Can less be more? Mentoring functions, learning goal orientation, and novice entrepreneurs' self-efficacy

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Structured abstract

Purpose
One of the main goals of entrepreneurial mentoring programs is to strengthen the mentees' self-efficacy. However, the conditions in which entrepreneurial self-efficacy is developed through mentoring are not yet fully explored. This article tests the combined effects of mentee's learning goal orientation and perceived similarity with the mentor and demonstrates the role of these two variables in mentoring relationships.

Design
The current study is based on a sample of three hundred and sixty (360) novice Canadian entrepreneurs who completed an online questionnaire. We used a cross-sectional analysis as research design.

Findings
Findings indicate that the development of entrepreneurial self-efficacy (ESE) is optimal when mentees present low levels of learning goal orientation (LGO) and perceive high similarities between their mentor and themselves. Mentees with high LGO decreased their level of ESE with more in-depth mentoring received.

Limitation
This study investigated a formal mentoring program with volunteer (unpaid) mentors. Generalization to informal mentoring relationships needs to be tested.

Practical implication/value
The study shows that, in order to effectively develop self-efficacy in a mentoring situation, learning goal orientation (LGO) should be taken into account. Mentors can be trained to modify mentees' LGO to increase their impact on this mindset and mentees' entrepreneurial self-efficacy.

Originality/value
This is the first empirical study that demonstrates the effects of mentoring on entrepreneurial self-efficacy and reveals a triple moderating effect of LGO and perceived similarity in mentoring relationships.

Introduction

In recent decades, countries all over the world have implemented support programs contributing to the development of entrepreneurial activity as part of the entrepreneurial ecosystem (Spigel, 2015). Among these initiatives, the mentoring of novice entrepreneurs was emphasized as highly beneficial for enhancing entrepreneurial self-efficacy (ESE) and entrepreneurial skills (e.g. Crompton, 2012; Gravells, 2006; Radu Lefebvre and Redien-Collot, 2013; St-Jean and Audet, 2013). Extensive empirical research (Ozgen and Baron, 2007; Sullivan, 2000; Ucbasaran, Westhead, and Wright, 2008) confirmed the positive impact of mentoring relationships on both mentees' cognitions (improving opportunity identification, clarifying business vision) and emotions (reducing stress and feelings of being isolated, establishing more ambitious goals). However, there is limited knowledge of *how* mentoring relationships produce these outcomes. We thus know little about the individual and relational variables moderating the impact of mentoring relationships. This article makes a theoretical and practical contribution to our understanding of how, and under what conditions, mentor input (mentor functions), along with a mentee variable (mentee's learning goal orientation; LGO) and a mentoring relationship variable (perceived similarity with the mentor) combine to develop novice entrepreneurs' ESE. This, in turn, will enable entrepreneurial support programs to better match and support mentoring dyads.

Despite their potential effects on mentees' ESE (Egan, 2005; Mitchell, Eby, and Ragins, 2015), research dedicated to the study of ESE development while simultaneously taking into account mentor functions, perceived similarity with the mentor, and mentees' LGO is scarce. Studies based on goal orientation theory (Dweck, 2008; Dweck and Leggett, 1988), social learning theory (Bandura, 1986, 1997) and social comparison theory (Festinger, 1954) generated consistent evidence related to the development of ESE through supportive relationships such as mentoring. Goal orientation theory emphasizes the role of LGO in producing positive effects on mentees' ESE

(Godshalk and Sosik, 2003; Kim, 2007), whereas social learning theory and social comparison theory focus on the importance of perceived similarity in producing positive ESE outcomes at the mentee level (Ensher and Murphy, 1997; Mitchell et al., 2015). The present article builds on these three streams of literature to test the combined effects of perceived similarity with the mentor and mentees' LGO on mentees' ESE. Moreover, we build on previous mentoring research in entrepreneurship that has established that the input mentors bring in mentoring relationships can be effectively operationalized as a set of mentoring functions. These mentoring functions can be related to career development whereas others are more focused on the mentees' attitude change and skills development (St-Jean, 2011; St-Jean and Audet, 2013).

The aim of the present study is to demonstrate that the impact of mentoring functions on mentees' ESE is moderated by the mentee's LGO and perceived similarity with the mentor. The reason for combining these three streams of literature to test our moderating model is that *together* they contribute to our understanding of the impact of mentoring relationships on novice entrepreneurs. First, the social comparison perspective within mentoring relationships is considered by testing the moderating effect of perceived similarity with the mentor on mentees' ESE development. Second, goal orientation is taken into account as part of novice entrepreneurs' psychological disposition upon entering a mentoring relationship, and how these relationships can have an impact on their ESE. Third, we highlight the potential combined effect of mentees' LGO and perceived similarity with the mentor in explaining the conditions in which mentees' ESE could develop to allow them to reach their full potential.

The article is structured as follows: first, we present the theoretical background and the main hypotheses. Then we focus on our empirical study and the methods used to test the hypotheses. Based on a sample of 360 entrepreneurs supported by a mentoring program in Canada, the study shows that mentoring functions foster ESE under certain conditions, which supports the hypotheses

concerning the moderating role of mentees' LGO and perceived similarity with the mentor. We demonstrate that high perceived similarity with the mentor increases mentees' ESE and we show that mentoring functions increase mentees' ESE, particularly when mentees have low levels of LGO. We discuss these findings and highlight their theoretical and practical implications for entrepreneurial research and policy.

Theoretical background

This section first presents the notion of ESE and its relevance in the context of mentoring for entrepreneurs. We then focus on the issue of the mentor's input and show the importance of mentor functions and mentees' perceived similarity with the mentor for mentees' ESE development. Mentees' LGO is also introduced and we highlight its direct and moderating effects on mentees' ESE enhancement. Finally, the combined effect of mentees' LGO, mentor functions and perceived similarity with the mentor is examined to explore how these variables may influence the development of mentees' ESE as a result of involvement in mentoring relationships.

ESE refers to the subjective perception of one's ability to successfully accomplish a specific task or behavior (Bandura, 1997). According to Bandura (1997, p. 77), ESE beliefs are constructed through four main sources of information: 1/ enactive mastery experiences that serve as indicators of capability; 2/ vicarious experiences that alter efficacy beliefs through transmission of competencies and comparison with the attainments of others; 3/ verbal persuasion and allied types of social influence that may persuade the individuals that they possess certain capabilities; and 4/ physiological and affective states from which people partly judge their capability, strength, and vulnerability to dysfunction. Although mentoring may not support ESE development through enactive mastery experiences, indirect evidence obtained from previous studies (ref. Bandura, 1997) suggests that mentoring can develop ESE through the three other processes (vicarious learning,

verbal persuasion, physiological and emotional states). Mentors may act as role models in a vicarious learning relationship which consists in facilitating mentees' self-evaluation and development of entrepreneurial and business skills through social comparison and imitative behavioral strategies (BarNir, Watson, and Hutchins, 2011; Johannisson, 1991; Scherer et al., 1989). Indeed, vicarious learning from mentors was identified as the most significant contribution to mentoring relationships, regardless of the context being studied (Barrett, 2006; Crocitto, Sullivan, and Carraher, 2005; D'Abate and Eddy, 2008; Gordon and Brobeck, 2010; Hezlett, 2005; Lankau and Scandura, 2002; St-Jean and Audet, 2012). Furthermore, mentors may use verbal persuasion strategies to help mentees explore and sometimes change their attitudes and beliefs (Marlow and McAdam, 2012; Radu Lefebvre and Redien-Collot, 2013; St-Jean and Audet, 2013). Finally, mentors may influence mentees' emotional states by reducing their levels of stress related to perceived uncertainty and future challenges (Kram and Hall, 1989; Sosik and Godshalk, 2000).

It is, however, important to note that not all mentors are equally invested in mentoring relationships; some may only provide marginal mentoring (Ragins, Cotton, and Miller, 2000) or worse, harmful mentoring experiences (Eby et al., 2004; Eby et al., 2000; Simon and Eby, 2003). The quality and depth of mentoring relationships can be assessed by mentor functions (Kram, 1985) that allow mentees to benefit from the mentoring relationship in various ways, particularly in terms of positive changes regarding their ESE (Day and Allen, 2004; Powers, Sowers, and Stevens, 1995; Wanberg, Welsh, and Hezlett, 2003). Mentor functions studied in large organizations, as well as in entrepreneurship, refer to three categories of support a mentee can receive: psychological, career-related, and role modeling (Bouquillon, Sosik, and Lee, 2005; Pellegrini and Scandura, 2005; St-Jean, 2011; Waters et al., 2002). Mentor functions can act as an indicator of the quality of the mentoring provided or received (Hayes, 1998). These functions influence the mentoring process, more specifically the development of mentees' ESE; prior research has demonstrated that higher

levels of psychological support improve mentees' ESE (Kram, 1985). As a result of their focus on providing challenging tasks to the mentee or in guiding them throughout the decision-making process, career-related functions also play a significant role in the development of mentees' ESE (Kram, 1985; St-Jean, 2011). To sum up, there is consistent evidence that mentor functions have a direct impact on mentees' ESE. Our goal is to demonstrate the contribution of two moderating variables that may enhance or diminish the impact of mentoring functions on mentees' ESE development: perceived similarity with the mentor and mentees' LGO, as indicated in the Figure 1.

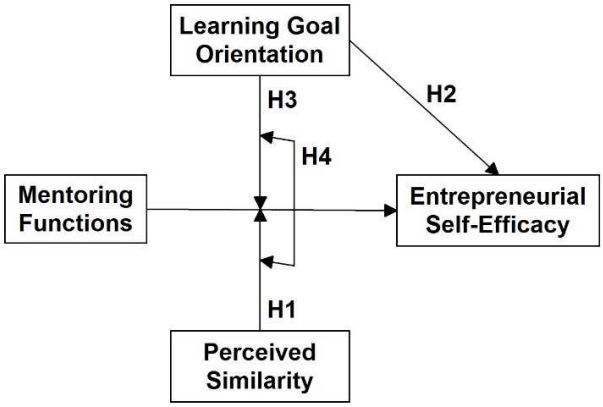

Figure 1. Tested theoretical model

The role of perceive similarity with mentor in supporting mentees' ESE development

The notion of "perceived similarity" was introduced by Festinger (1954), who stressed that when individuals evaluate their own opinions and abilities, there is a tendency to look to external sources of information such as role models. Social comparison theory (Festinger, 1954) complements Bandura's social cognitive learning theory in suggesting that the greater the perceived similarity to the role model, the greater the impact of that role model on the observer's ESE (Bandura, 1997). Social comparison theory highlights that the observer's identification with the role

model is crucial for maintaining the social comparison process. Perceived similarity regarding age, gender, background (Wheeler, Petty, and Bizer, 2005), values and goals (Filstad, 2004) reinforces identification to the role model. Individuals tend to compare themselves with people they perceive as similar to themselves, and avoid comparing themselves with people perceived as too different (Festinger, 1954). Mentoring relationships with low levels of perceived similarity are thus likely to reduce the social comparison process and generate a negative impact on vicarious learning; this decrease in vicarious learning would negatively impact the observer's ESE.

To generate positive outcomes as role models, one condition seems essential: mentors of entrepreneurs must be perceived as similar by their mentees (Elam, 2008; Terjesen and Sullivan, 2011; Wilson et al., 2009). In three recent meta-analyses in mentoring contexts, Eby et al. (2013), Ghosh (2014) and Ghosh and Reio (2013) demonstrated that perceived similarity with mentors is correlated to positive mentoring outcomes. The process through which perceived similarity influences mentoring outcomes was characterized by Mitchell, Eby and Ragins (2015) as "relational identification" in work relationships (cf. the theory of relational identification; Sluss and Ashforth, 2007). Prior empirical research has shown that entrepreneurs tend to choose role models of the same gender. This tendency is stronger for women entrepreneurs (Murrell and Zagenczyk, 2006), who start a business in what is still perceived as a male dominated social milieu (Wilson, Kickul, and Marlino, 2007). Interestingly, mentoring research has emphasized that *perceived* similarity is more important than *actual* similarity (Ensher, Grant-Vallone, and Marelich, 2002). When identification is effective, mentors share their values and attitudes, and they may model desired entrepreneurial behaviors or attitudes.

Comparing oneself to a mentor is an upward social comparison that can stimulate mentees' motivation to engage in a learning process when perceived similarity with the mentor is high (Schunk, 1983). On the other hand, upward social comparisons can also reduce mentees' ESE if the

mentor's level of proficiency seems unattainable and perceived similarity is low (Lockwood and Kunda, 1997). As a consequence, a high level of perceived similarity will facilitate upward social comparison with the mentor and enable mentees to improve their ESE through the mentor function received. These considerations suggest the following hypothesis:

> Hypothesis 1: The mentee's perceived similarity with the mentor has a positive moderating effect on the relation between mentor functions and the mentee's ESE.

Mentees' LGO

Learning goal orientation (LGO) (also known as mastery goal-orientation) is a relatively stable psychological disposition that individuals develop through their interpersonal relationships (Dweck, 1986). Individuals with a high LGO tend to perceive their abilities as malleable and subject to change (Dupeyrat and Mariné, 2005). These individuals will therefore approach the tasks at hand with self-confidence, and with the intention of developing new skills. They will consequently value hard work and self-improvement and will be constantly looking for new challenges to enhance their skills (Dweck and Leggett, 1988). By doing so, they engage in new activities, regardless of their difficulty (Button, Mathieu, and Zajac, 1996). Conversely, individuals with low levels of LGO tend to see their intelligence and their skills as 'stable' and 'unchangeable', and they tend to have a lower level of ESE than those who perceive their skills as malleable (Ames, 1992). Their approach towards, and expectations of, a mentoring relationship will undoubtedly differ from mentees with high levels of LGO.

LGO does not seem to be related to short-term or long-term goal setting (Harackiewicz et al., 2000); however, individuals with low LGO and high LGO use different strategies to reach their goals. For instance, given that LGO is related to self-regulated learning, low LGO individuals rely

more heavily on external support than individuals with high LGO, who will mobilize external sources of information to learn but will behave more autonomously (Wolters, Yu, and Pintrich, 1996). The notions of 'goal orientation' and 'goal setting' are distinct (Phillips and Gully, 1997).

LGO plays a crucial role in understanding how mentees perceive their ability to master a number of skills. From a learning perspective, prior research has shown that mentees enter mentoring relationships either with a desire to grow and improve their current skills (Barrett, 2006; Benton and Sankaran, 2005) or to receive advice and suggestions on how to improve their entrepreneurial project (Gaskill, 2001; Gibson, 2003) without having to change their current skills. LGO may be related to these mentoring outcomes from the mentees' perspective and thus depend on their motivation to grow/learn or to receive advice/help from their mentors. High LGO mentees could exhibit the first category of motivations whereas low LGO mentees may prefer the second types of motivations.

In a study that investigated children's behavior after a failure in school, Diener and Dweck (1978) found that learning-oriented children make fewer attributions and focus on remedies for failure, while helpless children (i.e., low LGO) focus on the cause of failure. In school, students who adopt a high LGO engage in more self-regulated learning than the others (Ames, 1992; Pintrich and Schunk, 1996). Furthermore, a high LGO mindset, also called a growth mindset (Dweck, 2008), is demonstrated to be related to high intrinsic motivation (Haimovitz, Wormington, and Corpus, 2011), goal achievement (Burnette et al., 2013) and ESE (Ames, 1992). Therefore, we assume that mentees with a high level of LGO will also have a high level of ESE, based on the influence the former has on the latter. These considerations lead us to the following hypothesis:

Hypothesis 2: Mentee's LGO is positively related to his/her ESE.

As we mentioned earlier, mentees can enter mentoring relationships harboring different motivations: to learn and to improve their skills or to receive advice and suggestions on how to manage their business. Who would benefit most from mentoring relationships with regard to ESE development? There is evidence that LGO is associated with feedback seeking behaviors (Tuckey, Brewer, and Williamson, 2002; VandeWalle, 2004; VandeWalle and Cummings, 1997); entrepreneurs with high LGO should thus be attracted to mentoring, as it procures feedback in a career setting where there are no hierarchical superiors for assessing one's skills and performance. Additionally, entrepreneurs with high LGO should be stimulated by mentoring relationships and consider their mentors as a potential learning source (St-Jean and Audet, 2012; Sullivan, 2000) to develop their intelligence and skills (Ames and Archer, 1988). On the other hand, low LGO entrepreneurs would prefer situations in which they can perform well (performance goal orientation) (Dweck, 2008). Given that they perceive their intelligence as fixed in time, when facing a difficult task or receiving a bad performance, they will seek help or try to avoid the task at hand rather than try to learn new skills that could allow them to face a similar challenge in the future.

As previously mentioned, individuals with high LGO tend to exhibit a higher level of ESE. Despite the fact that mentoring can be a source of learning for them, it is unlikely that they will significantly improve their ESE. As mentioned by Bandura (1997), vicarious experience (i.e., observing someone similar to oneself succeeding in a particular task will improve the observer's beliefs that he/she can also master the task) as well as verbal persuasion allow individuals to adjust their ESE to a more realistic level, either upward or downward. Thus, considering the high level of ESE of mentees with high LGO, it is highly probable that, at best, they will maintain their high ESE, or experience a decrease in ESE to a more realistic level.

The picture is quite different for low LGO mentees. They believe their intelligence to be stable and immovable. When facing a difficult task or receiving negative performance feedback,

they will either seek help to accomplish the task or try to avoid it in the future (Dweck, 2008). Novice entrepreneurs, despite feeling incompetent at performing certain tasks, are often required to complete these tasks because they often do not have the resources to hire qualified individuals to help them. Under these conditions, external support may become the preferred way to overcome this personal limitation as it may help them feel more effective in their management decisions. Given that low LGO entrepreneurs do not believe their intelligence is malleable, they are not likely to work on developing new skills to face challenging situations. Consequently, mentoring can help them feel more confident about their efficacy in managing their business (i.e., ESE). However, the increase of their ESE is dependent on the mentor functions received, and therefore it may only last as long as they stay in the mentoring relationship.

To sum up, mentoring may have less of an effect on high LGO novice entrepreneurs' ESE. For these entrepreneurs, mentoring may represent a source of learning (along with formal education, entrepreneurs' clubs, media, learning through action, etc.). Mentoring will thus keep their ESE high or slightly readjust it to a more realistic level. On the other hand, low LGO novice entrepreneurs may view mentoring as a significant source of help to overcome their perceived inability to deal with career-related goals and tasks. With the support of a mentor, the latter type of mentee should consequently perceive themselves as more suited to accomplish the tasks related to their entrepreneurial career, and thus experience an improvement of their ESE. These considerations suggest the following hypothesis:

> Hypothesis 3: Mentee's LGO has a negative moderating effect on the relationship between the mentor functions and the mentee's ESE, such that the relationship would be stronger for low LGO mentees.

As previously mentioned, low LGO mentees do not think that they are able to significantly improve their abilities. Thus, they will seek advice, support and help from mentors to compensate for their perceived weaknesses. Given that mentoring offers an opportunity to compare with others and because low LGO mentees may not believe they can change their abilities, perceived similarity with the mentor may act as a moderator of the relationship between mentor functions and mentees' ESE. Indeed, mentees would probably be more willing to accept advice and support from a mentor if the former is perceived as highly similar to the latter, causing in turn the mentor functions to improve ESE to a greater extent. Furthermore, throughout social comparison processes (Corcoran, Crusius, and Mussweiler, 2011; Festinger, 1954), the more the mentor exerts his/her functions, the more adapted the mentee will feel toward his/her entrepreneurial career, which, in turn, will have a positive influence on his/her ESE. However, when the mentee perceives himself/herself as not being very similar to the mentor, social comparison processes will stop (Festinger, 1954). Therefore, mentor functions would have less effect in improving the mentee's ESE as the mentee would feel less adapted to an entrepreneurial career (Lockwood and Kunda, 1997). This suggests the following hypothesis:

> Hypothesis 4: The impact of the mentor functions on the mentee's ESE is enhanced when the mentor is perceived as highly similar and when the mentee's LGO is low.

Methodology

We conducted a study of mentoring relationships within *Réseau M*, a mentoring network launched in 2000 by the *Fondation de l'entrepreneurship*, an organization dedicated to Quebec's economic development. *Réseau M* provides mentoring support to novice entrepreneurs through a network of 70 mentoring cells implemented across the province of Quebec (Canada). These cells

are generally supported by various economic development organizations such as local development centres (LDC's), Community Future Development Corporations (CFDCs), and local chambers of commerce. These organizations ensure the program's local and regional development, while subscribing to the mentoring model provided by the *Fondation de l'entrepreneurship*. Local organizations have cell coordinators in charge of recruiting mentors, organizing their training, promoting the program to novice entrepreneurs, and pairing and guiding mentor-mentee dyads. Before the first pairing, every mentor receives a mandatory three hour training session on the mission of mentoring and the main guidelines to follow. Novice entrepreneurs benefit from mentor support for a minimal cost: a few hundred dollars per year, and in some cases, for free. The program is available to every novice entrepreneur who wants to be supported by a mentor. Mentees are seeking career-related support (e.g. advice, a sounding board for decision-making, expertise, etc.), as well as psychological support (e.g. to ease loneliness, to be reassured or encouraged, etc.) from their mentors. Each mentor acts as a volunteer to help novice entrepreneurs in their entrepreneurial journey. Most of them are experienced entrepreneurs that are retired and want to stay active by supporting those less experienced, and a few of them are still working in the business world (e.g. bankers, practitioners, etc.). To ensure the coordination of the mentoring cells, the *Fondation* organizes workshops dedicated to the development of mentor-mentee relationships. *Réseau M* provides a Code of Ethics and a standard mentoring contract signed by mentors and mentees at the beginning of their interaction.

Sample

The sample for this study was composed of mentored entrepreneurs from *Réseau M* of the *Fondation de l'entrepreneurship*, who had attended at least three meetings with their mentor or were still in a mentoring relationship, and whose email addresses were valid at the time of the survey. In

2008, mentees were invited to participate in the study by email, and two follow-ups were conducted with non-respondents, resulting in a total of 360 respondents (a response rate of 36.9%). Given that the *Fondation* was not able at that time to provide information concerning the demographic characteristics of the sample, we decided to compare early respondents (who answered the first time), and later respondents (who answered after follow-ups), as suggested by Armstrong and Overton (1977). There are no significant differences between the two groups in terms of demographic variables, business-related variables, and the variables measured in the study. The respondents are thus representative of the studied population. Table 1 shows the characteristic of the sample.

Table 1. Sample characteristics

Mentoring relationship caracteristics	
Male mentees:	162 (51.6%)
Female mentees:	152 (48.4%)
Paired with male mentors:	275 (81.4%)
Paired with female mentors:	63 (18.6%)
Mean mentoring relationships length:	16.07 months (SD=14.4)
Mean meeting length:	68.52 minutes (SD=14.4)
Median meeting frequency:	Each month
Mentees characteristics	
Mean age:	39.8 years old (SD=8.97)
Mentees with university degree:	173 (55%)
Experience in industry before startup:	Less than 5 years: 61.6%
Experience in entrepreneurship:	Less than 5 years: 82.9%
Firm characteristics	
Mean number of employees:	4.48 (SD=9.69)
Annual turnover:	Less than $100,000CAD: 62.8%
Annual gross profit:	Less than $25,000CAD: 68.1%
Professional services:	23.0%
Manufacturing:	14.4%
Retailing:	11.9%
Others:	50.7%

Measures

Entrepreneurial self-efficacy (ESE). To gain better insight into the dimensions of ESE, we combined

the scales developed by Anna et al. (2000) and De Noble et al. (1999). This allowed us to measure several perceived abilities such as: defining strategic objectives (3 items), coping with unexpected challenges (3 items) (De Noble et al., 1999), recognizing opportunities (3 items), engaging in action planning (3 items), supervising human resources (3 items), and managing finance issues (3 items) (Anna et al., 2000). These items are similar to those suggested by other authors (McGee et al., 2009). Seven-point Likert scales were used. The Cronbach's alpha was 0.936, which is well above the average (Cronbach, 1951). A mean score of all the items was calculated.

Mentor functions. The measure of mentor functions was developed by St-Jean (2011), and includes 9 items assessed on a seven-point Likert scale. This scale provides an assessment of the depth of mentoring provided. The Cronbach's alpha was 0.898, which is well above average. A mean score of all the items was calculated.

Perceived similarity. We used the measure developed by Allen and Eby (2003), which includes similarity in values, interests, personality, and those suggested by Ensher and Murphy (1997), including similarity in worldview. Seven-point Likert scales were used and the Cronbach's alpha was 0.897, which is well above average. A mean of all the items was calculated.

Learning goal orientation (LGO). The study used a measure developed by Button et al. (1996), which includes 8 items. Seven-point Likert scales were used. The Cronbach's alpha was 0.927, which is well above the average suggested. A mean score of all the items was calculated.

Control variables. There are certain exogenous variables that may impact ESE, such as the respondents' gender (Mueller and Dato-On, 2008; Wilson et al., 2009), age (Maurer, 2001), education level and management experience. They were all included in the analysis.

The research was conducted in French. Thus, all the items have been translated into English and proofread by a professional translator, to ensure the validity of measures.

Common method bias

Using self-reported data and measuring both predictors and dependent variables may result in common method variance (CMV) (Lindell and Whitney, 2001; Podsakoff et al., 2003). To reduce the possibility of CMV, we first ensured confidentiality for each respondent in order to reduce social desirability, respondent leniency, and taking on perceptions consistent with the researchers' objectives (Podsakoff et al., 2003). We also performed Harman's single factor test as a post-hoc test. This procedure involved conducting an unrotated exploratory factor analysis on all of the items collected for this study. Results indicate that data converge into four factors, with the first factor explaining 26.87% of the variance. Furthermore, data show negative correlation or no correlation between the main variables (Table 1 shows no significant correlation between LGO and perceived similarity or mentor functions), which is unlikely to appear in data contaminated with CMV. Moreover, when the variables are too complex and cannot be anticipated by the respondent, as observed in this study, this reduces the potential effects of social desirability and therefore reduces CMV (Podsakoff et al., 2003). Given that personality is usually measured through self-report instruments, the fact that we used a self-report questionnaire for LGO does not constitute a limitation of the current study (Spector, 2006). We thus believe that the risk of CMV with the data used for the present study is relatively low.

Data analysis

A hierarchical regression analysis of ESE was conducted to test the hypotheses. We started by entering control variables, and then we considered the main effects of mentees' LGO, perceived similarity with the mentors and mentor functions. Lastly, we entered the interactions between independent variables and we ended with a triple interaction analysis. To calculate the interaction between variables and to avoid collinearity, we first multiplied the relevant variables and focused

on the results of each mean. After removing surveys where participants left out answers, the remaining sample was composed of 314 respondents.

Results

Means, standard deviations and correlations between variables are shown in Table 2.

Table 2. Means, Standard Deviations and Correlations of Variables

	Mean	S.D.	1	2	3	4	5	6	7
1-Gender	0.48	0.50	1.00						
2-Age	39.81	8.97	-0.01	1.00					
3-Education	2.53	0.94	0.12*	0.08	1.00				
4-Managerial experience	2.29	1.56	-0.13*	0.25*	-0.09	1.00			
5-LGO	6.24	0.88	0.12*	-0.05	-0.02	0.04	1.00		
6-Perceived Similarity	4.71	1.40	0.01	-0.14*	-0.09	-0.01	-0.00	1.00	
7-Mentor Functions	5.39	1.15	0.06	-0.14*	-0.00	-0.03	0.01	0.61*	1.00
8-Ent. Self-efficacy (ESE) (dependent variable)	5.89	0.76	0.01	-0.21*	0.05	0.08	0.33*	0.16*	0.16*

*=$p \leq 0.05$

Table 2 illustrates the results of the hierarchical regression of ESE. As expected, Model 1 takes into account control variables (R^2=0.069), Model 2 adds the main effects (R^2=0.175), while Model 3 takes into consideration the moderators (R^2=0.268), and Model 4 adds the three-way interaction between independent variables (R^2=0.284). The hypotheses were validated with model 4. Indeed, Model 4 shows that age has a negative effect on ESE, whereas the level of education and prior management experience produced a positive impact on ESE (p=0.073). LGO is related to ESE level (β=0.344, p=0.000), which confirms H2. The moderation of the LGO (H3) and perceived similarity (H1) on ESE is also confirmed (β=-0.357, p=0.000 and β=0.205, p=0.008, respectively). Finally, the three combined independent variables simultaneously influence ESE, which confirms H4 (β=-0.160, p=0.023). Overall, the two-way and three-way interactions explain 0.099% of the variance of ESE (Δ adj.R^2).

Table 3. Entrepreneurial Self-Efficacy Hierarchical Regression

	Model 1 Std.*β*	Model 2 Std. *β*	Model 3 Std.*β*	Model 4 Std.*β*
Gender	0.051	0.003	-0.048	-0.041
Age	-0.244***	-0.205***	-0.202***	-0.207***
Education	0.098	0.133*	0.110†	0.119*
Managerial Experience	0.135*	0.118†	0.127*	0.107†
Learning Goal Orientation (LGO)		0.284***	0.293 ***	0.344***
Perceived Similarity		0.147†	0.115	0.107
Mentor Functions		0.035	0.139†	0.151†
LGO X Similarity			0.241***	0.235***
LGO X Functions			-0.348***	-0.357***
Functions X Similarity			0.130†	0.205**
Functions X Similarity X LGO				-0.160*
Sig. F variation	0.002	0.000	0.000	0.023
R^2	0.069	0.175	0.268	0.284
Adj. R^2	0,053	0.151	0.236	0.250

***=$p \leq 0.001$ **=$p \leq 0.01$ *=$p \leq 0.05$ †=$p \leq 0.10$

Figure 2 shows that perceived similarity positively influences the interaction between mentor functions and ESE. Thus, when mentees perceive little similarity with their mentor, there is no shift in their ESE. Yet, in dyads where mentees perceive their mentor as highly similar, an increase in mentor functions increases mentees' ESE as well.

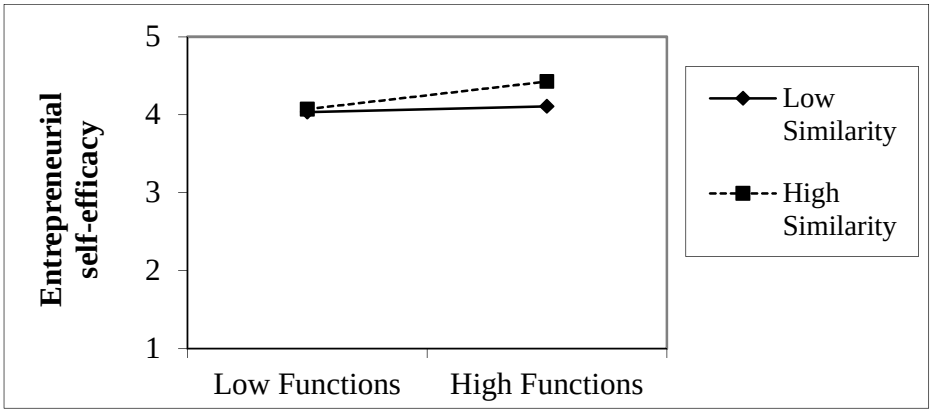

Figure 2. Moderating effect of perceived similarity on the interaction between mentor functions and ESE

Figure 3 illustrates the moderating effects of LGO on the relationship between mentor

functions and ESE. Results indicate that mentees with high levels of LGO slightly reduce their ESE when they experience a comprehensive mentoring relationship (high mentor functions), while mentees with lower LGO levels report an increase of their ESE in the same situation.

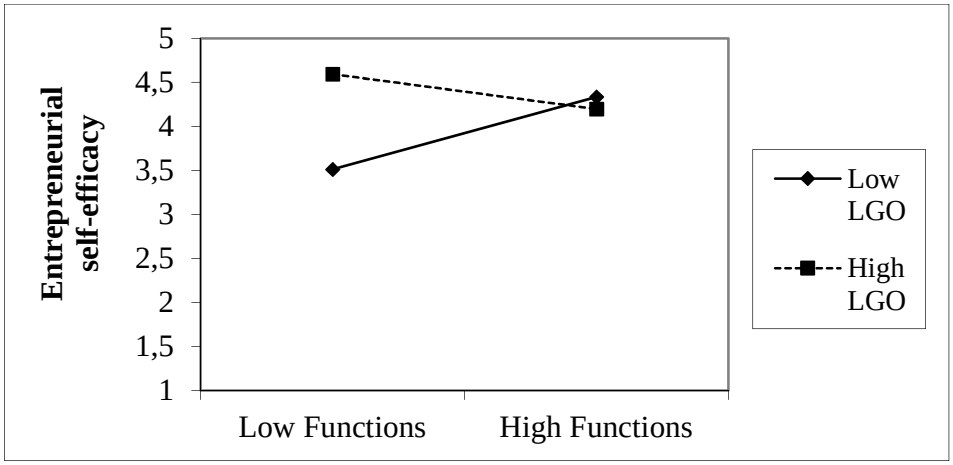

Figure 3. Moderating effects of LGO on the interaction between mentor functions and ESE.

Figure 4 illustrates the three-way interaction between variables. When a mentee has a high LGO, the mentor functions lower his/her ESE, no matter the level of perceived similarity. For mentees with low LGO, mentor functions increase their ESE level. This effect is the most significant when mentees perceive their mentors as similar, which indicates that mentoring relationships are the most effective at enhancing mentees' ESE when mentees have a low LGO orientation and a high level of perceived similarity with their mentor.

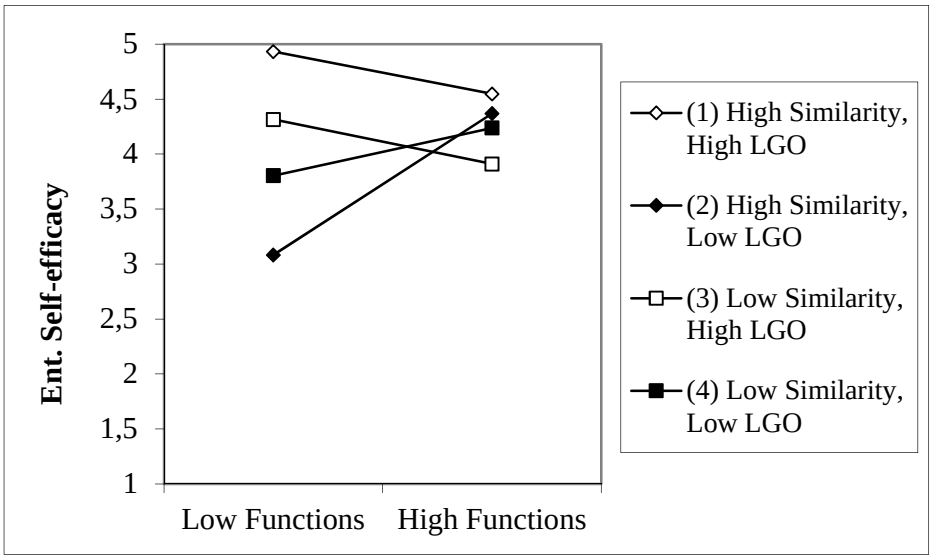

Figure 4. Three-way interaction between mentor functions, LGO, and perceived similarity for the development of ESE

Implications

The present research results show the positive effects of mentor functions on mentees' ESE when perceived similarity with the mentor is high. This suggests that entrepreneurial role models may play a similar role in improving ESE as found with other types of support relationships, such as entrepreneur-in-residence programs and business incubators (Christina, Purwoko, and Kusumowidagdo, 2015; George, Gordon, and Hamilton, 2010), peer learning networks (Kempster and Cope, 2010; Kutzhanova, Lyons, and Lichtenstein, 2009) and, more generally, in the context of public support for entrepreneurs (Delanoë, 2013; Robinson et al., 2010).

Findings suggest that high and low LGO mentees do not share the same motivations when entering mentoring relationships. Mentees with low levels of LGO are looking for advice and approval relative to their entrepreneurial skills (reassurance motivation) because external feedback may enable them to go beyond their perceived abilities (guidance motivation). On the other hand, mentees with high LGO levels are probably looking for a mentoring relationship that may enable

them to improve their skills by learning from their mentor's experience, a support relationship that may stimulate them in terms of new ideas and practices (motivation to be challenged). The present research also demonstrates that low LGO mentees benefit most from mentors' help in improving their ESE. High LGO mentees experienced a higher ESE when mentor functions were lower; conversely, when mentor functions were fully exercised, these mentees' ESE had a tendency to decrease to the same ESE level as that of low LGO mentees. In other words, in an intense mentoring context (high mentor functions), mentees reported a similar level of ESE, regardless of their LGO levels. At first glance, one would be tempted to prevent high LGO novice entrepreneurs from being accompanied by a mentor, as it seems to lead to a reduction in their level of ESE. However, previous studies have demonstrated that some entrepreneurs are overly optimistic, and this has a negative effect on the survival of their business (Lowe and Ziedonis, 2006). Moreover, Hmieleski and Baron (2008) demonstrated that a high ESE has a negative effect on business performance when the entrepreneurs' optimism is high. In this perspective, mentoring could be useful for these entrepreneurs because it brings ESE to a level closer to the reality of the entrepreneurs' abilities, which could reduce errors committed due to overconfidence in their skills.

Finally, our findings suggest that the positive effect of mentoring on mentees' ESE may be limited to the duration of the mentoring relationship for low LGO novice entrepreneurs. In other words, as long as low LGO mentees are involved in a mentoring relationship, they will probably feel more self-confident. However, once the mentoring relationship ends, they may experience a decrease in their ESE because of their need for constant external reassurance and support. This suggests that LGO is an important personal variable to consider in researching entrepreneurship support outcomes. In this regard, Dweck, Mangels, and Good (2004) demonstrated that it is possible to develop specific training and support that effectively enhances the participants' LGO, which, in turn, has an important effect on their motivational processes, attention, cognition, and performance.

Thus, an important practical implication of our findings is that mentors could learn how to counsel novice entrepreneurs with low levels of ESE and LGO, and help them not only improve their ESE level but also their LGO, thus securing an enduring increase in their ESE once the mentoring relationship ends.

Discussion

The present study has three main theoretical contributions. First, we demonstrate that the impact of mentors on mentees' ESE is moderated by the perceived similarity with the mentor, as previously assessed in entrepreneurial education contexts (Laviolette, Radu Lefebvre, and Brunel, 2012; Lockwood and Kunda, 1997; Schunk, 1983). Prior research has stressed the positive effect of mentoring on mentees' ESE (Gravells, 2006; Kent, Dennis, and Tanton, 2003; St-Jean and Audet, 2012; Sullivan, 2000) and the fact that mentors act as role models (BarNir et al., 2011). We introduce the notion of upward comparison with the mentor to explain the importance of mentees' perceived similarity with the mentor, based on social comparison theory (Festinger, 1954; Gibson, 2004) (Festinger, 1954).

Second, our study demonstrates the importance of mentees' LGO in entrepreneurial mentoring relationships, because of its relationship with mentees' ESE. Prior research based on goal-orientation theory documented the relationship between LGO and ESE in other contexts (Phillips and Gully, 1997). Our findings suggest that there is a strong relationship between LGO and the need for feedback (Tuckey et al., 2002; VandeWalle, 2004; VandeWalle and Cummings, 1997), as the mean score for the level of mentees' LGO in our study is 6.24 (on 7). However, another explanation for this high level of LGO may be that entrepreneurship, being a career with many challenges and difficulties (Aspray and Cohoon, 2007; Grant, 2011), attracts individuals interested in learning and with a desire to improve their abilities. This latter explanation is probably more

plausible, as previous research on LGO in a mentoring context found a mean score of mentees' LGO of 4.35 (on 7) (Egan, 2005) and a study measuring the impact of LGO on entrepreneurial intentions found an LGO score of 5.198 (on 7) (De Clercq, Honig, and Martin, 2013). Additionally, prior research has shown that a high level of LGO combined with a high level of ESE is likely to lead to choosing entrepreneurship as a career choice (Culbertson, Smith, and Leiva, 2011). In fact, a recent study indicated that LGO strengthens the relationship between ESE and entrepreneurial intention (De Clercq et al., 2013). Thus, LGO may be an important mindset that attracts and retains individuals in an entrepreneurial career, which suggests new research directions.

Finally, the third contribution of the present study is that it provides evidence concerning the combined effects of mentor functions, mentees' LGO and perceived similarity with the mentor on mentees' ESE. We confirmed the fourth hypothesis relative to the positive impact of the mentor functions on the mentee's ESE when the mentor is perceived as highly similar and when the mentee's LGO is low. The research model explains 15.1% of the variance when considering main effects only (adj. R^2). Adding the interaction effects explains an additional 9.9% of the variance, for an R^2 final adjustment of 0.25. Findings confirm previous research relative to the positive correlation between the mentees' LGO, level of education, prior management experience, and ESE (Bell and Kozlowski, 2002; Phillips and Gully, 1997). We found that a low level of LGO combined with a high level of perceived similarity significantly contributed to reinforcing novice entrepreneurs' ESE in a mentoring context.

Our study has, however, several limitations. First, although LGO is highlighted as an important moderator to consider in the study of mentoring for entrepreneurs, we cannot confirm without a doubt that low/high LGO mentees have different motivations for entering a mentoring relationship. Our reasoning was guided by the theoretical framework of LGO and social comparison theory; however, further investigation of the reasons underlying the need for a mentor could bring

additional confirmation of the underlying processes at play. Second, the present research assessed the impact of mentoring on mentees' ESE. However, not every entrepreneur has the desire to improve his/her ESE and novice entrepreneurs may seek mentoring for other cognitive or affective reasons. Thus, our final sample may include mentees who did not seek ESE development. Nevertheless, the reader should keep in mind that many other outcomes could be reached through mentoring and, as such, focusing on ESE development, despite highlighting specific processes at play, suggests a limited view of the potential effects of mentoring on the entrepreneurial process. The role of mentoring in improving opportunity identification, reducing loneliness and stress of novice entrepreneurs, or developing better managerial skills are also important research questions to be further explored. Third, we measured ESE development within a formal mentoring program. Given that mentors are trained and aware of the many aspects that could foster or hinder the effectiveness of mentoring, our findings cannot be extended to informal mentoring settings. Indeed, because informal mentors are generally well-known by their mentees before the beginning of the mentoring relationship, the former may be selected based on perceived similarity with the latter. Thus, our findings are most relevant for formal mentoring programs. Fourth, the study was not longitudinal, making it difficult to assess the mentoring effects on the development of mentees' ESE over time. Longitudinal research is thus necessary to better evaluate the contribution of personal and relational mentoring variables in terms of impact on mentees' ESE.

Conclusion

For the past decades, many mentoring programs have been launched in developed countries and evidence exists that they may trigger many outcomes (Wanberg et al., 2003). Prior research has also emphasized mentoring's contribution to novice entrepreneurs' personal development (Edwards and

Muir, 2005; Kent et al., 2003; St-Jean and Audet, 2012; Sullivan and Kolb, 1995) and business success in terms of startup launching, fundraising and business growth (McAdam and Marlow, 2007; Radu Lefebvre and Redien-Collot, 2013; Styles and Hegarty, 2008; Sullivan, 2000). These programs invest time and energy into identifying mentees and mentors potentially interested in developing mentoring relationships. However, little attention is being paid to the *matching process* of mentors and mentees in terms of perceived similarity and the training of mentors that could be offered.

The present research demonstrates that role-model identification needs to be secured by mentoring programs so as to ensure that novice entrepreneurs perceive their mentor as someone who is relevant, inspiring, and accessible. Mentoring programs could consider the similarity of mentors and mentees before making proposals concerning the composition of mentoring dyads. Also, mentors could be informed of the importance of perceived similarity in mentoring relationships. Moreover, the predominance of male mentors may become an issue as more women entrepreneurs enter the market. Research indicates that gender matching of mentors and mentees is especially important for women (Quimby and Santis, 2006). Social identity theory (Tajfel, 1978) and the similarity-attraction paradigm (Byrne, 1971) predict more perceived similarity and identification in same-gender relationships. Another practical implication related to these findings is that more attention should be paid to the matching process of mentoring dyads in terms of learning motivations and learning orientation. Complementary mentoring relationships may thus develop, with the help of a program manager, who could assist mentors in the identification of mentees' learning needs so as to ensure more effective mentoring relationships with regard to their potential impact on mentees' ESE. Training should be provided to mentors in order to help them identify their mentees' needs and personal profile more accurately in order to adapt the rendering of mentoring functions while taking into account mentees' needs and motivations. Given that LGO can be enhanced through training, mentors may play a significant role in developing mentees' LGO and in fostering mentees' ESE by the same token.

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