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Abstract

This article examines the effectiveness of a pilot project offered by members of the Faculty of Education at the University of Lethbridge entitled, —Career Coaching Across the Curriculum: Integrating Career Development into Classroom Instruction||. It explores whether this pilot project effectively prepares pre-service teachers to integrate career education into curriculum. It also explores whether this pilot project contributes to the attainment of important career development competencies for students in the Kindergarten-Grade 12 educational system.

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Career Coaching Across the Curriculum: Enhancing the Career Competencies of the 21st Century Learner

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Abstract

This article examines the effectiveness of a pilot project offered by members of the Faculty of Education at the University of Lethbridge entitled, "Career Coaching Across the Curriculum: Integrating Career Development into Classroom Instruction". It explores whether this pilot project effectively prepares pre-service teachers to integrate career education into curriculum. It also explores whether this pilot project contributes to the attainment of important career development competencies for students in the Kindergarten-Grade 12 educational system.

There is a growing recognition of the need to provide students in the Kindergarten-Grade 12 educational system with opportunities to develop critical career/life management competencies (Government of Alberta, 2010; McMahon, Patton & Tatham, 2003). The workplace of the knowledge era is a radically different place at the beginning of the 21st century compared with the 20th century (Jarvis, 2006). To thrive in the 21st century world of work individuals need to be equipped with competencies that will enable them to transition repeatedly between learning, work and other life roles in order to create a life balance for themselves that is both satisfying and productive (Amundson, Parker & Arthur, 2002, McMahon, Patton & Tatham, 2003). These competencies include: building and maintaining a positive self-image, participating in lifelong learning supportive of life/work goals, locating and effectively using life/work information, understanding the changing nature of life/work roles, being resilient and managing change in chaotic environments, remaining hopeful and self-confident, setting short and long term goals in the face of obstacles and competing pressures, engaging in activities that promote self-recycling and self-renewing, understanding, engaging in, and managing one's life/work building process, and working effectively in diverse teams, (Borgen & Hiebert, 2006; Campbell & Ungar, 2008; Hartung, Porfeli & Vondracek, 2008; Jarvis, 2009; Partnership for 21st Century Skills, 2004).

A document recently released by the Province of Alberta (2010) entitled "Inspiring Action on Education" exemplifies the growing importance being attached to developing career/life management competencies in students. This document sets forth an agenda for transforming the education system in Alberta and specifically targets competencies such as lifelong learning, self-direction and personal management. The writers of this document argue that these competencies need to be more central in the education of young people if they are to be active participants in an increasingly knowledge-based and globalized society. As stated in the document,

Alberta students develop competencies that help them to contribute actively and positively in their communities. Throughout life, students balance various roles and life-work priorities while understanding their personal strengths, history and identity. They participate in career exploration and planning as they adapt to change and seek opportunities for personal and professional growth throughout their lives. (p.11)

The most effective way to develop career self-management competencies in students is to

infuse career education across curricular subjects and throughout the Kindergarten-Grade 12 educational experience (Gyspers, 2001; Magnusson & Bernes, 2004; Magnusson & Bernes, 2002; Palladino Schultheiss, 2008, Partnership for 21st Century Skills, 2004). In the past career planning support has typically been provided through ancillary services (for example, guidance counsellors) or through stand alone courses (for example, courses such as Career and Life Management offered to high school students in the Alberta K-12 school system) and has been primarily targeted at high school students. However, there is increasing recognition that career development and transition services must emphasize a process rather than a single event or series of events and must be provided throughout the K-12 educational experience (Levinson & Ohler, 2006; Palladino Schultheiss, 2008). As experts in the field of career development suggest, an effective educational curriculum is one that infuses career-building competencies throughout the school program (Harkins, 2000; Magnusson & Bernes, 2004; Palladino Schultheiss, 2008).

According to this model, teachers across all grade levels and subjects support the development of career self-management competencies by infusing career education into regular curriculum. This can be done in many creative ways. In elementary Science classes, for example, teachers could read stories about people who work in various science-related occupations. As well, guest speakers could be brought in from the community to describe the roles they fulfill in their science-related occupation. Students could also go on fieldtrips to organizations focused on science related work. In middle school Health classes, for example, students could learn about how the pursuit of personally meaningful goals contributes to well-being. They could learn the characteristics of effective goals and the role of optimism in achieving such goals. In high school English classes, for example, students could engage in journal writing activities that help them identify sources of personal meaning. Students could write about past personal experiences in their lives that generated feelings of pride and satisfaction. Following this they could share their stories with their peers and with their teacher and could receive feedback concerning the themes contained in their story (e.g. what personal skills and characteristics were exhibited in the story, what seemed to be particularly meaningful about the experience described, etc.). These are only a few brief examples of how the competencies described earlier in this article could be fostered in children and adolescents through an infusion of career education across curriculum topics and grade levels in the K-12 educational system. Such an approach, if conducted in a systematic and developmentally appropriate manner, would build relevance for learning and would assist students in developing, over the course of their K-12 education, the knowledge, skills and attitudes to successfully navigate the 21st century world of work.

One example of an initiative designed to facilitate the infusion of career education into curriculum is the pilot project *Career Coaching Across the Curriculum: Integrating Career Development into Classroom Instruction* currently being offered by members of the Faculty of Education at the University of Lethbridge. This pilot project involves two main components. In the first component, pre-service teachers in the Faculty of Education are given the opportunity to take an elective course entitled Career Education. In this course, they learn about the career planning process, career theorists, career counselling skills, career counselling outcomes, career assessments (informal, semi-formal, and formal), effective initiation and engagement strategies, effective decision-making strategies, effective goal-setting and preparation strategies and effective exploration and goal-implementation strategies. They also learn about the world of work in the 21st century and how changes in the world of work impact the career planning of students. As well, they learn how to integrate career education lesson plans, unit plans and

school wide interventions into regular curriculum.

In the second component of this pilot project, after successfully completing the Career Education course, pre-service teachers function as interns in various schools (elementary, middle, and high schools) throughout Southern Alberta. They are provided with a 15 week internship wherein they are given the opportunity to implement into elementary, middle and high school classrooms the career education lesson plans, unit plans and school-wide interventions they developed in the Career Education course. During their internship they work under the supervision of a Teacher Mentor and are given the responsibility of maintaining 50% of the workload of a full-time teacher.

It is important to examine whether this pilot project is effectively preparing pre-service teachers to integrate career education into curriculum and whether this training is enhancing students' attainment of career/life management competencies. At the time of this article, two (out of four) cohorts of students have taken the Career Education class and have completed their internship experiences. This article will examine the effectiveness of the Career Education class in training these two cohorts of pre-service teachers to integrate career interventions into curriculum. As well, it will examine the impact of this training on the career development of students in the K-12 educational system.

The following section will describe the research methods utilized in this research study.

Method

Evaluation Framework

In 2005, the Canadian Research Working Group for Evidence-Based Practice in Career Development (CRWG) was formed by a number of Canadian researchers in response to criticisms by policy makers that there is little existing evidence to support the efficacy of career development services and interventions (Baudouin et al., 2007; Lalonde, Hiebert, Magnusson, Bezanson, & Borgen, 2006). The CRWG endeavored to address the criticisms of policy makers by developing a model for evaluating career development services and interventions. After extensive collaboration, members of the CRWG developed a framework to support the effective evaluation of career development services and interventions. According to members of the CRWG, an effective evaluation makes explicit links between the nature of the program being evaluated, the way in which the program is delivered, the ways in which participants engage with the program, the type of learning the participants experience, and the impact of the program on the lives of the participants (Hiebert & Magnusson, 2008; Smith, Schalk, & Redekopp, 2009). The evaluation framework developed by the CRWG reflects these characteristics. The framework developed by the CRWG was utilized to investigate the effectiveness of the *Career Coaching Across the Curriculum: Integrating Career Education Strategies in the Curriculum* pilot project.

Procedure

Data were collected in several ways. A formative evaluation of lectures and activities was administered at three separate junctures during the Career Education course. A summative evaluation was administered after the final Career Education class. Finally, formative and summative evaluations were administered by pre-service teachers to students in the K-12 schools

in Southern Alberta during their internships. The data gathered through these evaluations were analyzed through the use of frequency counts, percentages and mean scores. The qualitative responses provided by pre-service teachers and by students in the K-12 educational system are presented in this article as verbatim quotations. All of the evaluation tools utilized in this study were paper and pencil documents and were completed anonymously.

Sample

Pre-service teachers in this study were self-selected. Advertisements were circulated throughout the Faculty of Education at the University of Lethbridge. All pre-service teachers enrolled in the Faculty of Education teacher-training program were eligible to register in the Career Education course and the practicum experience. In total, twenty-one (N=21) pre-service teachers participated in the first two offerings of the Career Education class and thirteen (N=13) pre-service teachers participated in the first two offerings of the internship experiences. Ten (N=10) pre-service teachers participated in the first offering of the Career Education class. Five (N=5) pre-service teachers participated in the first offering of the internship experience. Eleven (N=11) pre-service teachers participated in the second offering of the Career Education course. Eight (N=8) pre-service teachers participated in the second offering of the internship experience.

The majority of pre-service teachers who participated in the first two offerings of the Career Education class and the internship experiences were between the ages of 20-29 (72%), and female (90%). Pre-service teachers in the Education program at the University of Lethbridge select a major and a minor course of study but they do not specialize in terms of elementary, middle or high school. The pre-service teachers described in this article represented a broad range of major and minor specializations (Social Studies Education, Art Education, Drama Education, English Language Arts Education, Science Education, Physical Education, Mathematics Education, etc) and were placed in a broad range of schools (for example, inner city schools, rural schools, elementary schools, middle schools, high schools).

In the following section the results of the data will be presented.

Results

The results of the study will be presented according to the following sections: Formative evaluation, summative evaluation, and student questionnaires.

Formative Evaluation

The Career Education course was offered on four weekends in May/June, 2009 and on four weekends in September/October, 2010. In the first three weekends of the course pre-service teachers were guided in an exploration of important topics in career education (for example, career theorists, career counselling process, career counselling outcomes). In the final weekend, pre-service teachers were required to present to their peers the lesson plans, unit plans and school wide interventions they intended to implement in their internship experiences. The first group of pre-service teachers participated in the Career Education class in May/June, 2009. The second group of pre-service teachers took the Career Education class in September/October, 2009. After each of the first three weekends each pre-service teacher was asked to complete an evaluation of the weekend's topics and activities (the fourth weekend was not evaluated since it was comprised

of presentations by pre-service teachers and did not contain new content).

When completing the evaluation forms pre-service teachers were first asked to indicate their level of participation in each of the topics and activities by indicating whether they didn't participate (1), somewhat participated (2) or fully participated (3). Participation in the topics and activities across the three weekends was high – 96% of pre-service teachers indicated that they fully participated in the career education topics that were presented in the Career Education class.

After indicating their level of participation, pre-service teachers were asked to indicate whether they found the topics and activities useful. They were first asked to indicate whether they found the topic or activity useful. Then they were further asked to identify whether they found the activity not useful (0), not really useful, but almost there (1), minimally useful (2), somewhere between minimally useful and extremely useful (3), or extremely useful (4).

Table 1 provides a description of the data collected after the first weekends (group one and group two) of the Career Education course.

Table 1

Formative Evaluation of Topics and Activities Weekend #1 (N=21)

Topics	Average Usefulness
Career counselling triads exercise	3.9 (extremely useful)
Career counselling skills	3.7 (extremely useful)
General counselling process	3.7 (extremely useful)
Career counselling process	3.6 (extremely useful)
Career counselling outcomes	3.5 (extremely useful)
Career theorists	3.5 (extremely useful)
World of work	3.2 (minimally useful/extremely useful)
Weekend #1 average	3.6 (extremely useful)

As indicated in Table 1, pre-service teachers highly rated all of the topics and activities presented in the first weekend of the Career Education class. The vast majority of topics were rated as either minimally useful/extremely useful (3) or extremely useful (4). The highest rated topics/activities were: career counselling triads activity (3.9), lectures/discussions on general counselling process (3.7), lectures/discussions on counselling skills (3.7), and lectures/discussions on the career counselling process (3.6).

Table 2 presents the data collected after the second weekends (groups one and two) of the Career Education course.

Table 2

Formative Evaluation of Topics and Activities Weekend #2 (N=21)

Topics	Average Usefulness
Past experiences	3.9 (extremely useful)
Informal career assessments	3.8 (extremely useful)
99 year old question	3.8 (extremely useful)
Guided imagery exercise	3.8 (extremely useful)
Pride story exercise	3.7 (extremely useful)
Initiation strategies	3.7 (extremely useful)
Semi-formal career assessments	3.6 (extremely useful)
Formal career assessments	3.5 (extremely useful)
Weekend #2 average	3.7 (extremely useful)

As Table 2 suggests, pre-service teachers found the topics and activities presented in the second weekend of the Career Education class very useful. All of the topics and activities were rated as extremely useful (4). The highest rated topics/activities were: “past experiences” exercise (3.9), informal career assessments (3.8), 99 year-old question activity (3.8), and “guided imagery” (encouraging participants to envision an ideal day/future) exercise (3.8), and discussion of informal career assessments (3.8).

Table 3

Formative Evaluation of Topics and Activities Weekend #3 (N=21)

Topics	Average Usefulness
Self-portraits exercise	3.8 (extremely useful)
Decision-making process	3.8 (extremely useful)
Exploration strategies	3.8 (extremely useful)
Decision-making strategies	3.8 (extremely useful)
Preparation strategies	3.8 (extremely useful)
Implementation strategies	3.7 (extremely useful)
Weekend #3 average	3.8 (extremely useful)

Table 3 presents the data collected after the third weekends (groups one and two) of the Career Education course.

As is indicated by the data in Table 3, pre-service teachers highly rated the topics and activities presented in the third weekend of the Career Education class. All topics and activities were rated as extremely useful (4). The highest rated topics/activities were: self-portraits exercise (3.8), the decision-making process (3.8), exploration strategies (3.8), decision-making strategies (3.8), and preparation strategies (3.8).

Summative Evaluation

At the culmination of the Career Education elective course pre-service teachers were asked to complete a summary evaluation. In completing the summary evaluation, participants were asked to rate themselves prior to taking the Career Education course and after taking the Career Education course. In doing so, they were asked to first decide whether their knowledge, skills or attitudes (on a number of important outcome items) were acceptable or unacceptable before and after taking the course. Then they were asked to identify whether their knowledge before and after taking the course was unacceptable (1), not really acceptable, but almost there (2), minimally acceptable (3), somewhere between minimally acceptable and exceptional (4), and exceptional (5).

Table 4 summarizes the data collected through the summary evaluation.

Table 4

Summary Evaluation of Career Education Class

Outcomes	Average Pre-score	Average Post-score	Average Difference
Confidence in my ability to integrate career development principles into the curriculum	1.6	4.7	3.1
A clear understanding of how the theories of career planning influence practice	1.5	4.5	3.0
Knowledge of processes involved in effective career self-management	1.8	4.8	3.0
A clear understanding of the theories of career development	1.5	4.2	2.7
A clear understanding of how to get students involved in, and excited about, the importance of career planning	2.1	4.7	2.6
Knowledge of resources available to students and teachers to assist students in their career planning	1.9	4.5	2.6
Understanding of the impact a teacher can have on career development of students	2.9	5.0	2.1
Understanding of the importance of lifelong career self-management	3.0	5.0	2.0
Overall means	2.0	4.7	2.7

As Table 4 clearly shows, pre-service teachers indicated that they achieved many

important outcomes as a result of participating in the Career Education class. On nearly all the outcome items they rated their knowledge, skills and attitudes as “unacceptable” or “not really acceptable, but almost there” before taking the Career Education. However, in all of the cases pre-service teachers rated their knowledge, skills and attitudes as either acceptable or exceptional after taking the Career Education course (as shown by mean score differences). The highest differences in mean score changes were found in the following items: “confidence in my ability to integrate career development principles into the curriculum” (1.6 to 4.7), “a clear understanding of how the theories of career planning influence practice” (1.5 to 4.5), and “knowledge of processes involved in effective career self-management” (1.8 to 4.8). Overall, pre-service teachers reported that prior to taking the Career Education class their knowledge of career development theory and practice and their confidence in their ability to provide effective career development support to students was minimally acceptable (overall mean score of 2.0); after taking the class they reported that their knowledge and confidence was exceptional (overall mean score of 4.7).

Pre-service teachers were asked to identify the extent to which the changes reported in the summary evaluation were the result of taking the Career Education course, or the extent to which the changes reported were a function of other factors in their lives. Specifically, they were asked to identify whether the changes reported were a result of “mostly other factors”, “somewhat other factors”, “uncertain”, “somewhat this course”, and “mostly this course”. Ninety-five percent (N=20) of pre-service teachers attributed the changes they reported in the summary evaluation to the instruction they received in the Career Education course.

As part of the summary evaluation, pre-service teachers were also given the opportunity to provide comments about their experiences in the Career Education course. The following comments were contributed:

- Great course! Great for personal reasons as well as for integrating into the curriculum. Would have liked a bigger focus on classroom uses rather than adult career counselling.
- I found this course to be an incredibly valuable experience that provides teachers with the knowledge, skills and resources to teach career/life planning effectively!
- This course gave me many skills to develop as a teacher and personally which I feel will greatly improve my effectiveness as a teacher.
- The course was beneficial not only to my own career development, but to the understanding of career planning and career coaching. I feel confident with bringing the aspects of career coaching to the classroom.
- This class was great! So very beneficial to career planning as well as life in general. I continue to find myself using strategies learned in class on a daily basis (all stages of career process). I have and will continue to recommend this class. Very beneficial to all teachers for all areas of the curriculum.
- I found this course especially rewarding and hope to bring my enthusiasm about this new knowledge to others during my internship and teaching years to follow.
- Great class that helped with my career planning as well.
- This was the most impactful, creative, and useful education course I have taken.
- The course material was presented in a way that made it easy to incorporate into curriculum.
- This has been one of the most helpful, interesting, and applicable courses that I have taken in the four years in my university career. Everything I learned in this class can be applied to the classroom environment and is very relevant to students.

- It is a great course and needed especially for Junior and Senior High students.
- It was a great learning experience for me! I hope to pass on what I learned to my students!
- This course was extremely beneficial and the info learned will be incorporated into my teaching. I liked doing presentations at the end so I could get more ideas on how to incorporate career counselling strategies into my teaching.
- This course didn't just help with career counselling but how to improve all relationships.
- It makes sense to me now that this is "life-planning", not just career planning. Excellent course!
- Life changing course! Most valued course throughout entire university education experiences!
- Great class. Learned so much valuable information. I feel this class should be integrated in every classroom.
- Great course and instructor.
- Great class, very eye-opening; it will be interesting to see what effects this will have on students graduating 5-10 years from now (hopefully they will be better prepared).
- This course was amazing, and will become a part of my teaching philosophy.

The following section describes the data that was collected by pre-service teachers during their internship teaching experiences.

Student Questionnaires

After pre-service teachers completed the Career Education elective class they were provided the opportunity to apply what they learned in an internship teaching experience. The first group of pre-service teachers participated in the Career Education internships in September-December, 2009. The second group of pre-service teachers participated in the internships in January-April, 2010. As part of this practicum teaching experience pre-service teachers were required to integrate career education into curriculum and provide career education lesson plans, unit plans and/or school wide interventions to students. As well, they were required to conduct an evaluation to assess the participation level of students, the perceived usefulness of their lesson plans/unit plans/school wide interventions and the outcomes resulting from their interventions.

The research questionnaire they distributed to students following their interventions required students to answer several questions. First, students were asked to indicate their level of participation. They were provided a list of career education activities implemented by the pre-service teacher and then were asked to indicate whether or not they participated in the activity.

Second, students were asked to rate the usefulness of the career education activities implemented by the pre-service teacher. They were given a list of the activities and asked to rate each activity by indicating whether it was "not good at all", "good" or "great".

Third, students were asked to consider four outcome statements: "This lesson, unit plan, school wide intervention helped me to learn a lot about myself", "This lesson, unit plan, school wide intervention helped me learn a lot about careers", "This lesson, unit plan, school wide intervention made me excited about what I could do with my life", and "This lesson plan, unit plan, school wide intervention made me want to learn more about different careers". In considering these outcomes statements, students were asked to indicate how much they agreed with each one by circling one of the following three options: "I don't agree", "I'm not sure", or "I agree".

Fourth, students were asked to describe what they liked about the career education interventions. They were also asked to indicate how the career education interventions could be improved.

Evaluation forms were gathered from 323 students in the K-12 educational system in Southern Alberta. The students ranged from six to eighteen years of age and their level of education ranged from Grade One to Grade Twelve. Students completed the questionnaires independently. In special cases, students with limited writing proficiency were aided by a scribe when completing the research questionnaires.

Participation in the lesson plans/unit plans and school wide interventions were high – 92% of students indicated that they fully participated in the career education intervention being evaluated.

Table 5 provides a description of the usefulness of the career education interventions as reported by students.

Table 5
Perceived Usefulness of Interventions

Usefulness of activities	f	%
Not at all good	84	5%
Good	465	29%
Great	1029	65%
Total	1578	100%

As shown in Table 5, students rated the career interventions as being very useful. Sixty-five percent of the activities were rated “great”, 29% were rated “good” and only 5% were rated “not at all good”.

Table 6 provides a description of the overall outcomes of the career education interventions.

Table 6
Outcomes Resulting from Interventions (N=323)

Outcomes	I Don't Agree	I'm Not Sure	I Agree
This lesson plan, unit plan, or school wide intervention helped me to learn a lot about myself	23 (7%)	112 (35%)	187 (58%)
This lesson plan, unit plan or school wide intervention helped me to learn a lot about careers.	23 (7%)	69 (21%)	228 (71%)
This lesson plan, unit plan, or school wide intervention helped make me excited about what I could do with my life.	16 (5%)	79 (24%)	227 (70%)
This lesson plan, unit plan, or school wide intervention made me want to learn more about different career paths.	21 (7%)	83 (26%)	217 (67%)

As shown in Table 6, the majority of students reported that they learned a lot about themselves (58%), they learned a lot about different career paths (71%), they became more excited about their future career/life (70%) and they became more motivated to continue learning about career planning (67%).

On the evaluation forms students were also given an opportunity to provide qualitative feedback on the career education lessons delivered by the pre-service teachers. Students were asked: “What did you like about the lesson plan, unit plan or school wide intervention?” The following are sample responses provided by students:

- It explained jobs that I didn’t know about.
- I liked this unit because it helped me to find out my dream job and more about myself and others.
- I learned things about myself that I didn’t know. I also learned things about my friends that I didn’t know.
- I liked the 99 year-old question because it made me think about all the stuff I might do in my life and it also made me think about some stuff I might not have thought about had I not done the project.
- I liked that we got/found good resources for the future.
- I liked learning about myself and knowing what I want to do later in my life.
- The good part about it was we got to think about our future and what we have to do to achieve it.
- I got to think of the fun jobs I can do in the future. I got to remember all of my moments where I was really proud.
- I liked the fact that I got to explore my favorite careers and it was really cool having our guest speakers come in.
- I liked how it gave you the chance to share stories and imagine your future life.

Students were also asked to respond to the question: “How could this lesson plan, unit plan or school wide intervention be improved?” The following are sample responses provided by students:

- Going to work places.
- It could be done more often like two days a week and not once every three weeks.
- Going to see people at their work and watching videos.
- Getting to try the jobs.
- I would like to have more time to do the activities.
- To bring more guest speakers.
- I think it should be longer. I really liked it.
- Maybe by having a list of 20 or 30 careers with a description of what you would do.
- I think it could be made better by telling us the kind of education you need for certain jobs and giving the Career Week more time (maybe make it longer).
- It could be made better with more activities or more time – make Career Week into Career Month.

As can be seen in the comments above, when students were asked to provide feedback as to how the career education interventions could be improved the only suggestions they provided was to offer more interventions.

In summary, data were collected on a wide array of factors in order to examine ways to improve the Career Education elective course. Data were also collected to determine the value of the course in training pre-service teachers to assist students in their career planning. The following section will provide some preliminary conclusions based on an analysis of the data.

Discussion

The results of this preliminary study allow for some preliminary conclusions. In the first place, the evaluation of the Career Education course clearly shows that providing training to pre-service teachers can be highly effective in assisting them in developing the knowledge and confidence to provide career development support to students. As a result of taking a credit course in career education, the pre-service teachers in this study indicated that, amongst other things: they felt confident to effectively assist students with their career development, they developed a clear understanding of how the theories of career planning influence practice, and they developed a clear understanding of how to get students involved in, and excited about, the importance of career planning.

In addition, it also appears that training pre-service teachers in career education positively impacts the career development of children and adolescents. As discussed earlier in this article, the worker of the 21st century requires the ability to engage in ongoing self-exploration, career exploration and career planning. As well, the worker of the 21st century requires the ability to manage change and maintain optimism while actively constructing and reconstructing her/his career/life. As a result of participating in the career education lesson plans, unit plans and school wide interventions, students reported that they learned a lot of valuable things about themselves, they learned a lot about career opportunities, they became more excited about their future, and they were excited to learn more about careers. These outcomes closely align with the kinds of competencies required to thrive in the 21st century of work.

Taken together, the preliminary results of this study indicate that providing training to pre-service teachers in career development theory and practice strongly benefits the career planning of children and adolescents in the K-12 educational system. Given the relatively small sample in this study, more research needs to be conducted to confirm these findings. As well, similar research needs to be conducted in other educational systems and regions to generalize these findings.

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