DRDC Mentoring Program:

An Examination of Program Design and Program Outcomes

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Abstract

An examination of the DRDC 2008-2009 mentoring program was undertaken to determine if the program is meeting its intended objectives. These objectives included skill development and transfer of organisational knowledge in order to develop a pool of future managers. At the end of the program, a survey was administered to participants. Findings suggest that the program is indeed, meeting the primary objectives which ultimately develop the talent that will reach managerial positions within the agency.

Résumé

On a procédé à une évaluation du programme de mentorat 2008-2009 de RDDC afin de déterminer si ses objectifs ont été atteints. Le programme vise le développement des compétences des participants et la transmission des connaissances propres à l'organisation dans le but de former de futurs gestionnaires. À la fin du programme, on a mené une enquête auprès des participants et les résultats ont montré que, effectivement, les principaux objectifs ont été atteints et que le programme permet ainsi de former convenablement des gens qui seront en mesure d'occuper des postes de gestion au sein de l'organisation.

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Executive summary

DRDC Mentoring Program: An Examination of Program Design and Program Outcomes

Introduction

Mentoring programs are the vanguard of most organisation human resource development strategies. In order to retain high level employees and improve workplace learning and managerial progression, many organisations have implemented formal mentoring programs including DRDC. The aim of the DRDC program is to create a mutually beneficial learning partnership between people who possess a greater amount of skills, knowledge and experience and those looking to augment career development and professional growth. This investigation examines the structure of that program and determines if it is meeting its intended objectives.

Method

A questionnaire was developed and administered to the 2008-2009 cohort. The survey consisted of both quantitative and qualitative items.

Results

The results from the questionnaire items show that participating in the program was a positive experience and all participants learned about the organisation and its culture. Mentees developed interpersonal skills, better understood the roles of management, developed a better understanding of strategic partnering groups, and how to focus efforts to advance work programs and shape their careers into desired directions. Mentors gained awareness on how their corporate actions affect those junior in the agency and experienced generativity by being able to provide guidance and advice that contributed directly to the professional development of their mentees. The paired t-tests provided additional evidence demonstrating that the facilitated program is working with respect to the selection of mentors and their ability to transfer knowledge to those younger in their careers.

Recommendations

In sum, there is strong evidence demonstrating the success of the DRDC Mentoring Program. As with most assessments, points of improvement are identified. From the findings of this study, it is recommended that:

- The DRDC Mentoring Program continue to function independently of other sanctioned mentoring programs;

- Funding for face-to-face meetings be reinstated;

- Greater encouragement for participants to use the tools such as the mentoring agreement form to help develop their relationships;

- Determine a pool of topics and find exercises and supporting material to facilitate the transfer and sharing of knowledge between the dyads; and

- Develop a workshop to enable mentors to help expand necessary mentoring skills.

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DRDC Mentoring Program: An Examination of Program Design and Program Outcomes

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Introduction

Pour la plupart des organisations, le programme de mentorat est un pilier central de leur stratégie de développement des ressources humaines. Afin de garder leurs meilleurs employés et de rehausser les possibilités d'apprentissage en milieu de travail et de promotion à des postes de gestion, beaucoup d'organisations mettent en place un programme de mentorat, et RDDC ne fait pas exception. Le programme de mentorat de RDDC a été conçu dans le but de créer un partenariat d'apprentissage dont peuvent profiter les employés les plus compétents, savants et chevronnés ainsi que ceux qui désirent accroître leurs possibilités de perfectionnement professionnel. L'enquête portait sur la structure du programme et visait à déterminer si les objectifs ont été atteints.

Méthode

Un questionnaire qualitatif et quantitatif a été conçu et administré à la cohorte de 2008-2009.

Résultats

Les résultats de l'enquête montrent que les participants au programme de mentorat ont trouvé leur expérience enrichissante et que tous ont appris quelque chose à propos de l'organisation et de sa culture. Le programme leur a permis de développer leur entregent, de mieux comprendre les rôles de la direction, de mieux connaître les groupes de partenariat stratégique, d'apprendre à organiser les efforts afin de faire progresser des travaux et d'orienter leur carrière dans la direction souhaitée. Quant aux mentors, ils ont eu l'occasion de constater de plus près l'effet qu'ont leurs décisions collectives sur le personnel subalterne et de se sentir utiles à la pérennité de l'organisation en fournissant un encadrement et des conseils influençant directement le perfectionnement professionnel de leurs stagiaires. Les tests t appariés ont montré que le succès du programme s'explique en bonne partie par la sélection de mentors aptes à transmettre leurs connaissances à des gens en début de carrière.

Recommandations

En somme, il est on ne peut plus clair que le programme de mentorat de RDDC est une réussite. Toutefois, comme dans la plupart des évaluations, des aspects à améliorer ont été cernés. À la lumière des résultats de l'enquête, on recommande :

- que le programme de mentorat de RDDC continue d'être mené indépendamment de tout autre programme de mentorat en place;

- de réinstaurer le financement des rencontres individuelles;

- d'encourager davantage les participants à bâtir des relations en s'appuyant d'outils tels que le formulaire d'entente de mentorat;

- d'établir une liste de sujets, d'élaborer des exercices et de se munir de matériel de soutien dans le but de faciliter la transmission des connaissances entre les dyades; et

- développez un atelier pour permettre à des mentors d'aider à augmenter des qualifications nécessaires de tutelle.

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1 Introduction

Mentoring is presently at the forefront of organisational human resource development strategies. In an effort to retain high quality employees, improve workplace learning, and prepare people for senior management and leadership positions, among other reasons, many leading edge organisations have implemented formal mentoring programs. Organisations became interested in mentoring when early research on the topic indicated it was linked to leadership development (Zaleznik, 1977), personal enrichment (Levinson, Darrow, Klein, Levinson, & Mckee, 1978), career and work satisfaction (Roche, 1979), and increased work productivity (Zey, 1984). More recently, mentoring has been linked to psychosocial support, organisational commitment, and work-related self-esteem (Waters, 2002).

Since the 1970s, hundreds of articles and books detailing instructions, formulas and guidelines for creating and implementing mentoring programs have appeared in both the popular and scholarly literature. Mentoring programs continue to gain popularity within organisations even though there is little empirical research concerning how programs should be designed and who should participate in them to achieve maximum effectiveness (Finklestein & Poteet, 2007).

This surge in popularity of mentoring programs is increasingly evident as many Canadian Government and private sector organisations, including Department of National Defence and Defence Research and Development Canada (DRDC), have instituted them without knowing much of the specific effectiveness of their unique programs. Understanding the ubiquitous rewards of this type of developmental relationship is particularly important given the amount of time, energy, and resources, both monetary and human invested to achieve program successes. To this end, this report presents a comprehensive review and summary of the extant academic literature on formal mentoring programs in organisational settings. Based on empirical evidence, the structure of the DRDC mentoring program is scrutinised and an assessment of the DRDC mentoring program is presented herein.

1.1 Definitional Issues of Mentoring

The concept of mentoring has been around for over 2700 years and can be traced to the ancient Greek poet Homer's *Odyssey*. According to the saga, when the Greek king and warrior Odysseus knew he would be away from home for many years, he chose a trusted friend, Mentor, to educate, protect, prepare and guide his son. Since then, Mentor's name has been attached to the process of knowledge transfer and learning by a more mature and experienced person.

Today, mentoring is conceptualised as much more than merely knowledge transfer. This type of developmental relationship reflects a unique connection between individuals. Traditionally, mentoring has been defined as a deep interpersonal relationship between a more senior, experienced, and knowledgeable employee (i.e., the mentor) who provides advice, feedback, counsel, support, and direction related to career and personal development to less experienced employees (i.e., the protégés) (Kram, 1983; Noe, 1988). According to the literature, there are numerous definitions of the concept (Eby, Rhodes, & Allen, 2007). However, there is no widely accepted operational definition of mentoring. Poor conceptualisation of mentoring is problematic leading to confusion as to what is being measured, difficulties drawing comparisons across studies and complications generalising results to different contexts.

An early yet comprehensive review of the literature yielded five components of mentoring about which there was and continues to be strong agreement. According to Jacobi (1991), a mentoring relationship 1) focuses on achievement 2) consists of three broad components: (a) emotional and psychological support, (b) direct assistance with career and professional development, and (c) role modeling[1], 3) is reciprocal—both the protégé and mentor derive intrinsic and extrinsic benefits from the relationship, 4) is personal requiring direct interaction between the members of the dyad, and 5) emphasises the greater experience, influence and achievement of the mentor within a particular organisation or environment. However, the relationship is driven by the needs of the mentee, with the aim that s/he becomes an independent and autonomous learner (Klasen & Clutterbuck, 2004).

1.2   Types of Mentoring Relationships

Structures of mentoring arrangements vary. The arrangement can be formal (a.k.a., facilitated or traditional), or informal. The structure or form of the relationship determines the basic distinction between the two. Informal mentoring arrangements tend to be low on control, (less structured), and occur spontaneously without external involvement and monitoring by the organisation (Chao, Walz, & Gardner, 1992). In contrast, facilitated relationships are generally tied to business or organisational initiatives, focused on skill development and transfer of experience, often linked to personal development plans and results are usually (empirically) evaluated (Murray, 2001, p. 208). Formal mentoring programs involve setting explicit goals and practices for connecting senior and more experienced managers with less experienced colleagues or those with managerial aspirations, and creating the necessary conditions for those relationships (i.e. developing a corporate culture that supports and enables the union). A formal mentoring program occurs when an organisation officially supports and sanctions mentoring relationships and provides some level of structure, guidelines, policies and assistance for starting, maintaining, and ending mentor-protégé dyads (Finkelstein & Poteet, 2007).

1.3   Outcomes of Mentoring

Mentoring has been discussed in the popular management literature for nearly two decades. Hundreds of books and articles have been written on mentoring, most of them describing the benefits of mentoring to protégés, mentors and organisations. In her seminal work on phases of the mentor-protégé relationship, Kram (1983) identified two primary functions of mentoring relationships; they have the potential to enhance psychosocial and career development for both the mentor and the protégé. According to Kram, psychosocial functions are those aspects of the relationship that primarily enhance ones sense of competency, identity, and effectiveness in the managerial role. Career functions are those aspects of the relationship that primarily enhance career advancement. These include such things as skill development, protection from career mistakes, and co-ordination of professional goals.

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[1] The function of role modeling in the mentoring relationship is under debate. Scandura and Ragins (1993) suggest that role modeling is one of three primary functions of a mentoring relationship, the other two being psychosocial and career development (Kram, 1983). However, this author argues that knowledge transfer can be of two kinds, direct or vicarious (Bandura, 1977). As such, role modeling is the vicarious process of knowledge transfer and is not a benefit derived from a mentoring relationship, per se.

1.3.1　Protégé Outcomes

The mentoring relationship affords many opportunities for the protégé to develop both personally (psychosocial function) and professionally (career function). Across many studies, protégés report a) greater satisfaction with both their jobs and their careers, b) higher likelihood of career advancement, c) more promotions, d) higher salaries, e) superior skill development, f) greater commitment to their careers and organisations and g) lower turnover intentions compared to non-mentored individuals (Allen, Eby, Poteet, Lentz, & Lima, 2004; Dreher & Ash, 1990; Fagenson, 1988, 1989; Lankau & Scandura, 2002;).

There are several theories that help explain how mentoring enhances protégés' performance and career outcomes. From a social learning perspective (Bandura, 1977), learning occurs in a social context through observation, imitation and modeling and can account for the psychosocial and career benefits suggested by Kram (1985). According to cognitive evaluation theory, individuals are more likely to adopt a modeled behaviour if it has functional value or results in outcomes they value and if the model is similar to the observer and has admired status (Bandura, 1986). Further, people are more likely to engage in certain behaviours when they believe they are capable of executing those behaviours successfully (feel self-efficacious). The mentor-protégé relationship sets the stage for the modeling process where individuals learn directly and vicariously through senior members of the organisation. Through friendship, counselling, teaching and acceptance, the mentor enables the development of professional competency by the protégé required for career success.

1.3.2　Mentor Outcomes

While the focus of positive outcomes of mentoring is typically on the protégé, there are also numerous beneficial psychosocial and career results for mentors. The mentoring relationship provides opportunities for the mentor to develop both personally (psychosocial function) and professionally (career function). The mentoring literature suggests that mentors may benefit primarily by acquiring knowledge, having the opportunity to test ideas, or being stimulated (Kram, 1985). Many studies find that mentors report gains in managerial skills, leadership capacity, and recognition and rewards for developing top talent (Eby, Butts, Lockwood, & Simon, 2004; Hunt & Michael, 1983). Features of the relationship such as role modeling and friendship allow for the mentor to satisfy a desire for generativity--the concern and commitment to the well-being of future generations (Levinson et al., 1978; McAdams, Diamond, Aubin, & Mansfield, 1997) obtain a sense of purpose and fulfillment through their work (Kram, 1985) and satisfy self-esteem needs (Solomon, Greenberg, & Pyszczynski, 1991). In terms of career development, mentoring may expand one's awareness of the organisational environment and revitalise an interest in one's work (Murray, 2001).

1.3.3　Organisational Outcomes

It is likely that different types of organisations benefit in different ways and to varying degrees from mentoring. One benefit that mentoring can provide is a structured system for strengthening and transmitting the organisational culture. Organisational culture can be thought of as the internalised set of beliefs, attitudes, and behaviours that influence the way members interact with each other and with stakeholders outside of the organisation (McKee & Hill, 2006, Schein, 1984). A strong corporate culture provides members with a collective core values base thereby providing implicit knowledge of what is expected, valued and likely rewarded by the organisation.

Organisational culture is not static or unchanging, nor are organisational environments. McKee and Hill (2006) argue that a hallmark of the new organisational environment is the notion of continuous change. In light of this, a mentoring system can be useful when an organisation is restructuring or redefining its culture. Other posited outcomes include development of the talent pool. Other organisational benefits include developing the talent pool, reduction of employee turnover (Dreher & Bretz, 1991; Scandura & Viator, 1994) and more recently increased organisational attraction (Allen & O'Brien, 2006). The latter finding that job seekers are more attracted to organisations that indicate they offer formal mentoring compared to organisations that do not, is an important finding particularly in light of the increasingly competitive labour market for highly skilled and knowledgeable employees (Banko, 2008). Therefore, mentoring programs may be a powerful attraction tool signalling that the organisation cares about the career development of its employees.

1.4 Program Structure

A characteristic of formal mentoring programs is that they provide some degree of procedures, control and oversight of the process. This includes such issues as creating relationships, defining specific individual goals, setting expectations, determining meeting frequencies and duration of a mentorship.

1.4.1 Selecting Program Participants

Mentor Selection

In organisational programs, mentors are typically experienced professionals, managers and executives. There are, however, several factors that should be considered with identifying members. Mentors should be able to model the work styles and behaviours that the organisations wants emulated by protégés, have effective communication skills, be confident, patient, and trusting, (Finkelstein & Poteet, 2007). Logically, these skills should assist and lead to positive program outcomes. Additionally, mentors would be expected to put greater effort into honouring appointments, giving guidance, and commitment to the success of the dyadic relationship and hence program successes.

Protégé Selection

When selecting protégés, two issues must be considered. Firstly, which group of employees should be targeted and secondly, within a particular group, which specific employees should participate.

1.4.2 Matching Process

In formal mentoring programs, protégés are typically assigned to mentors through organisational efforts. Early work on the topic warned of problems with this matching process. Kram (1985) cautioned that assigned mentoring relationships may not be as beneficial as mentoring relationships that develop informally, due to personality conflicts between parties, perceptions of the protégés supervisors that their ability to influence the subordinate is eroded by the presence of the mentor, and the lack of personal commitment of either the mentor or the protégé to the relationship because it was not formed on their initiative. Indeed, a meta-analytic review of the literature has found that informal mentoring produced larger and more significant effects on

career outcomes than formal mentoring (Underhill, 2006). This suggests that formal mentoring programs be designed so that participation is voluntary and participants have some say as to who will be their mentoring partner.

There is considerable empirical evidence concerning the positive effects of choice (autonomy) and perceived control (self-determination). Repeatedly, across domains, psychologists have argued that providing choice increases an individual's sense of volition and control (autonomy and self-determination) and intrinsic motivation (Cameron, Banko, & Pierce, 2001; Deci, Koestner & Ryan, 1999). In turn, autonomy, self-determination and intrinsic motivation have been linked to psychological well-being, life-satisfaction, enhanced performance, creativity, and greater feelings of competency (Banko, Cameron & Pierce, manuscript in preparation; Deci, 1975; Deci & Ryan, 1985). In contrast, the absence of choice has been shown to produce a variety of detrimental effects on motivation, life satisfaction, and health (Seligman, 1975; Deci et al., 1999).

1.4.2.1 Matching Characteristics

Various factors typically used to match mentors and protégés include race, sex, organisational level, type of job function, geographical proximity, talent and skill levels, mentor work experiences, the protégés development needs, ability of the mentor to develop a protégé, motivations and goals for the mentorship, interests and background, and personalities (Finkelstein & Poteet, 2007). One of the primary factors to consider is the difference in levels between the protégé and the mentor. Some recommend that mentors be at least two organisational levels above and not have a direct reporting relationship to the protégé (Kizilos, 1990; Tyler, 1998). Others have argued that mentors only one level higher would be better able to relate to the protégés' experiences (Keele, Bucker, & Bushnell, 1987). It is likely that the optimal arrangement of the organisational layers between the protégé and the mentor would depend on goals of the program. Dyads closer in rank would likely experience greater modeling benefits (Bandura, 1986); mentors higher in rank would likely have greater depth and breadth of experience and skills to pass. Intuitively, direct supervisors as mentors may stifle opportunities for fostering open and trusting relationships adding an evaluative component to a relationship that is intended to transfer knowledge and skills in a safe and non-judgemental context. To date, empirical evidence on most favourable matching characteristics is lacking.

1.4.3 Orientation and Training

A common recommendation in the field of organisational development is that individuals should receive adequate training when they are about to assume a new role or assignment. Across practitioner articles, all mentioned the need to train mentoring program participants.

The literature suggests a variety of topics that could be included in training including defining and outlining the program's objectives, reviewing roles and responsibilities for mentors and protégés, covering expectations about program outcomes (what it can and can not be expected to achieve), and tips on avoiding typical mentoring problems. Topics covered and skills taught should be specific to program participants. Specifically, protégés should be trained in career assessment and goal-setting, career choices and self-awareness. Mentors should cover topics and skills related to time requirements, coaching, effective communication, and providing feedback. However, there is little empirical evidence demonstrating the impact on the various topics and their effects on program outcomes. This may likely be the result of a common assumption, particularly in

workplace mentoring, that training for program participants is not a critical component necessary for the success of formal mentoring initiatives (Bearman, Blake-Beard, Hunt, & Crosby, 2007). Recent research on workplace mentoring has found significant effects of training for both mentors and protégés (Allen, Eby, & Lentz, 2006a, 2006b). Training positively impacted mentors' commitment and understanding of the program. For protégés, training positively impacted their understanding of the program and their perceptions of mentor commitment. This suggests that training may lay the groundwork for establishing an inter-personal connection between mentors and protégés.

1.4.4   Program Details

Across the literature, practitioners discussed the need for mentors and protégés to set expectations, goals, and responsibilities for their relationships (Finkelstein & Poteet, 2007). Some programs require that protégés create a formalised action plan detailing activities, roles, meeting times and locations, etc., as decided by the mentor-protégé dyad. In other instances, roles and responsibilities are set by the organisation. Ragins, Cotton, and Miller, (2000) found that having guidelines in place was predictive of perceived program effectiveness. The authors did not report information regarding how often the guidelines suggested that participants meet. It is likely that quality of dyadic interaction is a better predictor of perceived program effectiveness as Noe (1988) found that meeting frequency was not a significant predictor of relationships.

Recent research into psychological contracts may shed light on the complicated interpersonal nature of mentor-protégé relationships and effective program outcomes. A psychological contract is an individual's belief in mutual obligations between that person and another party such as an employer or a mentor. The belief is predicated on the perceptions that a promise has been made (e.g., the mentor has agreed to develop the managerial skills of the protégé) and a consideration offered in exchange for it (e.g., the protégé accepts challenging career opportunities) binding the parties to some set of reciprocal obligations. It is possible that successful program outcomes may be related to the extent to which protégés and mentors share beliefs regarding specific terms of the exchange and their reciprocal commitments. Formal agreements, then, detail the obligations between the dyad. As such, it is less likely that persons in the relationship will have fewer misperceptions with respect to individual program expectations and successes.

1.5   Summary and Conclusions

This review presents some clear definitions and a variety of recommendations for implementing a formal mentoring program. Unfortunately, there is little direct empirical evidence suggesting which practices are more effective.

It seems clear that mentoring programs do provide a variety of benefits for the protégé, the mentor, and the organisation. It is likely that a "magic bullet" objective of mentoring programs will not emerge. However, it seems logical that the program should be tailored to the organisation's needs, have a clear set of objectives, and those objectives should be clearly communicated.

The benefits of voluntary participation have yet to be demonstrated. However, research in other psychological domains suggests that voluntariness (choice) has many benefits.

The applied literature indicates that organisations rely on a variety of techniques when selecting protégés and mentors. Empirical work is offering some support to these selection criteria.

Although there is the possibility that random assignment to dyads may still produce positive program outcomes, a matching process based on the program's objectives and organisational culture is likely to produce far better program outcomes.

Training is nearly universally recommended as a precursor to participation in a formal mentoring program. Expectations should be clear and agreed upon by both the partners.

2 Defence Research and Development Canada Mentoring Program

This section details the program goals and expected outcomes of the DRDC formal mentoring program. Information was gathered from a variety of sources including the DRDC website and the program orientation manual.

2.1 Background

Based on a review of the academic literature and the results from a pilot project, DRDC designed and implemented a multi-cycle formal mentoring program to address present and future managerial requirements. The program, led by the mentoring implementation team (MIT) comprised of stakeholders from each DRDC centre, was officially launched 1 April 2007. Since that time there has been two iterations of the program. During the early stages of assessing the program, the author conducted an assessment of the program goals and benefits. This work was presented to the MIT, February 2008 (Banko, 2008). As a result, program literature and program outcomes and goals were refined. The information presented in the following sections represents the 2008/09 definitions and program goals.

2.2 Definition

A straightforward yet precise definition is vital to valid construct measurement. Ambiguities surrounding program functions, structure, goals, and explicit objectives for mentors, protégés, and the organisation, make program assessment complicated if not unattainable. Following is the definition of mentoring taken from the DRDC Mentoring Program Orientation Manual, April 2009.

> *"Mentoring is a mutually beneficial learning partnership between a mentor (who possesses a greater amount of skills, knowledge or experience) and a mentee (or associate, protégé, apprentice) who is looking to enhance his or her knowledge, skills, experience, career development, and professional growth (pp. 4)."*

According to the mentoring literature, there are five elements that are common to formal mentoring programs (Jacobi, 1991). Formal programs focus on achievement, psychosocial support, professional and/or career development, is beneficial to both the protégé and the mentor, require direct interaction of the dyad and emphasises the greater knowledge, influence and achievement of the mentor. Clearly, the definition fro the DRDC program meets elements common to formal mentoring programs.

2.3 Program Goals

Information taken from the DRDC mentoring program orientation manual[2] and information provided on the DRDC website[3], the primary objectives of the program are focused in three

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[2] This report uses the program goals and objectives of the 2009 version of the DRDC Mentoring Program Orientation Manual which formed the bases for the design of the program assessment questionnaire.

areas: skill development (to help mentees develop one or more needed skills or competencies); career development (stresses upward mobility and career planning for mentees); and organisational/cultural development (increases understanding of the organisation and its culture, vision, history, and status in the marketplace).

2.4   Program Benefits

The orientation manual lists expected benefits to the mentee, mentor, and the organisation and are provided below. Determining expected program benefits is central to program evaluation. That is, success of the program will be evaluated as a function of its ability to produce expected benefits/outcomes.

Mentee

- Gains from the mentor's expertise
- Receives critical feedback in communications, interpersonal relationships, change management and leadership skills
- Gains a sharper focus on steps needed to grow professionally in the organisation
- Foster informed career decision-making
- Learns specific skills and knowledge relevant to his or her personal goals
- Networks with a more influential employee
- Gains knowledge about the organisation's culture and unspoken rules that can be critical for personal success

Mentor

- Gains insights from the mentees background and history which can be utilised in the mentor's own professional and personal development
- Gains satisfaction in sharing his or her expertise with another
- Reenergises his or her own career
- Gains an ally in promoting the organisation's well being
- Increases his or her own internal network of colleagues
- Learns more about other areas within the organisation

Organisation

- Provides a method of exploring career paths within the organisation rather than looking for opportunities elsewhere
- develops greater company loyalty
- enhances strategic business initiatives
- increases organisational communication
- develops managerial talent
- increases loyalty of employees
- motivates senior people by making them feel useful

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[3] Program objectives can be found at: http://descartes.drdc-rddc.gc.ca/hr/pages/mentoring/objectives.aspx

- improves succession planning

2.5 Training

The MIT provides literature for mentors to assist them with their role. However, there is no formal training in place.

3   2008/2009 Program Assessment

3.1   Background

This section reports the findings from the 2008/2009 program cohort. This was the second iteration of the program following the pilot program in 2003.

3.2   Method

3.2.1   Participants

At the launch of the program, there were 49 mentees and 42 mentors. Some Mentors mentor more than one mentee at a time. Two Mentees dropped out of the program after its start leaving 47 dyads. Twenty-five Mentees and twenty-seven Mentors completed and submitted the survey. Two surveys from the Mentee and Mentor returns were identified as outliers and removed from the analysis because the relationships did not commence. Additionally, one Mentor did not complete the questionnaire but instead provided a qualitative assessment which was included in the qualitative data analysis. The final sample consisted of n = 50 (n = 24 for Mentees and n = 26 for Mentors).

3.2.2   Assessment Instrument

Two questionnaires, one for the Mentees (Appendix A) and one for the Mentors (Appendix B) were created by the members of the committee. Two separate questionnaires were required as the program outcomes varied as a function of participatory role. For the Mentees, four items focused on personal career development, gaining insight about the agency, and the dyadic relationship. The 10-item questionnaire for Mentors assessed generativity[4], insight about the agency, and the dyadic relationship. Each item was assessed with 5-point Likert type ratings scales anchored by "disagree strongly" (1) and "agree strongly" (5). Thus, item 8 which was negatively framed on both forms, was reversed scored for the analysis. An additional category of "not applicable" was also an available response choice. In addition to the quantitative items, two open-ended questions were added to both questionnaires asking respondents to identify benefits they gained as a result of their participation and to identify any challenges or obstacles they experienced over the course of the program. Questionnaires were provided to program participants in both official languages.

3.2.3   Procedure

The questionnaires were distributed electronically to participants for a four week period commencing 10 May 2009, approximately five weeks following the completion of the program.

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[4] "Generativity" is a term coined by the psychoanalyst Erik Erikson in 1950 to describe a development stage in one's life characterised by the concern to guide and nurture younger people and contribute to the next generation.

Reminders were sent to non-respondents 10 June 2009 with a return date of 2 July 2009. Completed forms were returned via email or mailed to the program facilitator. The program facilitator removed any indications of identity, such as email address, and coded the questionnaires so that paired sample t-test could be conducted on the five items that were similar on each questionnaire. However, not all participants submitted the questionnaire so this analysis could not be conducted. Instead, independent sample t-tests were conducted with those items.

3.2.4 Data Analysis Strategy

For the quantitative data, inferential statistics were computed using SPSS$^{®}$ software. The qualitative data were scrutinized line by line. Indexing of primary data was undertaken to inductively generate broad themes (Johnston, 1998). The thematic data was scrutinized and coded to generate initial descriptive categories (Strauss & Corbin, 1990). Hierarchical coding was applied "by hand" (King, 2004) to break down the descriptive categories into subthemes or subcategories.

3.3 Results

3.3.1 Quantified Self-report Data

The means and standard deviations of questionnaire items for the Mentees are presented in Table 2 in descending order of size; the means and standard deviation for the Mentors are displayed in Table 3 in a similar fashion. Examination of ranked means shows that the highest ranked items (item 8, 3, and 9) are all related to aspects of the relationship. Information about the organisation appears next, followed by personal skill development, although the pattern of findings for these two areas are not as distinct (i.e., item 2 is ranked amid the organisational outcomes).

Table 2. Means and standard Deviations of Questionnaire items from Mentees

Item no.	Item	M	SD	n
8)	I was displeased with the mentor assigned to me (reverse scored)	4.91	0.29	23
3)	Face-to-face meetings facilitated our relationship	4.82	0.40	22
9)	I could speak openly with my mentor	4.70	0.56	23
4)	I gained knowledge about the DRDC organisation	4.43	0.73	23
12)	I have a better understanding of the culture of the organisation	4.30	0.56	23

Item no.	Item	M	SD	n
2)	My mentor suggested strategies for achieving career aspirations	4.27	0.63	22
10)	I gained insight into the function of another part of the org.	4.18	0.73	22
11)	I was able to balance my relationship with my workload	4.17	1.03	23
5)	My mentor helped me formulate/advance my career objectives	4.04	0.71	23
7)	My mentor provided suggestions for me to learn new skills	4.00	0.80	20
6)	I gained an understanding of management as a career path	3.95	0.76	20
1)	The relationship created networking opportunities for me	3.23	0.92	22

The ratings the Mentors provided also ranked the items that relate to aspects of the relationship the highest. This is followed by personal achievements and then organisational understanding.

Table3. Means and Standard Deviations of Questionnaire Items from Mentors

Item no.	Item	M	SD	n
3)	I could speak openly with my mentee	4.88	0.34	24
8)	I was displeased with the mentee assigned to me (reverse scored)	4.46	1.14	24
1)	Being a mentor was a satisfying experience	4.12	0.85	24
4)	I gained a better understanding of my mentee's challenges	4.12	0.61	24
9)	I was able to balance my relationship with my workload	4.08	0.78	24
5)	Mentoring improves communication and information flow	3.65	1.03	23
2)	I understand the impact of corporate actions from mentee's view	3.50	0.80	22
7)	I gained insight in the function of another part of the org.	3.39	0.89	23
10)	I have a better understanding of the culture of the organisation	3.38	0.67	21

6) I found the mentor's role demanding	2.38 0.88 24

3.3.2   T-tests

Five items were identical on the mentor and mentees questionnaires. For each item an independent samples t-test was conducted; the results are presented in Table 4. The non-significant results (meaning there is no significant difference between the sample means) indicates that people were satisfied with the partner with whom they were paired, mentees and mentors were able to balance their workload with their partnership, and the dyads could speak openly with one another. There was a statistically significant effect for the item assessing the ability to gain insight into another part of the organisation. The averages reported for both members of the dyad are greater than the midpoint on the scale suggesting that both persons gained insight into the functioning of another part of the centre, the result, however, was greater for Mentees (M = 4.18, SD = 0.73) compared to Mentors (M = 3.39, SD = 0.89). There was also a statistically significant effect for increasing their understanding of organisational culture. Both parties gained a better understanding and the effect was greater for Mentees (M = 4.30, SD = 0.56) relative to Mentors (M = 3.38, SD = 0.67)

Table 3: Independent Samples t-test Results.

Item	t-statistic
Displeased with partner match	t(44) = 1.80, ns
Gained insight into the functioning of another part of the org.	t(43) = 3.24, p < .01
Was able to balance my relationship with my workload	t(46) = 0.34, ns
I could speak openly with my partner	t(46) = -1.34, ns
Gained better understanding of organisational culture	t(43) = 3.24, p < .01

Note: ns = non significant

3.3.3   Qualitative Responses from Mentees

Time, in a variety of ways, was reported to be the largest challenge for the relationship. Finding time to meet was difficult and compounded by physical distance (e.g., time zone differences). Some reported that workloads prevented regular communication and that it was difficult to balance the workload with learning managerial skills. Changes in careers/postings produced periods of inactivity or interrupted a regular meeting schedule. In terms of the relationship, it was questioned that perhaps it was too much to expect a mentor to "really get to know the partner in

such a short time." Similarly, the one year cycle was deemed to be insufficient—"involvement in the program should span one's career". More face-to-face meetings were recommended.

There were several comments made about the 'content' of the meetings. Respondents' would like to get advice on what skills that they could explore or improve. It was mentioned that they did not know what questions to ask and that mentors should have some backup topics for discussion. And, it was difficult to find topics to discuss once the 'list' had been addressed.

Mentees reported they learned about the other centres, DRDC as a whole, and about organisational culture. The program helped change people's misconceptions of management. Respondents gained a better appreciation of issues that face scientific staff, particularly from the view of management. They felt it was important to have access to 'informal' information but were sometimes disappointed when they learned of discrepancies between 'how things are suppose to work' compared to 'how things actually work' (i.e., got a clearer understanding of issues not addressed through formal management processes).

Generally, Mentees gained an understanding of the pros and cons and the responsibilities of the two career paths, gained a perspective on leadership, realised that managing scientific staff is "more than just supervising staff", and gained knowledge on how better to manage their careers.

In terms of the dyadic relationships, Mentees found their mentors to be a person with whom they could a) trust, b) openly discuss all job aspects, c) seek and receive "good" non-judgemental advice from, and d) use as a sounding board.

Skill development in multiple areas was reported by all Mentees. For example, they gained insights into how to deal with issues and challenges, got practical advice on how to engage military clients, learned strategies to deal with procurement issues (i.e., establish relationships with Public Works and Government Services Canada), and developed a broad understanding of strategic partnering groups. Others learned how to keep an open perspective when faced with challenges and when working with colleagues, and how to focus efforts in creative ways as the most effective mechanism for achieving goals, advancing work programs, and moving DRDC forward. Some developed managerial skills while others reported that the experience helped them begin to figure out how to approach developing the required skills. For those who had been in the program more than once, the second year in the program allowed for a deeper and broader understanding of DRDC and its partners.

3.3.4   Qualitative Responses from Mentors

Mentors reported that finding time to meet (i.e., balancing workloads and synchronising agendas) was the biggest challenge to the relationship. Other career associated challenges (i.e., professional development or career changes) also made scheduling time for meetings challenging. Face-to-face meetings were reported to be important to the relationship, particularly for building trust between the dyad. However, it was offered that this was difficult to achieve when partners were in different cities. In terms of the meetings, it was stated that as time passed, it became increasingly difficult to generate topics for discussion and that more [formal] structure would improve the conference. Additionally, some Mentors found it challenging to explain the difference between how decisions ought to be made versus how they actually are made.

Many Mentors reported that they increased their awareness in several ways. First, they stated that they had a better appreciation of the functional differences between the different research centres (labs), and between the labs and corporate offices. In contrast, it was also reported that Mentors gained insight into the similarities between the centres (e.g., other centres have similar problems). Additionally, Mentors gained awareness on how management and the decisions that are taken by those in managerial positions are perceived by those less senior in the organisation.

Several Mentors reported that they experienced personal satisfaction knowing that they helped their partners by a) providing guidance and advice, b) helping them understand DRDC better, and c) contributing directly to their professional development. They said it was enjoyable to discuss and plot strategy to solve problems. Some said that it broadened their knowledge of technical and operational areas and of career progressions dilemmas; they also they learned ways to correct misassumptions held by their partners.

A couple of general comments about the program were provided as well. Meetings that occurred in a social setting worked best for one pair and using the budget for face-to-face meetings was "very helpful" for the relationship.

4   Discussion and Recommendations

Based on the review of the literature, it is clear that the DRDC program has been designed in accordance with research that demonstrates positive program outcomes. Specifically, DRDC chose to create a formal mentoring program in which relationships were facilitated (assisted personal matching) and the goals of the program are linked to organisational initiatives, they focus on skill development and transfer of experience, and is officially endorsed by the organisation.

4.1   Achievement of Expected Program Outcomes

The results from the questionnaire items show that participating in the program was a positive experience and all participants learned about the organisation and its culture. Mentees developed interpersonal skills, better understood the roles of management, developed an better understanding of strategic partnering groups, and how to focus efforts to advance work programs and shape their careers into desired directions. Mentors gained awareness on how their corporate actions affect those junior in the agency and experienced generativity by being able to provide guidance and advice that contributed directly to the professional development of their mentees. The paired t-tests provided additional evidence demonstrating that the facilitated program is working with respect to the selection of mentors and their ability to transfer knowledge to those younger in their careers.

As stated in section 2.3, the success of the program would be evaluated as a function of its ability to produce the expected benefits and outcomes to the individuals and the organisation. Using the quantified mean ratings have been mapped onto the expected benefits that appear in the orientation manual; these results appear in table 4, 5 and 6 respectively.

Table 4: Findings Mapped onto the Expected Benefits for Mentees as Listed in the Orientation Manual

Program Outcome for Mentee	Achieved
Gains from the mentor's expertise	**Yes**
Receives critical feedback in communications, interpersonal relationships, change management and leadership skills	**Yes**
Gains a sharper focus on steps needed to grow professionally in the organisation	**Yes**
Foster informed career decision-making	**Yes**
Learns specific skills and knowledge relevant to his or her personal goals	**Yes**

Networks with a more influential employee	**Yes**
Gains knowledge about the organisation's culture and unspoken rules that can be critical for personal success	**Yes**

As can be seen from tables 4, 5, and 6, the findings from the questionnaire confirms that many of the program objectives were achieved.

Table 5: Findings Mapped onto the Expected Benefits for Mentors as Listed in the Orientation Manual

Program Outcomes for Mentors	**Achieved**
Gains insights from the mentees background and history which can be utilised in the mentor's own professional and personal development	**Yes**
Gains satisfaction in sharing his or her expertise with another	**Yes**
Reenergises his or her own career	Not assessed
Gains an ally in promoting the organisation's well being	Not assessed
Increases his or her own internal network of colleagues[5]	Not assessed
Learns more about other areas within the organisation	**Yes**

Table 6: Findings Mapped onto the Expected Benefits for DRDC as Listed in the Orientation Manual

Outcomes for DRDC	**Achieved**
Provides a method of exploring career paths within the organisation	YES
Develops greater company loyalty	Not assessed
Enhances strategic business initiatives	Not assessed
Increases organisational communication	YES

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[5] Because the participation in the program is anonymous, and meetings are held only between dyads, it is unlikely that his could ever be a program outcome.

Develops managerial talent	YES
Increases loyalty of employees	Not assessed
Motivates senior people by making them feel useful[6]	YES
improves succession planning	Not assessed

4.2   Other Program Outcomes

In addition to achieving the majority of program goals, the results of the questionnaire provided important insights about the program and its structure.

In terms of the dyadic relationships, participants were highly pleased with the person with whom they were matched. One of the ways in which the DRDC program differs from other mentoring programs (e.g. Department of National Defence Mentoring program) is the unique personal matching of mentors to mentees. Other programs use various means to match people (e.g., electronic matching) and this might be one of the reasons these programs do not succeed. As well, respondents reported that face-to-face meetings helped facilitate their relationships and this likely provided the bases for being able to speak openly with each other. Indeed, this link has been found in other formal mentoring relationship (Eby & Lockwood, 2005). As such, face-to-face meetings should be encouraged to foster ties between dyads to create the context in which relationships can flourish. The ability to have in-person meetings was assisted by the program budget. However, extensive government cutbacks have led to the removal of this funding for the program. As such, there could be a negative impact on the relationships of the current and future iterations of the program. The result could be that program goals will not be achieved and therefore the program will not continue to succeed. It is therefore recommended that funding be reinstated to ensure that the foundation from which the program is based, the relationships between the participants, remains strong.

One of the most often cited challenges was finding the time to meet which was also compounded by the physical distances between the pairs. This issue could be addressed by the MIT representatives to strongly encourage the use of the mentoring agreement for to plan for a specific meeting plan. Content of the meetings was raised as another point of concern. One potential way to address this is to conduct an assessment of mentors and mentees to determine what topics are covered during the various partner discussions in order to generate a living list of topics and then for the MIT or the participants of the program to find supporting documents to facilitate discussions and sharing of knowledge. As well, workshops that bring mentors together to share their experiences and how their relationships work would be of added benefit to the program.

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[6] The wording of this item was changed by the MIT facilitator prior to the administration of the questionnaire. The intent of the item is to assess generativity, however.

In sum, there is strong evidence demonstrating the success of the DRDC Mentoring Program. As with most assessments, points of improvement are identified. From the findings of this study, it is recommended that:

- The DRDC Mentoring Program continue to function independently of other sanctioned mentoring programs

- Funding for face-to-face meetings be reinstated

- Greater encouragement for participants to use the tools such as the mentoring agreement form to help develop their relationships

- Determine a pool of topics and find exercises and supporting material to facilitate the transfer and sharing of knowledge between the dyads.

- Develop a workshop to enable mentors to help expand necessary mentoring skills.

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Annex A Mentee Questionnaire Items

Using the following scale, respondents expressed their level of agreement with each statement.

1	2	3	4	5	NA
Disagree Strongly				Agree Strongly	Not Applicable

1) The mentoring relationship created networking opportunities for me.

2) My mentor suggested strategies for achieving career aspirations.

3) Face-to-face meetings facilitated our mentoring relationship.

4) I gained knowledge about the DRDC organization.

5) My mentor helped me formulate/advance my career objectives.

6) I gained an understanding of management as a career path.

7) My mentor provided suggestions for me to learn new skills.

8) I was displeased with the mentor assigned to me.

9) I could speak openly with my mentor.

10) I gained insight into the functioning of another part of the organization.

11) I was able to balance my mentoring relationship with my workload.

12) I have a better understanding of the culture of the organisation.

Respondents were asked to provide responses to the following two open-ended items.

a) Describe some benefits you gained because of your experience with the program.

b) Describe any challenges or obstacles, relationship or otherwise, which you experienced during the program.

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Annex B Mentor Questionnaire Items

Using the following scale, respondents expressed their level of agreement with each statement.

1	2	3	4	5	NA
Disagree				Agree	Not
Strongly				Strongly	Applicable

1) Being a mentor was a satisfying experience.

2) From the perspective of my mentee, I now understand more fully the impact of corporate actions.

3) I could speak openly with my mentee.

4) I gained a better understanding of the career challenges faced by my mentee.

5) Mentoring improves communication and information flow within DRDC.

6) I found the mentor's role demanding.

7) I gained a better insight into the functioning of another part of the organization.

8) I was displeased with the mentee assigned to me.

9) I was able to balance my mentoring relationship with my workload.

10) I have a better understanding of the culture of the organization.

Respondents were asked to provide responses to the following two open-ended items.

a) Describe some benefits you gained as a result of your experience as a mentor with the program.

b) Describe any challenges or obstacles, relationship or otherwise, which you experienced during the program.

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Annex C Data Summary Tables

C.1   Mentee Data

	Frequency of Ratings						Descriptive Statistics		
	SD	D	N	A	SA				
Item	1	2	3	4	5	N/A	*M*	*SD*	*n*
1) Networking opportunities	0	6	6	9	1	2	3.23	0.92	22
2) Career aspirations	0	0	2	12	8	1	4.27	0.63	22
3) Face-to-face meetings	0	0	0	4	18	1	4.82	0.40	22
4) Organizational knowledge	0	0	3	7	13	0	4.43	0.73	23
5) Career Objectives	0	0	5	12	6	0	4.04	0.71	23
6) Management career	0	0	6	9	5	3	3.96	0.76	20
7) New Skills	0	1	3	11	5	3	4.00	0.80	20
8) Displeased with mentor	20	2	0	0	0	1	1.09	0.29	22
9) Speak openly	0	0	1	5	17	0	4.70	0.56	23
10) Insight into other Centre	0	1	1	13	7	1	4.18	0.73	22
11) Workload balance	0	3	1	8	11	0	4.17	1.03	23
12) Organisational culture	0	0	1	14	8	0	4.30	0.29	23

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C.2　Mentor Data

	Frequency of Ratings						Descriptive Statistics		
Item	SD 1	D 2	N 3	A 4	SA 5	N/A	*M*	*SD*	*n*
1) Satisfying experience	0	1	4	10	9	0	4.12	0.85	24
2) Corporate action impact	0	2	9	9	2	2	3.50	0.80	22
3) Speak openly	0	0	0	3	21	0	4.88	0.34	24
4) Mentee career challenge	0	0	3	15	6	0	4.12	0.61	24
5) Improve communication	0	5	2	12	4	2	3.65	1.03	23
6) Demanding role	4	9	9	2	0	0	2.38	0.88	24
7) Insight into other Centre	1	1	11	8	2	1	3.39	0.89	23
8) Displeased with mentor	19	3	1	1	1	0	1.54	1.14	24
9) Workload balance	0	0	6	10	8	0	4.08	0.78	24
10) Organisational culture	0	2	9	10	0	3	3.38	0.67	21

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An examination of the DRDC 2008-2009 mentoring program was undertaken to determine if the program is meeting its intended objectives. These objectives included skill development and transfer of organisational knowledge in order to develop a pool of future managers. At the end of the program, a survey was administered to participants. Findings suggest that the program is indeed, meeting the primary objectives which ultimately develop the talent that will reach managerial positions within the agency.

On a procédé à une évaluation du programme de mentorat 2008-2009 de RDDC afin de déterminer si ses objectifs ont été atteints. Le programme vise le développement des compétences des participants et la transmission des connaissances propres à l'organisation dans le but de former de futurs gestionnaires. À la fin du programme, on a mené une enquête auprès des participants et les résultats ont montré que, effectivement, les principaux objectifs ont été atteints et que le programme permet ainsi de former convenablement des gens qui seront en mesure d'occuper des postes de gestion au sein de l'organisation.

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