

## **Self-Efficacy Related to Work and Transformative Leadership of School Principals as Explanatory Factors for Dispositional Resistance to Change**

Maude Loi Zedda<sup>1</sup>, Stéphane Thibodeau<sup>2</sup>, Eric Frenette<sup>3</sup>, & Pascal Forget<sup>2</sup>

<sup>1</sup>Haute école pédagogique du canton de Vaud,

<sup>2</sup>Université du Québec à Trois-Rivières, <sup>3</sup>Université Laval

### **Abstract**

This study addresses the lack of knowledge about the relationship between school principals' self-efficacy related to work, transformative leadership, and disposition to resist change. One hundred and twenty-six respondents completed three measurement scales: the Scale of School Principals' Self-Efficacy, the Self-Reported Leadership Scale, and the Resistance to Change Scale. The results indicate that there are links between different dimensions of school principals' self-efficacy related to work and dispositional resistance to change and that certain dimensions of transformative leadership play an intermediate role in these relationships. These results are discussed in the light of theories and studies relating to the three concepts.

*Keywords:* Self-efficacy, dispositional resistance to change, school principal, leadership

### **Résumé**

Cette étude s'intéresse à la méconnaissance des relations entre le sentiment d'efficacité personnelle lié au travail, le leadership transformatif et la disposition à résister au changement des directeurs d'établissement d'enseignement. Cent vingt-six répondants ont rempli trois instruments de mesure, soit l'Échelle du sentiment d'efficacité personnelle des directeurs d'école, l'Échelle de leadership transformatif du directeur d'école et l'Échelle de disposition à résister au changement. Les résultats indiquent qu'il existe des relations entre différentes dimensions du sentiment d'efficacité lié au travail et de la disposition à résister des directeurs d'établissement d'enseignement et que certaines dimensions du leadership transformatif jouent un rôle intermédiaire dans ces relations. Ces résultats sont discutés à la lumière des théories et des études relatives à ces trois concepts.

*Mots clés :* Sentiment d'efficacité personnelle, disposition à résister au changement, leadership, directeur d'établissements d'enseignement

## Resistance to Change in Education

School systems are constantly undergoing change (Toussaint & Malette, 2023), which is an integral part of society and the education environment (Gather Thurler, 2000). These changes, whatever their essence, are usually met with resistance from various school actors (Fédération autonome de l'enseignement, 2006; Inchauspé, 2007; Larouche et al., 2023; St-Germain, 2008).

According to Legendre (2005), the phenomenon of resistance to change can be understood as a set of forces that contribute to maintaining the stability of a system. These forces may originate from an individual's personality traits or from the social and cultural norms of groups (p. 1183). According to Bareil (2008), this resistance can be perceived as a lever and result in positive effects (e.g., motivation, commitment) as well as a negative response to change. This negativity is expressed as a refusal to change, which could be linked to behaviour that is considered destructive, such as rejection, opposition, or refusal (Bareil, 2013). The negative effects of this resistance remain a major concern (Bareil, 2010; Higgs & Rowland, 2005). Studies show that between 70 % and 80 % of organizational changes fail to meet their objectives because of the resistance of the actors involved (Armenakis et al., 2007; Kotter & Schlesinger, 1979; Yvon et al., 2019). Moreover, resistance to change negatively affects the employees' emotional commitment and performance (Armenakis et al., 2007).

The effects of this resistance can be harmful; as such, they need to be managed adequately. In Quebec, school principals are often the ones who must lead change in education. As agents of change (Loi Zedda et al., 2017), and in line with the Education Act (Government of Quebec, 2022), school principals are responsible for the administrative and pedagogical management of the programs and resources of their institution (Higher Council for Education, 1999). They must simultaneously introduce, manage, and enforce government requirements in their institution while responding and being accountable to higher authorities. They are seen as intermediaries between reforms and teachers (Thornburg & Mungai, 2011). Ultimately, school principals find themselves at the heart of changes, and they are obligated to adapt to these changes and have their school team members respect the changes as well (Loi Zedda et al., 2017).

According to Angel and Steiner (2013), resistance to change varies from one individual to another depending on the causes. Thus, what causes resistance to change could influence school principals' resistance (Oreg & Berson, 2011). Oreg et al. (2011) proposed two types of causes for resistance to change: organizational and personal. On the one hand, there are causes related to organizational characteristics that are specific to each organization, such as the culture or work commitment (Schermerhorn et al., 2014). On the other hand, causes can also be personal such as anxiety (Bareil, 2008). Recognizing the second type of causes, and therefore considering human components, would make it possible to improve the implementation of change (Allison, 2007).

In the literature, the lack of self-efficacy (Holt et al., 2007) and leadership (Oreg & Berson, 2011) are potential causes of resistance to change. These characteristics could influence both principals' and their subordinates' resistance to change (Oreg & Berson, 2011). Self-efficacy plays a primary role in how the school is managed because it brings about confidence, resilience, and perseverance among principals. In addition, self-efficacy enables principals to be more professionally committed and capable in facing difficulties (Virga, 2012). Conversely, individuals tend to avoid change if they feel it is beyond their skills (Armenakis et al., 1993). Bateh et al. (2013) pointed out that effective leadership would have a direct effect on the organizational capacity for change and, in some cases, could help implement change. Thus, a visionary leader would be able to convince subordinates to implement changes (Schein, 2010). Also, it would seem that principals have more difficulty exercising their leadership during changes and upheavals experienced in recent decades: Parent's reform (one of the most important reforms in Québec) and results-based management (Poirel & Yvon, 2012).

Although there is some empirical evidence on the relationships between self-efficacy, leadership, and resistance to change (Hyland, 2007), these links do not seem to have been tested with school principals. Thus, there is a lack of knowledge when it comes to the influence of self-efficacy and leadership on principals' resistance to change in the Quebec context, where the principals play the role of change agents in their institution (Loi Zedda et al., 2017).

## Framework

### *Resistance to Change and Self-Efficacy Related to Work*

Resistance, which can be understood as a three-dimensional negative attitude toward change involving affective, behavioural, and cognitive dimensions, is an unsuitable response to change or to the idea of changing, which would be subjective and complex depending on various factors (Oreg, 2003). It can obstruct an individual's perceptions. Oreg (2003) postulated that differences in resistance between individuals develop according to individual personality factors and come from the attitude of the individual but are independent of the context. He proposed to study the dispositional resistance to change, which is an antecedent to such resistance and which depends on the individual's personality. It is "a personality trait that reflects a generally negative attitude towards change and a disposition to avoid or resist it" (Oreg, 2003, p. 680). According to him, the dispositional resistance to change can be studied without it being associated with a specific change. This makes it possible to grasp the tendency of an individual to resist or avoid making changes, to depreciate these, or to find that change is hostile in various contexts. According to Oreg (2003), this arrangement has four dimensions: (a) seeking routines, which refers to how individuals perceive routines and the search for stable environments; (b) emotional reaction, which refers to all the emotional reactions linked to the imposed change, such as feeling stressed or uncomfortable; (c) short-term focus, which refers to individuals' concerns about short-term disadvantages that change will cause compared to its advantages; and (d) cognitive rigidity, which refers to a form of stubbornness and reluctance to consider novelties and other perspectives.

Self-efficacy, the second variable under study, is "the individual's belief in [their] ability to organize and carry out the course of action required to produce desired results" (Bandura, 2007, p. 12). This will have an impact on the nature and intensity of emotions, the cognitive ability to control perturbing elements, and the way the individual embraces actions that transform the environment. Bandura (2007) specified that self-efficacy is generally studied in relation to a particular task. The current research focuses specifically on the self-efficacy of school principals. That is to say, their judgment as to their ability to structure an action plan to produce the desired results in the institution they lead (Tschannen-Moran & Gareis, 2004). Moreover, Walumbwa et al. (2005) suggested that principals with strong self-efficacy related to work are persistent in pursuing their efforts, more flexible, and able to adapt to various changes and strategies and adopt visionary ideas.

Based on the work of Cattonar et al. (2007), Fernet et al. (2009) suggested conceptualizing the professional roles of principals in three dimensions to study and understand their self-efficacy. These are (a) administrative management, which refers to the responsibilities and administrative role of the establishment as well as the management of human, financial, and material resources; (b) personnel management and pedagogical leadership, which imply that principals are agents of change, pedagogical leaders, educational project planners, and supervisors of the work of their administrative and technical staff as well as teachers; and (c) management of external relations, which considers the principals' role as a promoter of the institution within the community (e.g., relationship with parents and authorities).

Although Oreg (2003) did not specifically address self-efficacy as a concept in his theory of dispositional resistance to change, Bandura (2007), for his part, indicated that principals with high self-efficacy continue to attempt to persuade others of the value of what they offer when they encounter resistance. On the other hand, those with low self-efficacy conclude that additional effort is useless. Arcand (2011), as well as Kotter and Schlesinger (2008), maintained that self-efficacy influences individual choices and motivation—key elements in the management of resistance to change. Also, Holt et al. (2010) argued that an individual's willingness and perceived ability to accept change have a strong influence on how they deal with change, and, therefore, their disposition resistance to change. Hence, self-efficacy seems to be an important factor in responding positively to change, since the latter requires an ability to succeed and achieve objectives (Bandura, 2007).

The analysis of the studies reviewed (e.g., Rafferty & Jimmieson, 2018; Smith, 2013; Wanberg & Banas, 2000) supports the possible relationship between principals' self-efficacy related to work and their disposition to resist. Most of the studies reviewed indicated that negative relationships exist between certain types of self-efficacy and the dispositional resistance to change. For example, results from Rafferty and Jimmieson (2018) showed negative relationships between general self-efficacy and dispositional

resistance to change. Also, the study by Smith (2013) revealed negative relationships between self-efficacy related to change and the three dimensions of the attitude of resistance to change (i.e., affective, behavioural, and cognitive) and between self-efficacy linked to change and affective commitment to organizational change. Finally, Wanberg and Banas (2000) mentioned that self-efficacy related to change has an influence on openness to change.

Overall, the analysis of the theory and previous studies suggests that there are negative links between principals' self-efficacy related to work and their dispositional resistance to change.

### *Dispositional Resistance to Change, Self-Efficacy Related to Work, and Transformative Leadership*

Bass (1990) defined leadership as the interaction during which individuals increase the motivation or skills of the members of their group. Bass's (1985a, 1985b) theory of transformative leadership has three dimensions: transformational, transactional, and laissez-faire. The transformational dimension refers to increasing subordinates' performance by, in particular, recognizing their needs while helping them to become aware of their skills and to surpass themselves in a period of change (Northouse, 2016; Yammarino et al., 1993). This dimension includes three factors: charisma, intellectual stimulation, and personal recognition. Charisma is the ability of leaders to be a source of inspiration for their subordinates or a model. Intellectual stimulation is behaviour that intellectually inspires or motivates subordinates. Finally, personal recognition is behaviour of leaders that enables them to address the needs of each subordinate.

As for the transactional dimension, it refers to a relationship based on exchange between leaders and their subordinates, with transactions at its heart. Two factors make up the transactional dimension: contingent reward and management by exception. Contingent reward is when a leader's behaviour leads to an agreement or contract about what is to be done by subordinates in exchange for a reward. Management by exception allows the redirection of subordinates' attention when they fail to achieve the planned objectives. To conclude, laissez-faire is unifactorial and corresponds to the lowest level of actions of a leader. This type of non-leadership is equivalent to "doing nothing" (Bass, 1985a).

According to McCormick et al. (2002), Bass described effective transformative leaders in the same way that Bandura described individuals whose self-efficacy are high by explaining that effective leaders are characterized by their commitment, determination, resilience, and effectiveness in resolving difficulties. Individuals demonstrating transformative leadership can increase their commitment, self-confidence and that of others, and the performance of the team (Bass, 1990). Thus, just like individuals whose self-efficacy is high, transformative leaders are proactively engaged in their development, and their actions can have an influence on their life.

Some studies have shown relationships between self-efficacy and leadership. For example, Hyland (2007) found a positive relationship between self-efficacy for change and the factor of management by active exception. Also, the results of Daly et al. (2011) showed a positive relationship between self-efficacy related to work and all the factors of the transformational dimension of leadership. Finally, Marin (2013) observed that principals who demonstrate high self-efficacy are more engaged in professional practices. Therefore, it is possible to think that they show more leadership.

Similarly, the review of literature based on leadership and a dispositional resistance to change, transformational and transactional dimensions are recognized as having a positive impact on efforts to change, whereas laissez-faire leadership can have a negative effect on these efforts (Bass, 1990). On the one hand, through their vision, transformative leaders foster motivation across the whole organization for the change to be implemented and to improve the commitment to change (Anggreini et al., 2022, Geijsel et al., 2003; Yu et al., 2002). Transactional leaders motivate subordinates via rewards. They propose transactions to achieve the desired objectives and enable change while rewarding subordinates and solving problems when they occur (Boga & Ensari, 2009). On the other hand, the laissez-faire dimension corresponds to a leader's lack of action. According to Bass and Avolio (1994), such leaders have capitulated on their responsibilities. As such, given the nature of the person's leadership and the actions taken, it is logical to imagine they will be unmotivated and not engage in action.

The review of previous studies allows us to consider some links between self-efficacy related to work and transformative leadership. For example, Hyland (2007) observed that there is a positive re-

relationship between the transformational dimension and the concept of openness to change, a positive relationship between the contingent reward factor and the concept of openness to change, and that there is no relationship between the laissez-faire dimension and dispositional resistance to change. Also, Oreg and Berson (2011) pointed to a negative relationship between principals' transformational leadership and their disposition and consequently affect the teachers' resistance to change.

In addition, among the studies surveyed, it appears that (a) self-efficacy linked to change can influence openness to change (Wanberg & Banas, 2000) and resistance to change (Johns, 2021), (b) self-efficacy predicts transformative leadership (Marín, 2013), and (c) transformative leadership indicates a willingness to change (Oreg & Berson, 2011). Based on this analysis, there appear to be relationships between principals' self-efficacy related to work, their transformative leadership, and their disposition to resist change. This suggests that principals' transformative leadership can play an intermediary role in the relationship between their self-efficacy related to work and their disposition to resist change. Since there could be links between the three variables under study, and one of these variables could influence the relationships between the other two, it is reasonable to believe that transformative leadership could have an intermediate role in the relationship between self-efficacy related to work and dispositional resistance to change. The research hypothesis can therefore be formulated as follows:

H: Transformative leadership of principals mediates the relationship between their self-efficacy related to work and their dispositional resistance to change.

## Methodology

### Participants

For this study, which used non-probabilistic sampling, approximately 2,280 Quebec principals were contacted. A total of 126 questionnaires were completed, representing an approximate response rate of 5.5%. The sample consisted of 77 principals (61.1%) and 47 vice-principals (37.3%).<sup>1</sup> Two respondents did not indicate their function. Eighty-seven (87) respondents were female (69%), while 37 respondents were male (29.4%). Their ages ranged from 32 to 66 years ( $M = 47.54$ ). On average, the respondents were in a management position for 9.72 years and spent 4.19 years in their current establishment. Seventy-one (71) worked in a preschool or primary school (56.3%), 34 in a secondary school (27%), 11 in an adult education center (8.7%), and 10 in a professional training center (7.9%). In terms of educational attainment, 58.7% of respondents had a graduate diploma (*diplômes d'études supérieures spécialisées* [DESS]), 11.1% had a master's degree, 6.3% completed a graduated microprogram, and 2.4% completed a third-grade DESS. Most of the respondents obtained their academic qualifications and other are in the process of doing : a microprogram and a DESS (3.2%); a microprogram, a DESS, and a master's degree (2.4%); a DESS and a master's degree (3.2%); or a master's degree and a third-grade DESS (0.8%). A few respondents had training in a field other than educational management (4%). Only 2.4% of respondents indicated that they had not taken any training. Finally, 5.4% of respondents did not answer the question.

### Measuring Instruments

#### Self-Efficacy Related to Work

The Scale of School Principals' Self-efficacy developed by Fernet et al. (2009) was chosen to measure self-efficacy related to work. The questionnaire consisted of 12 items organized according to three dimensions: administrative management (3 items), personnel management and educational leadership (6), as well as management of external relations (3). The response scale used was a five-point Likert-type scale ranging from completely disagree (1) to completely agree (5). For the present research, the internal consistency was considered good: Cronbach's alpha coefficient ( $\alpha$ ) was .76 for administrative management, .81 for personnel management and pedagogical leadership, and .76 for the management of external relations.

#### Transformative Leadership

The Self-Reported Leadership Scale developed by Dussault et al. (2013) was used to measure transfor-

<sup>1</sup> In this article, when the term *school principal* or *principal* is mentioned, the authors refer to both principals and vice-principals.



mative leadership. Built on Bass's (1990) theory and the Principal's Transformative Leadership Scale (Dussault et al., 2007), this instrument included 21 items to measure the transformational, transactional, and laissez-faire dimensions. The transformational dimension included 12 items covering charisma (4 items), intellectual stimulation (4), and personal recognition (4). The transactional dimension was measured using six items divided between the factors of contingent reward (3) and management by exception (3). Finally, the laissez-faire dimension, which is unidimensional, was measured using three items. The response scale used was a four-point Likert-type scale ranging from completely disagree (1) to completely agree (4). In the present study, the factors of the transformational and transactional dimensions all presented acceptable indices of internal consistency for transformational dimension: charisma ( $\alpha = .78$ ), intellectual stimulation ( $\alpha = .75$ ), and personal recognition ( $\alpha = .77$ ). For the transactional dimension, internal consistency was for contingent reward ( $\alpha = .83$ ) and for management by exception ( $\alpha = .80$ ). Although satisfactory, the laissez-faire dimension ( $\alpha = .66$ ) did not meet the acceptable threshold of .70 proposed by DeVellis (2017).

### ***Dispositional Resistance to Change***

A translation of the Resistance to Change Scale (RTC scale; Oreg, 2003), made it possible to use with a French-Canadian population in this study (Loi Zedda et al., 2024). This scale consisted of 17 items divided into four dimensions: routine seeking (5 items), emotional reaction (4), short-term focus (4), and cognitive rigidity (4). The response scale used was a seven-point Likert-type scale ranging from strongly disagree (1) to strongly agree (7). In the context of this research, the internal consistency indices were .67 for routine seeking, .77 for emotional reaction, .77 for short-term focus, and .71 for cognitive rigidity. Although satisfactory, routine seeking ( $\alpha = .67$ ) did not reach the acceptable threshold of .70 defined by DeVellis (2017).

### ***Data Analysis***

Descriptive analyses were carried out to provide an overall picture of the results (Trochim & Donnelly, 2008). More specifically, the means, standard deviations, and skewness and kurtosis coefficients were reported for the three instruments (Howell, 2008; Laflamme & Zhou, 2014). Pearson's correlation coefficients make it possible to show the relationship between variables (Howell, 2008; Laflamme & Zhou, 2014).

A path analysis (Bentler & Wu, 2006) enabled the verification of the intermediary role of transformative leadership between principals' self-efficacy related to work and their dispositional resistance to change, which verified the research hypothesis (Figure 1). A value of the Satorra-Bentler (SB)  $\chi^2/df$  less than 5 indicates that the observed data fits the model well, while a value smaller than 2 implies an appreciable fit (Jöreskog & Sörbom, 1993). The comparative fit index (CFI) (Bentler, 1990) and the non-normed fit index (NNFI) (Tucker & Lewis, 1973) come from the comparison between the hypothetical model and the null model in which no relationship exists between variables. If the model has a value greater than 0.90, it is considered acceptable, while a value greater than .95 is deemed to be appreciable (Hu & Bentler, 1999, as cited in Tabachnik & Fidell, 2007). With respect to the Root Mean Square Error of Approximation (RMSEA) (Steiger, 1990), a good fit to the model is determined by a value of .05 or less (Hu & Bentler, 1999, as cited in Tabachnik & Fidell, 2007). Given the number of parameters to be estimated and the limited number of respondents, the analysis was carried out using indicators (mean) for the latent variables to estimate the path model (Little et al., 2013). The use of these indicators is considered just as reliable as using all the statements when evaluating theoretical model adequacy (Marsh et al., 1998).

## **Results**

### ***Descriptive Results***

Table 1 presents the means, standard deviations, and skewness and kurtosis coefficients for each of the variables. Concerning self-efficacy related to work, the average score for the management of external relations was the lowest, followed by that of personnel management and pedagogical leadership, while the highest average score was in administrative management. This result indicates that the respondents

varied from agreeing to strongly agreeing with the items presented and that, consequently, they felt efficient in these three dimensions of their work.

**Table 1**

*Means, Standard Deviations, and Skewness and Kurtosis Coefficients for Self-efficacy Related to Work, Transformative Leadership, and Dispositional Resistance to Change*

Variables	<i>M</i>	<i>SD</i>	Skewness		Kurtosis	
			Value	<i>SE</i>	Value	<i>SE</i>
<b>Self-efficacy related to work <sup>a</sup></b>						
Administrative management	4.46	.50	-.90	.22	1.68	.44
Personnel management and pedagogical leadership	4.31	.46	-.24	.22	-.69	.44
Management of external relations	4.19	.67	-.95	.22	1.13	.44
<b>Transformative leadership <sup>b</sup></b>						
Transformational						
Charisma	3.60	.38	-.99	.22	.44	.43
Intellectual stimulation	3.67	.33	-1.53	.22	4.11	.43
Personal recognition	3.58	.39	-.89	.22	.79	.43
Transactional						
Contingent reward	3.47	.57	-1.37	.22	2.57	.43
Management by exception	3.27	.50	-.42	.22	1.17	.44
Laissez-faire						
	1.20	.42	3.62	.22	17.89	.44
<b>Dispositional resistance to change <sup>c</sup></b>						
Routine seeking	2.70		.75	.22	1.36	.43
Emotional reaction	2.77		.34	.22	-.57	.43
Short-term focus	2.01	.76	.60	.22	-.16	.43
Cognitive rigidity	3.28		.49	.22	.60	.43

Note. *n* = 120.

<sup>a</sup> Scale from 1 to 5. <sup>b</sup> Scale from 1 to 4. <sup>c</sup> Scale from 1 to 7.

The average score of laissez-faire for transformative leadership was the lowest, followed by the transactional factors, while the highest average scores corresponded to transformational factors. Based on their perceptions, the respondents either agreed or strongly agreed that they possessed traits or exhibited behaviour associated with this last dimension and its factors (i.e., charisma, intellectual stimulation, and personal recognition). Also, these results are slightly superior to those of respondents who were “rather in agreement” with the fact that they manifested behaviour related to the transactional dimension and its factors (i.e., contingent reward and management by exception). As for the results related to the laissez-faire dimension, these show that participants are close to the option ‘completely in disagreement’ when it comes to manifesting behavior associated with this dimension.

In terms of the dispositional resistance to change, the lowest average score was obtained by the short-term focus, followed by routine seeking, and then by emotional reaction. Cognitive rigidity, on the other hand, obtained the highest score. The respondents were “rather in disagreement” with the fact that they

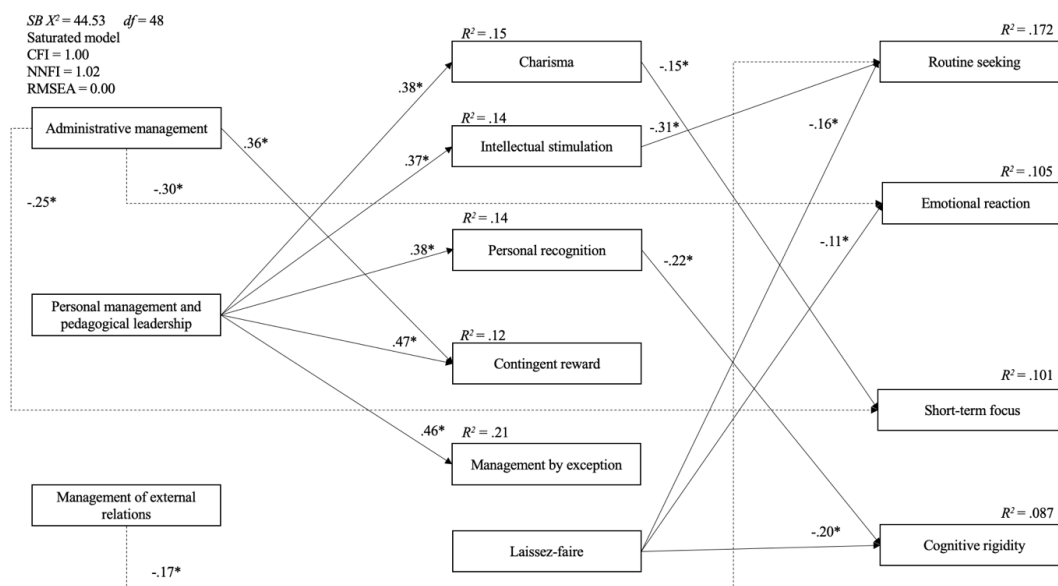
were disposed to resist change, and this, for the dimensions of routine seeking, emotional reaction, and cognitive rigidity and in disagreement for the short-term focus. Thus, it seems that the respondents did not consider themselves to be disposed to resist change.

### Hypothesis Results

Figure 1 illustrates all the statistically significant links present in the path analysis. The path model makes it possible to explain the variance of the dimensions of the dependent variable, which, in this case, is the dispositional resistance to change. Like several path models, this model presents fit statistics of a saturated model: CFI = 1.00, NNFI = 1.02, and RMSEA = 0.00. Moreover, the result of the SB  $\chi^2$  is 44.53, whose degree of freedom (df) is 48, for a value of .92.

**Figure 1**

*Path Model of the Links Between Self-efficacy Related to Work, Transformative Leadership, and Dispositional Resistance to Change*



Note. CFI = Comparative Fit Index. NNFI = Non-Normed Fit Index. RMSEA = Root Mean Square Error of Approximation.

\*  $p < .05$

Table 2 presents the correlations between the different variables, while Tables 3, 4, and 5 present the correlations between the dimensions or factors of the same variable or their measurement error (in the case of predicted variables) in the path model.



**Table 2***Correlations Between Principals' Self-efficacy Related to Work, Transformative Leadership and Dispositional Resistance to Change*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Self-efficacy related to work</b>															
1 Administrative management	-	.67**	.52**	.38**	.34**	.31**	.31**	.12	.04	.28**	.02	-.23*	-.31**	-.29**	-.05
2 Personnel management and pedagogical leadership		-	.58**	.45**	.38**	.36**	.37**	.40**	.22*	.46**	-.08	-.27**	-.24**	-.24**	-.05
3 Management of external relations			-	.37**	.35**	.30**	.25**	.27**	.14	.31**	-.10	-.26**	-.17	-.21*	.01
<b>Transformative leadership</b>															
4 Transformational				-											
5 Charisma					-	.56**	.54**	.41**	.43**	.29**	-.16	-.32**	-.13	-.24**	-.09
6 Intellectual stimulation						-	.68**	.42**	.40**	.37**	-.10	-.42**	-.16	-.16	-.18
7 Personal recognition							-	.46**	.43**	.38**	-.09	-.29**	-.13	-.21*	-.23*
8 Transactional								-							
9 Contingent reward									-	.43**	-.10	-.26**	-.02	-.03	-.19*
10 Management by exception										-	-.15	-.25**	-.18*	-.26**	-.16
11 Laissez-faire											-	-.10	-.09	.08	-.18
<b>Dispositional resistance to change</b>															
12 Routine seeking												-	.39**	.27**	.05
13 Emotional reaction													-	.61**	.09
14 Short-term focus														-	.18
15 Cognitive rigidity															-

*Note.*  $n = 120$ .\* $p < .05$ . \*\* $p < .01$ .

**Table 3***Correlations Between Dimensions of Self-efficacy Related to Work in the Path Model*

Dimensions	1	2	3
1 Administrative management	-	.67*	.52*
2 Personnel management and pedagogical leadership		-	.58*
3 Management of external relations			-

\* $p < 0.05$ .**Table 4***Correlations Between Measurement Errors of the Transformational and Transactional Factors and the Laissez-faire Dimension of Transformative Leadership in the Path Model*

Factors	1	2	3	4	5	6
1 Charisma	-	.37*	.34*	.39*	n.s.	n.s.
2 Intellectual stimulation		-	.52*	.26*	.21*	n.s.
3 Personal recognition			-	.29*	.21*	n.s.
4 Contingent reward				-	n.s.	n.s.
5 Management by exception					-	n.s.
6 Laissez-faire						-

Note. n.s. = link removed during analyses to optimize the model.

\* $p < 0.05$ .**Table 5***Correlations Between Measurement Errors of Dispositional Resistance to Change in the Path Model*

Dimensions	1	2	3	4
1 Routine seeking	-	.34*	.21*	n.s.
2 Emotional reaction		-	.57*	n.s.
3 Short-term focus			-	.14*
4 Cognitive rigidity				-

Note. n.s. = link removed during analyses to optimize the model.

\* $p < 0.05$ .

As shown in the path model, there were three direct links between self-efficacy related to work and dispositional resistance to change. Administrative management had a negative relationship with the emotional reaction and the short-term focus. External relations management had a negative relationship with routine seeking. The dimension of personnel management and pedagogical leadership had no direct relationship with the dimensions of dispositional resistance to change.

The following results are presented for each of the four dimensions of dispositional resistance to change. First, the management of external relations, personnel management, and pedagogical leadership via the intellectual stimulation factor, as well as the laissez-faire dimension, amounted to 17.2% of the variance of the routine seeking dimension. Second, the administrative management dimension of self-efficacy related to work and the laissez-faire dimension of transformative leadership amounted to 10.5% of the variance of the emotional reaction dimension. Third, the administrative management dimension as well as the personnel management and pedagogical leadership dimension of the self-efficacy related to work through the charisma factor of the transformational dimension of transformative leadership amounted to 10.1% of the variance of the short-term focus dimension. Fourth, the personnel management and pedagogical leadership dimension of the self-efficacy related to work through the personal

recognition factor of the transformational dimension, as well as the laissez-faire dimension of transformative leadership, amounted to 8.7% of the variance of the cognitive rigidity dimension. The amount of variance is considered weak.

In summary, the administrative management and external relations management dimensions of the self-efficacy related to work had a direct link with three of the dimensions of dispositional resistance to change (except cognitive rigidity). The three factors of the transformational dimension of transformative leadership played an intermediate role between the personnel management and pedagogical leadership dimension of the self-efficacy related to work and the dimensions of dispositional resistance to change (except emotional reaction). Finally, the laissez-faire dimension of transformative leadership had direct effects only on two dimensions of the dispositional resistance to change: routine seeking and emotional reaction.

## Discussion

This study investigated the relationship between school principals' self-efficacy related to work and their dispositional resistance to change as well as the intermediary role of their transformative leadership on this relationship. Table 6 presents the different study variables, dimensions, and factors. The results are discussed below, along with the limitations of the study and possible future research.

**Table 6**

*Study Variables, Dimensions, and Factors*

Variables	Dimensions	Factors
Self-efficacy related to work	Administrative management	
	Personnel management and pedagogical leadership	
	Management of external relations	
Transformative leadership	Transformational	Charisma
		Intellectual stimulation
		Personal recognition
	Transactional	Contingent reward
		Management by exception
	Laissez-faire	
Dispositional resistance to change	Routine seeking	
	Emotional reaction	
	Short-term focus	
	Cognitive rigidity	

### *Direct Relationships Between Principals' Self-efficacy Related to Work and Their Dispositional Resistance to Change*

It is necessary to interpret the results concerning the direct links between the principals' self-efficacy related to work and their dispositional resistance to change. As a reminder, in this study, administrative management was negatively related to the emotional reaction and short-term focus. For its part, the management of external relations was negatively related to routine seeking.

The relationships found in this research are consistent with those reported in previous studies (Hyland, 2007; Johns, 2021; Rafferty & Jimmieson, 2018). All three exhibited negative relationships between self-efficacy and dispositional resistance to change. Similarly, the study by Oreg (2003), which

is the only one to present results concerning dispositional resistance to change, indicated negative relations between generalized self-efficacy and the dimensions of routine seeking and short-term focus of dispositional resistance to change.

These results suggest that principals would be unlikely to resist change if their self-efficacy related to work is high and vice versa. They are therefore consistent with Bandura's (2007) social cognitive theory, which suggests that individuals with high self-efficacy can highlight elements that help persuade subordinates of the value of change. Also, this theory suggests that self-efficacy can influence choices and motivation, two central elements in the management of resistance to change (Arcand, 2011; Kotter & Schlesinger, 2008). Indeed, the choices made regarding change and the motivation the individuals derives from it, could help them overcome their resistance. In the same vein, the theory of change management indicates that an individual's ability to accept change has an influence on the management of change and the associated resistance (Holt et al., 2010). There would therefore be links between the two variables, namely dispositional resistance to change and self-efficacy related to work.

More specifically, concerning the negative relationship between the administrative management of self-efficacy related to work and the emotional reaction of dispositional resistance to change, the result suggests that the individuals who feel able to manage their responsibilities and their administrative role would be able to control their thoughts and emotions (Bandura, 2007). Thus, it is reasonable to believe that the principals' self-efficacy related to work would allow them to maintain control over their emotions thanks to an a priori analysis of the change (Oreg, 2003).

Regarding the negative relationship between the administrative management dimension of self-efficacy related to work and the short-term focus of dispositional resistance to change, it indicates that a short-term focus would result in an inability to visualize the benefits of the change due to the immediate concerns it produces. For his part, Bandura (2007) indicates that self-efficacy refers to individuals' beliefs in their ability to succeed and to achieve their goals. Thus, self-efficacy could influence the success of change. In addition, the competency framework for managers of educational establishments in training (MELS, 2008) mentions several required skills that echo the concept of self-efficacy related to work. It seems consistent that if Quebec principals feel efficacious, they would be able to manage change. Indeed, these skills are intended to help meet the specific challenges of their function, of which change is a part (MELS, 2008). These results suggest that principals who feel efficacious in their role would be able to overcome the immediate constraints related to change and perceive its long-term benefits.

Regarding the negative relationship between the management of external relations of self-efficacy related to work and routine seeking of dispositional resistance to change, it is possible to rely on the competency framework of principals training (MELS, 2008) to explain it. The framework mentions that the profession of principal is based on a systemic vision of the organizational structure that aims to take into consideration all the internal and external stakeholders. Therefore, the ability to manage external relations is necessary for the management of the establishment. The results obtained point in this direction. In fact, owing to acquaintances among external partners, principals can rely on those relationships, particularly with members of the school service center, when dealing with change. These external actors can help them feel efficacious and carry out change and therefore, be less dependent on routine.

In short, it is reasonable to suppose that some of the dimensions of principals' self-efficacy related to work could be precursors to certain dimensions of dispositional resistance to change. Self-efficacy related to work could therefore be one of the variables that influence dispositional resistance to change in principals.

### *Intermediate Role of Transformative Leadership in the Relationship Between the Principals' Self-Efficacy Related to Work and Their Dispositional Resistance to Change*

Regarding the research hypothesis that transformative leadership has an intermediate effect on the relationship between principals' self-efficacy related to work and their dispositional resistance to change, the results partially supported this assertion. The path model tested indicates that existing relationships were modified by the addition of the intermediate variable, that is, the factors of the transformational dimension of transformative leadership. As for routine seeking, the link with personnel management and pedagogical leadership was mediated by the intermediary of intellectual stimulation. For short-term fo-

cus, the link with personnel management and pedagogical leadership was mediated by charisma. Finally, for cognitive rigidity, the link with personnel management and pedagogical leadership was mediated by personal recognition.

These results can be explained in light of Bandura's (2007) socio cognitive theory, which suggests that the higher the self-efficacy, the more an individual is inclined to rise to certain challenges. This factor is concomitant with the fact that a leader who displays transformational behaviour tends to be proactive and take risks (Françoise, 2016). It is therefore consistent that the dimension of personnel management and pedagogical leadership was positively linked to the dimensions of transformative leadership. These results can be explained by the fact that the very nature of the transformational dimension (Bass & Avolio, 1993) is to foster a culture of change. This implies that the principal who displays related behaviour acts proactively in implementing transformation and is, therefore, unlikely to resist change.

More specifically, regarding the intermediary role of the charisma factor, it influenced the relationship between the dimensions of personnel management and pedagogical leadership of the self-efficacy related to work and the short-term focus of the dispositional resistance to change. This result can be explained by the fact that a charismatic leader is self-confident, competent, ready to take risks (Avolio, 1999), and able to interpret change and enact strategies to promote its success (Yukl, 2013). Oreg (2003) specified that short-term focus is dictated by concerns regarding the disadvantages change can produce in the short term. This result can be explained by the fact that principals who manifest traits linked to charisma are motivated by the change thanks to their vision of the establishment and that they are not discouraged by small daily nuisances (Bass, 1990). Therefore, it is reasonable to think that principals who feel effective in managing their subordinates and who demonstrate elements associated with the charisma factor, can launch strategies to achieve their missions. Moreover, they would be unconcerned about short-term obstacles resulting from change.

Regarding the intermediary role of intellectual stimulation, it acted on the relationship between the personnel management and pedagogical leadership dimension of self-efficacy related to work as well as the routine-seeking dimension of dispositional resistance to change. Intellectual stimulation is defined by Avolio (1999) as the ability to solve problems, to motivate subordinates, and arouse their interest. Oreg (2003) mentioned that routine seeking reflects an individual's degree of tolerance regarding routine and stimulation. This result can be understood by the fact that principals who show such behaviour are motivated by change they can share with their entire establishment (Anggreini et al., 2022; Geijssels et al., 2003; Nguni et al., 2006; Yu et al., 2002). If school principals are motivated, they can adapt to situations that transform their habits (Yukl, 2013). Conversely, if the latter are not motivated, they perceive change as a loss of bearings or routine that could compromise their well-being at work (Oreg, 2003). Thus, principals who feel effective both in managing their staff and as pedagogical leaders, who act to stimulate or motivate subordinates, are likely to agree to implement changes by observing them as stimulation, as problems to solve. The changes would not be seen as an obstacle to well-being at work and a loss of reference, but rather as a source of motivation.

Regarding the intermediary role of personal recognition, it influenced the relationship between the personnel management and pedagogical leadership dimension of self-efficacy related to work and the cognitive rigidity dimension of dispositional resistance to change. Personal recognition is the act of being attentive to the needs and desires of subordinates (Bass, 1985b). This factor is close to the definition of the personnel management and pedagogical leadership dimension of self-efficacy related to work proposed by Fernet et al. (2009), since Northouse (2016) mentioned that principals act as a coach to their team by ensuring that subordinates' expectations and ambitions are achieved. According to Yukl (2013), because of their charisma, principals can implement strategies to promote the success of change. This result can be explained by the fact that principal interested in the needs of their employees are able to listen to them and consider new ways of thinking while leading them to surpass themselves (Avolio, 1999; Sashkin, 2004). The competency framework for managers of educational establishments in training (MELS, 2008) indicates, in this regard, that principals must, as a cross-cutting capacity, act with shared leadership that allows the development of mutual trust. They must consider the opinions of subordinates. However, as Oreg (2003) stated, individuals who demonstrate cognitive rigidity are characterized by narrow-mindedness and a lack of will to change their mind. Therefore, they might not be inclined to show an interest in their subordinates' proposals. While principals supervise their team by considering

their needs and desires, the person who displays cognitive rigidity might not consider their subordinates' opinions. Therefore, the results could be understood by the fact that principals who feel effective as a pedagogical supervisor and who display behaviour associated with personal recognition are unlikely to show cognitive rigidity.

However, analysis of the results reveals no intermediary role on the part of transformative leadership between the dimensions of self-efficacy related to work and the emotional reaction dimension of dispositional resistance to change. This can be explained by the fact that transformative leadership mainly aims to achieve high goals by increasing motivation and skills (Bass, 1990) and does not address the issue of emotions. However, the emotional reaction dimension, as defined by Oreg (2003), is linked to the emotions felt during change. It would therefore be relevant to study the role of other leadership styles as an intermediary between self-efficacy related to work and dispositional resistance to change.

All in all, the intermediary role of the three factors of the transformational dimension of transformative leadership could be understood as an aid to managing change because of the nature of behaviour or traits associated with this dimension. The principals' self-efficacy regarding personnel management and pedagogical leadership and their transformative leadership could have an influence on the dimensions of routine seeking, short-term focus, and cognitive rigidity of dispositional resistance to change. Thus, the research hypothesis is partially validated.

### Limitations of the Study and Future Avenues of Research

Although this research contributes to some extent to the development of knowledge, it still has limitations. At a theoretical level, Oreg's (2003) model has only been tested a few times (e.g., Oreg & Goldenberg, 2015); as such, we are unable to conclude its validity. At a methodological level, the non-probability sampling method and the low participation rate of 5.5% limit the generalization of the results (Fortin, 2010; Gauthier & Beaud, 2009). This rate is low, but it is in line with other research conducted on the same population (e.g., Chevrier, 2019; G  linas-Proulx et al., 2022; Hadchiti et al., 2017; IsaBelle, 2013). Furthermore, the notion of sampling only makes sense from a statistical point of view when the population exceeds 100 individuals. The sample and its size are defined according to the degree of precision required by the researcher and the nature of the phenomenon to be studied (Carlsen and Glenton, 2011; Naing et al., 2006). In addition, resource constraints, such as time and money, could justify a small sample size (Lakens, 2022). In the case of this study, the researchers were faced with both constraints.

Another limitation lies with the measuring instruments used. The laissez-faire dimension of the Self-Reported Leadership Scale (Dussault et al., 2013) and the routine-seeking dimension of the Resistance to Change Scale (Loi Zedda et al., accepted), while acceptable, both show internal consistency below the minimum standard (DeVellis, 2017). Finally, this research, carried out as it is using individual self-evaluation to determine self-efficacy related to work, transformative leadership, and dispositional resistance change, could lead to a bias of social desirability (Edwards, 1957).

Considering the results obtained and the limitations noted, certain avenues can be proposed for future research. It would be interesting to measure the relationships between school principals' self-efficacy related to work, transformative leadership, and disposition to resist a specific change. This would make it possible to measure the attitude of principals toward the change in question and study the factorial structure of the entire model of Oreg (2003). Finally, the more this research is replicated, the more it will be possible to generalize the results. This would ultimately make it possible to propose hypotheses of causal relationships (Ladouceur & B  gin, 1986).

Overall, despite the limitations outlined, this study presents results that could have relevant and important practical and theoretical implications, particularly regarding the training of principals. It also points to avenues of research relevant to the education community, and subsequent research and analysis can be conducted to analyze the specific links between transformative leadership and the dispositional resistance to change. In this research, we did not question school principals about the quality of the change (good or bad). Further research is needed to consider the influence of perceived quality of change (good or bad) in the study of dispositional resistance to change and its associated factors (self-efficacy and leadership).



## References

- Allison, L. (2007). *The effects of person-organization fit, needs-supplies fit, and type of change on resistance to change*. [Doctoral dissertation, Wayne State University]. ProQuest Dissertations Publishing. <https://www.proquest.com/openview/1df99d7788d0102a383e150c-c03bd6f6/1.pdf?pq-origsite=gscholar&cbl=18750>
- Angel, V., & Steiner, D. D. (2013). “Je pense, donc je résiste” : théorie de justice et personnalité dans l’explication de la résistance au changement [“I think, therefore I resist”: theory of justice and personality in explaining resistance to change]. *Revue internationale de psychologie sociale*, 1(26), 61–99. <https://www.cairn.info/revue-internationale-de-psychologie-sociale-2013-1-page-61.htm>
- Anggreini, F., Hasyim, H., & Kusumapradja, R. (2022). Causality analysis of resistance to change in hospital: Transformational leadership, communication and emotional intelligence approaches. *European Journal of Business and Management Research*, 7(2), 192–199. <https://doi.org/10.24018/ejbmr.2022.7.2.1322>
- Arcand, M. (2011). *La gestion stratégique du changement : conceptions théoriques, modèles diagnostiques et choix de l’intervention* [Strategic change management: theoretical concepts, diagnostic models and intervention choices]. Éditions Nouvelles.
- Armenakis, A. A., Bernerth, J. B., Pitts, J. P., & Walker, H. J. (2007). Organizational change recipients’ beliefs scale: Development of an assessment instrument. *The Journal of Applied Behavioral Science*, 43(4), 481–505. <https://doi.org/10.1177/0021886307303654>
- Armenakis, A. A., Harris, S. G., & Mossholder, K. W. (1993). Creating readiness for organizational change. *Human Relations*, 46(6), 681–703. <https://doi.org/10.1177/001872679304600601>
- Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations*. SAGE Publications.
- Bandura, A. (2007). *Auto-efficacité : le sentiment d’efficacité personnelle* (2nd ed.). De Boeck Supérieur.
- Bareil, C. (2008). Démystifier la résistance au changement : questions, constats et implications sur l’expérience du changement [Demystifying resistance to change: questions, findings and implications for the experience of change]. *Télescope*, 14(3), 89–105. [https://telescope.enap.ca/telescope/docs/index/vol\\_14\\_no\\_3/telv14n3\\_bareil.pdf](https://telescope.enap.ca/telescope/docs/index/vol_14_no_3/telv14n3_bareil.pdf)
- Bareil, C. (2010). Les cadres face aux changements [Managers facing change]. *Gestion*, 34(4), 30. <https://doi.org/10.3917/riges.344.0030>
- Bareil, C. (2013). Two paradigms about resistance to change. *Organization Development Journal*, 31(3), 59–71. <https://www.proquest.com/docview/1467438141?parentSessionId=sc9fK9cB-WA7eCwEHQochhX0e8el6ZQ2nVA6U6dtxsxs%3D>
- Bass, B. M. (1985a). *Leadership and performance beyond expectations*. The Free Press.
- Bass, B. M. (1985b). *Multifactor Leadership Questionnaire*. Binghamton: State University of New York, School of Management.
- Bass, B. M. (1990). *Bass & Stogdill’s handbook of leadership: Theory, research, and managerial applications* (3rd ed.). The Free Press.
- Bass, B. M. (1998). *Transformation leadership: Industry, military and educational impact*. Lawrence Erlbaum Associates.
- Bass, B. M., & Avolio, B. J. (1993). Transformational leadership: A response to critiques. In R. Chermers, M. M. et Ayman (Eds.), *Leadership theory and research: Perspectives and directions* (pp. 49–80). Academic Press.
- Bass, B. M., & Avolio, B. J. (1994). *Transformational leadership development: Manual for the Multifactor Leadership Questionnaire*. Consulting Psychologists Press.
- Bateh, J., Castamed, M. E. & Farah, J. E. (2013). Employee resistance to organizational change. *International Journal of Management & Information Systems*, 17(2), 113–116. <https://doi.org/10.19030/ijmis.v17i2.7715>

- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238–246. <https://doi.org/10.1037/0033-2909.107.2.238>
- Bentler, P. M. & Wu, E. J. C. (2006). *EQS Structural equations program* (6.2). Multivariate Software.
- Boga, I., & Ensari, N. (2009). The role of transformational leadership and organizational change on perceived organizational success. *The Psychologist-Manager Journal*, 12(4), 235–251. <https://doi.org/10.1080/10887150903316248>
- Carlsen, B., & Glenton, C. (2011). What about N? A methodological study of sample-size reporting in focus group studies. *BMC Medical Research Methodology*, 11(1), Article 26. <https://doi.org/10.1186/1471-2288-11-26>
- Cattonar, B., Lessard, C., Blais, J.-G., Larose, F., Riopel, M.-C., Tardif, M., Bourque, J., & Wright, A. (2007). *Les directeurs et les directrices d'école au Canada : contexte, profil et travail. Enquêtes pancanadiennes auprès des directions et des enseignants d'écoles primaire et secondaires (2005–2006)* [School principals in Canada: context, profil and work. Pan-Canadian surveys of principals and teachers in elementary and secondary schools (2005–2006)]. Chaire de recherche du Canada sur le personnel et les métiers de l'Éducation. <https://depot.erudit.org/id/003041dd>
- Conseil supérieur de l'éducation. (1999). *Diriger une école secondaire: un nouveau contexte, de nouveaux défis* [Running a secondary school: a new context, new challenges]. Conseil supérieur de l'éducation.
- Daly, A. J., Der-Martirosian, C., Ong-Dean, C., Park, V., & Wishard-Guerra, A. (2011). Leading under sanction: Principals' perceptions of threat rigidity, efficacy, and leadership in underperforming schools. *Leadership and Policy in Schools*, 10(2), 171–206. <https://doi.org/10.1080/15700763.2011.557517>
- DeVellis, R. F. (2017). *Scale development: Theory and applications* (4th ed.). SAGE Publications.
- Dussault, M., Frenette, É., & Fernet, C. (2013). Leadership: Validation of a self-report scale. *Psychological Reports*, 112(2), 419–436. <https://doi.org/10.2466/01.08.pr0.112.2.419-436>
- Dussault, M., Valois, P., & Frenette, É. (2007). Validation de l'échelle de leadership transformatif du directeur d'école [Validation of the principal's transformative leadership scale]. *Psychologie du Travail et des Organisations*, 13(2), 37–52.
- Edwards, A. L. (1957). *The social desirability variable in personality assessment and research*. The Dryden Press.
- Fédération autonome de l'enseignement. (2006, November 8). *La FAE lance l'appel à la formation d'une coalition pour corriger la réforme de l'éducation* [FAE calls for coalition to correct education reform].
- Fernet, C., Austin, S. & Dussault, M. (2009, Nov.). *L'importance de la spécificité des rôles professionnels lors de l'évaluation de la perception d'efficacité personnelle des directions d'école* [The importance of professional role specificity in assessing principals' perceived self-efficacy] [Conference presentation]. 31ème Colloque de l'Association pour le Développement des Méthodologies d'évaluation en éducation, Québec, Canada.
- Fortin, M.-F. (2010). *Fondements et étapes du processus de recherche : méthodes quantitatives et qualitatives* [Foundations and stages of the research process: quantitative and qualitative methods] (2nd ed.). Chenelière éducation.
- Françoise, D. (2016). *Pleine-conscience et management: effet de la mindfulness sur la relation au travail et le style de leadership des managers* [Mindfulness and management: the effect of mindfulness on managers' work relationships and leadership style] [Doctoral dissertation, Université Grenoble Alpes]. HAL Theses. <https://theses.hal.science/tel-01452592>
- Gather Thurler, M. (2000). *Innover au cœur de l'établissement scolaire*. [Innovation at the heart of the school]. ESF Editeurs.
- Gauthier, B. (2009). *Recherche sociale : de la problématique à la collecte des données* [Social research: from problem to data collection] (5th ed.). Presses de l'Université du Québec.

- Geijsel, F., Sleegers, P., Leithwood, K., & Jantzi, D. (2003). Transformational leadership effects on teachers' commitment and effort toward school reform. *Journal of Educational Administration*, 41(3), 228–256. <https://doi.org/10.1108/09578230310474403>
- Gélinas-Proulx, A., Jacquin, P., Labelle, J., & Cambron-Prémont, A. (2022). Élaboration d'un questionnaire d'autoévaluation de la compétence interculturelle des directions d'établissement scolaire de langue française au Québec et au Nouveau-Brunswick [Development of a self-assessment scale for the intercultural competence of French-speaking school principals in Quebec and New Brunswick]. *Mesure et évaluation en éducation*, 45(1), 67–102. <https://doi.org/10.7202/1097153ar>
- Gouvernement du Québec. (2022). *Loi sur l'instruction publique*. Recueil des lois et des règlements du Québec. <https://www.legisquebec.gouv.qc.ca/fr/document/lc/l-13.3/20010701>
- Hadchiti, R., Frenette, E., Dussault, M., & D'amours-Raymond, J. (2017). Elaboration d'un questionnaire sur le mentorat reçu par les directions d'établissement scolaire primaire et secondaire au Québec [Development of a scale on mentoring received by elementary and secondary school principals in Quebec]. *Canadian Journal of Education / Revue canadienne de l'éducation*, 40(3), 26–59. <https://journals.sfu.ca/cje/index.php/cje-rce/article/view/2258>
- Higgs, M., & Rowland, D. (2005). All changes great and small: Exploring approaches to change and its leadership. *Journal of Change Management*, 5(2), 121–151. <https://doi.org/10.1080/14697010500082902>
- Holt, D., Armenakis, A. A., Feild, H. S., & Harris, S. G. (2007). Readiness for organizational change: The systematic development of a scale. *The Journal of Applied Behavioral Science*, 43(2), 232–255. <https://doi.org/10.1177/0021886306295295>
- Holt, D. T., Helfrich, C. D., Hall, C. G., & Weiner, B. J. (2010). Are you ready? How health professionals can comprehensively conceptualize readiness for change. *Journal of General Internal Medicine*, 25(1), 50–55. <https://doi.org/10.1007/s11606-009-1112-8>
- Howell, D. C. (2008). *Méthodes statistiques en sciences humaines* [Statistical methods in human sciences] (2nd ed.). De Boeck Supérieur.
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hyland, P. K. (2007). *Resistance to organizational change: The impact of followers' disposition toward change and supervisors' leadership style*. [Doctoral dissertation, Columbia University].
- Inchauspé, P. (2007). *Pour l'école : lettres à un enseignant sur la réforme des programmes* [For school: letters to a teacher on curriculum reform]. Éditions Liber.
- IsaBelle, C. (2013). Directions et futures directions d'école franco-canadienne : sentiment d'efficacité personnelle de leurs compétences pour gérer une école en contexte de valorisation linguistique et culturelle [Principals and future principals of French-Canadian schools: self-efficacy of their skills to manage a school in a context of linguistic and cultural valorization]. *Canadian Journal of Education / Revue canadienne de l'éducation*, 36(3), 204–228. <https://journals.sfu.ca/cje/index.php/cje-rce/article/view/1658>
- Johns, G. M. (2021). *A quantitative analysis of resistance to change and psychological capital* (Order No. 28773776) [Doctoral dissertation, Keiser University]. ProQuest Dissertations Publishing. <https://www.proquest.com/dissertations-theses/quantitative-analysis-resistance-change/docview/2597492546/se-2>
- Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*. Lawrence Erlbaum Associates.
- Kotter, J. P., & Schlesinger, L. A. (1979). Choosing strategies for change. *Harvard Business Review*, 57(2), 106–114. [https://projects.iq.harvard.edu/files/sdpfellowship/files/day3\\_2\\_choosing\\_strategies\\_for\\_change.pdf](https://projects.iq.harvard.edu/files/sdpfellowship/files/day3_2_choosing_strategies_for_change.pdf)
- Kotter, J. P., & Schlesinger, L. A. (2008). Choosing strategies for change. *Harvard Business Review*, 86(7), 130–139. <https://hbr.org/2008/07/choosing-strategies-for-change>

- Ladouceur, R., & Bégin, G. (1986). *Protocoles de recherche en sciences appliquées et fondamentales* [Research protocols in applied and basic sciences] (2nd ed.). Edisem.
- Laflamme, S., & Zhou, R.-M. (2014). *Méthodes statistiques en sciences humaines* [Statistical methods in human sciences]. Éditions Prise de parole.
- Lakens, D. (2022). Sample size justification. *Collabra: Psychology*, 8(1), 33267. <https://doi.org/10.1525/collabra.33267>
- Larouche, C., Beauchesne, R., Boucher, C., Deschenaux, F., Gauthier, R., Huot, A., ... Vachon, I. (2023). Module 2: Aperçu sociohistorique. In *Site internet Organisation de l'éducation au Québec (OEQ)*. Université du Québec. [https://oraprdnt.uqtr.quebec.ca/portail/gscw031?owa\\_no\\_site=1839](https://oraprdnt.uqtr.quebec.ca/portail/gscw031?owa_no_site=1839)
- Legendre, R. (2005). *Dictionnaire actuel de l'éducation* [Current Dictionary of Education] (3rd ed.). Guérin.
- Little, T. D., Rhemtulla, M., Gibson, K., & Schoemann, A. M. (2013). Why items versus parcels controversy needn't be one. *Psychological Reports*, 18(3), 285–300. <https://doi.org/10.1037/a0033266>
- Loi Zedda, M., Frenette, E., Thibodeau, S., et Forget, P. (2024). Échelle de disposition à résister au changement (ÉDRAC) : Adaptation transculturelle en contexte québécois de la "Resistance to Change scale (RTC)". *Revue des sciences de l'éducation de McGill / McGill Journal of Education*, 58(3), 230-259.
- Loi Zedda, M., Thibodeau, S. & Forget, P. (2017). Vers une meilleure compréhension de la résistance au changement des directeurs d'école [Towards a better understanding of principals' resistance to change]. *Sens public*. <http://sens-public.org/article1253.html>
- Marín, J. R. (2013). *The relationship between ethnicity, self-efficacy, and beliefs about diversity to instructional and transformational leadership practices of urban school principals* [Doctoral dissertation, University of Southern California]. ProQuest Dissertations Publishing. <https://www.proquest.com/openview/1d40e4ea2ec5d77c23750ee44fb-bf7bc/1?pq-origsite=gscholar&cbl=18750>
- Marsh, H. W., Hau, K. T. & Balla, J. (1998). Is more ever too much : The number of indicators per factor in confirmatory factor analysis. *Multivariate Behavioral Research*, 33(2), 181–220. [https://doi.org/10.1207/s15327906mbr3302\\_1](https://doi.org/10.1207/s15327906mbr3302_1)
- McCormick, M. J., Tanguma, J. & Lopez-Forment, A. S. (2002). Extending self-efficacy theory to leadership: A review and empirical test. *Journal of Leadership Education*, 1(2), 34–49. [https://journalofleadershiped.org/wp-content/uploads/2019/02/1\\_2\\_McCormick\\_Tanguma\\_Lopez-Forment.pdf](https://journalofleadershiped.org/wp-content/uploads/2019/02/1_2_McCormick_Tanguma_Lopez-Forment.pdf)
- Ministère de l'Éducation, du Loisir et du Sport (MELS). (2008). *La formation à la gestion d'un établissement d'enseignement: les orientations et les compétences professionnelles* [School management training: orientations and professional skills]. Gouvernement du Québec. [http://www.education.gouv.qc.ca/fileadmin/site\\_web/documents/reseau/formation\\_titulisation/07-00881.pdf](http://www.education.gouv.qc.ca/fileadmin/site_web/documents/reseau/formation_titulisation/07-00881.pdf)
- Naing, L., Winn, T., & Rusli, B. N. (2006). Practical issues in calculating the sample size for prevalence studies. *Archives of Orofacial Sciences*, 1, 9–14.
- Nguni, S., Slegers, P. J. C., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement*, 17(2), 145–177. <https://doi.org/10.1080/09243450600565746>
- Northouse, P. G. (2016). *Leadership: Theory and practice* (7th ed.). SAGE Publications.
- Oreg, S. (2003). Resistance to change: Developing an individual differences measure. *Journal of Applied Psychology*, 88(4), 680–693. <https://doi.org/10.1037/0021-9010.88.4.680>
- Oreg, S., & Berson, Y. (2011). Leadership and employees' reactions to change: The role of leaders' personal attributes and transformational leadership style. *Personnel Psychology*, 64(3), 627–659. <https://doi.org/10.1111/j.1744-6570.2011.01221.x>
- Oreg, S., & Goldenberg, J. (2015). *Resistance to innovation: Its sources and manifestations*. The University of Chicago Press.



- Oreg, S., Vaklova, M., & Armenakis, A. (2011). Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *The Journal of Applied Behavioral Science*, 47(4), 461–524. <https://doi.org/10.1177/0021886310396550>
- Poirel, E., & Yvon, F. (2012). Le leadership distribué: l'épreuve des réformes éducatives [How have educational reforms affected distributed leadership?]. *Éducation et francophonie*, 40(1), 94–118. <https://doi.org/10.7202/1010148ar>
- Rafferty, A. E., & Jimmieson, N. L. (2018). Individual and external coping resources as predictors of employees' change attitudes. In M. Vakola & P. Petrou (Eds.), *Organizational change: Psychological effects and strategies for coping* (pp. 47–64). Routledge.
- Sashkin, M. (2004). Transformational leadership approaches: A review and synthesis. In J. Antonakis, A. T. Cianciolo, & R. J. Sternberg (Eds.), *The nature of leadership* (p. 438). SAGE Publications.
- Schermerhorn, J. R., Hunt, J. G., Osborn, R. N., & de Billy, C. (2014). *Comportement humain et organisation* [Human behavior and organization]. (5th ed.). ERPI.
- Smith, R. E. (2013). *Insecure commitment and resistance: An examination of change leadership, self-efficacy, and trust on the relationship between job insecurity, employee commitment, and resistance to organizational change*. [Doctoral dissertation, University of Minnesota]. University of Minnesota Digital Conservancy. <https://hdl.handle.net/11299/161089>
- St-Germain, P. (2008). Petite histoire d'une lutte contre la réforme [A short story of the fight against reform]. In R. Comeau & J. Lavallée (Eds.), *Contrer la réforme pédagogique* (pp. 15–27). VLB éditeur.
- Schein, E. H. (2010). *Organizational culture and leadership* (3rd ed.). Jossey-Bass.
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioural Research*, 25(2), 173–180. [https://doi.org/10.1207/s15327906mbr2502\\_4](https://doi.org/10.1207/s15327906mbr2502_4)
- Tabachnik, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Allyn & Bacon.
- Thornburg, D. G., & Mungai, A. (2011). Teacher empowerment and school reform. *Journal of Ethnographic & Qualitative Research*, 5(4), 205–217.
- Toussaint, P., & Malette, D. (2023). Module 8: Réforme et curriculum. Dans *Site internet Organisation de l'éducation au Québec (OEQ)*. Université du Québec. [https://oraprdnt.uqtr.quebec.ca/portail/gscw031?owa\\_no\\_site=1839](https://oraprdnt.uqtr.quebec.ca/portail/gscw031?owa_no_site=1839)
- Trochim, W. M. K., & Donnelly, J. P. (2008). *Research methods knowledge base* (3rd ed.). Atomic Dog/Cengage Learning.
- Tschannen-Moran, M., & Gareis, C. R. (2004). Principals' sense of efficacy: Assessing a promising construct. *Journal of Educational Administration*, 42(5), 573–585. <https://doi.org/10.1108/09578230410554070>
- Tucker, L. R., & Lewis, L. S. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38, 1–10. <https://doi.org/10.1007/bf02291170>
- Virga, J. J., Jr. (2012). *Examining the perceptions and sources of the self-efficacy beliefs of principals of high-achieving elementary schools*. [Doctoral dissertation, University of Maryland]. Digital Repository at the University of Maryland. <http://hdl.handle.net/1903/13141>
- Walumbwa, F. O., Lawler, J. J., Avolio, B. J., Wang, P., & Shi, K. (2005). Transformational leadership and work-related attitudes: The moderating effects of collective and self-efficacy across cultures. *Journal of Leadership & Organizational Studies*, 11(3), 2–16. <https://doi.org/10.1177/107179190501100301>
- Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85(1), 132–142. <https://doi.org/10.1037/0021-9010.85.1.132>
- Yammarino, F. J., Spangler, W. D., & Bass, B. M. (1993). Transformational leadership and performance: A longitudinal investigation. *The Leadership Quarterly*, 4(1), 81–102. [https://doi.org/10.1016/1048-9843\(93\)90005-e](https://doi.org/10.1016/1048-9843(93)90005-e)

- 
- Yu, H., Leithwood, K., & Jantzi, D. (2002). The effects of transformational leadership on teachers' commitment to change in Hong Kong. *Journal of Educational Administration*, 40(4), 368–389. <https://doi.org/10.1108/09578230210433436>
- Yukl, G. (2013). *Leadership in organizations* (8th ed.). Pearson.
- Yvon, F., Béguin, M., & Bareil, C. (2019). Accompagner le changement [Supporting change]. In J.-M. Huguenin, F. Yvon & D. Perrenoud (Eds.), *Relever les défis contemporains dans la gestion des établissements scolaires* (pp. 285–323). L'Harmattan.