

MEETING WORKPLACE SKILLS: THE CAREER DEVELOPMENT CONTRIBUTION

REPORT 1

Synthesis Report

*A project of the Canadian Research Working Group on Evidence
Based Practice in Career Development*

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Context

The overall context for the research project was to explore the impacts of career development workplace interventions on employers and employees in small to medium enterprises (SMEs). Small-to-medium businesses (SME's) in particular face certain challenges in providing career development services in their places of work. SME's refer to organizations with less than 500 employees. Although company activities in SMEs are often highly specialized, roles generally are not. There is less infrastructure than in larger organizations, fewer 'support' functions, as well as broader individual responsibilities. This context leads smaller companies to be typically very lean, and career ladders to be minimal. In particular, SME's do not tend to have human resources departments that manage employee training and development initiatives. Taken together, these characteristics represent a very different context for workforce development than what exists in larger organizations. Yet the concerns of SMEs and large businesses are often the same when it comes to developing worker skills (Kickul, 2001). The difference lies more in the means available to address employee skills development. The issues identified by SMEs include retention of skilled labour in particular (CFIB, 2008). This is a major concern when it comes to staff recruitment and retention. Although organizations invest resources in career development types of activities for recruitment, there tends to be less investment in similar types of activities for employee retention.

Reviews of the literature provided some evidence of positive impacts of career development workplace interventions for both employees and the SME but very limited implementation and very few actual interventions developed for employed adults.

This program of research experimented with career development interventions in a range of workplaces in order to study the impacts of these interventions on aligning the goals and needs of organizations with the goals and needs of employees, on work satisfaction and on employee retention.

General Description of the Overall Project

This project is best conceptualized as having four components. First, a Needs Analysis was conducted, in order to provide a snapshot of current career development practices in SMEs. An online survey for employees and managers and a series of employee focus groups provided an overview of the career development services that currently were available to employees in SMEs, as well as the career development services that employees would find useful but were not necessarily available to them. (Report 2: Career Development in SMEs: Needs Analysis, Baudouin, R., 2010).

Based on the results of the situation analysis, three specific interventions were developed and field tested, as outlined below.

1. **Workplace Skills Assessment and Development (*Bilan et développement de compétences*)** - a professionally accompanied intervention. The Workplace Skills Assessment and Development Skills Assessment (unlike Prior Learning and Assessment-PLAR) focuses both on skills identification by looking to an individual's past and present learning, and on skills *development* which has a focus on future career goals and future learning. The intervention consists of a number of skills assessment and development sessions (3 to 10 depending on the person) with significant personal work to be completed by the individual in between sessions. This intervention was delivered by trained professional career counsellors external to the organization. The experimentation of this intervention was done in French only. The materials are available in both official languages.
2. **Career Conversations** - an intervention delivered by a manager/supervisor. A career conversation is a discussion between an employee and his or her manager that supports the employee in developing career goals and an action plan for achieving these goals. This conversation will not always result in a specific decision or plan right away, but will set the stage for an employee to later clarify goals and set plans. This result is intended to be beneficial for both the employee and the employer. Supervisors and managers were trained in the skills to initiate and conduct career conversations with employees to help them articulate their own career aspirations, the competencies that they possessed or would like to develop, and positions within the organization where those competencies could be put to use in a manner that employees found optimally satisfying and fulfilling. The experimentation of this intervention was done in English only. The materials are available in both official languages.
3. **My Career GPS** – a self-directed intervention. *My Career GPS* is a self-directed guide enabling individuals to assess their current life and work paths, notably their personal characteristics, values and career aspirations in order to identify personal projects they wish to undertake, such projects including but not restricted to skills development. My GPS contains seven sections and the average time taken by individuals to complete this intervention is between 12 to 20 hours. The experimentation of this intervention was done in both French and English although the English sample size was much smaller than the French sample. The materials are available in both official languages.

It was intentional that each intervention in the study be delivered through a different delivery mechanism (professional career counsellor, manager/supervisor, individual employee) demanding different levels of resources from SMEs. Both the Workplace Skills Assessment and Development and My Career GPS may be delivered external to the SME while the Career Conversation is delivered internally and engages supervisors/managers as actual deliverers of the intervention. SMEs are therefore able to consider their own operational realities as they consider making one or more of these interventions available to their employees.

Each of the above components is detailed fully in the component specific Final Reports.

Canadian Research Working Group for Evidence-Based Practice in Career Development (CRWG)

This research project has been managed by the Canadian Research Working Group on Evidence Based Practice in Career Development. The Canadian Research Working Group (CRWG) was created in 2004, following the Pan Canadian Symposium on Career Development, Lifelong Learning and Workforce Development with an overall mission to build the evidence base for career development interventions and services. The CRWG is a pan-Canadian collaboration between the Canadian Career Development Foundation (CCDF) and seven professors and researchers at the following universities: the University of Victoria, Simon Fraser University, the University of British Columbia, the University of Calgary, Université Laval, Université de Sherbrooke and the Université de Moncton. It is a unique Canadian research partnership and in addition to advancing the evidence base for career development practice, it provides a mechanism for ensuring that research conducted in both official languages is shared.

General Approach to Evaluation

The model for demonstrating the value of career development services developed by the CRWG (Baudouin et al., 2007) was used to evaluate the effectiveness of the interventions piloted in this project. The model has three main components: Inputs, Processes, and Outcomes. (See Figure 1.) Processes refer to the interventions used to create client change. In the current project, the processes were the three types of interventions described earlier, Workplace Skills Assessment and Development, Career Conversations, and My Career GPS. Inputs refer to the resources used to deliver the interventions. In the current project the inputs were the facilitator guides, participant workbooks, interview protocols, competencies of the staff delivering the interventions, etc. The Workplace Skills Assessment and Development intervention was delivered by professional counsellors who had the skills and experience necessary to be able to implement the intervention successfully. For the Career Conversations, a training intervention was developed to teach supervisors and managers how to engage in career conversations with their employees. Outcomes refer to the changes that research participants experience as a result of participating in the processes.

In this project, there were two levels of outcomes: intervention specific outcomes and outcomes common to all three interventions. In each intervention, a tracking process was implemented to determine intervention fidelity, which permitted us to determine the extent to which career counsellors, managers/supervisors and employees adhered to the intervention plan as intended. Intervention-specific monitoring forms also were constructed to measure changes in research participant knowledge, skills, and personal attributes that were related to the outcome objectives of the interventions under examination. Two instruments were used in all interventions to assess outcomes that pertained to all three interventions. The common measures are described later in this report. Each intervention also used measures specific to that intervention. The variables which were tracked in the interventions included personal self-efficacy, self-esteem, quality of management of work life and career self-management. The intervention-specific measures are described in detail in the final reports of each intervention.

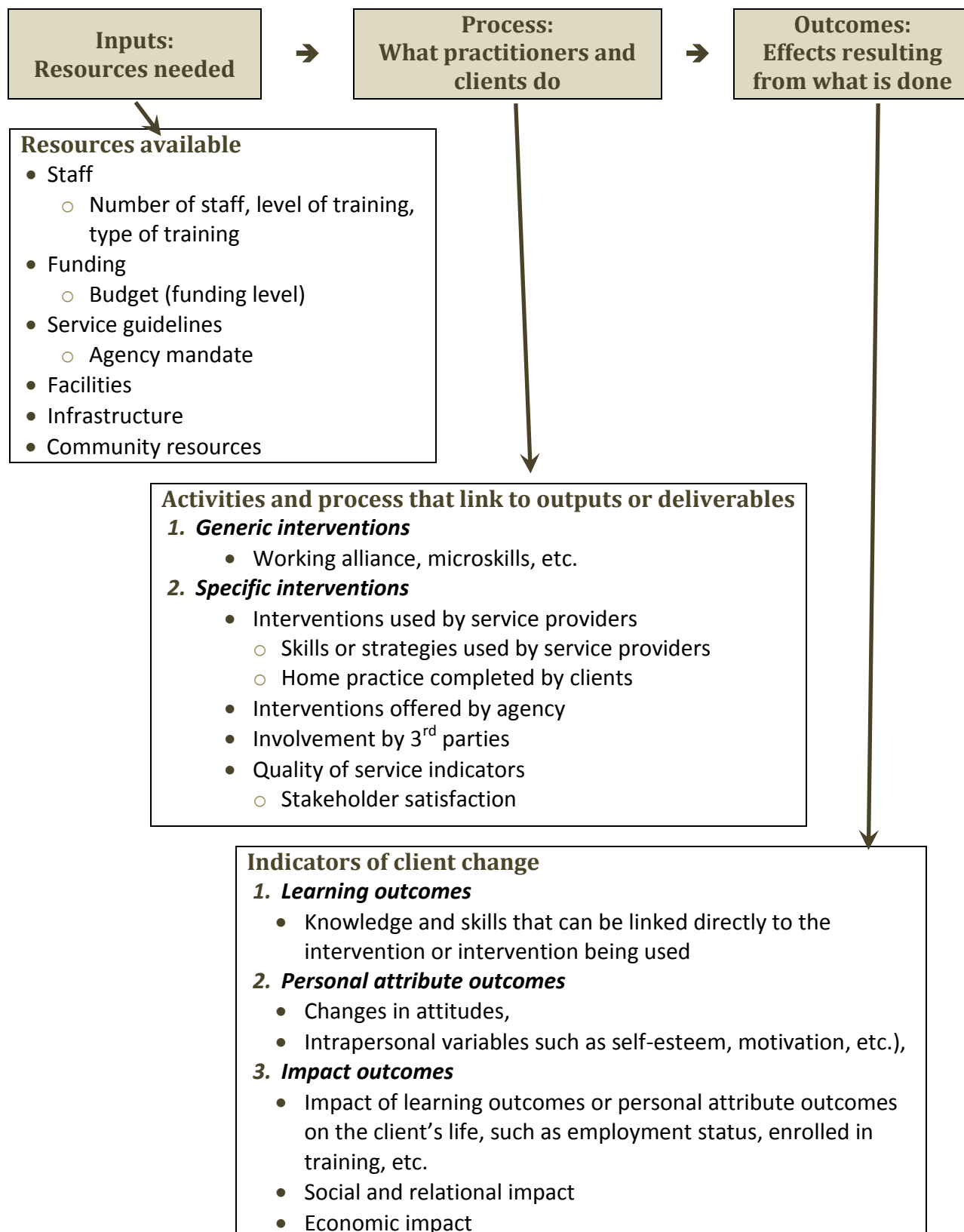


Figure 1: Evaluation framework: A tool for organizing relevant evaluation information

The CRWG model provides a framework for assessing client change resulting from career development interventions. We restrict the use of the term outcome to apply only to client change. In this way, outcomes (client change) can be distinguished from outputs (the products that are produced in the process of delivering the intervention). The outputs also include products that clients produce as part of an intervention, including things such as a personal project, a career conversation follow-up action plan or a goal and action plan upon completion of My GPS. These sorts of outputs often are used as indicators that clients have followed the processes involved in the intervention and can provide evidence attesting to client change.

In this project, there are many outputs:

- The Situation Analysis: a snapshot of employee workplace needs as seen by them and their managers and their assessment of the degree to which these needs are important and are or are not being met;
- Organizational Support for Career Development in the SME Context: an extensive literature review of organization-based career development initiatives;
- Focussed Literature Reviews for each intervention as the basis for developing each intervention;
- Facilitation Guides, Participant Workbooks and Implementation Guides for each intervention;
- Evaluation instruments used to track intervention fidelity and research participant outcomes;
- Detailed Final Research Report for each intervention.

A complete list of outputs appears at the beginning of all reports, including this Synthesis Report.

General Findings

This Synthesis Report presents the results of the analysis of the data obtained from the two questionnaires that were common to all interventions. A detailed description of the field test results for each intervention can be found in the Final Research Report on each intervention. In this synthesis report, a few highlights are mentioned.

Generally speaking, the anecdotal data and the reports from employees and employers who participated in this project, indicate that all three interventions were successful. Employers reported that their initial fear that examining career goals would result in employees seeking employment elsewhere, was unfounded. A common theme running through all three interventions is that when employees examine their own competencies, reflect on their career goals, and become more aware of job possibilities within their current organizations, their job satisfaction increases and they are more likely to remain within their current employment setting. These informal reports suggest that regardless of which intervention an employer

might choose, doing something to promote employee career self-management is likely to have a positive effect on the employee and the organization.

Results of Situation Analysis:

The objective of this analysis was to gain a better understanding of how employees perceive their career development and the challenges they face; what helps them to stay motivated and committed to their work and their training; and what support they receive from their employers, as well as what support they would like to receive. An online survey and across Canada focus groups were completed. The survey sample was small (n=78); in contrast, the number of focus group participants was large (n=86) and included a more diverse sample.

The results of the employee survey indicated that, overall, the employees were satisfied with their current work situations. However, there are still significant career development and training needs that are not met or could be better met. The analysis identified five important needs, which are very closely connected to career development in the workplace and are not currently being met. These are:

1. The development or maintenance of job satisfaction or a feeling of accomplishment.
2. Matching of tasks, skills, and interests with workplace duties and their skills, and interests.
3. Achieving independence in the workplace.
4. Positive communications and work relationships, whether with the management team, the immediate manager, or co-workers.
5. The need for ongoing development of career plans.

The results of the managers' survey largely confirm the conclusions drawn from the employees' survey. In addition, the managers identified their own needs as managers including being able to help employees with their own career development and training. The managers agreed that employees do not need to go outside the organization to discuss their futures in the organization.

In a third data collection exercise, we asked participants of focus groups to tell us what motivates them to engage in their work and stay with their current employer. Nine categories with many sub-categories were identified. Some were anticipated (for instance, financial considerations and other benefits); however, other categories show that there are several avenues for investigation and intervention. For instance, work climate, recognition, the work itself, interest in work, passion, the workplace, perception of the company, the boss, co-workers, and team spirit are all key factors in employee engagement.

Participants were questioned about their future plans within the organization. Some were very optimistic about their future within the organization, while others were very pessimistic. The factor underlying this pessimism related to the small size of the company, which limits perceived opportunities for advancement. A very strong dependence on shifts in the economy

was also noted. The participants seemed to be saying that when the economy slows down, their organization is quickly affected. The reverse was probably observed as well. Level of education to qualify for advancement was another personal factor affecting development within the organization.

Participants were asked what their employer could do to help them realize their future plans. First, the participants told us that they hoped to have access to mentoring programs in some form or another. Second, they hoped their employer would modify their responsibilities so they would have more challenges and could learn new skills. Third, the participants said they wanted more information about the company's future plans.

Participants were asked to identify what their employer could do to encourage them to stay with the organization. Financial considerations were quickly identified. However, other elements considered equally important included work climate, transparency, motivation, and communication.

While collecting these data, we noted that, for the most part, employees of small and medium enterprises enjoy their work and like working for a small company. They value communication with their employer and co-workers a great deal. However, they feel limited with regard to possible development and, together with their employer, would like to be able to identify new challenges.

In general, the employees and managers reported that they were very interested in ongoing career development and training that would allow them to advance within their workplaces. However, many important career development needs were identified that were not currently being met. Support and assistance with career planning and the achievement of career goals were identified as being mutually beneficial to both the employee and the employee organization. Workplace support for career development included the sharing of information, mentoring and workplace flexibility for skill development. These factors also contributed to employee engagement in training.

Results across Common Measures

Each intervention used two common measures the Career Maintenance Strategy (CMS)/Questionnaire Gestion du maintien au Travail (QGMT) and the Career Self-Management Questionnaire (CSQ)/Questionnaire d'autogestion de Carrière (QAC)

To analyze the data from the common measures, a Multi-variate Analysis Of Variance for repeated measures approach was used. For each measure, sex and age were each crossed with time and the 13 subscales of the CMS/QGMT or the 4 subscales of the CSQ/QAC were used as dependent measures.

Using MANOVA to analyze these data provided a very conservative test, in that it reduced the chances of producing a significant finding due to the number of analyses that were done. The MANOVA simultaneously tests all dependent measures to see if there are any statistically significant effects, and if there are, a step-wise procedure is enacted to see which of the

multiple dependent measures is contributing to the significant effect. The risk of using a MANOVA approach is that small cell size, coupled with the conservative nature of the procedure, reduces the possibility of discovering a statistically significant effect when it does in fact exist. In the final reports on the interventions a more robust approach is described, therefore in this synthesis report the more conservative approach is reported. The project as a whole produced an enormous amount of data; therefore, only the statistically significant findings are reported here. Additionally, the study was designed to test the efficacy of each intervention, rather than to determine the comparative effectiveness of the three interventions. The interventions were designed for different audiences, required different resources for implementation, and were designed to achieve different goals. Therefore, it was not valid to use intervention as an independent variable in this study. Thus, we avoid comparing the results of the three interventions and instead provide an analysis of the effectiveness of each intervention, focusing on measures that were common to all three programs. Furthermore, the field test of the Career Conversations intervention was designed as a qualitative study and therefore utilized a smaller sample size. This, coupled with sampling difficulties that were beyond the control of the researchers, resulted in the sample size for the Career Conversations intervention being too small to conduct valid statistical analysis. However, a detailed description of the effectiveness of all three interventions can be found in the Final Reports on each intervention, and are summarized in a later section of this Synthesis Report.

For the Workplace Skills Assessment and Development (WSAD) (*Bilan et développement de compétence*) intervention, there was no significant main effect for sex, age, or time, but there was a significant sex-by-time interaction effect ($p = .05$), suggesting that the pattern of change across time was different for men and women. Follow up univariate tests indicated that the significant effect was coming from two subscales: Positive reflective career outlook, and Reasonable investment in work (not under-extending self). Subscale means appear in the table below.

Mean scores for Men and Women on Two Subscales of the CMS/QGMT

<i>Subscale & Sex</i>	<i>n</i>	<i>Pretest</i>	<i>Posttest</i>	<i>Total</i>
<i>Positive reflective career outlook</i>				
Male	16	3.19	3.88	3.53
Female	12	3.67	3.67	3.67
Total	28	3.39	3.79	
<i>Reasonable investment in work</i>				
Male	16	4.81	4.06	4.44
Female	12	4.58	5.50	5.04
Total	28	4.71	4.68	

The mean scores depicted in the above table indicate that men developed a more positive and reflective career outlook from pretest to posttest, while the career outlook for women

remained stable over that time period. On the other hand, women tended to show more work-life balance at posttest, while for men the opposite was true.

Regarding the *My Career GPS* intervention, for the CSQ/QAC there was no significant main effect for sex and no significant interaction effects. However, there was a significant main effect for time ($p = .02$) and for age ($p = .03$). Follow up univariate tests indicated that the significant time effect came mainly from three subscales, “*Takes appropriate action with the right person at the right time*”, “*Clearly identifies personal competencies in one’s résumé or portfolio*”, and “*Access, consult, and use LMI*”. Specifically, participants reported greater readiness to take appropriate action with the right person at the right time at both the 3-month and 6-month posttest compared to their pretest reports and also compared to their scores immediately after completing the intervention. It seems as if initial gains on this newly developed skill were strengthened as participants practiced during the follow up period. Participants also reported greater ability to clearly identify personal characteristics in their portfolio at posttest, compared to pretest, a situation that was maintained at the 3-month and 6-month follow up. Similarly, participants also reported greater ability to access and use LMI at posttest, compared to pretest, a situation that was maintained at the 3-month and 6-month follow up. Subscale means appear in the table below.

<i>Subscale & test time</i>	<i>n</i>	<i>Sample Mean</i>
<i>Takes appropriate action with the right person at the right time</i>		
Pretest	39	2.90
Posttest 1 (3 months after)	39	3.31
Posttest 2 (6 months after)	39	3.64
Posttest 3 (12 months after)	39	3.67
<i>Clearly identifies personal competencies in one’s résumé or portfolio</i>		
Pretest	39	2.90
Posttest 1 (3 months after)	39	3.67
Posttest 2 (6 months after)	39	3.64
Posttest 3 (12 months after)	39	3.64
<i>Access, consult, and use LMI</i>		
Pretest	39	2.72
Posttest 1 (3 months after)	39	3.15
Posttest 2 (6 months after)	39	3.00
Posttest 3 (12 months after)	39	3.18

Follow up univariate tests indicated that the significant age effect came from “*Has development projects at work for both short and medium term and where possible, long term; action plans are realistic and achievable*”. Specifically, older workers (age 40 and older) reported less of this attribute than their younger peers ($p \leq .05$), a condition that was stable across time. Subscale means appear in the table below.

<i>Subscale & Age</i>	<i>n</i>	<i>Sample Mean</i>
<i>Has development projects at work for both short and medium term and where possible, long term; action plans are realistic and achievable</i>		
29 and younger	13	4.92
30 - 39	16	4.54
40 and older	17	3.84*

Regarding the *My Career GPS* intervention, for the CMS/QGMT there was a significant main effect for time ($p = .03$) and the main effect for age approached significance ($p = .07$). Follow up univariate tests (3 months and 6 months) indicated that the main effect for time was coming mostly from the *Express self clearly to the right person at the right time subscale*, which also showed a significant effect for age. The subscale *Sense of managing workload adequately* also had a significant age effect. Specifically, the sample as a whole tended to place more importance on maintaining a balance between work activities and non-work activities at posttest (compared to pretest) and younger and older workers tended to place more importance on maintaining balance than did workers in the 30-39 age group.

<i>Subscale & Sex</i>	<i>n</i>	<i>Pretest</i>	<i>Posttest</i>	<i>Total</i>
<i>Sense of managing workload adequately</i>				
29 and younger	15	4.40	4.47	4.44
30 - 39	18	2.50	2.83	2.67
40 and older	18	3.56	4.00	3.78
Total	51	3.43	3.73	
<i>Express self clearly to the right person at the right time</i>				
29 and younger	15	4.20	3.20	3.70
30 - 39	18	3.22	2.44	2.85
40 and older	18	4.00	3.61	3.80
Total	51	3.78	3.08	

To summarize, the results of the statistical analysis suggest that after completing either the *Bilan et développement de compétences* intervention or the *My Career GPS* intervention, participants were more self-directed and more intent on maintaining work-life balance, an effect that was sustained over time. In addition, participants in the *My Career GPS* intervention reported being better at accessing LMI and developing a relevant portfolio, two outcomes that are explicitly addressed in the intervention. Thus there is reasonable agreement between the results of the statistical analysis and the anecdotal reports.

Pulling it all together, it is possible to say with some confidence that doing something to promote employee self-management of their own career paths has a positive effect. As can be seen in the summaries of the individual interventions in the following section, the nature of the impact is different for the different interventions, but overall, interventions that help employees identify and articulate their competencies, become more clear about their career goals, and become more aware of job possibilities within their current organizations, has a positive effect on the organizations they work for. Their job satisfaction increases and they are more likely to remain within their current employment setting. These informal reports suggest that regardless of which intervention an employer might choose, doing something to promote employee career self-management is likely to have a positive effect on the employee and the organization. The decision as to which intervention an employer should consider using is likely best made by considering the needs of the employees and the organization and the resources available for implementation.

Intervention Specific Outcomes:

The Workplace Skills Assessment and Development (WSAD) (*Bilan et développement de compétences*):

This study has four specific objectives:

- To adapt the model of Michaud et al. (2007) to the SME context;
- To study the impact of the approach on the determining variables in skills assessment which are feeling of personal efficacy in relation to skills assessment and development, quality of management of work life, and self-esteem
- To evaluate the immediate subjective effects of each of the workplace skills assessment and development (WSAD) sessions; and
- To identify effective interventions by triangulating the results.

The sample consisted of 31 employed persons (19 men and 12 women between the ages of 25 and 60) from five enterprises, five career counsellors and two senior career counsellors, and five employers or their representatives, who were either managers or human resources directors.

The analysis and cross-referencing of the quantitative and qualitative data made it possible to identify ***seven particularly effective interventions*** in WSAD, each needing ongoing support from a career counsellor in order to do the following:

1. Explore professional and personal history in order to identify acquired skills.
2. Validate the person's perception of his or her skills development.
3. Prepare a skills portfolio.
4. Find and understand information that will make skills development possible in the person's unique work situation.

5. Understand the challenges relating to the skills developed or to be developed.
6. Identify, clarify, and validate a skills development plan.
7. Prepare a skills development action plan.

Generally, the WSAD approach increased the employed persons' feeling of personal efficacy in relation to skills assessment and development, the quality of job retention management, and self-esteem. The three paragraphs below present the results specific to each of those variables.

The increase in the feeling of personal efficacy continued until the study's last measurement period, i.e., one year after the assessment. In the study, the feeling of personal efficacy evaluated focused on three factors:

1. the ability to perform tasks,
2. the ability to identify and recognize one's skills, and
3. the ability to get mobilized to carry out an action plan or project relating to skills development.

The results show that WSAD fosters an increased feeling of personal efficacy in relation to those three factors. The largest and most significant increase was in the ability to get mobilized to carry out an action plan or project relating to skills development. ***Those results provide a strong validation of the effects of WSAD on ability, and even motivation, to take action in order to develop one's skills.*** Given the positive links established by other studies between the feeling of personal efficacy and performance, those results suggest that WSAD could have a positive impact for the enterprise by increasing the employees' feelings of personal efficacy. Other studies will have to be done to validate that hypothesis.

Another major aspect of this study is that of accessing the information required for skills development. The results show that those who complete WSAD increase quite significantly their ability to access the information needed for skills development. Once again, this increase continued throughout the year following WSAD. The results even suggest that certain people, in addition to having learned something by seeking information related to skills development, may also have transferred that learning to the workplace.

A positive increase was observed immediately upon completion of the WSAD process in the quality of management of work life.

The data also point to a positive increase in self-esteem immediately after the process. In this study, self-esteem was evaluated on the basis of social competence, problem-solving ability, intellectual ability, and value in relation to others. The results enable us to conclude that WSAD has a positive effect on quality of job retention management and self-esteem.

Those results make it possible to validate the theory that workplace skills assessment and development is effective, on the basis of evidence-based data. This type of process is therefore beneficial for employed persons, which seems to indicate that it is also beneficial for the

businesses that hire them. It is a promising career development practice that lends support to the notion of the importance of lifelong learning.

Career Conversations

The Career Conversation project involved training SME managers how to conduct career conversations with their employees, having them conduct career conversations in their places of work, and interviewing both employers and employees about their experience.

At the end of the manager training seminar, each manager was asked to complete a questionnaire regarding the effectiveness of the workshop. They were contacted for an interview after they had completed their first career conversation with an employee. The interview focused on whether the manager training workshop prepared them for the interview. The managers also taped the first career conversation and this tape was reviewed to determine whether they utilized the communication skills and career conversation process taught in the training seminar. Managers were interviewed again three months after completing their first career conversation with an employee. A final interview was held six months after the initial conversation to verify the summary of the critical incident interview and to obtain any further reflections by the managers.

Employees who volunteered to participate in the study were provided an employee career conversation workbook to be completed before the career conversation. They were contacted right after the career conversations and an interview was arranged utilizing a semi-structured interview guide that asked employees what they found to be effective in the career conversation, what was not effective, and whether there were things that would have been effective but were not included. Three months following the career conversation, the employees were contacted again to review the data analyzed from their first interview. Six months after the career conversation, the employees were contacted to arrange for their last interview in the research study. The intention of this interview was to better understand the employees' perspective of the ongoing impacts of participating in career conversations with their manager.

Sixteen managers participated in the career conversation training seminar, however, over the duration of the research between 3 and 16 of these managers participated in the various data collection procedures. Eight employees who participated in career conversations were interviewed. The primary reason expressed by the managers for not conducting a career conversation following the training was that there were workplace challenges to implementing this new procedure. Budget cuts, the lack of an advancement program, and lack of support were some of the challenges identified (see the Final Research Report). Although it is difficult to generalize from the evaluation results due to the small sample size, the findings indicate that career conversation training and implementation have value for managers, employees and SME's.

The managers utilized the communication skills and processes for career conversations that were taught in the training seminar. They also reported that the training increased their understanding of how to conduct career conversations, identify their personal assets and

resources for conducting career conversations, and develop action plans to overcome challenges to conducting career conversations. These results were maintained in the first and second follow-up interviews with managers, indicating that the knowledge and skills taught in the manager training seminar persisted.

Again, it is difficult to generalize the evaluation results regarding the employees' experiences of career conversations due to the small sample size, but the results were rich and informative. The feedback about the experience and impact of career conversations on employees was overwhelmingly positive, in that 85% of the feedback referred to helpful, as opposed to unhelpful aspects of the conversations. Sixteen percent of the total number of reported incidents referred to suggestions to improve career conversations.

One of the beneficial outcomes of career conversations was that employees felt empowered to achieve their goals and participate in personal development. Employees had increased personal insights about their wants and needs that resulted in intentional improvements at work and future goal setting. Specifically, they had increased self-knowledge, were able to look inwards, could see how things change, and were able to identify skills and attributes. There was also a sense that the company cared for the employee, contributing to increased motivation to participate in the conversations and achieve goals. The employees reported increased trust and more open communication with the managers after the career conversation. They also learned from having their manager conduct the conversation because they understood the work situation and had a similar career path.

Feedback from employees 6 months after the career conversation suggested that the perceived benefits of career conversations persisted, as did the identified processes that facilitated successful conversations. In particular, employees learned how to achieve career goals and the conversations helped them consider these career goals. They felt more committed to the career goals and the conversations were a beginning for personal development. It was important, however, that the manager who conducted the career conversation needed to follow-through with stated intentions after the career conversation. If this did not happen, it could result in employee mistrust of the manager and the experience of not being supported.

Although the direct impact of career conversations on the businesses was not measured, the results indicate that the outcomes are likely to be very positive. Six months after the initial career conversation, there is evidence to suggest that career conversations had positive impacts on the managers and employees. Managers reported wanting to continue career conversations and were interested in improving how to conduct conversations. They believed that career conversations had a positive influence on their roles as managers and improved their relationships with employees. They reported beneficial impacts on the employee's career development and workplace performance, such as making more of an effort in the workplace, taking a course, and following up with the manager's requests. Career conversations increased their awareness of discrepancies between employee skill levels and the organization training program qualifications, resulting in the need to rectify this issue. These results suggest that career conversations have the potential to benefit businesses by:

1. improving manager-employee relationships,
2. improving employee work performance,
3. aligning employee goals with organizational goals, and
4. providing more meaningful training programs.

Employees reported increased ability to formulate career plans that aligned with workplace needs. Supporting the employees' career management in a systematic way benefits organizations in achieving their business goals.

The career conversation intervention has been demonstrated to have value for both managers and employees in some Canadian SME's. This is an intervention that requires moderate resources for implementation in companies where human resources support is minimal.

My Career GPS

The Career GPS has five objectives aimed at teaching individuals how to:

1. take stock of their current situation,
2. identify their personal characteristics at work,
3. identify their plans as an employed person,
4. appreciate their workplace experience, and
5. set goals to provide impetus for achieving their development plans.

The sample consisted of 56 employed individuals (12 men and 44 women, aged 24 to 59) from 28 small and medium-sized enterprises in a variety of economic activity sectors.

The evaluative research used a mixed methodology incorporating quantitative and qualitative data. The quantitative data consisted of a variety of collection tools including assessment sheets, questionnaires, interview protocol, and research memos. In addition, four questionnaires supplied data on several variables: feeling of personal efficacy, quality of management of work life, career self-management, and self-esteem. These data were collected at four points in time: before the GPS (T1), immediately after the GPS, three months after the GPS and six months after the GPS.

Also, during the process, semi-structured participant interviews lasting an average of one hour were recorded on audiotape, after which a synthesis summary of the recordings was prepared.

The analysis and cross-referencing of the quantitative and qualitative data pointed to the relevance and effectiveness of 10 self-directed learning strategies concerning career self-management. Those strategies are as follows:

1. identify key career self-management elements to be worked on a priority basis;
2. identify generic and specific competencies to be developed;
3. identify personality traits in terms of strengths and limitations;

4. identify the fundamental values that guide one's actions and future;
5. evaluate/synthesize all of one's characteristics on the basis of one's life path;
6. identify key dimensions (health, family/couple, social, financial, spiritual, personal development) to be developed on a priority basis;
7. describe one's optimum work situation;
8. formulate workplace development plans to be worked on on a priority basis;
9. seek information and feedback about oneself, the organizational environment, and one's plans, including skills development;
10. identify objectives that are specific, measurable, realistic, positive, and personal.

The study results make it possible to conclude that all of these learning strategies are very effective. Generally, the Career GPS enabled employed individuals to increase their feelings of personal efficacy, the quality of their management of work life, their career self-management, and their self-esteem. The results of the effects of the Career GPS on the basis of these four variables are positive.

The increase in the feeling of personal efficacy was maintained throughout the four measurement times over a period of six months. The results serve to validate the effects of the Career GPS on people's ability to take action on developing their plans, including skills development. That implies that a self-managed process such as the Career GPS could have a positive effect on performance for the enterprise by increasing employees' feelings of personal efficacy. However, other studies will have to be conducted in order to validate this hypothesis.

With regard to quality of management of work life, the data indicate a positive increase three and six months after completion of the Career GPS. The GPS approach has a positive effect on four elements:

1. feeling of adequate workload management (state),
2. positive feeling about career (state),
3. feeling of physical and emotional health (state), and
4. not overinvesting in work (strategy).

There was no significant change immediately afterwards in any aspect (state or strategy). These results seem to indicate that a self-directed process such as the Career GPS has a positive effect in the medium term (three months) on the quality of management of work life. Indeed, certain changes are noted in Time 3 (three months after completion of the GPS). The change in the average of all states and strategies is significant between Time 1 and Time 3.

The self-esteem evaluated in this study concerns social competence, problem-solving ability, intellectual ability, and value in relation to others. The data show a positive increase in self-esteem six months after the process but no significant change after three months or immediately following completion of the Career GPS. Those results indicate that the Career GPS

has a positive effect on self-esteem and on quality of management of work life in the medium term (six months). That implies that a Career GPS approach could have a positive effect by increasing self-esteem when employees make changes in their lives and develop their plans. However, other studies will need to be carried out to validate that hypothesis.

As for career self-management, the data show a positive increase that is maintained over time in relation to three dimensions: taking appropriate action with strategic individuals at the right moment; identifying competencies in a CV or portfolio; and identifying short-, medium-, and long-term career plans and having realistic action plans.

Another important aspect is finding and processing the information required for project development. The study results show that individuals who complete all of the sections of the Career GPS actively seek out the information needed to validate and develop their plans ¹ over a six-month period. This refers to learning how to seek out information relating to self-validation and project validation in or outside the workplace. The follow-up conversations revealed that there are a number of situations that impede access to information for developing one's plans, including skills development in an SME. Such situations include the diversity and complexity of information, as well as difficulties matching the worker's resources with the enterprise's demands/requirements

Methodology

The research team was composed of members of the CRWG. For each component in the project, one or two members of the CRWG took the lead, consulting with other members as required, and following an agreed on process. Generally speaking, the development of each component of the project began with a literature review, which provided a foundation for that part of the project. Members of the CRWG were invited to comment on the substance of the literature review, and offer suggestions regarding the nature of the intervention that would flow from the literature review. The lead team then consolidated the input and prepared a draft of what their part of the project would look like when it was implemented. Members of the CRWG were invited to comment on this draft and the resulting feedback was incorporated to produce a more detailed draft that could be pilot tested with a representative sample of potential participants in the field test. Finally, the end product (situation analysis survey or intervention guide) was prepared and field tested in real work settings with employees and in some cases managers and supervisors. Details of the field testing are provided in the final reports from each component of the project. A synopsis is provided in this synthesis report.

Sample

The three interventions were designed to address the needs of different groups of clients and were field tested in different contexts. Furthermore, the research methodologies used to field test the interventions were different. Although all three field tests utilized a mixed methods approach, it was predominantly quantitative in the field tests of the Bilan et développement de

¹ Project includes skills development

compétences and Career GPS and predominantly qualitative in the Career Conversations field test. The *Bilan et développement de compétences* was the first intervention developed and field testing was underway before sampling could be done with the other two interventions. In addition, with the Career Conversations intervention, very stringent informed consent procedures were imposed on the project by the Ethics Review Board which necessitated a very complex recruitment process that resulted in an extremely small sample and tracking procedure that made it difficult to match participant pretest and posttest scores. The field test process for the Career GPS intervention proceeded in a more commonly accepted manner that was more research friendly and resulted in the most complete data set. It was not possible to implement a sampling procedure that permitted the comparison of the three interventions with each other. Nor was it sensible to aggregate the samples across interventions, because of the different nature of the interventions and the different types of samples used in the field tests.

Pretest Sample

Given the problems described above and the usual attrition that occurs when trying to contact clients for follow up, sample sizes were too small to conduct inferential statistical analyses on some interventions and pretest-posttest comparisons with some interventions had very low power for accurately predicting change across time. In the interest of conserving space, the pretest samples are depicted below. Complete information on the sample at all test points (pre, post, 3-month follow up, 6-month follow-up) are in Annex A.

Career GPS Pretest Sample: Sex x Age

	20-24	25-29	30-34	35-39	40-44	45-49	50+	Total
Male	0	2	3	5	9	3	1	23
Female	6	9	8	11	3	3	5	45
Total	6	11	11	16	12	6	6	68

Career Conversations Pretest Sample: Sex & Age

	20-24	25-29	30-34	35-39	40-44	45-49	50+	Total
Male	1	0	0	1	0	0	0	2
Female	0	3	0	1	1	0	0	5
Total	1	3	0	2	1	0	0	7

Bilan et développement de compétences Pretest Sample: Sex & Age

	25-34	35-44	45-54	55+	Total
Male	2	8	5	1	16
Female	2	6	3	1	12
Total	4	14	8	2	28

Evaluation Measures

Two types of measures were used to assess the effectiveness of the interventions: measures that were unique to each intervention and measures that were common to all interventions. The specific measures unique to each intervention incorporated a variety of approaches, including qualitative research procedures, standardized tests, researcher developed surveys, and a retrospective assessment process developed by the CRWG and indexed to the outcome objectives of the interventions. Retrospective evaluation questionnaires (sometimes referred to as post-pre assessments) were developed to assess changes in client knowledge, skills, and personal attributes resulting from participation in the interventions. Also, checklists were developed to track the extent to which participants followed the processes that were developed for implementing the interventions (intervention fidelity). The specific procedures used are described in detail in the final reports on those interventions. Two measures of client characteristics were common to all three interventions. These are described below.

Career Maintenance Strategy (CMS)

Questionnaire Gestion du Maintien au Travail (QGMT)

The CMS/QGMT (Lamarche, Limoges, Guédon, & Caron, 2006) is a 99 item, agree-disagree, instrument that produces 11 subscale scores dealing with various factors involved in implementing and sustaining a satisfying career path. (See Annex B.) The instrument has demonstrated adequate validity and reliability (Lamarche, 2006) and has been used previously in research projects similar to the one described in this report. (See Lamarche, 2006 for details regarding factor structure, validity, and reliability.) The CMS/QGMT produced 11 dependent measures, which are listed below along with an indication of how the dependent measures relate to the evaluation model described earlier in this paper.

Variable (Subscale)	Type of Outcome		
	Learning outcome	Personal attribute outcome	Impact outcome
1. Personal satisfaction, motivation and sense of accomplishment		✓	
2. Sense of Work-Life balance		✓	
3. Sense of personal competency		✓	

4. Sense of managing workload adequately		✓	
5. Positive reflective career outlook			
6. Maintain/Improve physical/mental health		✓	
7. Self-care especially at work (i.e. setting boundaries)	✓		
8. Self-knowledge and self-respect		✓	
9. Able to develop competencies	✓		
10. Maintain balance between life and leisure	✓		
11. Reasonable investment in work (not over-extending self)			✓
12. Reasonable investment in work (not under-extending self)			✓
13. Express self clearly to the right person at the right time	✓		

Career Self-Management Questionnaire (CSQ) Questionnaire d'autogestion de Carrière (QAC)

The CSQ/QAC is a 19 item, agree-disagree, instrument that produces 4 subscale scores dealing with various factors related to the interventions in this project, but not addressed in the CMS/QGMT. (See Annex C.) The CSQ/QAC was developed by the research team in this project, using the following process. First, a brainstorming session was conducted to identify important assessment areas not addressed in the CMS/QGMT. The resulting topics were grouped into clusters and assessment items were created for each of the areas identified. The draft items were then circulated to the research team for comment and suggestions. Comments and suggestions were incorporated to produce a draft questionnaire containing 29 items, each intended to fit in only one cluster. The 29 items were listed randomly and circulated to a panel of 8 career development experts who were asked to place each item into one and only one of the four subscales. Items that received agreement from three-quarters or more of the judges were retained and the rest of the items were discarded. This process provided an indication of consensual validity and construct validity for the CSQ/QAC. The result was a 19 item instrument containing 4 subscales, which also were used as dependent measures in this project and which are listed below along with an indication of how the dependent measures relate to the evaluation model described earlier in this paper.

<i>Variable (Subscale)</i>	<i>Type of Outcome</i>		
	<i>Learning outcome</i>	<i>Personal attribute outcome</i>	<i>Impact outcome</i>
1. Takes appropriate action with the right person at the right time	✓		
2. Clearly identifies personal competencies in writing in one's portfolio	✓		
3. Has development projects at work for both short and medium term and where possible, long term;	✓		

action plans are realistic and achievable.			
4. Access, consult and use LMI	✓		

The final version of the CSQ/QAC demonstrated a stable structure and adequate reliability, based on the field test results. For example, with the data from the Career GPS pretest, Chronbach’s Alpha was .80. All items except one correlated more highly with their intended subscale than with any other subscale, and the inter-correlations between subscales was low. The results from other data sets in the project provide a similar picture. The inter-item and item-total correlations for other data sets in this project are provided in Annex D.

Validation of the Evaluation Model

The interventions that were developed and field-tested in this project represent one of the first attempts to validate the approach to demonstrating the value of career development interventions utilizing the framework developed by the CRWG. The interventions were developed in a manner that made outcome assessment an explicit part of the intervention process. Processes were created to track intervention fidelity for both service provider and employee, which facilitated making a connection between the intervention and the outcomes. The outcome assessments used permitted us to gather data on what employees learned as a result of participating in the intervention and also the career-related personal attributes that were cultivated as a result of the intervention. In addition, the follow-up data provided an indication of the sustainability of these changes across time. Projects utilized the retrospective (Post-Pre) assessment approach to participant learning, and the results of that approach provided useful data on the learning and personal attribute outcomes that were associated with the interventions. The intervention tracking data coupled with the outcome data provide an explicit link between the interventions used and the outcomes reported. It is unfortunate that the inordinately restrictive procedures imposed by the Ethics Review Board on the Career Conversations part of the project resulted in a small sample size that did not permit statistical analysis of the data associated with that intervention. However, the qualitative data analysis and the anecdotal reports associated with that intervention provide convincing evidence of its utility.

All-in-all, this project has resulted in the development of three interventions that have a data base to support their efficacy for developing employee self-management of their career paths in small and medium enterprises. Moreover the project as a whole provides validation data that support the approach being developed by the CRWG for evaluating career development interventions and services.

Challenges in conducting the research:

Recruitment of employers and employees to participate in the research project was a significant challenge, particularly for the Situation Analysis and for the Career Conversations intervention. We had not planned to offer incentives for research participation but discovered that these were essential in order to get cooperation and buy-in. Some tangible reward for participation sends an important signal that the time of the individual is valuable and deserves to be recognized. In addition, we discovered that our knowledge of employer networks and how to access them to make a case for research participation was limited. In addition, our “language” was not sufficiently tuned into business world terminology and therefore we had difficulty getting employer doors open so that we could present a convincing case.

In both of the above interventions, we eventually contracted with individuals who were well connected with the employer community in the provinces where we wanted to undertake the research. This quickly led to organized focus groups in six provinces in the case of the Situation Analysis and the recruitment initially of over 20 employers into the Career Conversation intervention in British Columbia and Alberta. The recruitment challenges delayed significantly start up times for both of these research components and in the case of Career Conversations, resulted in completion of three and six month follow-ups rather than the originally intended three, six and twelve month follow-ups. The individuals with whom we contracted needed only a few days to get doors open and sign up participants. They were well known in their communities and had established business networks which made an enormous difference.

Somewhat related to the recruitment challenge was our experience with the Sector Council Advisory Group (SCAG). This was a group of key employers recruited at the beginning of the project to be a conduit for us to their employer contacts and also to advise us on our Communications and Dissemination Strategy. Our intention was to have an annual meeting with the SCAG and to engage them as active partners in all aspects of the research program. We quickly discovered that this group was very keen on results but not at all keen on the research process. Given that we did not have results until well into the third year of the project, we had too little to offer them to make annual meetings a worthwhile investment of their time.

In retrospect, it would have been preferable to organize such a group for two specific purposes, recruitment at the front end and dissemination at the end. This would have been a much better use of their time and would have value added to the progress of the project.

Partnering with universities and university researchers presents huge opportunities. For example, research expertise is excellent and access is plentiful to graduate students who want to work on research and will do so for very modest payment. At the same time, Ethics Boards, contracting regulations, buy-out time rules and overhead expectations all take negotiation as there are already complex procedures in place which need to be respected. The advantages far outweigh the disadvantages but it is important to expect that time delays will likely occur and compromises will be necessary.

An additional very important point is the timeframe for research projects. University professors can only devote a finite amount of time to research in any one academic year and as a result, a significant and complex research project can be expected to take a minimum of two to three years. As a result, by the time the data are analysed, the funding for the project is close to finished and there is no window for an extensive communications and dissemination strategy which would cover conference presentations, magazine and journal articles, and publicity aimed at the employer groups who need to know about the programs and their impacts. It would be very worthwhile to consider adding an additional year on to research projects of this magnitude, funded at a much lower level, but with the objective of achieving wide dissemination and adoption across the community of intended users. This would yield much greater return on the investment of research dollars.

Sustainability and Transferability:

Career Development Programs:

Each of the three career development programs developed under this project have been designed for wide implementation:

- Career Conversations has a Facilitator Guide, a Manager Workbook and an Employee Workbook in both official languages. Training in English is available for Managers from the developers;
- My Career GPS has a comprehensive self-directed Employee Workbook, an easy-to-use tool available in both official languages;
- Workplace Skills Assessment and Development (Bilan et développement de compétences) has an Employer Guide, Employee Guide and an Implementation Guide.

There are many professional career counsellors in Québec who are qualified to conduct a Bilan and available to work under contract.

Each of these programs has been developed based on actual needs which employees and managers in SMEs stated they have. SMEs now have a variety of tools to support employee engagement and employee retention which have a strong evidence base, are supported with implementation guides and are economical to implement.

There remain some significant steps which still need to be undertaken to make all interventions widely available in both languages. In Career Conversations, a Training for Trainers session is needed with bilingual trainers who can then provide the manager training in French. The Bilan has only been tested in French and an experimentation is needed in English as is the development of a training program to equip Anglophone professional career practitioners with the requisite skills and competencies.

In March, 2010, a highly successful one day Symposium titled “Retaining an Adaptable Workforce in a Changing Economy” was attended by 36 employers, each of whom represented a network of employers. The Symposium was intended to provide an opportunity for employers to discover and understand the results of the three career development programs,

how they might use them and what results they could expect in their workplaces. An additional objective was to provide input on how to disseminate information about the programs widely in the SME community.

All of the resources developed in the project will be freely accessible on the website of the CRWG as well as distributed through the CCDF Clearinghouse. The employers who attended the Symposium will be encouraged to make use of all materials and to advise their networks of their availability. CCDF will liaise closely with The Alliance of Sector Councils (TASC) with respect to dissemination. There is significant interest in a full across Sector Council adoption of one of the programs. CCDF will use the website to report on adoptions and employer and employee experience with the programs.

It is to be noted that the target population for the career development programs which were developed was SMEs. Many large employers attended the Symposium and it was clear that the programs would work equally well in all sizes of businesses and enterprises.

The CRWG Evaluation Framework: Making the Case for Career Development

In addition to the three interventions that have a data base to support their efficacy for developing employee career self-management, the project as a whole has provided validation data that supports the CRWG approach for evaluating career development interventions and services.

A second highly successful Symposium was held in March, 2010 titled “An Evaluation Culture in Career Development Practice: If not us, who? If not now, when?” It was attended by 32 career development leaders, all of whom are key individuals in professional associations of career development practitioners and/or in employment services networks. Among its objectives was to discover strategies for establishing an evaluation culture in career development practice generally and within organizations.

During the course of this research project, the Canadian Council of Career Development Associations (CCDA) has been formed. This is similar to a Sector Council in composition and has the capacity to reach out to most career practitioners in Canada. There is enormous interest in establishing a more rigorous evaluation culture in career development practice and several follow-up research project ideas were generated to take this initiative much further. These ideas include establishing a national baseline of evidence based outcomes resulting from career and employment services. In partnership with the CRWG, this group will be seeking support for additional research to further validate the CRWG model and to put it into front-line practice. This has the potential to be truly transformative for the career development sector.

The CRWG:

The CRWG in itself is a contribution of this program of research. It is a unique Canadian model with seven universities, both Anglophone and Francophone working in partnership and seven researchers working in both official languages at all meetings and doing so highly successfully. Given that part of the mandate of the CRWG is to build a strong evaluation culture by making evaluation an integral part of all program and service designs and delivery, it was agreed that the work of the CRWG over the past three years would be anonymously evaluated by each

member using a common framework. The results were uniformly strongly positive. Each member of the group wanted to continue to partner in research projects and to do so with the coordination of CCDF. Among the advantages and the exemplary practices are the following:

- Working with an external body (CCDF) rather than strictly within the university context allowed much more flexibility, speed and collaboration rather than competition;
- The traditional research “solitudes” which were in high evidence at the 2003 Pan-Canadian Symposium on Career Development and Public Policy were reduced. Francophone researchers who formerly would have travelled to France for professional conferences outside of Quebec were attending conferences in other Canadian provinces; Anglophone researchers who never had attended conferences in Quebec presented at the Quebec City L’Ordre conference in 2009;
- Shared research projects provide not only the capacity to train students at the Doctoral level but also opportunities to expose them to another body of literature and research;
- The CRWG has established an international reputation in which Canada is seen to be leading the movement towards a strong evidence base for career development practice. It is to be noted that at the fifth International Symposium on Career Development and Public Policy held in New Zealand in fall, 2009, the Canada Team agreed to be the lead country in advancing the evidence base before the 2011 Symposium in Hungary. Both CCDF and a member of the CRWG were members of the Canadian Team;
- Members of the CRWG have a strong commitment to continue to work together and to share programs across the two languages. This project has generated very large amounts of data and much more could be done with the data with additional funding. For example, a very large amount of qualitative data is available from interview recordings in all three interventions. This data is rich but needs to be transcribed and analyzed in the next three years before the databank must be destroyed. Much more could be learned from existing data which should not be lost;
- A number of follow-up proposal ideas are under consideration to continue the work of the CRWG and to continue to build its reputation for excellence nationally and internationally.

Recommendations

Each Final Research Report and Executive Summary contains a series of recommendations focused on the sustainability and wide implementation of each specific intervention. The following recommendations represent a composite of suggested next steps to maximize the learning from this three year study and to apply the findings to continue to benefit SMEs and employed adults in general. Policy implications are presented for consideration as are necessary initiatives to sustain an applied research agenda in career development practices and evidence based practice.

Employers and Employees:

This research study has provided evidence that investing in career development programs for employees contributes to the retention of valuable employees, increased work satisfaction and improved engagement with the workplace. The programs developed are time efficient and relatively low cost. For all workplaces, but particularly for SMEs who do not have specialized human resource staff and/or significant staff development budgets, programs such as these provide mechanisms whereby SMEs can reasonably, and within their resources, invest in their employees and their career futures. This investment benefits both the employee and the organization.

It is recommended that employers:

1. Adopt one or more of the career development programs as part of an active human resource strategy designed to retain valuable employees
2. Implement a common evaluation framework in order to document the effects of the program(s) on employees and on the organization
3. In adopting one of the programs, ensure that it is implemented in the intended way, specifically:
 - a. ensure training for managers and supervisors in implementing Career Conversations as a condition for using this program in workplaces;
 - b. ensure that only professional career counsellors trained in the use of the Workplace Skills Assessment and Development (Bilan et développement de compétences) are charged with delivering this program to employees;
 - c. offer employees the opportunity to receive follow-up after completing My Career GPS and/or the Bilan. One of the clear results of providing employees with any one of these programs was an increased feeling among employees that their employer was interested in them and their career futures; therefore use this as an opportunity to support employee engagement.
4. Give consideration to taking the training in Career Conversations for all managers and supervisors regardless of which program is being adopted. The communication skills acquired are generic across all three programs and can only enhance the workplace and the confidence of managers/supervisors in their roles in supporting employee engagement.

Policy Makers:

Policy Makers issued the challenge to the career development sector to “make the case” for the effectiveness of career development programs and services. While much more remains to be done, this program of research has demonstrated that career development programs for employed workers benefit both the worker and the organization with respect to retaining

valuable employees and improving work satisfaction. This part of the case has been made. The following merit the study and consideration of policy makers:

1. Consider a tax incentive (tax credit) directly to employers and/or employed individuals for completing a career development program at regular intervals. France has adopted the Bilan as an entitlement for employed workers every five years. Canada is strong in promoting lifelong learning as a requirement for our continued economic growth and productivity; investing in career development for citizens is a very tangible and effective way of promoting lifelong learning;
2. Consider establishing new Skill Assessment and Development Centres for adults (or supplement existing career and employment services), both employed and unemployed. Such Centres and/or services would be developed based on emerging skills development needs in the economy, providing support in work adjustment situations and promoting increased employability.
3. Experiment with on-line and telephone services in Skills Assessment, access to training and professional information and careers advice. Many countries are already well advanced in these technologies (UK, New Zealand, Australia). Career services for employed adults have been very sparse in Canada, especially for employed adults who are less highly educated and/or employed in lower paid work. There is considerable potential to engage these adults in additional training and skills acquisition by providing necessary professional supports and ready access to information on opportunities.

Funders:

It is regrettable that the WSI program which funded this program of research has been terminated. So much more could have been accomplished through applied research with underserved Canadians. Finding more cost and resource effective ways of increasing worker productivity, worker engagement and supporting organizational excellence are critical investments. It is hoped that new programs of research will be introduced which will provide avenues to continue to advance this important applied research agenda. The following are recommended:

1. Capitalize on the considerable investment in the three career development programs developed by maximizing their potential by funding the following:
 - a. Development of an English version of the Workplace Skills Assessment and Development (Bilan et développement de compétences) and an English pilot project to test its efficacy prior to implementing a wide dissemination strategy;
 - b. Provision of a Training for Trainers program in Career Conversations in order to develop a cadre of qualified Anglophone and Francophone trainers who can assist employers to implement Career Conversations in workplaces;

- c. Development of an on-line version of My Career GPS to provide wide access of the program to large numbers of employed workers;
 - d. Replicate the above experiments with diverse populations, for example manufacturing workers who could not participate in the research as there were no funds for replacement workers and/or workers who are less well educated and/or in lower levels of employment who are likely to have participated the least in job-related training.
2. Provide funding for a fourth year at a much lower cost in order that a full year can be devoted to dissemination of results and providing support for implementation in workplaces.
3. Support longer term research which would allow evaluation of impacts on actual productivity indicators.
4. Support the ongoing work of the CRWG which is a unique and highly successful pan-Canadian model of research partnership. The CRWG is very well situated to make significant progress in evidence based practice nationally and internationally by working collaboratively on specific research projects.
5. Introduce a program of research in career development which will allow for research with diverse populations and which will help to address the emerging workforce challenges resulting from serious shifts in workforce demographics.

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Annex A: Sample Composition for all interventions at all test points

My Career GPS Sample Sizes

Pretest Sample: Sex x Age

	20-24	25-29	30-34	35-39	40-44	45-49	50+	Total
Male	0	2	3	5	9	3	1	23
Female	6	9	8	11	3	3	5	45
Total	6	11	11	16	12	6	6	68

Posttest1 (immediately following the intervention) Sample: Sex x Age

	20-24	25-29	30-34	35-39	40-44	45-49	50+	Total
Male	0	1	1	1	6	1	0	11
Female	7	7	6	10	3	3	5	40
Total	7	8	7	11	9	4	5	51

Posttest2 (3 month follow-up) Sample: Sex x Age

	20-24	25-29	30-34	35-39	40-44	45-49	50+	Total
Male	0	1	1	1	5	3	0	9
Female	6	5	7	11	3	1	5	37
Total	6	6	8	9	8	4	5	46

Posttest3 (6 month follow-up) Sample: Sex x Age

	20-24	25-29	30-34	35-39	40-44	45-49	50+	Total
Male	0	1	1	1	6	0	0	9
Female	6	6	5	6	1	2	4	30
Total	6	7	6	7	7	2	4	39

Career Conversations Sample Sizes

Pretest Sample: Sex x Age

	20-24	25-29	30-34	35-39	40-44	45-49	50+	Total
Male	1	0	0	1	0	0	0	2
Female	0	3	0	1	1	0	0	5
Total	1	3	0	2	1	0	0	7

Posttest1 (immediately following the intervention): Sex x Age

	20-24	25-29	30-34	35-39	40-44	45-49	50+	Total
Male	0	0	0	1	0	0	0	1
Female	0	3	0	0	0	0	0	3
Total	0	3	0	1	0	0	0	4

Bilan de Developement et Competences Sample Sizes

Pretest-Posttest1 Sample: Sex x Age

	25-34	35-44	45-54	55+	Total
Male	2	8	5	1	16
Female	2	6	3	1	12
Total	4	14	8	2	28

Pretest-Posttest2 Sample: Sex x Age

	25-34	35-44	45-54	55+	Total
Male	2	5	5	1	13
Female	2	4	3	1	10
Total	4	9	8	2	23

Pretest-Posttest3 Sample: Sex x Age

	25-34	35-44	45-54	55+	Total
Male	2	4	1	1	8
Female	0	3	3	1	7
Total	2	7	4	2	15

Pretest-Posttest4 Sample: Sex x Age

	25-34	35-44	45-54	55+	Total
Male	1	2	2	1	6
Female	0	4	3	0	7
Total	1	6	5	1	13

Annex B : CAREER MAINTENANCE STRATEGY QUESTIONNAIRE (CMSQ)

Developed by Lamarche, L., Limoges, J., Guédon, M-C., & Caron, Z., and field-tested by Lamarche, L. (2006). Validation d'un instrument visant à mesurer le maintien professionnel. Thèse de doctorat, Université de Sherbrooke, Sherbrooke, Québec, Canada. Used with permission of the authors.

Read the 99 statements below and indicate whether or not they apply to your situation by placing an "X" in the column corresponding to your opinion ("Agree" or "Disagree"). If you unsure, choose the response that reflects what you experience the most often.

	Agree	Disagree
1. You feel at ease with your work activities.	<input type="checkbox"/>	<input type="checkbox"/>
2. You have ways of making or keeping your work activities enjoyable.	<input type="checkbox"/>	<input type="checkbox"/>
3. Your work activities still enable you to grow personally.	<input type="checkbox"/>	<input type="checkbox"/>
4. You are often bored at work.	<input type="checkbox"/>	<input type="checkbox"/>
5. You are really engaged in your working life because it's important to you.	<input type="checkbox"/>	<input type="checkbox"/>
6. You are able to maintain a certain amount of balance between work and relaxation every day.	<input type="checkbox"/>	<input type="checkbox"/>
7. You work hard all week long, relaxing only on weekends.	<input type="checkbox"/>	<input type="checkbox"/>
8. You work intensively and relax for only a few days each month.	<input type="checkbox"/>	<input type="checkbox"/>
9. You have only your annual vacation and a few days off to take a break from the intense work that you do all year long.	<input type="checkbox"/>	<input type="checkbox"/>
10. At the moment, you feel burned out at work.	<input type="checkbox"/>	<input type="checkbox"/>
11. You look after your personal life despite work-related pressures.	<input type="checkbox"/>	<input type="checkbox"/>
12. You are satisfied with your work activities.	<input type="checkbox"/>	<input type="checkbox"/>
13. You do not have very good self-esteem when it comes to your working life.	<input type="checkbox"/>	<input type="checkbox"/>
14. You tend to stand back when you experience a difficult situation at work.	<input type="checkbox"/>	<input type="checkbox"/>
15. Generally, you are able to assert yourself through words and attitudes, even at work.	<input type="checkbox"/>	<input type="checkbox"/>
16. At work, you feel proud of yourself and believe yourself capable of recognizing your strengths and accomplishments.	<input type="checkbox"/>	<input type="checkbox"/>
17. Your work activities have become routine and monotonous.	<input type="checkbox"/>	<input type="checkbox"/>
18. You take on extra work without receiving any of the expected compensation.	<input type="checkbox"/>	<input type="checkbox"/>
19. At work, you feel that you give more to others and to the workplace than you get back.	<input type="checkbox"/>	<input type="checkbox"/>

	Agree	Disagree
20. When you need to, you ask others for help and don't try to solve everything on your own.	<input type="checkbox"/>	<input type="checkbox"/>
21. The main purpose of your work activities is earning a good income.	<input type="checkbox"/>	<input type="checkbox"/>
22. You feel that you have reached a plateau in your working life.	<input type="checkbox"/>	<input type="checkbox"/>
23. You tend to take care of yourself at work.	<input type="checkbox"/>	<input type="checkbox"/>
24. Sometimes you take stock of your work activities, seeing what has been done and what remains to be done, and consequently acting accordingly.	<input type="checkbox"/>	<input type="checkbox"/>
25. You are indifferent to your career development.	<input type="checkbox"/>	<input type="checkbox"/>
26. Usually you savour the moment, live in the here and now.	<input type="checkbox"/>	<input type="checkbox"/>
27. Your working life still presents you with challenges.	<input type="checkbox"/>	<input type="checkbox"/>
28. You have at least 4 of the following symptoms:	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • chronic fatigue, • poor concentration, • loss of self-confidence, • poor performance even with a great deal of effort, • irritability, • hard time laughing, • loss of interest, • physical disorder (insomnia, ulcers, anxiety, fluctuating weight). 		
29. At work, you prefer to use old practices rather than learn new ones.	<input type="checkbox"/>	<input type="checkbox"/>
30. Generally, you are able to balance your energy output.	<input type="checkbox"/>	<input type="checkbox"/>
31. You are becoming insensitive to people.	<input type="checkbox"/>	<input type="checkbox"/>
32. You are attentive to the signals your body gives you and you try to address them as quickly as possible.	<input type="checkbox"/>	<input type="checkbox"/>
33. On the whole, your work activities leave you feeling dissatisfied.	<input type="checkbox"/>	<input type="checkbox"/>
34. Since you are able to say "yes," you let yourself say "no" occasionally.	<input type="checkbox"/>	<input type="checkbox"/>
35. These days, you tend to speak very fast at work.	<input type="checkbox"/>	<input type="checkbox"/>
36. Your work environment calls on you more than you would like to.	<input type="checkbox"/>	<input type="checkbox"/>
37. You are innovative in your working life, seeking out new ways of doing things and new projects to carry out.	<input type="checkbox"/>	<input type="checkbox"/>
38. You feel frustrated in your work activities.	<input type="checkbox"/>	<input type="checkbox"/>
39. You find that you are letting yourself go professionally.	<input type="checkbox"/>	<input type="checkbox"/>
40. Professionally, you feel that the grass is always greener elsewhere.	<input type="checkbox"/>	<input type="checkbox"/>
41. You can control your emotions (stress, impulses, etc.) without denying them or letting them get the best of you.	<input type="checkbox"/>	<input type="checkbox"/>
42. Dissatisfied at work, you have decided to do less.	<input type="checkbox"/>	<input type="checkbox"/>
43. You do not hesitate to ask your co-workers for information.	<input type="checkbox"/>	<input type="checkbox"/>
44. You can express anger appropriately.	<input type="checkbox"/>	<input type="checkbox"/>

	Agree	Disagree
45. You participate in social activities regularly.	<input type="checkbox"/>	<input type="checkbox"/>
46. You feel powerless or desperate about your working life.	<input type="checkbox"/>	<input type="checkbox"/>
47. You feel you are competent in your line of work.	<input type="checkbox"/>	<input type="checkbox"/>
48. At the moment, you find your work activities fulfilling.	<input type="checkbox"/>	<input type="checkbox"/>
49. You really have no one to talk to about your concerns.	<input type="checkbox"/>	<input type="checkbox"/>
50. You continue to upgrade your skills on a regular basis.	<input type="checkbox"/>	<input type="checkbox"/>
51. You use humour regularly in managing your working life.	<input type="checkbox"/>	<input type="checkbox"/>
52. You like what you do at work.	<input type="checkbox"/>	<input type="checkbox"/>
53. You have trouble dealing directly with problems you encounter at work.	<input type="checkbox"/>	<input type="checkbox"/>
54. You are very demanding of yourself at work.	<input type="checkbox"/>	<input type="checkbox"/>
55. The job you have now no longer motivates you.	<input type="checkbox"/>	<input type="checkbox"/>
56. You feel threatened by criticism, particularly at work.	<input type="checkbox"/>	<input type="checkbox"/>
57. You watch out for what is new in your career field.	<input type="checkbox"/>	<input type="checkbox"/>
58. You avoid taking on projects or activities out of fear of failing.	<input type="checkbox"/>	<input type="checkbox"/>
59. Your work activities enhance your personal development.	<input type="checkbox"/>	<input type="checkbox"/>
60. You continue to learn and to keep up to date in your field of expertise.	<input type="checkbox"/>	<input type="checkbox"/>
61. You are absent from work more and more often.	<input type="checkbox"/>	<input type="checkbox"/>
62. You dwell more on your failures than on your successes.	<input type="checkbox"/>	<input type="checkbox"/>
63. You have to devote a lot of time to your work in order to complete it.	<input type="checkbox"/>	<input type="checkbox"/>
64. At the moment, you feel worn out at work.	<input type="checkbox"/>	<input type="checkbox"/>
65. You appreciate who you are in your professional field.	<input type="checkbox"/>	<input type="checkbox"/>
66. When you think about work, you feel anxious.	<input type="checkbox"/>	<input type="checkbox"/>
67. You believe you would find work quickly if you lost the job you have now.	<input type="checkbox"/>	<input type="checkbox"/>
68. At work, you are aware that you do too much.	<input type="checkbox"/>	<input type="checkbox"/>
69. You structure your work activities by establishing goals, deadlines, and monitoring methods.	<input type="checkbox"/>	<input type="checkbox"/>
70. You always refuse to work overtime.	<input type="checkbox"/>	<input type="checkbox"/>
71. For a while now, your work activities have obsessed you.	<input type="checkbox"/>	<input type="checkbox"/>
72. At work, you tend to compare yourself with others.	<input type="checkbox"/>	<input type="checkbox"/>
73. Even at work, you take care of yourself, enjoy yourself, and satisfy your needs and desires.	<input type="checkbox"/>	<input type="checkbox"/>
74. You like to talk about your work in your spare time.	<input type="checkbox"/>	<input type="checkbox"/>
75. You have recently had a serious physical warning: panic attack, doubts about your mental health, crying fit, etc.	<input type="checkbox"/>	<input type="checkbox"/>
76. You feel unmotivated at work.	<input type="checkbox"/>	<input type="checkbox"/>

	Agree	Disagree
77. You are very preoccupied with what others think of you.	<input type="checkbox"/>	<input type="checkbox"/>
78. You bring work home regularly outside office hours in order to get it done.	<input type="checkbox"/>	<input type="checkbox"/>
79. You made the right career choice.	<input type="checkbox"/>	<input type="checkbox"/>
80. You feel appreciated in your workplace.	<input type="checkbox"/>	<input type="checkbox"/>
81. You enjoy learning and using new work methods.	<input type="checkbox"/>	<input type="checkbox"/>
82. You socialize rarely, particularly at work.	<input type="checkbox"/>	<input type="checkbox"/>
83. At work, you are always in a rush.	<input type="checkbox"/>	<input type="checkbox"/>
84. You tend to bring the topic of conversation back to your own concerns.	<input type="checkbox"/>	<input type="checkbox"/>
85. Even at work, it is easy for you to feel calm and to joke around.	<input type="checkbox"/>	<input type="checkbox"/>
86. For a while now, you have felt alone or isolated.	<input type="checkbox"/>	<input type="checkbox"/>
87. Your most recent structured professional development activity was more than a year ago.	<input type="checkbox"/>	<input type="checkbox"/>
88. You feel sceptical or indifferent about your career development.	<input type="checkbox"/>	<input type="checkbox"/>
89. You are able to pull back from your work activities and engage in other types of activities.	<input type="checkbox"/>	<input type="checkbox"/>
90. You believe it is important to continue to develop your work skills.	<input type="checkbox"/>	<input type="checkbox"/>
91. You wait impatiently for breaks, weekends, vacations, and retirement.	<input type="checkbox"/>	<input type="checkbox"/>
92. You feel that you are maximizing your potential at work.	<input type="checkbox"/>	<input type="checkbox"/>
93. You feel that you are at the end of your rope, particularly at work.	<input type="checkbox"/>	<input type="checkbox"/>
94. At work, you tend to bottle up your emotions, not to express yourself.	<input type="checkbox"/>	<input type="checkbox"/>
95. You can relax without much difficulty.	<input type="checkbox"/>	<input type="checkbox"/>
96. Workdays never seem to end.	<input type="checkbox"/>	<input type="checkbox"/>
97. You're the type of person who puts a lot of effort into things and then falls flat.	<input type="checkbox"/>	<input type="checkbox"/>
98. You tend to solve problems as they arise by assessing and expressing them.	<input type="checkbox"/>	<input type="checkbox"/>
99. You find that your work activities are well suited to your abilities.	<input type="checkbox"/>	<input type="checkbox"/>

Annex C : Career Self-Management Questionnaire (CSQ) Questionnaire d'autogestion de Carrière (QAC)

Read the 19 statements below and indicate whether or not they apply to your situation by placing an “X” in the column corresponding to your opinion (“Agree” or “Disagree”). *If you unsure, choose the response that reflects what you experience the most often.*

	Agree	Disagree
1. You have a clear understanding of the qualities you have to offer an employer (i.e., your abilities, values, interests, personal style, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
2. You know the extent to which the skills and abilities that you possess are what employers are looking for.	<input type="checkbox"/>	<input type="checkbox"/>
3. You know what you need to do to reach your goals in your line of work.	<input type="checkbox"/>	<input type="checkbox"/>
4. You are aware of how current social and labour market trends may impact your career.	<input type="checkbox"/>	<input type="checkbox"/>
5. Your resume or portfolio sets you apart from other employees.	<input type="checkbox"/>	<input type="checkbox"/>
6. When you approach people with a question or concern, they usually understand your needs and help you resolve the issue.	<input type="checkbox"/>	<input type="checkbox"/>
7. You have documented your competencies and accomplishments relevant to your career.	<input type="checkbox"/>	<input type="checkbox"/>
8. You understand foreseeable changes in the labour market and act accordingly.	<input type="checkbox"/>	<input type="checkbox"/>
9. When you make plans concerning your career future, you usually can make them work.	<input type="checkbox"/>	<input type="checkbox"/>
10. You are able to communicate your needs and goals to the individuals who can help you fulfil them.	<input type="checkbox"/>	<input type="checkbox"/>
11. You know how to access and who to consult regarding information about career and training alternatives in your field.	<input type="checkbox"/>	<input type="checkbox"/>
12. You do not think much about the way your career might unfold 10 years from now.	<input type="checkbox"/>	<input type="checkbox"/>
13. When you have a work-related concern, you know who to talk to about it so that it gets resolved.	<input type="checkbox"/>	<input type="checkbox"/>
14. You are unsure of how to showcase your competencies to employers (i.e., your knowledge, skills, personal attributes, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
15. Your future work or career is not that important to you right now.	<input type="checkbox"/>	<input type="checkbox"/>

	Agree	Disagree
16. When you encounter a concern at work, you are able to negotiate a solution with the people who are involved.	<input type="checkbox"/>	<input type="checkbox"/>
17. You have specific goals for what you want your career to become in the future.	<input type="checkbox"/>	<input type="checkbox"/>
18. You have difficulty describing the value of your competencies (i.e., your knowledge, skills, attributes, experiences, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
19. You are systematically trying to improve the skills you need for success in your career.	<input type="checkbox"/>	<input type="checkbox"/>

Annex D: Reliability Coefficients for the CSQ / QAC

GPS: Item-Total Correlations (Pretest)

Inter-Item Correlation Matrix (GPS Pretest Scores)

	CSQ6	CSQ10	CSQ13	CSQ16	CSQ1	CSQ5	CSQ7	CSQ14	CSQ18	CSQ3	CSQ9	CSQ12	CSQ15	CSQ17	CSQ19	CSQ2	CSQ4	CSQ8	CSQ11	
CSQ6	1.00																			
CSQ10	.14	1.00																		
CSQ13	.38	.24	1.00																	
CSQ16	.30	-.10	.29	1.00																
CSQ1	.03	.34	.16	-.01	1.00															
CSQ5	-.20	.16	.11	-.01	.14	1.00														
CSQ7	.08	.46	.18	-.08	.08	.29	1.00													
CSQ14	.13	.18	.29	.05	.33	.06	.18	1.000												
CSQ18	.18	.33	.40	.13	.51	.15	.26	.565	1.00											
CSQ3	-.21	.19	.10	-.07	.52	.19	.23	.158	.22	1.00										
CSQ9	.18	.45	.21	.03	.25	.33	.37	.299	.39	.04	1.00									
CSQ12	-.03	.33	.15	.01	.18	.02	.47	.124	.22	.08	.21	1.00								
CSQ15	-.16	-.02	-.09	-.03	.11	-.10	.05	-.010	-.02	.08	-.08	.33	1.00							
CSQ17	.05	.31	.14	-.01	.25	.01	.27	.207	.29	.09	.23	.33	-.07	1.00						
CSQ19	-.18	.17	.10	.01	.12	.17	.38	.103	.09	.13	.35	.27	.21	.30	1.00					
CSQ2	-.03	.10	.33	.11	.51	.03	-.02	.304	.29	.38	.08	-.01	.03	.02	.15	1.00				
CSQ4	-.07	.22	.09	.09	.29	.14	.29	.148	.22	.18	.23	.33	.03	.25	.31	.31	1.00			
CSQ8	-.03	.31	.26	.02	.17	.13	.23	.208	.30	.10	.23	.13	-.02	.31	.33	.20	.22	1.00		
CSQ11	.10	.23	.20	.06	.10	-.01	.29	.166	.32	.09	.28	.28	.12	.29	.27	-.07	.35	.31	1.00	
S8	.71	.58	.76	.49	.23	.03	.29	.26	.42	.02	.37	.20	-.12	.21	.05	.20	.13	.24	.25	
S9	.07	.46	.36	.03	.63	.52	.58	.67	.78	.40	.52	.32	.01	.32	.27	.34	.37	.33	.27	
S10	-.08	.45	.20	-.01	.42	.19	.55	.28	.37	.39	.57	.68	.38	.60	.68	.19	.41	.34	.41	
S11	-.01	.34	.35	.11	.39	.11	.31	.32	.44	.28	.32	.28	.06	.35	.41	.53	.68	.71	.65	

All items except one correlate more highly with their intended sub scale than with any other subscale. The one exception is “You know what you need to do to reach your goals in your line of work” which correlated equally with S9 (Clearly identifies personal competencies in one’s resumé or portfolio) and S10 (Has development projects at work for both short and medium term and where possible, long term; action plans are realistic and achievable).

Chronbach’s Alpha = .80 (n = 70)

Subscale inter-correlations (GPS Pretest Scores)

	<i>S8</i>	<i>S9</i>	<i>S10</i>	<i>S11</i>
<i>S8 Takes appropriate action with the right person at the right time</i>	1.00			
<i>S9 Clearly identifies personal competencies in one’s resumé or portfolio</i>	.39	1.00		
<i>S10 Has development projects at work for both short and medium term and where possible, long term; action plans are realistic and achievable</i>	.25	.57	1.00	
<i>S11 Access, consult, and use LMI</i>	.33	.49	.52	1.00

GPS: Item-Total Correlations (Posttest)

Inter-Item Correlation Matrix (GPS Posttest Scores)

	CSQ6	CSQ10	CSQ13	CSQ16	CSQ1	CSQ5	CSQ7	CSQ14	CSQ18	CSQ3	CSQ9	CSQ12	CSQ15	CSQ17	CSQ19	CSQ2	CSQ4	CSQ8	CSQ11
CSQ6	1.00																		
CSQ10	.10	1.00																	
CSQ13	.28	.40	1.00																
CSQ16	.12	.17	.10	1.00															
CSQ1	.06	.32	.03	.38	1.00														
CSQ5	.20	.32	.14	-.12	.04	1.00													
CSQ7	-.05	.17	.15	-.16	-.02	.38	1.00												
CSQ14	.19	.54	.49	.28	.35	.15	.13	1.00											
CSQ18	.16	.41	.09	.06	.34	.13	-.07	.25	1.00										
CSQ3	.08	-.01	.18	.24	.43	.20	-.04	.13	.11	1.00									
CSQ9	.04	.26	.27	-.13	.02	.31	.21	.18	.06	-.11	1.00								
CSQ12	-.04	.06	-.09	-.13	.03	.04	.34	.12	-.10	-.09	-.12	1.00							
CSQ15	-.09	.11	-.12	-.08	-.10	.02	.16	.08	-.06	-.15	-.01	.52	1.00						
CSQ17	.26	.24	.33	.20	.24	.11	.26	.35	.30	.23	.19	.15	.04	1.00					
CSQ19	-.14	.32	-.06	.17	.32	.08	.17	.21	.19	-.01	.15	.29	.11	.35	1.00				
CSQ2	-.12	.22	.21	.19	.35	-.01	.11	.26	.36	.51	.07	-.15	-.18	.42	.22	1.00			
CSQ4	.18	.11	-.25	.21	.38	.29	.04	.20	.18	.38	-.01	.01	.01	.16	.26	.30	1.00		
CSQ8	-.13	.08	-.01	.06	.34	.03	.10	.17	.05	.24	.15	.18	-.06	.30	.19	.36	.30	1.00	
CSQ11	-.07	.25	.10	-.11	.07	.13	.28	.13	.11	.10	.39	.10	-.08	.41	.25	.30	.20	.31	1.00
S8	.64	.67	.78	.38	.25	.26	.08	.59	.29	.17	.22	-.06	-.07	.41	.07	.18	.05	-.01	.09
S9	.20	.61	.34	.10	.46	.62	.55	.66	.57	.23	.28	.16	.06	.44	.31	.35	.34	.20	.26
S10	.06	.33	.19	.07	.29	.25	.38	.36	.17	.23	.41	.58	.46	.69	.62	.29	.24	.34	.42
S11	-.07	.24	.03	.114	.41	.15	.20	.27	.23	.43	.23	.07	-.11	.47	.33	.69	.62	.76	.67

All items except one correlate more highly with their intended subscale than with any other subscale. The one exception is “You know what you need to do to reach your goals in your line of work” which correlated more highly with S11 (Access, consult, and use LMI) than with S10 (Has development projects at work for both short and medium term and where possible, long term; action plans are realistic and achievable).

Chronbach’s Alpha = .76 (n = 50)

Subscale inter-correlations (GPS Posttest Scores)

	<i>S8</i>	<i>S9</i>	<i>S10</i>	<i>S11</i>
<i>S8 Takes appropriate action with the right person at the right time</i>	1.00			
<i>S9 Clearly identifies personal competencies in one’s resumé or portfolio</i>	.51	1.00		
<i>S10 Has development projects at work for both short and medium term and where possible, long term; action plans are realistic and achievable</i>	.26	.50	1.00	
<i>S11 Access, consult, and use LMI</i>	.10	.40	.47	1.00