

The Effect of Transformational Leadership Behaviours among Public School Managers on Teachers' self-efficacy in Egypt

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Abstract

Purpose - The aim of this study was to examine the effects of transformational leadership behaviours of primary school managers on teacher self-efficacy in the context of public schools in Egypt. **Design/methodology/approach** – This study was descriptive and was conducted using "cross-sectional survey" design. Correlation and regression were used in the analysis of the data. **Findings** – the results showed that the school managers' transformational leadership behaviours had a positive relationship with teachers' self-efficacy. The results of the significance of regression coefficients indicates that the dimensions of transformational leadership, namely encourage the heart, inspire a shared vision, enable others to act, and challenge the process significantly affect teachers' self-efficacy. Model the way influenced teacher self-efficacy but not to a significant level. **Research limitations/implications** – the findings of this study have significant implications for professional development programs in Egypt. The results suggest the need for preparing school managers on how to motivate their teachers to fulfill the school vision by setting the example, motivating, and inspiring them to perform better. **Originality/value** – The contribution of this study resides in two areas. Firstly, given the scarcity of research on the leadership styles, this study seeks to develop the knowledge base on transformational form of leadership within Egyptian context. Secondly, it is hoped this study will contribute to diversify the global knowledge in educational management.

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Introduction

Teachers are crucial in ensuring the success of education. The quality of the teachers determines the school outcomes. Teachers play a significant role in the life of their students. They are responsible for preparing their students for the future. Therefore, it is important to improve teacher's self-efficacy, namely teacher's belief in their abilities, to develop the quality of student learning.

Teacher's self-efficacy is a significant antecedent for student achievement. Self-efficacy refers to teacher's belief in their capabilities regarding how well they can perform behaviours needed to handle situations (Kurt, Duyar and Calik, 2012). It was found that teacher's self-efficacy is a major determinant of the level of persistence and effectiveness that teachers devote in the performance of their academic duties. Thus, it powerfully predicts students' higher achievement, motivation, and success (Kurt, Duyar and Calik, 2012).

The improvement of teacher's self-efficacy depends largely on the leadership style of the school managers. Transformational style of leadership has emerged as a key mechanism to overcome weaknesses associated with traditional styles of leadership to introduce effective changes in the institutions' vision, strategy, and culture (Daft, 2008). Since 1990s, scholars have recognized transformational leadership as one of the major styles of the school managers (e.g., Leithwood and Poplin, 1992; Leithwood and Jantiz, 1999; Leithwood and Jantiz, 2000; Yaakub and Ayob, 1993). Transformational leadership is a leadership style that transforms the

values of the followers whereby the leader simulates the employees to perform beyond expectations (Yulk, 1989). Transformational leadership inspires employees to go beyond their self-interest goals to the benefit of their institution (Marks and Printy, 2003) by "reaching the souls of others in a fashion which raises human consciousness, builds meanings, and inspires human intent that is the source of power "Benssi cited in Dillard, 1995, p.560). This form of leadership increases the level of the employees' motivation and thus achieves a higher level of achievement (Nguni et al., 2006).

Transformational leaders are mainly illuminated in dimensions such as model the way, inspire a shared vision, challenging the process, enabling others to act, and encourage the heart. Model the way is about being a role model and setting an example; inspiring a shared vision refers to envisioning the future and motivating others towards a common goal; challenging the process relates to searching for opportunities and taking risks; enabling others to act is about reinforcing teacher's capacity to exceed their expectations; encouraging the heart is about recognizing teachers' contributions and achievements (Kouzes & Posner, 2002). In the educational context, through these dimensions, transformational leadership behaviours of the school managers can organize the complex structure in their schools, enabling the adjustments to changing conditions, sharing common goals and enhancing the school capacity. Accordingly, transformational school managers can motivate teachers to accomplish the school objectives, and instilling enthusiasm in them to believe that they can reinforce student success (Cansoy, 2020).

Parallel with the growing demand for increased school reform, several studies examined the variables included in the current study namely, transformational leadership and teachers' self-efficacy. First, several studies examined transformational leadership. For example, Alshenawy (2014) aimed to examine the school managers' transformational leadership behaviours in accredited schools in Gharbia Governorate. The study employed the descriptive method.

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The sample of the study included 183 teachers and a population of 60 school managers. The results revealed a high level of transformational leadership among school managers. Alham (2014) aimed to examine the transformational leadership behaviours among primary school managers. The results revealed a high level of transformational leadership among school managers based on managers' views and a medium level based on teachers' views. The results also revealed that primary school managers face multiple difficulties in implementing transformational leadership. Emira (2015) examined the relationship between transformational leadership and creative administration. The participants of the study included 452 teachers located in the governate of Al Gharbiya. The results revealed a high level of transformational leadership among school managers. The results also revealed that transformational leadership had a positive correlation with administrative empowerment.

Mohamdeen (2020) investigated the relationship between the school managers' transformational leadership behaviours and teacher empowerment based on teachers' views. The sample of the study included 391 teachers located in the governorate of Aswan. The results revealed a medium level of transformational leadership among school managers. The results also revealed that transformational leadership had a positive correlation with teachers' empowerment.

Second, some studies investigated the variable of teacher's self-efficacy. For example, Al-Khalaileh (2011) aimed to examine the level of teachers' self-efficacy Zarqa governorate schools in Jordan in light of some variables. The study employed the descriptive method. The study used teacher's sense of self-efficacy created by Tschannen-Moran and and Woolfold Hoy (2001). The sample included 401 teachers. The results of the study showed that the level of teacher self-efficacy was high. For the dimensions of self-efficacy, classroom management had the highest score, while student

engagement had the lowest score. Page, Pendergraft and Wilson (2014) investigated if teachers at rural, urban, and suburban primary schools differ in their sense of self-efficacy. The study employed teacher's sense of self-efficacy created by Tschannen-Moran and Woolfold Hoy (2001). The participants included in this study were in the southeastern of United States. The results of the study revealed that teachers' self-efficacy at urban elementary school have significantly lower score of TSES than teachers at suburban and rural schools. Turkoglu, Cansoy, and Palar (2017) examined the relationship between teachers' self-efficacy and their job satisfaction. The participants included 489 teachers (295 females and 194 males) in the district of Beyaglu, Istanbul. Dimensions of the teacher self-efficacy include student engagement, classroom management, and instructional strategies. While the teacher's beliefs about instructional strategies were found to be the highest among self-efficacy beliefs, teacher's self-efficacy for student engagement had the lowest level. Hakami (2019) examined the degree of self-efficacy among 118 female teachers located in the city of Riyadh. The data gathered through self-efficacy scale. The results showed a high level of teacher's self-efficacy.

Finally, several studies examined the relationship between school principals' transformational leadership behaviours and teachers' self-efficacy. For instance, Graham (2007) explored the relationship between school principals' transformational leadership behaviours and teachers' efficacy. The sample of the study included 328 teachers located in the state of Texas, USA. The study employed Kouzes and Posner scale. The results of the study showed a weak positive correlation between transformational leadership was and teachers' efficacy. While challenge the process had the highest degree of correlation with the teachers' efficacy, inspired a shared vision had the lowest degree of correlation with the teachers' efficacy. Kurt et al (2012) examined the relationship between the transformational leadership behaviours of school managers and teachers' self-efficacy and collective efficacy. The participants

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included a cluster sample of 813 primary school teachers located in Turkey. The study employed Kouzes and Posner scale and teacher's self-efficacy scale. The findings showed a significant relationship between transformational leadership and teacher's self-efficacy beliefs. Sharma and Singh (2017) examined the relationship between transformational leadership style of 120 school managers having a minimum of 7-8 years and the self-efficacy of 100 teachers having a minimum experience of senior teachers in India. They found that the dimensions of transformational leadership were positively correlated with teachers' self-efficacy. Gkolia et al., (2018) also explored the association between transformational leadership behaviours of school managers and the level of 640 teachers' beliefs of their abilities. He revealed that transformational leadership practices influenced teachers' sense of self-efficacy (efficacy in student engagement and instructional strategies). In addition, Francisco (2019) investigated the effect of school principals' transformational leadership style on 260 teachers' self - efficacy in Plaridel district, Bulacan. The results of the regression analysis found that the all the dimensions of transformational leadership affect teachers' self-efficacy. The results also found that teachers had high level of self efficacy in classroom management followed by instructional strategies and students engagement. Cansoy (2020) investigated the relationship between transformational school leadership and teachers' efficacy. The sample of the study included 293 teachers in the Uskudar district of Istanbul. The correlation and regression were used in the analysis of the data. The results found transformational leadership had a positive moderate significant relationship with teachers' efficacy. In addition, School managers' transformational leadership were significant predictor of teachers' efficacy. More recently, Choi and Kang (2021) analyzed the effect of transformational leadership on the self-efficacy of teachers. The participants of the study included 193 korean teachers. The correlation analysis showed a significant positive relationship between transformational leadership and

teachers' self-efficacy. Additionally, they found that transformational leadership explained 43% of the total variance in teachers' self-efficacy. In the Arabic context, Abu-Tineh & Al-Khalaileh (2011) examined whether transformational leadership behaviours of school managers (i.e., challenging the process, inspired a shared vision, modelling the way, enabling others to act, and encouraging the heart) influence Jordanian teachers' self-efficacy. The study revealed the presence of a significant positive relationship between the components of transformational leadership and teachers' self-efficacy. The study also reported that challenging the process was the most closely related leadership practice to influence teachers' beliefs of their capabilities. In the local context, there is also evidence that transformational leadership behaviours positively affect teachers' self-efficacy. For example, Gabriel and Alalem (2020) examined the relationship between transformational and transactional leadership and the self-efficacy among 160 basic education teachers (55 males and 105 females) in the city of Mahalla, Gharbia governorate. They found a significant positive correlation between transformational leadership and teachers' self-efficacy. They also found that transformational leadership significantly affects teachers' self-efficacy in comparison to transactional leadership.

Over the past years, the Egyptian Ministry of Education have initiated organized efforts to develop the quality of school systems and improve the leadership practices of school managers through professional development programs that inspire the school managers to foster their teachers' efficacy to impact the quality of the school outcomes. In addition, the Ministry of Education enhances teachers' self-efficacy through modifying the role of school managers which has been recognized as one of the major programs to improve the school system to accomplish Egypt's strategic vision for education to 2030.

Problem statement

Despite the efforts of the Egyptian Ministry of Education to improve the role of school management and teachers' self-efficacy, there are many obstacles that may impede these efforts as follows:

- Lack of presurance and leadership among school managers and their resistance to the idea of changing their leadership behaviours (Aidaros, 2016).

- lack of training programs directed to school managers on the modern styles of leadership (Alham, 2014; Hussain, 2020).

-The weak role of the school managers in motivating teachers and enabling them to work (Ibrahim, 2015).

Moreover, the schools still suffer from various management challenges including the quantitative expansion in education rather than focusing on the quality of education and this was reflected in the high density of classes, the multiplicity of study periods, poor teaching quality, lack of adequate facilities, inadequate curricula, poorly trained teacher and educational management, lack of finance, poor education services, absence of supervision over curricula, density rate in classes, deficiency of evaluation. In addition to conflicting responsibilities and competencies between different leadership levels which lead to weak performance among school managers (Ministry of Education, 2014; Ministry of Planning, Monitoring and Administrative reform, 2016).

In an exploratory study conducted by the professional academy for teachers revealed that there is a need to improve the professional development programs, in addition to the lack of follow-up evaluation of the professional growth of the education community (Ministry of Education, 2017).

Furthermore, given the fact that Egypt vision 2030 seeks to boost the quality of school system to conform international systems, and enhance its outcomes, transforming the behaviours of school management is essential to empower teacher's self-efficacy to positively affect the quality of our system. Moreover, given the

importance of developing self-efficacy in our teachers and that there are many challenges correlated with the traditional style of leadership, the problem of the current study seeks to investigate the transformational leadership behaviours among school managers and its affect on teachers' self-efficacy.

Questions of the study

The current study seeks to answer the following main question:

How can transformational leadership practices be activated for public school managers and increase teachers' self-efficacy?

The following sub-questions are derived from the previous main question:

- 1) What are the theoretical bases of the relationship between transformational leadership behaviours and school teachers' self-efficacy?
- 2) What is the nature of the relationship between transformational leadership behaviours and teachers' self-efficacy in public schools in Egypt?
- 3) What is the field situation of transformational leadership behaviours and teachers' self-efficacy in public schools in Egypt from the point of view of the sample members?
- 4) What are the proposed mechanisms to activate the transformational leadership behaviours of primary public school managers in Egypt and their effect on teachers' self-efficacy?

Objectives of the study

This study sought to identify the theoretical bases of the relationship between transformational leadership behaviours and school teachers' self-efficacy, the nature of the relationship between transformational leadership behaviours and teachers' self-efficacy in public schools in Egypt, and identify the field situation of transformational leadership behaviours and teachers' self-efficacy in

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public schools in Egypt from the point of view of the sample members. Finally, the study sought to propose mechanisms to activate the transformational leadership behaviours of public-school managers in Egypt and their effect on teachers' self-efficacy.

Significance of the study

The significance of this study stems from the following considerations:

-This study may be of importance to leadership programs developers and designers who are interested in enhancing teachers' self-efficacy through modifying the role of school management.

-This study provided some implications for school improvement since teachers' self-efficacy is an essential variable that could be enhanced to improve teaching effectiveness, and school reform.

-This study may develop the knowledge base on transformational form of leadership within Egyptian context.

Limitations of the study

This study was delimited to the following limitations:

-Subject limitations: this study was limited to discuss the transformational leadership behaviours of public school managers in terms of (a) challenging the process, (b) modelling the way, (c) Inspiring a shared vision, (d) enabling other to act (e) and encouraging the heart and teacher's self-efficacy in terms of (a) classroom management, (b) student engagement, and (c) instructional strategies.

-Human limitations: this study was confined to primary school teachers.

-Time limitations: this study was applied during the first semester of the academic year 2020-2021.

-Place limitations: this study was confined to the city of Quesna within Menofia governorate, Egypt.

Method

The study used the descriptive method due to its suitability to the nature and objective of the study. Based on the methodology, the study proceeds according to the following steps:

- Highlighting the theoretical bases of the relationship between transformational leadership behaviours and school teachers' self-efficacy.
- Studying the relationship between transformational leadership behaviours and teachers' self-efficacy in public schools in Egypt theoretically and empirically.
- Proposing mechanisms to activate the transformational leadership behaviours of public school managers in Egypt and their effect on teachers' self-efficacy.

Instrument

A cross- sectional survey was used to identify Transformational leadership behaviours and school teachers' self-efficacy in the context of public schools in Egypt from the point of view of the primary school teachers in the city of Quesna in Menofia governorate, Egypt.

The paper will include the following parts:

- Transformational leadership behaviours and teachers' self-efficacy- Theoretical Framework
- A theoretical study of transformational leadership behaviours and teachers' self-efficacy in public schools in Egypt.
- Transformational leadership behaviours and teachers' self-efficacy-empirical study.
- Proposing mechanisms to promote the transformational leadership behaviours of public-school managers in Egypt and their effect on teachers' self-efficacy

Part one: Transformational leadership behaviours and school teachers' self-efficacy- Theoretical Framework

This section sheds light on the major variables of this study which are transformational leadership, teachers' self-efficacy, and the relationship between the two variables.

1. Transformational leadership

The development of transformational leadership theory can be traced back to the 1970s. Burns (1978) defines transformational leadership as a leadership model that focuses on "mobilizing people for participation in the process of change, encouraging a sense of collective identity and collective efficacy which in turn bring strong feeling of self-worth and self-efficacy" (pp.25-26). Transformational leadership focuses upon building up individual and collective problem-solving capabilities (Leithwood & Jantzi, 2000). Transformational leaders inspire employees to accomplish a shared vision, challenging them via "coaching, mentoring, and provision for both challenge and support" (Riggio, Bass, p. 5).

Transformational leader not only inspire followers to seek high-level goals, but also facilitate them to accomplish them (Bass, 1985). Research evidenced that transformational leadership is one of the most powerful form of leadership globally in all cultures and organizations (Bass, 1997), because transformational leaders have a vision that go beyond their own interests toward the benefit of their employees, groups, and organization (Burns, 1978). Transformational leadership facilitate changes in the employees' value systems, supporting them to cap the performance beyond expectation (Jung & Avolio, 2000). Transformational leadership have also proved to promote communal learning (Koffman & Senge, 1993; Mohrman & Mohrman, 1995), and team creativity (Jung, 2001; Eisenbeiss et al., 2008). As transformational leader, school managers simulate teachers to transcend expected outcomes, and lead them to motivation, commitment, and satisfaction.

Findings from prior empirical studies found that transformational leadership is correlated with a wide range of

teacher outcomes. More specifically, transformational leadership was significantly correlated with teacher satisfaction, commitment, organizational citizenship behavior, work engagement, and efficacy (Dumay & Galand, 2012; Liu, Li & Wang, 2019; Windlinger, Warwas & Hostettler, 2020).

This study adopted Kouzes and Posner's (2003, 2007) model for understanding the transformational leadership role. They proposed that leadership is not a profession, but a group of procedures and activities. These procedures were developed through extensive research on 17,000 leaders and have been recognized as essential component of effective leadership behaviours (Kouzes & Posner, 1995). This model proposes five dimensions. These dimensions evidenced correlation with essential components of transformational leadership paradigm (Abu-Tineh et al, 2008; Taylor, 2002). These dimensions include Challenging the process, inspired a shared vision, modelling the way, enabling others to act, and encouraging the heart. Transformational leaders envision the future and inspire followers to make their vision through positive language and personal energy (Kouzes & Posner, 2002). Challenging the process is seeking "challenging opportunities" to introduce changes. Enabling others to act is supporting empowerment to develop employees' competencies and enable them to accomplish their work and " realize their full potential" (Abu-Tineh et al, 2008). Modelling the way means the leaders sets the example by sharing the standards and exemplify them (Kouzes & Posner, 1995, 2002). Encouraging the heart means influence employees' motivation by recognizing their contributions, celebrating their achievements, and inspiring them to work properly (Kouzes & Posner, 2002).

2. Teacher self-efficacy

The theoretical framework for this study is based on Bandura's conceptualization of self-efficacy as defined in his article "Self-efficacy: Toward a Unifying Theory of Behavioural Change". The basic hypothesis of self-efficacy theory is that " people's beliefs in their capabilities to produce desired effects affect by their own actions" (Bandura, 1977, p, vii). Self-efficacy beliefs refer to

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individual's assessment of his abilities to "organize and perform a specific behaviour " (Staple, Hulland & Higgins, 1999). Self-efficacy is not an individual's "characteristic affective evaluation of self" (Tschannen- Moran et al, 1998). It is "a judgement about task capability that is not inherently evaluative" (Gist & Mitchell, 1992, p.185).

Self-efficacy beliefs depend on "behavioural, cognitive, and other environmental personal factors" (Bandura, 1986, p.23). It is a type of "personal expectancy which influence choice of practices, and effort. People asses their own abilities based on their belief of their self-efficacy. It is this concept that affects one's motivation and behaviour (Bandura, 1986). Self-efficacy is essential to the "initiation and persistence of behavioural performance in all aspects of human development" (Lent & Hackett, 1987, p.349). Self-efficacy affects a wide range of occupational behaviours such as persistence, achievement, decision-making, and problem solving (Bandura, 1997; Hackett & Lent, 1992).

Self-efficacy is a "product of complex process of self-persuasion that relies on cognitive processing of efficacy coveys inactively, socially and psychologically (Bandura, 1993, p. 145). Bandura (1986) posited four sources of self-efficacy: successful experiences, and psychological and emotional states verbal persuasion, and vicarious experience. Successful experiences are the most powerful source of self- efficacy beliefs. Successful experiences refer to one's perception that his/her work has been successful which contribute that future performance will be successful too. It is this perception that enhance self-efficacy beliefs. Positive psychological and affective states can enhance self-efficacy beliefs too. Verbal persuasion refers to the ability of the person to influence others. Vicarious experiences are those related to one's identification with a successful model. The evolution of occupational self-efficacy may change overtime through the course of career as it is influenced by environmental circumstances. The combination of mastery experiences, identification with successful

models, having positive attitude toward oneself and verbal support from leaders, supervisors, peers, students, and build self-efficacy for teachers.

Self-efficacy is an essential variable that could be enhanced to improve teaching effectiveness, and school improvement (Leithwood et al., 2010). Efficient teachers often gain higher levels of persistence, satisfaction, and enthusiasm (Caprara et al, 2003). Teachers with high self-efficacy can make a difference on student learning.

Tschannen- Moran and Woolfold Hoy (2001) characterized teachers' self-efficacy as the assessment of their capabilities to bring positive outcomes in students' learning. Teachers do not only need a combination of cognitive skills, but the self-belief of being able to perform the job leads to acquisition of further skills (Bandura, 1986). Berman et al. (1977) found that the most powerful characteristic affecting change implementation was teachers' self-efficacy.

Teacher's self-efficacy has evidenced to be strongly correlated to many positive outcomes such as teachers' interest (Caprara et al, 2003), commitment, and persistence (Tschannen- Moran and Hoy, 2001). Research has also provided evidence that teacher sense of self-efficacy has proven to be powerfully related to student achievement and success (Guskey, 1988; Ross, 1992; Skaalvik and Skaalvik, 2007). Additionally, results reported in subsequent studies revealed that teacher self-efficacy is positively related with professional learning (Coladarci, 1992), instructional experimentation, innovation (Allinder, 1994), classroom management skills (Gordon, 2001; Gibson & Dembo, 1984), and overall school effectiveness and performance (Bray-Clark & Bates, 2003). While teachers who have strong self-efficacy beliefs approach new strong teaching methods, and support their students (Al-Yousuf, 2013; Gibson and Dembo, 1984; Midgley et al, 1989), those with low self-efficacy undergo several challenges related to the teaching process (Battersby & Cave, 2014).

3. The relationship between transformational leadership and self-efficacy

Principal leadership practices had documented effect on school effectiveness. Researchers argue that transformational leadership can influence teaching quality through enhancing teacher self-efficacy level. According to Bandura (1993), effective leadership can improve school effectiveness by supporting teacher self-efficacy. School managers can affect educational outcomes through the leader's influence on teachers.

The transformational leadership model employed in this study presents insights on the factors through which school managers are most likely to affect efficacy beliefs of their teachers. Social cognitive theory argues that the most important contribution is through the effect of the managers on teacher perceptions of their efficacy (Ross and Gray, 2006).

Specifically, the components of transformational leadership can develop teachers' self-efficacy. First, transformational managers play a central role in celebrating teachers' achievements and recognizing their contributions. Through recognition and celebration, teachers experience success and develop a positive and emotional attitude toward themselves, which in turn affect teacher's sense of self-efficacy. Second, transformational leaders model the way (Kouzes & Posner, 1995, 2002). By setting the example of excellence, school managers can encourage followers to observe and model the other's success in educational practices (Schunk, 2003) which will strengthen teachers' beliefs of their capabilities to control the classrooms and affect students' dispositions towards learning (Bandura, 1986; Ross and Gray, 2006). Third, transformational managers motivate teachers to act, and enable them to feel powerful and efficient. Fourth, transformational school managers support teachers to critique existing conditions, so they can make a new perspective (Bass & Avolio, 1994). This is likely to motivate teachers to seek challenging situations and innovate new ways to improve their schools. Then, teachers feel that they are

capable to "bring desired results related to students' achievement even with those who are difficult to manage" (Tschannen-Moran & Hoy, 2001). Finally, by inspiring a shared vision and motivating the teachers that they can make a difference (Kouzes & Posner, 1995, 2002), school leaders can enhance teachers' sense of self-efficacy, and support their capabilities to produce desired results (Bandura, 1986). Thus, the author can argue that transformational leadership is positively associated with teachers' self- efficacy.

Part two: The relationship between transformational leadership behaviours and teachers' self-efficacy in public schools in Egypt

The Egyptian Educational system is one of the largest systems in the Arab world. There are two basic structures of education in Egypt: secular and religious streams. While the Ministry of Education is responsible for the secular stream, Al-Azhar Sheik is responsible for the religious stream (Emira, 2010).

Since the 19th century, primary education has a centralized structure as it was affiliated to the Divan El-Jihada. In 1836, Mohammed Ali formed the first central ministry of education known as Council for School Organization which maintained a centralized control of the educational system (De Nooijer and Edelenbosch, 2004) . Nonetheless, since 2002, there were many attempts taken by the Ministry of Education towards decentralization. For example, educational directorates at the governorates were created. This was accompanied by delegating limited authority to the governor of Alexandria. Then the delegation expanded to include 7 governorates. Then, the interest in decentralization was then expanded to include the rest of governorates when the ministry of education presented a project to activate decentralization in light of the Law of education No. 139 of 1981 and local administration Law No. 43 of 1979. In 2006, the Ministry adopted a new policy framework for comprehensive application of the concept of efficiency of management. This was accompanied by building capacity at administrative level (Ministry of Education, 2014). However, major decisions, important policies remain highly

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centralized. School managers still have marginal control over several issues including allocation decision over budgets and hiring personnel.

In recent years, the strategic plan for pre-university education (2014-2030) have strengthened the capacity to implement decentralization through expanding the primary school authority as independent units responsible for managing its operations through the implementation of good governance system. Moreover, the strategic plan for primary education (2014-2030) aims at providing quality education, eliminating gaps between schools in performance and achievement, and raising the efficiency of primary school management system. Meeting these goals require improving the practices of school management in order to enhance teachers' efficacy (Ministry of Education, 2014).

Furthermore, the National Education Standards in Egypt, represented in the Distinguished Management Standards, are linked to the development of transformative practices for school managers, including managers' encouragement of creativity and experimentation at school, trust in the ability and ideas of teachers, building teachers' capacity and commitment to change, encouraging teachers' participation in articulating the school's vision and integrating them to achieve it (Ministry of Education, 2003).

It is clear by reviewing the distinguished management standards that they are closely related to the dimensions of transformational leadership described in the theoretical framework of the study.

More recently, Egypt's Strategic Vision for Education to 2030 represents a significant step in Egypt's reform efforts in Education. Egypt vision 2030 aims at availing high quality education and training to all without discrimination, improving the educational system quality, and enhancing competitiveness of the educational system and its outputs. The government has mandated the ministry of education and the schools to develop new financing systems, apply a comprehensive curriculum reform and update quality standards to accomplish Egypt's vision 2030. Improving the

practices of the school leaders in managing the school has become one of the strategic goals of school management. For example, school-centred reform program included in the strategic plan for pre-university education (2014-2030) aims to improve the performance of school managers within the framework of balanced centralized/decentralized system and enhance professional development programs that enhance the capacity of school managers to develop positive school learning environment through supporting the efficacy of their teachers (Ministry of Education, 2014). School managers' participation in training programs that focus on sustainable professional learning have potential to support the self efficacy of their teachers. Transformational leadership is a fundamental step for efficient progress of Egyptian school reform. It can achieve success and improve school effectiveness through enhancing teachers' self-efficacy.

Empirically, transformational leadership has attracted the attention of many scholars in Egypt (e.g., Alham, 2014; Alshenawy, 2014; Emira, 2014; Mohamdeen, 2020). Nonetheless, it was found that the implementation of transformational leadership conflicted with the bureaucratic and the tradition of centralization (Ibrahim, 2015). School managers are confronted with barriers that hinder the practice of transformational leadership including conflicting responsibilities between the school manager and the vice school manager, stagnation of regulations and laws regulating work, pressures placed on school managers from senior management, lack of positive school climate that support managers to inspire teacher's creativity, and lack of training programs directed to managers on the recent leadership styles (Alham, 2014). In addition, teachers do not perceive their managers to have all the skills needed to ensure transformational leadership achieve its objectives (Alshreef , 2017; Mohamdeen, 2020) which negatively affect the self-efficacy of the teachers to make a difference in the leaning of their students.

Although few studies examined the relationship between transformational leadership and teachers' self-efficacy in Egypt, the available research has provided evidence of the positive relationship

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between transformational leadership and teacher's self-efficacy. For example, Gabriel and Alalem (2020) found a positive correlation between transformational leadership and teachers' self-efficacy. They also found that transformational leadership significantly predicts teachers' self-efficacy in comparison to transactional leadership. They state that transformational school managers can strengthen the teachers' self-efficacy by articulating an inspiring vision and enhancing teacher's confidence which in turn affect teachers' self-efficacy.

Part three: Transformational leadership behaviours and teacher self-efficacy in public schools in Egypt: empirical study

First: Empirical study procedures

1. Sample data collection

This research was conducted in the city of Quesna in Egypt. Quesna is one of the main cities of Menoufia governorate. It is also of the one of the major administrative divisions of the governorate. Data collection was conducted between 4 November 2020 and 15 January 2021. The population of the study consisted of 738 primary school teachers. The response rate for the questionnaire was 62.3 % (n= 460 teachers). The participants consisted of 158 males and 302 females. About 14.6% of the participants had 1-4 years of teaching experience, 52.7% 5-10 years of experience, and 32.7% more than 11 years of teaching experience.

2. Instrument

The author used Brislin's (1970) "back translation method" to validate the translated measures. The scales were translated into Arabic language. Seven experienced educators were contacted to discuss the Arabic version of the scales. Then, the Arabic version of the scales were translated back into English. Then, a bilingual scholar compared the back translation and the original document to ensure consistency and clarity. Fifty-four items distributed over two scales.

Kouzes and Posner's (2002, 2003, 2007) leadership practices Inventory was used for collecting data on principal transformational

leadership. The leadership practices Inventory is 30-item survey measuring five sub-scales: challenging the process (6 items), model the way (6 items), Inspired a shared vision (6 items), enable other to act (6 items), and encourage the heart (6 items). Table 1 shows the dimensions of the scale and the items belonging to each dimension in it. The scale employed a five-point likert scale. (The LPI showed strong reliability and validity in Arabic contexts (e.g Abu -Tineh et al., 2008; Abu-Tineh & Al-Khalaileh, 2011; Litz & Scott, 2017). Nonetheless, the author validated the use of the scale in the Egyptian context. The transformational leadership instrument was presented to 11 arbitrators to verify its validity (e.g., clarity of the statements) and to ensure that the questionnaire measures what was designed to measure. In addition, the alpha coefficient for the scale was calculated and resulted in 0.91 for encourage the heart, 0.82 for enable others to act, 0.87 for challenging the process, 0.91 for inspired a shared vision, 0.82 for model the way, and 0.91 for the whole scale. Thus, the current study confirmed the reliability of the scale for measuring transformational leadership.

Table 1

Dimensions of the manager's transformational leadership practices scale

Dimension	No. Of Items Total	No. Of Items
encourage the heart	6	30, 25, 20, 15, 10, 5
Enable other to act	6	28, 24, 19, 14, 9, 4
Challenge the process	6	28, 23, 18, 13, 8, 3
Model the way	6	26, 21, 16, 11, 6, 1
Inspired a shared vision	6	27, 22, 17, 12, 7, 2

Tschannen-Moran and Hoy's scale was used to measure teacher self-efficacy (2001). Teacher self-efficacy scale (TSES) is "superior to previous measures of teacher efficacy in that it has a unified and stable teacher factor structure a assess a broad range of capabilities that teachers consider important to good teaching" (Hoy and Burke Spero, 2005). It adheres "more closely to the theoretical guidelines proposed by Bandura" (Klassen and Chiu, 2010, p.742). The scale consists of three sub-scales with 24 items. Each sub-scale

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includes eight items. Table 2 shows the dimensions of the scale and the items belonging to each dimension in it. Sample item for each sub-scale includes " How much can you do to get children follow classroom rules? In classroom management, "How much can you do to help your students value learning? In student engagement, and " How much can you do to adjust your lessons to the proper level for individual students? in instructional strategies.

Table 2
Dimensions of the teacher's self-efficacy scale

Dimension	No. Of Items Total	No. Of Items
Efficacy in classroom management	8	21,19,16,15,13,8,5,3
Efficacy in student engagement	8	22,14,12,9,6,4,2,1
Efficacy in instructional strategies	8	24,23,20,18,17,11,10,7

The instrument was presented to 11 arbitrators to ensure its validity and to ensure that the questionnaire measures what was designed to measure. Teacher's self-efficacy scale (TSES) has also documented strong reliability for the whole scale and for each sub-scale in both western and non-western settings (Wolters & Daugherty, 2007; Klassen et al, 2009; Liu & Hallinger, 2018; Abu-Tineh & Al-Khalaileh, 2011; Al-Khalaileh, 2011; Abu-Tineh , Khasawneh & Al-Khalaileh 2011). The scale employed a five-point likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) Internal reliability was computed for the final Arabic version of TSES resulting in 0.91 for classroom management, 0.85 for instructional strategies, 0.79 for student engagement, and 0.90 for the whole questionnaire. It should be noted that the reliability coefficients for the scale exceeded 0.6 (Nunnally & Bernstein, 1994) which confirmed the reliability of the scale for measuring teachers' self-efficacy.

To determine the length of the cells of the scale, the range of each category was calculated. Then, it was divided by number of cells of

the scale (5) to obtain/ calculate the cell length to determine the degrees of availability of the variables (see Table 3).

Table 3

Degree of availability of the variables according to Likert Scale

Average weighted range	Degree of availability
1 to less than 1.8	very low
From 1.8 to less than 2.6	low
From 2.6 to less than 3.4	Medium
From 3.4 to less than 4.2	high
From 4.2 to 5	very high

3. Data analysis

Data was analyzed using SPSS. The consistency of the scales was measured using Cronbach's alpha test. Means and standard deviations were used to determine the level of transformational leadership and teachers' self-efficacy in Egyptian public schools based on the perceptions of the sample. Correlation analysis was used to examine the relationship between transformational leadership and teachers' self-efficacy. The effect of transformational leadership on teachers' self-efficacy was measured using regression analysis.

Second: Results and discussion

This section includes the results of the study as follows:

1. Results related to the levels of transformational leadership behaviours and teachers' self-efficacy and their dimensions

To identify the levels of transformational leadership behaviours and teachers' self-efficacy and their dimensions, means and standard deviations were computed. As indicated in Table 4, the overall mean for transformational leadership was 4.22 (SD= 0.34) reflecting a very high level of transformational leadership behaviours among school managers. This result is consistent with findings reported in

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earlier research (e.g., Alham, 2014; Alshenawy, 2014; cansoy, 2020; Emira, 2015). The level of transformational leadership behaviours may be attributed to the efforts exerted through leadership development programs to improve the practices and behaviours of the school managers as an adequate response to the leadership challenges and to accomplish Egypt strategic vision for education 2030.

For the dimensions of transformational leadership, table 4 reveals that encourage the heart had the highest mean score (M=4.28, SD=.47), followed by challenging the process (M=4.26, SD=.56), enable others to act (M=4.24, SD=.57), inspire a shared vision (M=4.17, SD=.64), and model the way (M= 4.15, SD=0.56). The highest score of the dimension of encouraging the heart may be attributed to the managers' attention to reward their teachers by celebrating their achievements and recognizing their contributions. However, inspire a shared vision had the lowest mean score. This is in line with findings reported in similar studies such as Graham (2007) who found that inspiring a shared vision was the least practiced dimension of transformational leadership behaviours among primary school managers. This may be attributed to the weakness of the school management to envisioning the future and motivating their teachers to accomplish this vision.

Table 4 also indicates that the least practiced behaviours of transformational leadership were "Ensures that people grow in their jobs" (M=4.04), and "Paints "big picture" of group aspirations" (M=4.04). This may be attributed to the multiple responsibilities and pressures placed on the school managers.

These findings are consistent with Ibrahim (2015) who admitted that school

Table 4
Arithmetic means and the degree of practicing transformational leadership behaviours among primary school managers

#	Item	Arithmetic Mean	Standard Deviation	Ra3nk	Degree of practice
Encourage the heart					
1	Recognizes people for commitment to shared values	4.37	.81	1	Very high
2	Tells stories of encouragement about the good work of others	4.35	.80	2	Very high
3	Gets personally involved in recognizing people and celebrating accomplishments	4.26	.87	3	Very high
4	Praises people for a job well done	4.22	.89	4	Very high
5	Makes sure that people are creatively recognized for their contributions to the success of our projects	4.16	.86	5	High
6	Expresses confidence in people's abilities	4.08	.85	6	High
Overall Mean of the dimension		4.28	.47	Very high	
Enable others to act					
7	Actively listens to diverse points of view	4.47	.74	1	Very high
8	Develops cooperative relationships	4.37	.77	2	Very high
9	Treats people with dignity and respect	4.33	.82	3	Very high
10	Involves people in the decisions that directly impact their job performance	4.24	.84	4	Very high

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11	Gives people choice about how to do their work	4.13	.89	5	High
12	Ensures that people grow in their jobs	4.04	.89	6	High
Overall Mean of the dimension		4.24	.57	Very high	
Challenge the process					
13	Actively searches for innovative ways to improve what we do	4.22	.88	1	Very high
14	Seeks challenging opportunities to test skills	4.20	.87	2	Very high
15	Asks "What can we learn?"	4.19	.89	3	high
16	Identifies measurable milestones that keep projects moving forward	4.17	.90	4	high
17	Takes initiative in anticipating and responding to change	4.12	.91	5	high
18	Challenges people to try new approaches	4.12	.89	6	high
Overall Mean of the dimension		4.26	.56	Very high	
Inspire a shared vision					
19	Speaks with conviction about meaning of work	4.37	.75	1	Very high
20	Talks about future trends influencing our work	4.18	.89	2	high
21	Shows others how their interests can be realized	4.12	.87	3	high
22	Describes a compelling image of the future	4.11	.90	4	high
23	Appeals to others to share dream of the future	4.09	.89	5	high
24	Paints "big picture" of group aspirations	4.04	.84	6	high
Overall Mean of the dimension		4.17	.64	high	

Model the way					
25	Asks for feedback on how his/her actions affect people's performance	4.49	.70	1	Very high
26	Is clear about his/her philosophy of leadership	4.41	.76	2	Very high
27	Makes certain that people adhere to the principles and standards that have been agreed upon	4.35	.87	3	Very high
28	Builds consensus around organization's values	4.26	.82	4	Very high
29	Follows through on promises and commitments	4.15	.84	5	high
30	Sets a personal example of what is expected	4.12	.87	6	high
Overall Mean of the dimension		4.15	.57	high	
Overall transformational leadership		4.22	0.34	Very high	

Table 5 reveals that the overall mean for teachers' self-efficacy was 4.28 (SD= 0.35) reflecting a very high level of self-efficacy. This finding is also in line with findings reported in earlier studies (e.g., Al-Khalaileh (2011); Abu-Tineh and Al- Khalaileh, 2011; Francisco, 2019). The high level of teachers' self-efficacy may be due to the efforts exerted by the Ministry of education through the professional development programs which include various programs that contribute to improve the teacher's self efficacy. Table 5 also reveals that teachers' self-efficacy in instructional strategies had the highest score (M=4.34., SD=.44), followed by classroom management (M=4.30 SD=.45), and student engagement (M=4.21, SD=.54). The highest score of the

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dimension of instructional strategies may be attributed to the focus of both pre- and in-service programs to improve the instructional strategies of all the teachers, especially the primary school teachers. Nonetheless, self-efficacy in student engagement had the lowest score. This finding may be attributed to the large number of the students in the classroom since the student teacher ratio reflects the ability of the teachers to actively engage their students in the learning process. These results are consistent with Abu-Tineh and Khalaileh (2011) and Al-Khalaileh, (2011) who found that teachers' self efficacy in student engagement had the lowest mean score in comparison to the other dimensions of self-efficacy.

Table 5 also reveals that the least practiced behaviours of teachers' self efficacy was "I can motivate students who show low interest in school Work " (M=4.06), and " I can adjust my lessons to the proper level for individual students" (M=4.07). This may be attributed again to the large number of the students in the classroom. However, the item "I can control disruptive behavior in the classroom" (M=4.48) had the highest mean score of all the practices of teachers' self-efficacy. This finding may be due to the efforts exerted through professional development programs to improve the teachers' skills in managing their classrooms.

Table 5
Arithmetic means and the degree of practicing the
dimensions of teachers' self-efficacy

#	Item	Arithmetic Mean	Standard Deviation	Ra2nk	Degree of practice
Classroom management					
31	I can control disruptive behavior in the classroom.	4.48	.73	1	Very high
32	I can make my expectations clear about student behavior.	4.40	.78	2	Very high
33	I can get children to follow classroom rules.	4.38	.81	3	Very high
34	I can keep a few problem students from ruining an entire lesson.	4.37	.80	4	Very high
35	I can calm a student who is disruptive or noisy.	4.34	.78	5	Very high
36	I can establish a classroom management system with each group of students.	4.33	.78	6	Very high
37	I can establish routines to keep activities running smoothly.	4.25	.80	7	Very high
38	I can respond to defiant students.	4.16	.85	8	high
Overall Mean of the dimension		4.30	.45	Very high	
Instructional strategies					
39	I can provide an alternative explanation or example when students are confused.	4.47	.74	1	Very high
40	I can respond to difficult questions from your students.	4.31	.81	2	Very high
41	I can gauge student comprehension of what you have taught.	4.22	.86	3	Very high

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42	I can craft good questions for your students.	4.20	.85	4	Very high
43	I can implement alternative strategies in your classroom.	4.18	.89	5	High
44	I can use a variety of assessment strategies.	4.16	.89	6	High
45	I can provide appropriate challenges for very capable students.	4.12	.89	7	High
46	I can adjust my lessons to the proper level for individual Students.	4.07	.88	8	high
Overall Mean of the dimension		4.34	.44	Very high	
Student engagement					
47	I can foster student creativity.	4.46	.74	1	Very high
48	I can improve the understanding of a student who is failing.	4.37	.81	2	Very high
49	I get students to believe they can do well in school work.	4.36	.77	3	Very high
50	I help my students think critically.	4.33	.81	4	Very high
51	I can assist families in helping their children do well in school.	4.27	.87	5	Very high
52	I get through to the most difficult students.	4.23	.88	6	Very high
53	I can help my students value learning.	4.18	.86	7	high
54	I can motivate students who show low interest in school Work.	4.06	.85	8	high
Overall Mean of the dimension		4.21	.54	Very high	
Overall mean of self-efficacy		4.28	0.35	Very high	

2. Results related to the relationship between the dimensions of transformational leadership behaviours of school managers and teacher self-efficacy.

As indicated in Table 6, the correlation analysis indicates that the factor scales of transformational leadership correlated positively with teachers' self-efficacy. Most of the correlations were found to be significant. These results are consistent with findings reported from earlier research (Abu-Tineh and Al-Khalaileh, 2011; Choi and Kang, 2021; Gabriel and Alalem, 2020; Sharma and Singh, 2017). The author attributed this positive relationship to the fact that recognizing teachers' contributions, setting an example of excellence, motivating teachers to act, feel that they are capable, supporting them to seek challenging situations, and inspiring them that can make a difference could positively reinforce teacher's self-efficacy to produce positive outcomes. This result reflects that teacher's beliefs in their capabilities are strengthened when accomplished in the framework of transformational leadership. The significance of these results lies in the "well-established" relationship between teacher efficacy and student learning (Bandura, 1993, 1997; Ross et al, 2003; Ross and Gray, 2006). Nonetheless, some of the correlations were weak since some of the correlations were less than (0.20) between the dimensions of the transformational leadership and teachers' self-efficacy.

The highest correlations were between transformational leadership and teacher self-efficacy in student engagement (0.90), the dimensions of encouraging the heart (0.88)and enabling others to act (0.81) and teacher self-efficacy in instructional strategies.

Table 6 also revealed that if the primary school managers seeks to develop, for example, teacher self efficacy in instructional leadership, they have to develop the practices of transformational leadership dimensions with the following order: (encourage the heart, enable others to act, Inspire a shared vision, model the way, challenge the process). Also, if the managers seek to improve the efficacy of teachers in classroom management, they have to develop the practices of transformational leadership dimensions with the

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following order: (inspire a shared vision, enable others to act, model the way, encourage the heart, challenge the process).

3. Results related to the effect of transformational leadership on self-efficacy of teachers in Egyptian public schools.

The transformational leadership variables of challenging the process, inspired a shared vision, modelling the way, enabling others to act, and encouraging the heart explained 83% of the variance in teachers' self-efficacy. Table 7 indicates that teacher's self-efficacy was more influenced by challenging the process ($\beta=.361$), and less affected by encouraging the heart ($\beta=.326$). This may be attributed to the fact that when the school managers simulate their teachers to analyse existing conditions, search for and experiment innovative techniques to improve their work, and believe that they can make a difference, they are more significantly affecting the overall self-efficacy of their teachers in comparison to other behaviours of transformational leadership. The results of the significance of regression coefficients indicates that the dimensions of transformational leadership, namely encouraging the heart, inspiring a shared vision, enabling others to act, challenging the process significantly affect teachers' self-efficacy. Model the way influenced teacher self-efficacy but not to a significant level.

As shown in Table 8, the regression analysis revealed that teacher's self-efficacy in classroom management was more influenced by encouraging the heart ($\beta=.206$) and less influenced by Modelling the way ($\beta=.200$). This may be due to the idea that school managers who recognize the contributions of their teachers and celebrate their achievements and success and share the rewards of their efforts significantly motivate teachers' self efficacy to manage their classrooms more efficiently and keep their students focused and productive during the class. This result is in line with Leithwood et al's (1999) argument that transformational leadership behaviours of school leaders affect teacher's enthusiasm to strive extra effort to manage their classrooms and get their students to value learning. Besides managers can affect teacher efficacy by

challenging their teachers and addressing their low expectations (Ross and Gray, 2006). The results of the significance of regression coefficients indicates that all the dimensions of transformational leadership except for enable others to act and inspire a shared vision had a significant effect on teachers' self-efficacy in classroom managements. This may be due to the lack of opportunity to empower teachers, share powers in making decisions and motivate teachers towards a common vision.

All the dimensions of transformational leadership explained 91% of the variance in teachers' self-efficacy in instructional strategies. As indicated in Table 8, the results of standardized regression coefficients (β) revealed that teachers' self-efficacy in instructional strategies was more affected by enable others to act ($\beta=.617$), and it was less affected by challenging the process ($\beta=.465$). This finding implies that empowering teachers to do their work strengthen their sense of professionalism (Bogler and Somech, 2005; Ali, 2020). This result is consistent with findings reported in earlier research (e.g. Bogler and Somech, 2005; Firestone and Pennel). For example, Firestone and Pennel (1993) emphasized that when teachers are actively enabled to do their job, their empowerment assures that right data will be accessible for taking decisions that enable effective instruction, and in turn increase self-efficacy. Enabled teachers has a sense of a "can do attitude" which enhance their capabilities to affect student learning by embracing new instructional and engagement practices (Bogler and Somech, 2005; Lotfy, 2016; Short et al., 1994; Wilson and Coolican, 1996). Moreover, the results of the t-test on the significance of regression coefficients indicated (see Table 8) that the dimensions of transformational leadership had a significant effect on teachers' self efficacy in instructional strategies except for encouraging the heart and modelling the way.

Additionally, It was found that all these dimensions explained 87% of the variance in teachers' self-efficacy in student engagement. The results of the standardized regression coefficients (β) revealed that teachers' self-efficacy in student engagement was more affected by

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encouraging the heart ($\beta=.839$), and it was less affected by enable other to act ($\beta=.265$). Finally, it should be noted that the results of the t-test indicated that all the factors of transformational leadership had a significant effect on teachers' self-efficacy in student engagement (see Table 8). These findings imply that all the transformational leadership behaviours significantly affect teachers' self-efficacy in student engagement. However, encouraging the heart was proved to significantly predict teachers' self-efficacy in student engagement. This may be attributed to the idea that rewarding the teachers and caring about them and celebrating their victories within the school create multiple opportunities to encourage their hearts which in turn encourage them to engage their students and keep them interested and passionate when they are learning.

Table 6 Correlation analysis between the variables in the study

Variable	Transformational leadership	Encourage the heart	Enable others to act	Challenge the process	Inspire a shared vision	Model the way	Classroom management	Instructional strategies	Student engagement
Transformational leadership	1								
Encouraging the heart	0.258**	1							
Enable others to act	0.308**	0.216**	1						
Challenging the process	0.202**	0.578**	0.166**	1					
Inspire a shared vision	0.107*	0.179**	0.230**	0.194*	1				
Model the way	0.128**	0.55**	0.41**	0.166*	0.038	1			
classroom management	0.273**	0.187**	0.205**	0.166*	0.246**	0.188**	1		
Instructional strategies	0.286**	0.882**	0.815**	0.187*	0.66*	0.188**	0.203**	1	
Student engagement	0.904**	0.494**	0.276**	0.084	0.074	0.216**	0.445**	0.276*	1

Table 6 Correlation analysis between the variables in the study

Variable	Transformational leadership	Encourage the heart	Enable others to act	Challenge the process	Inspire a shared vision	Model the way	Classroom management	Instructional strategies	Student engagement
Transformational leadership	1								
Encouraging the heart	0.258**	1							
Enable others to act	0.308**	0.216**	1						
Challenging the process	0.202**	0.578**	0.166**	1					
Inspire a shared vision	0.107*	0.179**	0.230**	0.194*	1				
Model the way	0.128**	0.55**	0.41**	0.166*	0.038	1			
classroom management	0.273**	0.187**	0.205**	0.166*	0.246**	0.188**	1		
Instructional strategies	0.286**	0.882**	0.815**	0.187*	0.66*	0.188**	0.203**	1	
Student engagement	0.904**	0.494**	0.276**	0.084	0.074	0.216**	0.445**	0.276*	1

* Correlation is significant at the 0.01 level, * Correlation is significant at the 0.05 level

Table 7 Regression analysis of transformational leadership on total self-efficacy

Variables	B	Std. Error	β	T	P
Constant	1.016	.080		12.709	.000
Encourage the heart	.245	.040	.326	6.107	.000
Enable others to act	.122	.030	.197	4.032	.000
Challenging the process	.229	.018	.361	12.878	.000
Inspire a shared vision	.158	.013	.283	11.893	.000
Model the way	.016	.012	.025	1.259	.209

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Table 8 Regression analysis of the effect of transformational leadership dimensions on self-efficacy dimensions

Variables	Classroom management					Instructional strategies					Student engagement				
	B	SE	β	T	P	B	SE	β	T	P	B	SE	β	T	P
Constant	16.9	2.08		8.135	.000	0.34	.793		0.43	.966	6.479	.857		7.556	.000
Encourage the heart	.213	.047	.206	4.491	.000	.005	.018	.004	.273	.785	.923	.019	.839	47.367	.000
Enable other to act	.031	.058	.029	.539	.590	.805	.022	.617	36.503	.000	.299	.024	.265	12.551	.000
Challenging the process	.112	.050	.120	2.240	.026	.532	.019	.465	27.987	.000	.035	.021	.035	1.711	.088
Inspired a shared vision	.082	.047	.078	1.732	.084	.043	.018	.034	2.402	.017	.042	.019	.038	2.172	.030
Model the way	.261	.058	.200	4.527	.000	.029	.022	.018	1.308	.192	.055	.024	.040	2.315	.021

Part Four: Proposing mechanisms to promote the transformational leadership behaviours of public school managers in Egypt and their effect on teachers' self-efficacy.

The results of this study showed that most of the correlations between the principal's transformational leadership practices and teachers' self-efficacy were weak. Accordingly, the study proposes some mechanisms that could be employed to promote the transformational leadership behaviours of primary school managers and their effect on the efficacy of their teachers as follows:

-The Ministry of Education should push for the adaptation of a decentralized educational system and provide more decision-making authorities to the school managers which in turn empower primary school managers to fulfill their transformational roles and motivate their teachers to act and feel capable. Through developing cooperative relationships with the teachers and involving them in the decisions that impact their job performance, school managers can create a supportive positive school climate that can also affect the development of all the dimensions of their teachers' self-efficacy especially teachers' self-efficacy in instructional strategies and student engagement.

-Creating primary school managers' training centers for practicing and aspiring managers to provide a wide array of professional development opportunities and prepare school managers to incorporate all the dimensions of transformational leadership.

Fostering teachers' self-efficacy requires high levels of transformational leadership competencies. Therefore, both aspiring and practicing school managers should be trained on the practices of transformational leadership based on the effect of each dimension on predicting teachers' self-efficacy as shown by the results of the study.

Additionally, using various methods, training programs in transformational leadership should also support managers to create conditions in the school that meet the needs of their teachers and enable them to realize their full potential and build their capabilities to produce desired results. More specifically, it should focus on educating school managers about the transformational roles and responsibilities that would influence affect their teachers' self-efficacy. For example, based on the findings of the regression analysis, managers need to know how to motivate their teachers to fulfill the school vision by setting the example, motivating them to seek challenging opportunities to improve their schools, enabling them to act and inspiring and recognizing them to perform better. Thus, educators of school managers should encourage managers to seek innovative ways to foster their teachers' self-efficacy. Then, managers should provide their teachers with skills and knowledge to do their work and think that they will be successful thereafter.

- Transformational leadership practices should be included in the job qualifications, selection criteria, and the performance evaluation of the primary school managers to guarantee their impact on the efficacy beliefs of their teachers and inspiring them for success.

-Teacher development programs should be aimed at enhancing the efficacy of the teachers in managing their classrooms, engaging their students, and developing their instructional strategies.

- Creating a teamwork within the school to measure the levels of the transformational leadership practices among school managers and the self-efficacy of their teachers and the relationship between the two variables to find gaps and create an action plan to move the school forward.

Limitations and future research

This research draws attention to the effects of transformational leadership behaviours of school managers on teacher self efficacy. Nonetheless, our research has some limitations. First, this study was conducted on primary schools in one city in Egypt. The results of our study show the perceptions of the teachers in the primary schools where the study was conducted. Thus, it is reasonable that other patterns of transformational leadership could be found in other schools in Egypt. Further research could address the relationship between these variables in other areas. Second, although this study provides insights on leadership practices in Egyptian schools. Our study did not examine how perceived patterns of leadership is connected to the context of the country. Further research could complement quantitative research with qualitative data (e.g., interviews) that provide more connection between the leadership behaviours and the context. A mixed methods research designs provide more insight into teacher efficacy. Third, this study explored only the effect of transformational leadership on teacher self-efficacy. It would be useful to extend the current conceptual model to consider other independent variables as few studies have been conducted to date. Furthermore, since school leadership explained only some portion of effect on teacher efficacy (Ngunit et al, 2006), the author believes that other variables could affect teacher self-efficacy. Further research could focus on other variables that might have influence on teacher efficacy. A final limitation is that we explored the effect of transformational leadership on teacher efficacy at one time only. Longitudinal studies could help us to fully understand the relationship among the variables. Longitudinal studies will confirm the important role of transformational leadership behaviours on building teacher self-efficacy in the school setting.

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