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SCHOOL PRINCIPAL SELF-EFFICACY FOR INSTRUCTIONAL LEADERSHIP: A REVIEW OF QUANTITATIVE RESEARCH

The principal's leadership has a significant impact on students, teachers, and other members of the school community. Thus, an important question is which factors are related to efficacy beliefs of school principals. The purpose of this paper was to review quantitative research on principals' self-efficacy in the domain of instructional leadership. In the SCOPUS and Google Scholar repositories, 26 relevant publications were identified and included in the analysis. The results of the present review indicated that self-efficacy for instructional leadership was typically measured as a unidimensional construct. The most frequently studied outcome of self-efficacy of school principals was the motivation to leave the position. On the other hand, the effects of self-efficacy of school principals on student achievement have rarely been investigated. Recommendations for future research are discussed in the paper.

Key words: school principal, self-efficacy, instructional leadership, efficacy beliefs, quantitative research

INTRODUCTION

How successful the key actors of school life will be in their roles depends on how much they believe in their abilities. Perceived efficacy is one of the important motivational beliefs that affect an individual's behavior (Bandura, 1997). Based on this assumption, researchers focused on the self-efficacy of students (Zimmerman, 2000), teachers (Tschannen-Moran & Woolfolk Hoy, 2001), and principals (Tschannen-Moran & Gareis, 2004). In addition to knowledge and skills, self-efficacy is an important segment of professional competencies of school principals.

The role of a school principal in today's conditions includes a wide range

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of professional tasks. For this reason, it is justified to differentiate various dimensions of self-efficacy of the school principal. Starting from the fact that the improvement of teaching and learning is one of the key functions of the school principal, this paper focuses on perceived self-efficacy in the domain of instructional leadership. According to our knowledge, an overview of quantitative research on this construct has not been done so far. Therefore, this paper contributes to the existing literature in two ways. First, we tend to provide insights into how the self-efficacy of school principals in the domain of instructional leadership is defined and measured. Another contribution of this paper refers to a systematic review of the predictors and effects of school principals' self-efficacy for instructional leadership.

SELF-EFFICACY AS A PROFESSIONAL COMPETENCE OF SCHOOL PRINCIPALS

Self-efficacy is a personal belief that significantly determines an individual's thinking and behavior. According to Bandura's (Bandura, 1997) social cognitive theory, self-efficacy affects an individual's self-imposed goals anda level of persistence when facing obstacles and challenges. More precisely, people tend to avoid activities that they feel exceed their personal capacities and in which they expect to fail. It should be borne in mind that self-efficacy does not reflect the actual abilities that someone has, but speaks about how much a person believes in his competences in a certain domain. Self-efficacy concerns the answer to the questions "Can I do this?" and "How well can I do this?" (Skaalvik, 2020a).

Four basic sources of self-efficacy are mastery experience, vicarious experience, verbal persuasion and affective states (Bandura, 1997). Personal experience of success is assumed to be the primary determinant of self-efficacy. After successfully performing a task, a person develops expectations of success in similar situations in the future. However, it should be borne in mind that several sources of self-efficacy can occur simultaneously. For example, the interpretation of personal achievements is influenced by the feedback an individual receives from influential people in the social environment (Bellemans & Devos, 2023).

As an affective-motivational characteristic, self-efficacy is an important professional competence (Blömeke & Kaiser, 2017). Tschannen-Moran and Gareis (2004) define principal self-efficacy as a self-assessment of personal "capabilities to structure a particular course of action in order to produce desired outcomes in the school he or she leads" (p. 573). In order to be effective leaders, school principals need to have affirmative beliefs about their abilities. School leaders'

lack of confidence in their abilities can negatively affect their day-to-day functioning. Low levels of self-efficacy can lead to avoiding challenging goals and giving up quickly when faced with obstacles. Although there is agreement among scientists that the self-efficacy of school principals plays an important role, different interpretations of the structure of this construct are evident. On the one hand, some researchers use a general measure of self-efficacy that comes to the fore in different situations. On the other hand, the second understanding emphasizes that self-efficacy is always conditioned by the task and several dimensions of this phenomenon should be examined.

PRESENT STUDY

The aim of this work was to review and integrate available findings on the self-efficacy of school principals in the domain of instructional leadership. Synthesizing existing knowledge can provide important insights for scientists and practitioners. More specifically, this study sought to answer the following research questions:

1. How the school principal's self-efficacy for instructional leadership has been defined and measured?
2. What antecedents and outcomes of school principals' self-efficacy for instructional leadership were investigated?

METHOD

Literature search

In March 2024, a search of relevant literature was made using the SCOPUS database. We decided on this repository of scientific papers, since it covers the field of educational research well. The literature search was performed using the keywords: "school principal* self-efficacy" OR "principal* sense of efficacy" OR "principal* self-efficacy" OR "self-efficacy of principal*". These terms were searched within the paper titles, abstracts, and keywords. In the first step, 48 papers were identified. Publications that do not represent scientific articles ($n = 4$) and papers not written in English ($n = 7$) were excluded. The titles and abstracts of the remaining 41 papers were carefully reviewed. In this step, we excluded studies of a qualitative nature ($n = 7$) and those studies in which self-efficacy in the domain of instructional leadership was not examined ($n = 10$). Using Google Scholar, we found two more relevant publications that were not

visible in the SCOPUS database. Therefore, 26 papers were included in the analysis.

Coding of studies

The authors of the present study created a coding scheme to analyse the selected works. To answer the first research question, we examined how the school principal's self-efficacy for instructional leadership was measured. In addition, we carefully reviewed the results section of each paper in order to identify the examined correlates (predictors and outcomes) of the self-efficacy of school principals for instructional leadership.

RESULTS

The review of the main findings of the present study is structured in several categories. In the first subsection, we described the most often used scales for assessment of principal self-efficacy for instructional leadership.

Measurement of principals' self-efficacy for instructional leadership

The first studies on the self-efficacy of school principals were published in 1996 (Dimmock & Hattie, 1996; Imants & De Brabander, 1996). However, scholars have increasingly focused their attention on principals' self-efficacy for instructional leadership since the publication of the work of Tschannen-Moran and Gareis (2004). These authors developed a widely used scale consisting of 18 items arranged in three dimensions. According to this conceptualization, the basic dimensions of the construct are efficacy for management, efficacy for moral leadership, and efficacy for instructional leadership. The mentioned three dimensions of the construct were moderately positively correlated.

Federici and Skaalvik (2011) created the Norwegian Principal Self-Efficacy Scale and found that the self-efficacy of school principals can be represented as a construct with eight factors, one of which is self-efficacy for instructional leadership. On the other hand, Skaalvik (2020a) underlined in her work that it is not appropriate to treat self-efficacy for instructional leadership as a global construct. This author argued that it is a multidimensional phenomenon that reflects various dimensions of the school principal role as an instructional leader.

Pointing out the conceptual and empirical limitations of previously used instruments, Petridou et al. (2014) developed a new scale of self-efficacy of school leaders. This scale includes eight dimensions, several of which relate to

instructional leadership activities. The authors suggested that it is an instrument that has the potential to be used in different educational systems. However, it should be noted that this scale contains 32 items, which may provide a challenge when utilizing it in conjunction with other instruments.

Table 1 shows the instruments that were used to assess the self-efficacy of school principals in the field of instructional leadership. As can be seen, the scale created by Tschannen-Moran and Gareis (2004) is the most commonly used. The researchers have used six instruments based on different theoretical models of self-efficacy of school principals.

Table 1. *Instruments for measuring principals' self-efficacy for instructional leadership*

| Reference study	Scale name	Number of items	Number of dimensions	Frequency of use
Tschannen-Moran & Gareis (2004)	Principals' sense of efficacy scale	18	3	14
Federici and Skaalvik (2012)	Norwegian principal self-efficacy scale (NPSES)	24	8	4
Skaalvik (2020a)	The Norwegian self-efficacy for instructional leadership scale	15	5	3
Goddard et al. (2021)	Principal efficacy beliefs for instructional leadership scale	5	1	2
Petridou et al. (2014)	School Leaders' Self-Efficacy Scale (SLSES)	32	8	2
Fisher (2014)	The professional self-efficacy of school principals	57	5	1

Note. The order of the instruments is given in accordance with the frequency of their use.

Self-efficacy for instructional leadership and principal outcomes

As can be seen in Figure 1, various outcomes of principal self-efficacy

have been examined. It should be noted that the principal's motivation to leave the position was most often examined outcome variable.

Figure 1. *Correlates of principal's self-efficacy for instructional leadership*
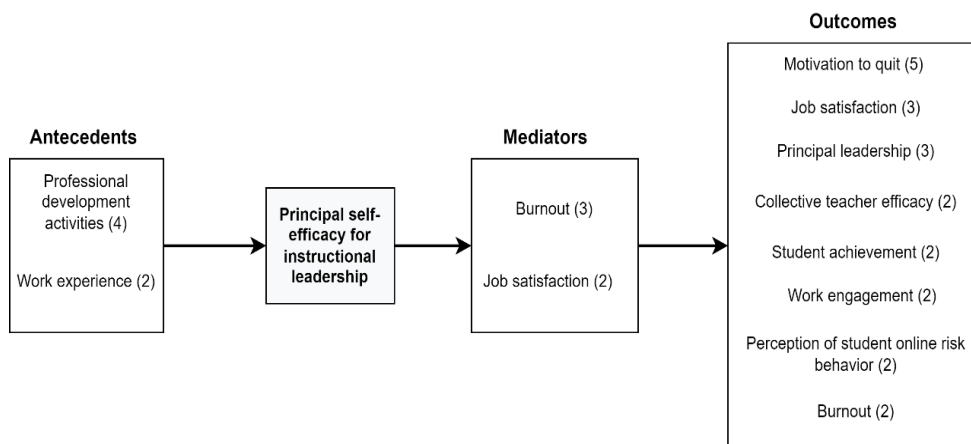
Note. Only variables examined in at least two studies are presented. The number in parentheses indicates the frequency of examination of the construct.

One of the main findings of the study conducted by Federici and Skaalvik (2011) was that principals' self-efficacy in the domains of instructional leadership and administrative management best predict school principals' work engagement. The same authors found in their second study (Federici & Skaalvik, 2012) that the principal's self-efficacy, treated as a hierarchical construct that includes eight lower-order dimensions, through job satisfaction and burnout, has a negative relationship with the motivation to leave the position. On the other hand, the direct effect of self-efficacy beliefs on principal motivation to leave the position was positive. The authors interpreted this finding as the possibility that principals who believe in their abilities perceive a job change as a challenging opportunity. In the American context, Bauer and Silver (2018) demonstrated that the feeling of isolation significantly negatively affects the self-efficacy of school principals. Furthermore, it was found that principal self-efficacy through job satisfaction and professional burnout has a significant connection with the intention to leave the profession. The direct effect of self-efficacy on the outcome variable was approximately the same size as the indirect one. Federici (2013) further confirmed that principal self-efficacy is positively related to perceived job autonomy and job satisfaction.

Skaalvik (2020a) did not find that self-efficacy for instructional leadership was directly related to motivation to leave the position of principal. However, the principal's perceived self-efficacy in this domain, through emotional exhaustion and engagement, had a significant effect on motivation to quit. It should be noted that it was obtained that among five dimensions of self-efficacy for instructional leadership, the strongest relationships with school principals' emotional exhaustion, engagement, and motivation to quit had self-efficacy for motivating teachers.The same author (Skaalvik, 2020b) conducted another similar study in which the outcome variable was the same – motivation for leaving the position of principal. However, this time the mediating role of job resources and demands was examined. Self-efficacy in the domain of instructional leadership was shown to be negatively related to perceived job demands (e.g., demanding parents) and positively to all job resources (e.g., perceived autonomy). Self-efficacy was not directly related to motivation to quit and job satisfaction, but it was indirectly, through job demands and resources. Anselmus Dami et al. (2022) on a sample of school principals in Indonesia demonstrated a positive relationship between principal self-efficacy for instructional leadership, work engagement, and job satisfaction, while the direct relationship between self-efficacy in the domain of instructional leadership and motivation to leave the position was not significant.

Touloupis and Athanasiades (2020) found that principals' self-efficacy positively contributes to principals' confidence in dealing with students' online risky behaviors. The same authors conducted a similar study a little earlier (Touloupis & Athanasiades, 2018) and found that self-efficacy significantly predicts the principal's perception of several aspects of students' risky Internet use. It should be noted that the instrument developed by Tschannen-Moran and Gareis (2004) was used in this study, but it was reduced to two dimensions. Justus et al. (2022) demonstrated that self-efficacy in the domain of instructional leadership has a positive effect on the work performance of principals, while self-efficacy for moral leadership had a significant negative effect. On the other hand, no significant correlation was found between growth mindset and self-efficacy of school principals. In a recent study in the Turkish educational context (Mavi et al., 2024) it was demonstrated that self-efficacy has a direct effect on the innovative behavior of school principals, but also an indirect effect through principal entrepreneurship.

Principals' self-efficacy for instructional leadership and teacher outcomes

Goddard et al. (2021) found that school principals' self-efficacy in the

domain of instructional leadership is positively related to collective teacher efficacy. In this study, multilevel structural equation modeling was used since data was collected from principals, teachers, and students. Yada and Savolainen (2023) also found that principals' self-efficacy has positive effects on teachers' collective efficacy. Moreover, the obtained findings indicated that the school climate at the school level mediates this relationship. Hallinger et al. (2018) reported a positive effect of principal self-efficacy on the expression of instructional leadership and, to a lesser extent, on the collective efficacy of teachers as well. Dahlkamp et al. (2018)did not find that principal self-efficacy significantly predicted teacher retention or teacher perceptions of school climate. On the other hand, it was found that school climate is significantly related to teacher retention.

Principals' self-efficacy for instructional leadership and student achievement

A review of the existing literature indicates that the effects of principal self-efficacy on student achievement have rarely been examined. In the study conducted by Goddard et al. (2021), the indirect effect of school principal self-efficacy for instructional leadership on student achievement via collective teacher efficacy was tested. Nevertheless, this mediated effect was only marginally statistically significant. Leithwood and Jantzi (2008) showed that school principals' self-efficacy has positive effects on leadership practices. On the other hand, self-efficacy in the domain of instructional leadership was not significantly related to student achievement indicators.

Antecedents of principals' self-efficacy for instructional leadership

Several studies have examined factors that can contribute to the development of school principals' self-efficacy. Findings obtained in the American school context (Airola et al., 2014; Miller et al., 2016) suggest that engagement in professional development positively affects principals' efficacy beliefs. A quasi-experimental study by Petridou et al. (2017) showed that participation in a professional development program is positively associated with an increase in the level of several dimensions of school leaders' self-efficacy. Gümüş and Bellibaş (2020) also reported that participation in traditional forms of professional development improves the self-efficacy of school principals. Moreover, self-efficacy played the role of a mediator through which professional development activities contribute to learning-centered leadership.

Existing findings indicate that the level of self-efficacy of school

principals depends on personal characteristics. For example, Papaioannou et al. (2022) found that resilience dimensions positively predict school principals' self-efficacy. Some scholars (Baroudi & Hojeij, 2018) found that the relationship between age and self-efficacy depends on the gender of the school principal. Özer (2013) reported that school principals' self-efficacy depends on seniority, and that the principals with 11–20 years of experience had the lowest self-efficacy. On the other hand, the principal's self-efficacy was not found to be related to the number of students in the school. According to the obtained results, principals who have a higher level of self-efficacy in the domain of moral leadership tend to experience less professional burnout (Özer, 2013). It is interesting that Fisher (2014) found that the highest level of self-efficacy has a group of participants who have just started their career as school principals in Israel.

DISCUSSION

The aim of this paper was to review previous quantitative research on the self-efficacy of principals for instructional leadership. The paper provides an analysis of relevant works identified in the SCOPUS and Google Scholar index databases. The most popular instrument for measuring the self-efficacy of school principals is the one created by Tschannen-Moran and Gareis (2004). This scale, in addition to efficacy for instructional leadership, evaluates two other dimensions of school principal efficacy. Although it was used in different countries, it should be noted that in some studies this scale was shortened or the researchers used a summative score on the scale. Another popular instrument in this area is the Norwegian Self-Efficacy Scale (Federici & Skaalvik, 2011), which differentiates eight interrelated dimensions of school principals' self-efficacy. However, it should be borne in mind that only two items of this instrument measure self-efficacy for instructional leadership. It is worth mentioning that only recently (Skaalvik, 2020a) there was an initiative to treat self-efficacy in the domain of instructional leadership as a construct whose structure consists of several components. This understanding is based on the fact that there are numerous activities of school principals in terms of improving teaching and learning.

Principal's self-efficacy is most often associated with the motivation to leave the position. The obtained findings indicate that the relationship between these constructs can be both direct and indirect. Several studies have confirmed that school principals' self-efficacy (Gümüş & Bellibaş, 2020; Hallinger et al., 2018; Leithwood & Jantzi, 2008) predicts the manifestation of effective leadership practices. It is worth mentioning that only two studies examined the relationship

between the perceived effectiveness of school principals and student academic achievement. Based on the findings of such a small number of studies, it is not possible to draw final conclusions about the nature of the relationships between principal self-efficacy and student outcomes.

It should be noted that researchers paid attention to the effects of socio-demographic characteristics on principals' self-efficacy. The length of work experience was singled out as one of the relevant characteristics (see Özer, 2013). In addition, empirical findings indicate that self-efficacy for instructional leadership can be fostered through the involvement of principals in professional development activities (see Petridou et al, 2017). These findings imply that principals may have varying degrees of confidence in their own competencies in different domains. During the professional development of school principals, it would be useful to determine the areas in which principals doubt their abilities and focus on them.

This study has several limitations that should be noted. First, it is possible that our review did not cover all relevant works. Second, studies that employed broad measures of self-efficacy that were not developed with consideration for the particulars of school functioning were purposefully left out of the study. Content analysis of those research could provide useful insights. Finally, this synthesis does not include qualitative studies of the self-efficacy of school principals.

CONCLUSION AND IMPLICATIONS

The findings of this review study indicate that more frequent research is needed on the effects of school principals' self-efficacy for instructional leadership on student achievement. From the perspective of educational practice, it is important to identify the factors through which the principal's efficacy beliefs influence student outcomes. The choice of tested mediators should be guided by relevant theoretical understandings. From a methodological point of view, there is a need for research on the development and fluctuation of self-efficacy of principals in longer and shorter time intervals. Another methodological recommendation for future research would be the application of approaches that enable the identification of different profiles of school principals with regard to their levels of self-efficacy in different domains.

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SAMOEFIKASNOST DIREKTORA ŠKOLE ZA PEDAGOŠKO LIDERSTVO:
PREGLED KVANTITATIVNIH ISTRAŽIVANJA

Rezime

Složena uloga direktora škole obuhvata rukovođenje školom u celini. Uzimajući u obzir ovu činjenicu, važno je ispitati čionioce koji određuju uspešnost rukovođenja različitim aspektima rada škole. Profesionalne kompetencije određuju način na koji direktor škole tumači svoju ulogu i koliko efikasno je ostvaruje u praksi. Jedna od važnih profesionalnih kompetencija školskih lidera jeste opažena samoefikasnost. Definisanje opažene samoefikasnosti kao višedimenzionalne pojave implicira da direktor škole može u različitom stepenu verovati u svoje sposobnosti, u zavisnosti od situacije sa kojom se suočava.

Zbog usredsređenosti na unapređivanje nastave i učenja, pedagoško liderstvo jedan je od najpopularnijih modela obrazovnog liderstva širom sveta. U fokusu ovog rada je samoefikasnost direktora u domenu pedagoškog liderstva. U radu je izložen pregled 26 kvantitativnih studija u kojima je istraživan ovaj konstukt. Na osnovu rezultata sprovedene analize, može se zaključiti da su relativno retko istraživani prediktori samoefikasnosti rukovodilaca škole u domenu pedagoškog liderstva. Štaviše, najčešće su ispitivani efekti samoefikasnosti na afektivno-motivaciona uverenja direktora škole. S druge strane, postignuće učenika je retko ispitivano kao ishod ovog konstrukta. Dosadašnje studije su pažnju posvetile indirektnim efektima samoefikasnosti direktora škole, ali treba imati u vidu da su pojedine medijatorske varijable istraživane samo jednom. Bilo bi dobro da se buduća istraživanja fokusiraju na povezanost samoefikasnosti direktora sa ispoljavanjem različitih ponašanja karakterističnih za pedagoško liderstvo. Osim toga, potrebno je realizovati više istraživanja u cilju konsolidovanje zaključaka o medijatorima efekata samoefikasnosti rukovodilaca škole na postignuće učenika.

Ključne reči: direktor škole, samoefikasnost, pedagoško liderstvo, uverenja o efikasnosti, kvantitativna istraživanja.

REFERENCES

Airola, D., Bengtson, E., Davis, D., & Peer, D. (2014). Principals' sense of efficacy: The influence of the Arkansas Leadership Academy. *Journal of Educational Administration*, 52(6), 754–774. https://doi.org/10.1108/JEA-08-2013-0089

Anselmus Dami, Z., Budi Wiyono, B., Imron, A., Burhanuddin, B., Supriyanto, A., & Daliman, M. (2022). Principal self-efficacy for instructional leadership in the perspective of principal strengthening training: Work engagement, job satisfaction and motivation to leave. *Cogent Education*, *9* (1), 2064407. https://doi.org/10.1080/2331186X.2022.2064407

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman Lawrence.

Baroudi, S., & Hojeij, Z. (2018). The role of self-efficacy as an attribute of principals' leadership effectiveness in K-12 private and public institutions in Lebanon. *International Journal of Leadership in Education*, *23*, 1–15. https://doi.org/10.1080/13603124.2018.1529822

Bauer, S. C., & Silver, L. (2018). The impact of job isolation on new principals' sense of efficacy, job satisfaction, burnout and persistence. *Journal of Educational Administration*, 56(3), 315–331. https://doi.org/10.1108/JEA-07-2017-0078

Bellemans, L., & Devos, G. (2023). Exploring the sources of self-efficacy by Flemish school principals in primary education. *Educational Management Administration & Leadership*, 51(3), 733–750. https://doi.org/10.1177/17411432211001365

Blömeke, S., & Kaiser, G. (2017). Understanding the Development of Teachers' Professional Competencies as Personally, Situationally and Socially Determined. In D. Clandinin &J. Husu, *The SAGE Handbook of Research on Teacher Education* (pp. 783–802). SAGE Publications Ltd. https://doi.org/10.4135/9781526402042.n45

Dahlkamp, S., Peters, M., & Schumacher, G. (2018). Principal Self-Efficacy, School Climate, and Teacher Retention: A Multi-Level Analysis. *Alberta Journal of Educational Research*, 63(4), 357–376.

Dimmock, C., & Hattie, J. (1996). School Principals' Self-Efficacy and its Measurement in a Context of Restructuring. *School Effectiveness and School Improvement*, 7(1), 62–75. https://doi.org/10.1080/0924345960070103

Federici, R. A. (2013). Principals' self-efficacy: Relations with job autonomy, job satisfaction, and contextual constraints. *European Journal of Psychology of Education*, 28(1), 73–86. https://doi.org/10.1007/s10212-011-0102-5

Federici, R. A., & Skaalvik, E. M. (2011). Principal self-efficacy and work engagement: Assessing a Norwegian Principal Self-Efficacy Scale. *Social Psychology of Education*, 14(4), 575–600. https://doi.org/10.1007/s11218-011-9160-4

Federici, R. A., & Skaalvik, E. M. (2012). Principal self-efficacy: Relations with burnout, job satisfaction and motivation to quit. *Social Psychology of Education*, 15 (3), 295–320. https://doi.org/10.1007/s11218-012-9183-5

Fisher, Y. (2014). The timeline of self-efficacy: Changes during the professional life cycle of school principals. *Journal of Educational Administration*, *52*(1), 58–83. Scopus. https://doi.org/10.1108/JEA-09-2012-0103

Goddard, R. D., Bailes, L. P., & Kim, M. (2021). Principal Efficacy Beliefs for Instructional Leadership and their Relation to Teachers' Sense of Collective Efficacy and Student Achievement. *Leadership and Policy in Schools*, 20(3), 472–493. https://doi.org/10.1080/15700763.2019.1696369

Gümüş, S., & Bellibaş, M. (2020). The relationship between professional development and school principals' leadership practices: The mediating role of self-efficacy. *International Journal of Educational Management*, 34(7), 1155–1170. https://doi.org/10.1108/IJEM- 10-2019-0380

Hallinger, P., Hosseingholizadeh, R., Hashemi, N., & Kouhsari, M. (2018). Do beliefs make a difference? Exploring how principal self-efficacy and instructional leadership impact teacher efficacy and commitment in Iran. *Educational Management Administration & Leadership*, 46(5), 800–819. https://doi.org/10.1177/1741143217700283

Imants, J. G. M., & De Brabander, C. J. (1996). Teachers' and principals' sense of efficacy in elementary schools. *Teaching and Teacher Education*, 12(2), 179–195. https://doi.org/10.1016/0742-051X(95)00053-M

Justus, K., Arghode, V., & Barker, D. (2022). Principal self-efficacy, mindset and performance outcomes: Exploring the connection. *European Journal of Training and Development*, 47(5/6), 565–585. https://doi.org/10.1108/EJTD-07-2021-0092

Leithwood, K., & Jantzi, D. (2008). Linking Leadership to Student Learning: The Contributions of Leader Efficacy. *Educational Administration Quarterly*, *44* (4), 496–528. https://doi.org/10.1177/0013161X08321501

Mavi, D., Tuti, G., & Özdemir, M. (2024). The effect of principal self-efficacy on innovative work behavior: The mediating role of principal entrepreneurship. *Current Psychology*, 43(6), 5020–5031. https://doi.org/10.1007/s12144-023-04663-5

Miller, R. J., Goddard, R. D., Kim, M., Jacob, R., Goddard, Y., & Schroeder, P. (2016). Can Professional Development Improve School Leadership? Results From a Randomized Control Trial Assessing the Impact of McREL's Balanced Leadership Program on Principals in Rural Michigan

Schools. *Educational Administration Quarterly*, 52(4), 531–566. https://doi.org/10.1177/0013161X16651926

Özer, N. (2013). Investigation of the Primary School Principals' Sense of Self-Efficacy and Professional Burnout. *Middle East Journal of Scientific Research*, *15*, 682–691. https://doi.org/10.5829/idosi.mejsr.2013.15.5.11108

Papaioannou, A., Papavassiliou-Alexiou, I., & Moutiaga, S. (2022). Career resilience and self-efficacy of Greek primary school leaders in times of socioeconomic crisis. *International Journal of Educational Management*, 36(2), 164–178. https://doi.org/10.1108/IJEM-01-2021-0024

Petridou, A., Nicolaidou, M., & Karagiorgi, Y. (2017). Exploring the impact of professional development and professional practice on school leaders' self-efficacy: A quasi- experimental study. *School Effectiveness and School Improvement*, 28(1), 56–73. https://doi.org/10.1080/09243453.2016.1236734

Petridou, A., Nicolaidou, M., & S. Williams, J. (2014). Development and validation of the School Leaders' Self-Efficacy Scale. *Journal of Educational Administration, 52(2)*, 228–253. https://doi.org/10.1108/JEA-04-2012-0037

Skaalvik, C. (2020a). School principal self-efficacy for instructional leadership: Relations with engagement, emotional exhaustion and motivation to quit. *Social Psychology of Education*, 23, 479–498. https://doi.org/10.1007/s11218-020-09544-4

Skaalvik, C. (2020b). Self-efficacy for instructional leadership: Relations with perceived job demands and job resources, emotional exhaustion, job satisfaction, and motivation to quit. *Social Psychology of Education*, 23(5), 1343–1366. https://doi.org/10.1007/s11218-020- 09585-9

Touloupis, T., & Athanasiades, C. (2018). Principals' attitudes towards risky internet use of primary school students: The role of occupational factors. *Education and Information Technologies*, 23(1), 497–516. https://doi.org/10.1007/s10639-017-9614-1

Touloupis, T., & Athanasiades, C. (2020). A comparison between primary school principals' and teachers' perceptions of students' online risk behaviours: The role of perceived self- efficacy. *Cambridge Journal of Education*, 50, 1–18. https://doi.org/10.1080/0305764X.2020.1740170

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

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, *17* (7), 783–805. https://doi.org/10.1016/S0742-051X(01)00036-1

Yada, T., & Savolainen, H. (2023). Principal self-efficacy and school climate as antecedents of collective teacher efficacy. *School Effectiveness and School Improvement*, 34(2), 209–225. https://doi.org/10.1080/09243453.2023.2170425

Zimmerman, B. J. (2000). Self-Efficacy: An Essential Motive to Learn. *Contemporary Educational Psychology*, 25(1), 82–91. https://doi.org/10.1006/ceps.1999.1016