning Outcomes

Learning Outcome	Disagree Frequency (%)	Not Sure Frequency (%)	Agree Frequency (%)	Total Frequency of Responses
This project helped me to learn a lot about myself.	30 (10%)	109 (35%)	165 (53%)	304
This project helped me to learn a lot about careers.	15 (5%)	82 (27%)	207 (67%)	304
This project made me excited about what I could do with my life.	29 (9%)	78 (25%)	195 (63%)	302
This project made me want to learn more about different careers.	39 (13%)	97 (31%)	168 (54%)	304

*Frequency of students who rated their agreement with each learning outcome.

could integrate career education to this level of success with limited training and teaching experience, then it is expected that in-service training for teachers with greater teaching experience and course familiarity would produce meaningful results. In future versions of the training course, it may be useful to emphasize the necessity of time management strategies, as a challenge across projects was a lack of time to complete activities to their intended depth. Nine projects (82%) recommended that future projects provide more time for students to work on activities, and 24 students (7%) asked that future projects allow more time. This emphasis would hopefully allow intern teachers to select carefully targeted inter-

ventions that could be completed within the desired time frame.

Delivering integrated career education. Several suggestions have been created for educators and practitioners to use in the delivery of integrated career education. Each suggestion is described in greater detail below.

Provide students with wide exposure to career research and information. Bardick, Bernes, Magnusson, and Witko (2004) found that junior high school students wanted help with exploring career options and accessing information about occupational and post-secondary institution requirements. These student desires were reflected within the re-

sults of this evaluation, as students and intern teachers highlighted the importance and helpfulness of career research activities. For example, one student commented, “I liked that I could learn more about myself and what jobs I might want to have. The online tests gave me ideas of jobs that I hadn’t considered before and the occupation exploration helped me understand what skills I might need and what I would do.” Students often commented that they liked learning about careers (n = 54; 12%) and researching careers (n = 42; 9%), and interventions such as Research Careers and Research Subject-specific Careers were rated highly by students in terms of their effectiveness. Furthermore, 67% of students agreed that the career education projects helped them to learn a lot about careers, and 10 projects (91%) reported that students were able to broaden their career expectations, aspirations, or both through participation in the unit. Common recommendations from intern teachers involved including more career planning activities (n = 4; 36%) and incorporating a career research activity (n = 4; 36%) into the unit. Taken together, these results highlight the importance of providing students with career research opportunities and access to career-related information, as this was a source of interest for students across projects. Furthermore, if students are able to conduct career research under teacher supervision, then they may be supported to learn career research strategies that they can use again in the future as their interests and personal situations shift over time.

Integrate career education into other subjects. One student wrote, “I liked how I learned that lots of careers are related to Science in some way.” Another student commented, “Writing prompts made us think a lot about ourselves and how

**Table 6**

Project Strengths Reported in >20% of Projects

Strength Category	Frequency (%)
General Unit Characteristics	
Taught career planning skills (researching, decision-making)	10 (91%)
Lessons were engaging	7 (64%)
Taught academic skills (reading, writing, math, second language)	5 (46%)
Developmentally appropriate activities	4 (36%)
Unit fit well with curricular objectives	4 (36%)
Variety of activities	3 (27%)
Effective use of art	3 (27%)
Students' Personal Outcomes	
Students became aware of their unique traits, skills, abilities	10 (91%)
Students had fun/enjoyed unit	9 (82%)
Students thought about personal values	4 (36%)
Students were given freedom or independence	4 (36%)
Students were creative or imaginative	4 (36%)
Students became more confident	3 (27%)
Students' Work Outcomes	
School became more relevant	6 (55%)
Students put lots of effort into work	3 (27%)
Students were more engaged at school	3 (27%)
Students' Interpersonal Outcomes	
Students enjoyed sharing stories with classmates	6 (55%)
Students were able to work together	4 (36%)
Students were engaged in class discussion	4 (36%)
Class community was strengthened	4 (36%)
Students learned about their classmates	3 (27%)
Unit facilitated respect for diversity	3 (27%)
Students' Career Outcomes	
Students broadened their career expectations, aspirations, or both	10 (91%)
Students connected self-knowledge to career opportunities	7 (64%)
Standardized Learning Objectives	
Students learned a lot about careers	9 (82%)
Students became excited about what they could do with their lives	8 (73%)
Students wanted to learn more about different careers	8 (73%)
Students learned about selves	6 (55%)

*Frequency of projects that reported each strength category; Total of 11 projects.



Table 7

Project Challenges Reported in >20% of Projects

Challenge Category	Frequency (%)
Insufficient time to complete interventions	9 (82%)
Lack of student engagement	4 (36%)
Too much writing, homework, or both	3 (27%)
Boring or unexciting activities	3 (27%)
Students did not see relevance of unit to course	3 (27%)
Unit did not make students excited to learn about careers	3 (27%)

*Frequency of projects that reported each challenge category; Total of 11 projects.

Table 8

Project Recommendations Reported in >20% of Projects

Recommendation Category	Frequency (%)
Provide more time to work on interventions	9 (82%)
Include more career planning interventions	4 (36%)
Include career research intervention	4 (36%)
Integrate career education into other subjects	4 (36%)
Provide more opportunities for students to discuss ideas with peers	4 (36%)
Expose students to more career options	3 (27%)

*Frequency of projects that reported each recommendation category; Total of 11 projects.

we feel, what we are proud of, and what we want to do.” In both of these cases, students were able to connect career development with course content and regular instruction activities. Orthner, Jones-Sanpei, Akos, and Rose (2013) emphasized the importance of helping students to recognize the relevance of their curriculum content to the world of work. In four projects (36%), intern teachers recommended that career education be integrated into other subject areas. If students were exposed to career education across multiple subject areas over the course of their education, it is likely that the cumulative results of this integration would allow students to see the relevance of their academic studies and solidify their post-high school goals over an extended period of time. Porfeli and Lee (2012) advocated for career exploration for adolescents to try out career options without facing the burden of a necessary, immediate career commitment. Instead, this ex-

tended time would allow students to make career-related decisions based on in-depth, rather than superficial, personal knowledge regarding their interests, passions, and long-term goals.

Use exciting, engaging interventions that are tailored to each class. Career education has been linked to enhanced student engagement in junior high school populations (Kenny, Blustein, Haase, Jackson, & Perry, 2006; Orthner, Jones-Sanpei, Akos, & Rose, 2013; Sutherland, Levine, & Barth, 2005). Trowler (2010) defined student engagement as the interaction between student resources and institutional supports to enhance students’ experiences, learning outcomes, and development. This interaction occurs on behavioural, cognitive, and emotional dimensions. Within this evaluation, evidence of emotional engagement was identified. Students demonstrate emotional engagement if they experience “affective reac-

tions such as interest, enjoyment, or a sense of belonging” (Trowler, 2010, p. 5).

A common theme in students’ responses was that they enjoyed the career education project because it was fun or enjoyable (n = 35; 8%). Similarly, nine projects (82%) noted student enjoyment of the unit as a strength. Twenty-five students (8%) recommended that future career education projects be more fun or exciting. Taken together, these results highlight the importance of creating fun, engaging interventions that students can enjoy participating in and completing. This is important, because “students who are engaged in their education, consider school as a valuable experience, and want to participate in school activities are more likely to demonstrate high academic achievement” (Orthner et al., p. 27), which may translate to enhanced career and life outcomes.

To help tailor interventions to student interests, it may be worth-



while for teachers to poll students prior to the unit and midway through the unit to help direct the course of the activities and cater to student interests. Strategies that are geared towards unique class dynamics and student interest may be more attractive to students, and thereby encourage increased participation and engagement in the unit and in career planning processes in general.

Provide opportunities for students to work with one another.

Researchers have outlined the utility of incorporating social and interactional skill development into career education (Kosine, Steger, & Duncan, 2008; Lapan, 2004; Shulz, 2008). Shulz suggested that students can benefit from social skill development, through activities such as presentations and class discussions, because individuals who are lacking in social skills may experience less occupational success than socially fluent competitors. Kosine et al. advised that structured group discussions could be used to help students evaluate career concepts and explore topics of personal and social meaning to help support their identities and develop a sense of purpose. Seventeen students (5%) asked that future projects involve more group work. Similarly, students rated activities that involved Class Discussion as being highly effective, and six projects (55%) noted that students enjoyed sharing their stories and their experiences with their peers. One student indicated, "I enjoyed being able to share and discuss my passions and ideas with others." As a result, four projects (36%) recommended that future career education involve more opportunities for students to discuss their ideas with their peers. This set of results highlight the value of having students work with one another to share their ideas and receive feedback from their peers. If teachers allow students to

work with one another during their career development, it is recommended that an emphasis be placed on encouraging students to develop and pursue their own ideas, rather than simply adopting those of their peers. This would provide a balance between social interaction and individual exploration and career planning.

Use technology, where possible, to assist in career education.

One student commented, "I liked going on the computer and researching to research the careers and create a PowerPoint." Another wrote, "I liked being able to find, research, and share what we want to do when we grow up." In total, 41 students (9%) commented that they particularly enjoyed completing PowerPoints or presentations related to their career development. Furthermore, students rated activities such as Video and Discussion and Research Careers as being highly helpful. In each of these interventions, students were engaged with technology: students were required to use the Internet to research careers of interest, create PowerPoint presentations on the computer, or watch career-related videos. Future projects may benefit from the inclusion of similar content to help engage students and teach them about credible career resources that can be accessed online. This would help to mitigate the concerns that students have previously raised about not having access to career-relevant information (Bardick, Bernes, Magnusson, & Witko, 2004). Furthermore, as 54% of students indicated that they wanted to learn more about different careers, including technology-based research activities would enable students to return to these career planning resources in the future. This returns to the concept of emphasizing career planning as a process that can be returned to

and refined over time rather than a single, monumental decision (Magnusson, 1995; Porfeli & Lee, 2012; Pyne & Bernes, 2002).

Capitalize on students' self-interest through exploration.

Kosine, Steger, and Duncan (2008) advocated for a purpose-centred approach to career development wherein the "rich, reciprocal relationship between the development of identity and the development of purpose throughout adolescence" (p. 133) is facilitated through careful exploration of students' identities and areas of personal meaning. Ten projects (91%) reported that students were able to become more aware of their unique traits, skills, and abilities as a result of participating in exploration throughout the career education unit. For example, one student wrote, "I liked that it helped you connect with yourself and find out more about yourself and your future. Thank you [teacher] for helping me with finding myself, I'm glad I got to do this!" Another student commented, "I liked that it really broadened my options and helped me realize my strengths and the other things I can do." Altogether, 31 students (7%) commented that they liked learning about themselves, and 53% of students (n = 165) agreed that the projects had helped them to learn a lot about themselves. Students rated activities that involved significant levels of self-exploration, such as the Values Inventory and Vision Board, as being highly helpful. Overall, these findings suggest that students enjoy having opportunities to learn more about themselves. This may reflect students' developmental stage and high level of self-interest during adolescence (Elkind, 1968). If teachers are able to engage students in thinking about their personal attributes and considering how these attributes shape their long-term goals,



then students may develop a more informed and personally relevant approach to career planning.

Connect self-awareness with career options. In seven projects (64%), intern teachers indicated that students were able to connect their self-knowledge with career opportunities. As one student wrote, "I liked that it taught you what to do when deciding on a job, plus I also liked that it kind of helped to give a sense of yourself." Self-awareness is certainly important, but it is enhanced through the next phase of career development as students learn to link their personal attributes to future life and career goals. Porfeli and Lee (2012) recommended that career interventions facilitate adolescent identity development and empower students to develop a clearer, more realistic image of themselves in their future work roles. This would help students to understand their interests, skills, abilities, and potential career roles that could complement their self-images (Porfeli & Lee). Across projects, interventions that required students to describe their future selves or list their future accomplishments were rated highly in terms of helpfulness.

This combination of self-awareness and career awareness may enhance students' perceptions of the relevance of education, and may also help them to gain a sense of excitement for their futures. One hundred and ninety-five students (63%) agreed that participation in the career education projects made them excited about what they could do with their lives: ideally, this excitement will be translated into energy and motivation to reach their intended career goals.

Strengths

This article has a number of strengths. For one, it is practically useful because it critically examines aspects of career education projects that were useful and not useful for a variety of intern teachers and their students. Furthermore, this analysis combines intern teacher and student opinions to provide an integrated critique of the career education projects. The use of quantitative and qualitative data from both perspectives allows for a broader, richer description of the career education projects' strengths, challenges, and recommendations for future practice. Finally, this evaluation provides promising results for the effectiveness of career education training for intern teachers, as intern teachers were able to successfully incorporate career education training into their course development and teaching strategies. It is also encouraging that these results were obtained across such a diverse sample of students and intern teachers, as this suggests that career education may be successful in a variety of teaching contexts.

Limitations

In terms of limitations, the evaluation's diversity of projects caused some research difficulties. The projects were highly different from one another in terms of the types of interventions included, which rendered inferential statistics such as Chi square tests impossible due to insufficient frequencies within cells. In addition, this evaluation could not account for various extraneous factors that could have impacted each project's effectiveness, such as teaching style, school size, mentor teacher influences, and classroom dynamics. Each of these factors could have affected a given project's results. For example, some

students may have completed their student evaluation surveys in a manner that would please the intern teacher, and this could have influenced the results of this evaluation.

Another challenge is that the researcher's interpretation of intern teachers' reports may have added an extra level of interpretation to the evaluation. For example, there were likely challenges and strengths that occurred within projects but were not included in intern teachers' project reports; these factors were not included in analysis. Since project reports were submitted for evaluation by the course instructor, it is possible that intern teachers may have presented their results in a manner that emphasized project strengths and minimized project challenges. This validity concern may be tempered by the course instructor's involvement in the intern teacher's practicum experiences, as the course instructor observed intern teachers during their practicum placements and remained in close contact with their mentor teachers to ensure that projects were completed to a standard of excellence.

Implications for Future Research

To address the limitations caused by project diversity, future research may examine career education projects that are implemented within similar teaching contexts (i.e., class size, teaching style, subject matter). This targeted investigation would allow for more focused, comparable results. Future research may also examine the effects of the original career education courses from a longitudinal perspective, and assess whether practicing teachers who participated in the courses as interns still integrate career education into every day teaching. This longitudinal examination could identify factors that facilitate and restrict career education integration,



and highlight aspects of the career education course that were most useful for teachers over a long-term period. Another longitudinal investigation could be used to track students who were involved in career education projects, and assess the cumulative effects of career education across subject areas and grade levels on their overall career development.

Conclusion

This article presented student and intern teachers' perceptions of career education projects that intern teachers integrated into their courses and classrooms. A number of recommendations have been provided for future research and practice, to continually refine the construction and delivery of integrated career education. Practitioners should provide students with wide exposure to career-relevant information, use student engagement and excitement to make content more interesting, enable students to work with one another and refine their communication and social skills, encourage technology use to enhance students' information accessibility and career research skills, and reinforce the connection between students' self-exploration with career exploration in the context of students' senses of purpose and personal meaning. As articulated by Kosine, Steger, and Duncan (2008), Career is more than fitting one's personality with environment and job tasks – we must explore who we are and what our purpose is, determine what we find meaningful, and understand our strengths and skills in order to truly develop a satisfying career. (p. 135).

Likewise, Pyne and Bernes (2002) recommended that career education emphasize career development as a process so that students

could see their career exploration as an expression of their identities, and thereby focus on creating a career rather than finding a job. The results of this evaluation highlight the need for future research to continually examine and refine career interventions that can be used with students. These findings can thereby contribute to career education for students, and in the process help them to create and realize meaningful career and life outcomes.

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*Appendix A*

Career Education Project Coding Frame

1. Project ID: ____

Context of the Teaching Environment

2. Grade level: ____
3. Number of students in class: ____
4. Number of students that completed surveys: ____
5. Targeted curriculum: _____

Detailed Description of Lesson Plan

6. Number of lessons: ____
7. Duration of lessons: ____
8. Interventions included
(select all that apply)
9. Stages of Magnusson's Model included (select all that apply)
 - Initiation
 - Exploration
 - Decision-making
 - Preparation
 - Implementation

Summative Evaluation Results

10. Overall student participation: _____ (% Completed all Interventions)
11. Overall perceived helpfulness of activities: _____ (% Rated "Good" or "Great")
12. Specific outcomes:
 - a. Outcome 1: Helped me to learn a lot about myself ____ (% Agree)
 - b. Outcome 2: Helped me to learn a lot about careers ____ (% Agree)
 - c. Outcome 3: Made me excited about what I could do with my life ____ (% Agree)
 - d. Outcome 4: Made me want to learn more about different careers ____ (% Agree)
13. Strengths

(type information here)
14. Challenges

(type information here)
15. Recommendations
(type information here)



Appendix B

Student Evaluation Coding Frame

1. Intervention ID: ____
2. Overall Participation Score: ____ (Number of interventions completed/total number of interventions)
3. Perceived Helpfulness of Each Intervention
 - Not Good at All
 - Good
 - Great

Perceived Effectiveness of Unit

4. Outcome 1: This [project] helped me to learn a lot about myself
 - Agree
 - Not Sure
 - Disagree
5. Outcome 2: This [project] helped me to learn a lot about careers
 - Agree
 - Not Sure
 - Disagree
6. Outcome 3: This [project] made me excited about what I could do with my life
 - Agree
 - Not Sure
 - Disagree
7. Outcome 4: This [project] made me want to learn more about different careers
 - Agree
 - Not Sure
 - Disagree

Open-Ended Responses

8. What I liked about this project:
(type response here)
9. How this project could be made better:
(type response here)



Appendix C

Career Coaching Across the Curriculum: Student Evaluation Survey

Thank you for participating in this lesson/unit plan/school-wide intervention! I would like to know if it was helpful and how it could be made better. Please answer the questions on this sheet to help me with this.

Part 1: Please let me know if you did the interventions.

Activity	I didn't do it	I did it
*Each intervention has its own category	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

Part 2: Please let me know if you thought the intervention was helpful by circling whether you thought it was "Not good at all," "Good" or "Great."

Intervention	Not good at all	Good	Great
*Each intervention has its own category	☹	☺	☺
	☹	☺	☺
	☹	☺	☺

What did you like about this lesson, unit plan or school wide intervention?

How could this lesson, unit plan or school wide intervention be made better?



Part 3: Please tell me how much you agree with the following statements by putting a checkmark in the box that best tells me how you feel:

	I Don't Agree	I'm Not Sure	I Agree
This lesson, unit plan or school wide intervention helped me to learn a lot about myself	☹	☺	☺
This lesson, unit plan or school wide intervention helped me to learn a lot about careers	☹	☺	☺
This lesson, unit plan or school wide intervention made me excited about what I could do with my life	☹	☺	☺
This lesson, unit plan or school wide intervention made me want to learn more about different careers	☹	☺	☺

Thank you very much for your help!!