

RESEARCH TITLE

The Effect of Leadership Skills Acquired from the Leadership Diploma on the Motivation of Government School Principals in Northern Directorates: Proposed Vision for Improvement

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Abstract

This study aimed to examine the effect of leadership skills acquired from the Leadership Diploma on the motivation of government school principals in northern directorates. The population included in this study included 315 government school principals in Jenin, Qabatya, and Tubas Directorates. A quasi-experimental design was used; the study sample included 100 principals who had been trained through the Leadership Diploma. A questionnaire was used to collect data from the school principals. The results showed that principals who completed the Leadership Diploma had higher motivation, a sense of responsibility, and self-efficacy than the control group. Also, the study demonstrated that there was no effect of the training received during the leadership diploma on the motivation due to age, gender, specialization, and qualification. However, there was an effect of the principals' experience, in favor of 5 to 10 years. The study recommends starting the Leadership Diploma program to all government school principals from the first year.

Key Words: Leadership skills, Leadership Diploma, Motivation, School Principals.

أثر المهارات القيادية المكتسبة من دبلوم القيادة على دافعية مديري المدارس الحكومية في المديرية الشمالية: رؤية مقترحة للتطوير

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المستخلص

هدفت هذه الدراسة إلى فحص أثر المهارات القيادية المكتسبة من دبلوم القيادة على دافعية مديري المدارس الحكومية في المديرية الشمالية. شمل مجتمع الدراسة (315) مديرًا ومديرة من مديري المدارس الحكومية في مديريات جنين وقباطية وطوباس. استخدمت الدراسة المنهج شبه التجريبي، وتكوّنت عينة الدراسة من (100) مدير ومديرة ممن تلقوا التدريب من خلال دبلوم القيادة. ولجمع البيانات، استخدمت استبانة وُزعت على مديري المدارس. أظهرت النتائج أن المديرين الذين أنهوا دبلوم القيادة يتمتعون بمستويات أعلى من الدافعية، والشعور بالمسؤولية، والكفاءة الذاتية مقارنة بالمجموعة الضابطة. كما بيّنت الدراسة عدم وجود أثر للتدريب الذي تلقاه المديرون خلال دبلوم القيادة على الدافعية يُعزى إلى متغيرات العمر، والجنس، والتخصص، والمؤهل العلمي. في المقابل، وُجد أثر لخبرة المديرين في الدافعية لصالح من تتراوح خبرتهم بين (5-10) سنوات. وأوصت الدراسة ببدء تطبيق برنامج دبلوم القيادة لجميع مديري المدارس الحكومية منذ السنة الأولى لتوليهم مهام الإدارة.

الكلمات المفتاحية: المهارات القيادية، دبلوم القيادة، الدافعية، مديرو المدارس.

Introduction

Schools are the one of most important institutions where students are developed cognitively, socially, and morally. Teachers play an important role in the educational process; they affect students' achievement. Good administration is necessary to the success of teachers and students. (Dinampo & Balones, 2023). Leadership is Known as the core element of educational administration; it directs schools towards achieving educational goals. Educational leaders should inspire and guide the staff towards their shared goals (Rachman et al., 2023). Also, they should influence individuals towards achieving these goals, motivating them, and enhancing an environment where responsibilities are shared among the whole team members (Jambo & Hongde, 2020). Leaders play an important role in influencing teachers' motivation, affect the whole school members (Hasibuan, 2022).

A successful leader seeks to be motivated to achieve. Some training programs, such as the Leadership training, help school principals with knowledge and skills that they need to succeed in their roles. Leadership training helps principals in dealing with schools' difficulties, using good practices, and applying good strategies. So, principals who go through the training programs should be well prepared to achieve high levels of achievement and be motivated (Elfaragy et al., 2022). In addition, leadership motivates principals to achieve their goals, and it enhances their commitment and sense of responsibility (Faisal, 2023).

Theoretical Background

Motivation to achievement refers to the desire of principals to reach their goals and succeed in tasks, it is linked with professional ambitions, personal aspirations, and educational objectives, it can be fueled by many factors, such as self-improvement, the desire for recognition, and financial rewards (Hasibuan, 2022). There is a positive relationship between having leadership skills and the workers' motivation (Marselina et al., 2023). Sometimes motivation comes from within the individual, as people are driven by personal satisfaction. For example, a principal may feel motivated and think to improve his methods when he finds fulfillment in helping teachers and students succeed (Faisal, 2023). This is what known as intrinsic motivation. It helps them build a positive work environment which focus on teamwork and cooperation (Rohim et al., 2023). Principals are responsible of dealing with school problems and making decisions to resolve them effectively, this requires them to be ready to assume their responsibilities and to be aware of their role in organizing the educational environment (ÇETİN et al., 2023). Moreover, principals express a deep sense of responsibility for managing their schools, emphasizing the significance of cooperation with all stakeholders to ensure a purposeful and disciplined environment, they believe that the school's success depends on their ability of making suitable decisions and achieving the school's goals by collaborating with students, teachers, and parents with awareness and seriousness (Velody & Koskei, 2023).

When school principals are self-motivated, they will be able to fulfill their responsibilities in addressing challenges, their role will not be only to identify and analyze problems, but also to guide teachers, foster a positive work environment which promotes interaction (Alene et al., 2025), and solves problems that affect teachers' performance (Rohim et al., 2023). To solve problems effectively, a principal needs to think flexibly, along with self-confidence and the ability to plan. There are many steps to solve difficulties include identifying the problem, collecting information, analyzing causes, evaluating solutions, and then implementing the results (Ekren et al., 2025). The principals who possess problem-solving skills, depending on creative thinking and decision-making abilities can reduce student suffering from inappropriate behavior and achieve school stability, they also utilize their skills in managing problems and finding appropriate solutions (Velody & Koskei, 2023).

A principal's sense of leadership causes success in the school because it enhances the principal's ability to motivate and guide teachers, builds an enthusiastic school environment, and promotes trust between the principal and teachers. Therefore, a principal who feels a sense of responsibility for achieving educational goals will be better able to lead the team (Rohim et al., 2023). Principals positively affect students through solving problems, motivating teachers, and providing a learning environment that encourages students to achieve academic progress. During critical times, they support and motivate teachers to reduce the impact of external pressures on students. Accordingly, effective leadership raises student achievement and builds a learning environment that encourages success and excellence (Alene et al., 2025).

On the other hand, principals are sometimes motivated to achieve goals in order to receive praise, rewards, promotions, or other forms of recognition. For example, a principal may work hard to achieve high performance ratings to receive a recognition from the ministry of education (Hasibuan, 2022). In addition, social acceptance and appreciation are the most important motivators that inspire individuals to achieve professional and personal goals, as individuals feel respected and valued by society, this positively affects their motivation, as they strive to prove themselves through achievement. Respect from family, friends, or society acts as a form of external support that enhances an individual's self-confidence and encourages them to make greater effort, especially when they feel they are enhancing the reputation of their community, also, this acceptance plays an important role in fostering a positive attitude toward commitment and motivates individuals to keep up their efforts toward success (Hernandez et al., 2022). In addition, community acceptance of the school enhances school effectiveness and sustains educational outcomes, it also contributes to building a relationship based on understanding, respect, and trust, leads to collaboration in educational activities and participation in school affairs. This acceptance increases trust in educational leadership, facilitates the implementation of educational initiatives and programs. It also promotes transparency and encourages community participation in the educational process, which positively affects principals' performance (Kumar et al., 2024). Community acceptance of a school principals is affected by several factors, most notably the communication between the school and the community, the participation of the community in decision-making, and the level of community awareness. This acceptance can be enhanced by building relationships of trust and respect, and organizing workshops to increase community cooperation (Berhanu & Naidoo, 2024).

Motivated principals show greater commitment to managing the school efficiently and inspiring teachers and students to work with a spirit of positivity and commitment. This sense of responsibility also encourages mutual trust between principals and their team members and encourages them to take their responsibilities seriously. In this way, schools work to achieve their vision and strategic goals through responsible leadership (Rohim et al., 2023). Also, principals take full responsibility for the educational decisions inside the school; these decisions have an impact on the team performance. Also, they are responsible of the consequences of decisions, as their outcomes may affect employee performance, the achievement of their goals, and relationships among the team. So, decision-making is not only an administrative procedure; it is a responsibility that demands wisdom and a desire to bear the consequences, whether positive or negative (Zeinstra et al., 2023). Making decisions demands a suitable level of competence and awareness, if school principals are not managed effectively, that may negatively affect the quality of education. however, hesitation in making decisions declines principals' responsibility to face the consequences of their decisions and weakens school discipline (Alene et al., 2025).

Moreover, when school principals have sufficient skills and knowledge about their job, they can improve school culture. These skills and knowledge encourage cooperation among the employees (Boudouaia et al., 2024). Principals should develop themselves in many areas such as communication skill in order to foster their relationships with teachers and create a positive work environment. In addition, professional development and being exposed to the modern administrative methods are important for developing leadership capabilities because it helps them in responding successfully to varied challenges and asking teachers to share their ideas and opinions (Prakash et al., 2024). A principal's ability to manage workload and provide support to teachers are essential factors in motivation. The more responsible principals are and the more capable they are of directing their team appropriately, the more this contributes to developed team performance and a supportive learning environment. There are several strategies that help principals to manage workloads efficiently and effectively such as the fair distribution of tasks among team members, which helps reduce stress and promotes teamwork and cooperation (Boudouaia et al., 2024). It is important for principals to be confident in themselves in order to deal with challenges or crisis that may face them. They should be able to make right decisions, keep a safe school environment despite difficult circumstances (Ramos-Pla et al., 2021). Principals' confidence in their abilities helps them in improving their performance, increases their competence in facing difficulties (Collie et al., 2024).

Definition of Terms

leadership skills: Administrative capabilities demonstrated by school principals as an evident in their performance in the areas of planning, supervision, improving the school environment, and developing relationships with the local community (Leithwood et al., 2020), these abilities also enable principals to plan, lead, organize, and control resources effectively to attain organizational goals and help principals be motivated and motivate staff, coordinate activities, solve problems, and make decisions within an organization (Papilaya & Nanda, 2024).

In this study, leadership skills are the required managerial and instructional competencies for successful school leadership, including planning, school principals role in teachers' professional development, supervision and follow-up of teachers and school operations, monitoring of teaching and learning, internal and external communication, managing the school environment. These skills form the framework for assessing principals' performance, as they outline the main dimensions of successful school leadership practice.

Leadership Diploma: A specialized training program for school principals, implemented under the supervision of the Ministry of Education, with the aim of equipping principals with leadership skills that is necessary to meet the demands of modern school management. It lasts for a year that includes 360 training hours. Principals join a monthly face-to-face session and a weekly online session, maintaining a balance between theoretical and practical activities. It includes ten units covering different leadership skills such as planning, supervision, communication, monitoring teaching and learning, and monitoring schools' environment. During the training period, principals are assigned practical tasks that help them apply these concepts to their school context, enhancing their leadership and development capabilities. At the end of the program, each principal is required to prepare a project and procedural research that reflect the knowledge and skills they have acquired during the training period. The program is implemented in training centers geographically distributed across the country. The northern region includes the Qabatiya Directorate Center, which includes the Tubas, Jenin, and Qabatiya Directorates, as well as the Nablus Center. There is a training center in Ramallah for the central region, and another for the southern region (Ziada, 2021).

Motivation: According to Bandhu et al. (2024) motivation means the intention to direct

behavior, the force that initiates and drives actions towards a goal requiring energy and sustained effort. But Morris et al. (2022) defined motivation as recognizing an unsatisfied need and establishing a goal to fulfill it. It can be driven by rewards. It can be intrinsic, arising from the satisfaction derived from the work itself, or extrinsic, driven by external rewards.

In this study, motivation represents the intrinsic and extrinsic psychological factors which motivate school principals to perform efficiently, pursue excellence and strengthen self-efficacy, and assume responsibility.

School Principals: leaders who shape teaching practices, direct school operations, mentor teachers, allocate resources, and maintaining relationships with staff to improve school performance (Hoque & Raya, 2023).

In this study school principals are teachers who are officially appointed by the Ministry of Education to be chief administrative leaders of public schools in the directorates of Tubas, Jenin, and Qabatiya. Their responsibilities include planning, supervising teachers, monitoring the process of teaching and learning in their schools, provide students with the suitable and comfortable school environment, maintain communication with parents and local community.

Problem Statement

Leadership is important for the effectiveness and success of educational institutions; it requires a set of leadership skills that enable the leader to motivate and guide individuals to achieve their goals (Yada & Jäppinen, 2022). It is important for school principals to possess a set of skills to be an effective leader. The researcher works as a supervisor for school principals in Qabatiya Directorate, she visits principals at their schools in order to evaluate their performance, she also trains them within the Leadership Diploma program. Through repeated meetings with principals and during their visits at their schools, the researcher noted that the Diploma had improved their performance and increased their motivation to achieve. This aroused the researcher's curiosity to examine whether the training had a real effect on school principals' motivation.

In contrast, other school principals stated that they didn't benefit from the training program. This difference in principals' experiences was a reason to study the effect of Leadership Diploma on principals' motivation, and to study if these differences are influenced by additional personal factors. Therefore, this study aims to investigate the real effect of the leadership skills acquired from Leadership Diploma on the motivation of school principals in Northern Directorates.

The researcher also discovered that most of the previous studies have focused on the role of leadership in improving teacher performance and motivation. However, there is no single study that concerns with the principals themselves. This gap in the literature captured the researcher's attention and encouraged her to explore this topic in depth.

Research Questions

Main Question

What is the effect of the leadership skills acquired from the Leadership Diploma on the motivation towards achievement of government school principals in the northern directorates?

Sub-questions

RQ1: Do the average levels of motivation in the experimental group and the control group differ at ($\alpha \leq 0.05$)?

RQ2: Do the average levels of motivation differ due to gender, age, academic qualification, specialization, and practical experience?

Study Objectives

The objective of the study is to identify the leadership skills acquired by government school principals through the Leadership Diploma program, evaluate the levels of motivation towards achievement among school principals after the completion of the Leadership Diploma, explore the relationship between the leadership skills and the principals' achievement motivation, and provide recommendations for encouraging the Leadership Diploma program based on the findings, aimed at improving the principals' motivation.

Significance of the Study

The study is important in several ways both in theory and practice. From theoretical perspective, it addresses an important topic, which is measuring the effect of the Leadership Diploma on managers' motivation to achieve, and it is the first study, to the researcher's knowledge, that addresses the effect of leadership training on principals. Evaluating how such leadership training programs affect the motivation of school principals. Also, it offers important insights into the development of leadership in education(He et al., 2024).

From a practical perspective, the study provides information for The Ministry of Education, policymakers, and educators on how is the leadership Diploma important for each school principal. Leadership skills such as communication and planning are important for school principals(Leithwood et al., 2020), and principals should improve these skills through training (Nebieridze, 2023).

Moreover, this study offers a proposed vision that may introduce a framework for developing the leadership diploma in order to offer leadership skills that each school principal needs.

Study Hypotheses

H1: There are no statistically significant differences at the level of ($\alpha \leq 0.05$) between the average levels of motivation in the experimental group and the control group.

H2: There are no statistically significant differences at the level of ($\alpha \leq 0.05$) between the average levels of motivation due to the variables of gender, age, academic qualification, specialization, and practical experience.

Research Design

The study follows the quasi-experimental approach because it is appropriate for the study objectives, using a nonequivalent control group design. The Non-equivalent control-group design contains an experimental and control group where the subjects are not randomly assigned to groups. The fact there is no random assignment means that subjects in the experimental group and control group may not be equivalent on all variables. For example, you could have more low ability principals in the control group compared to the experimental group. In the Non-equivalent control-group design both groups are given first a pretest and then a posttest [after the treatment is given to the experimental group]. The pretest score and the posttest score are compared to determine if there are significant differences. An advantage of this Design is that it involves intact groups (i.e., keeps the participants in natural settings), thus allowing a higher degree of external validity

	Pre-test	Treatment	Posttest
Experimental group	O ₁	X	O ₂
Control group	O ₃		O ₄

Population of the Study

The study population consists of all public-school principals in Qabaty, Jenin, and Tubas Directorates whom number was 315 according to the Ministry of Education in the year 2024-2025. Sample of the Study

The sample was selected based on their participation in the Educational Leadership Diploma training program for the 2024/2025 academic year. The experimental group consisted of all principals enrolled in the training program during the year from Jenin, Qabatiya, and Tubas directorates, totaling (100) participants, and the control group consisted of (100) principals who did not enroll in the diploma program in the same year. They were selected purposively because the participants in the diploma training program had already been determined by the Ministry of Education, making purposive sampling the most suitable for achieving the study's objectives. Table (1) illustrates the sample of study distribution according to the demographic variables:

Table 1

Sample of the study according to its demographic variables

Demographic variables of the control group				experimental group		
Age		Frequency	Percentage	Age	Frequency	Percentage
	25-35	39	39%		8	8%
	36-45	37	37%		27	27%
	More than 46	24	24%		65	65%
	Total	100	100%		100	100%
qualification	BA	54	54%	qualification	83	83%
	MA	46	46%		17	17%
	Total	100	100%		100	100%
experience	Less than 5 years	5	5%	experience	30	30%
	5 - Less than 10	33	33%		33	33%
	More than 10	62	62%		37	37%
	Total	100	100%		100	100%
gender	Male	49	49%	gender	52	52%
	female	51	51%		48	48%
	Total	100	100%		100	100%
Directorate	Tubas	34	34%	Directorate	18	18%
	Jenin	32	32%		27	27%
	Qabatiya	34	34%		55	55%
	Total	100	100%		100	100%
Specialization	Humanities	42	42%	Specialization	72	72%
	Natural Sciences	58	58%		28	28%
	Total	100	100%		100	100%

Study Tools

The researcher used the following tool:

Motivation questionnaire

This questionnaire in its first draft was designed to measure principals' level of their motivation to work. It consists of twenty-one items related to four domains to identify the factors that motivate principals to achieve better. It was based on two previous scientific studies: the first, by Erdem& Cicekdemir (2016), who designed a scale to evaluate motivation in schools, and the second, by Ling et al. (2015). The scale focused on four domains representing motivations; intrinsic motivation, extrinsic motivation, sense of responsibility, and self-efficacy. A five-point Likert scale was used for this tool, with responses ranging from (1 = strongly disagree) to (5 = strongly agree).

Validity of the questionnaire

Content Validity

The questionnaire was reviewed by a group of expert judges specializing in educational leadership, teaching, and learning to ensure the validity, accuracy, and relevance of the items to their respective fields, in order to modify, delete, or add items. The percentage of judges who agreed on the questionnaire items reached 80%, according to research standards for content validity. This indicates that the questionnaire has acceptable content validity. So, the questionnaire in its final draft consists of 21 items, covering four domains.

Construct Validity and Internal Validity

The tool validity was proven through computing correlation coefficients between each domain and the total score. The results showed that all domains expressed strong statistical significance at the significance level of 0.01, showing a high degree of consistency between the domains.

The correlation between the first domain and the total score was ($r = 0.914^{**}$), a high value statistically significant at the 0.01 level, showing the high validity of this domain. The results in the second domain showed that the correlation coefficient was ($r = 0.922^{**}$), reflecting the reliability and accuracy of the items related to this domain and their consistency with the general structure of the scale. The third domain achieved a correlation coefficient of ($r = 0.907^{**}$), that is also statistically high. The fourth domain recorded ($r = 0.889^{**}$), which indicates a high correlation between this domain and the overall scale as shown in table (2).

Table (2)

Spearman correlation coefficients between total score and all domains of motivation scale

domain	correlation	domain	correlation
intrinsic motivation	.914 ^{**}	sense of responsibility	.907 ^{**}
extrinsic motivation	.922 ^{**}	self-efficacy	.889 ^{**}

Also, to ensure the validity of the questionnaire, Pearson's correlation coefficients were calculated between the total score for each domain and the score of each item within it, and it was found that all domains have high degrees of validity. In the domain of intrinsic-motivation, the correlation coefficients ranged between (0.713 – 0.853), while in the domain of extrinsic motivation they ranged between (0.717 – 0.853), also the correlation of the domain of sense of responsibility coefficients ranged between (0.619 – 0.855, and the results for the fourth domain, self-efficacy, showed that the correlation coefficients between its items and the total ranged between (0.758 – 0.816). These results indicate the strength of the

relationship between the items and the domain to which they belong, and that the items measure the same dimension as shown in table (3).

Table (3)

Spearman correlation coefficients between each item and its domain total score of motivation scale

intrinsic-motivation		extrinsic motivation		sense of responsibility		self-efficacy	
item	correlation	item	correlation	item	correlation	item	correlation
1	.832**	7	.822**	12	.756**	17	.812**
2	.853**	8	.853**	13	.838**	18	.802**
3	.826**	9	.817**	14	.855**	19	.808**
4	.713**	10	.744**	15	.785**	20	.758**
5	.846**	11	.717**	16	.619**	21	.816**
6	.775**						

Also, to ensure the validity of the questionnaire, the correlation between all items and the total was examined, and it ranged between (0.489) and (0.805), all of which were positive and indicate a strong relationship. This is an indication that the items are interconnected and consistent in measuring the targeted phenomenon, which confirms the validity of the tool and its suitability for use in the current research as shown in table (4).

Table (4)

Spearman correlation coefficient between total scores and all items of motivation scale

item	correlation	item	correlation	item	correlation	item	correlation
1	.762**	7	.783**	13	.751**	19	.721**
2	.788**	8	.758**	14	.781**	20	.712**
3	.805**	9	.735**	15	.792**	21	.756**
4	.627**	10	.698**	16	.489**		
5	.735**	11	.703**	17	.683**		
6	.694**	12	.678**	18	.681**		

Reliability of the Scale

Cronbach's alpha coefficient was employed to assess the reliability of the questionnaire, the results show a value of (0.92) which is above 0.90 that considered excellent and enhances the reliability of the scale as shown in table (5)(Zakariya, 2022).

Table (5)

Results of Chronbach's alpha for motivation scale

No. of Items	Cronbach's Alpha
21	0.929

Results

This section discusses the results of testing the study's hypotheses. PERAM-ANCOVA tests were used to analyze the data, which are a nonparametric alternative to ANCOVA analysis when the basic assumptions of ANCOVA are not met. These assumptions are: The normal distribution test revealed that the data did not follow a normal distribution. The p-value for the Shapiro test was 0.0001, which is less than the statistical significance level of 0.05, and therefore does not follow a normal distribution. The second assumption is homogeneity of variances between study groups. This means that the variances between study groups and the levels of the independent variables relative to the dependent variable are unequal. The p-value for the LLeven test for homogeneity was 0.001, which is less than the statistical significance level of 0.05. The third assumption is homogeneity of regression slopes. This assumption assumes that the control variable (pretest) has no effect on the dependent variable (protest), and that the interaction between the independent variables and the pretest has no effect on the posttest. This assumption was often not met in most cases in the study data. Since the normal distribution assumption was not met, the alternative was to use PERAM-ANCOVA, available in the R package "permuco", which provides a non-parametric version of ANCOVA, using permutation tests. The idea of this package is to calculate the reference distribution by rescaling the data (number of permutations) thousands of times (Frossard & Renaud, 2019), and in this study, it was performed 5000 times. As a result, F is more accurate and flexible even if the assumptions were not met. A linear regression model (lm) available in the lmPerm package was used to obtain the mean marginal estimated (MME) using the emmeans package, and then to calculate the pairwise comparisons.

Results related to the first hypothesis which states:

There are no statistically significant differences ($\alpha \leq 0.05$) between the averages of motivation levels in the experimental group and the control group.

The results of the PERAM-ANCOVA analysis indicate an effect of the group (experimental, control) on motivation levels at a significance level of ($\alpha = 0.05$). After controlling for the pretest effect, the resampled P(F) value for the group at the intrinsic motivation level reached 0.0002, which is less than the statistical significance level of ($\alpha = 0.05$). This indicates an effect of the group (experimental, control) on the post-application level of intrinsic motivation. Similarly, for the level of extrinsic motivation, the results showed that the (experimental and control) group had an impact on the post-test of extrinsic motivation. The resampled P(F) value was 0.0002, which is less than the significance level of ($\alpha = 0.05$). The same resampled p-value was observed for the level of sense of responsibility and self-efficacy. In conclusion, the (experimental, control) group had an impact on the levels of motivation (intrinsic motivation, extrinsic motivation, sense of responsibility, self-efficacy) at a significance level of ($\alpha \leq 0.05$). Regarding overall motivation, the results showed that the (experimental, control) group had an impact on overall motivation. The resampled P(F) value was 0.0002, which is less than the significance level of ($\alpha \leq 0.05$) (Appendix A).

Pairwise comparisons across all motivation levels indicate that the comparison was statistically significant across all motivation levels. The p-value for all comparisons reached 0.001, which is statistically significant at a statistical significance level of ($\alpha \leq 0.05$) in favor of the experimental group (Appendix B).

The results showed that principals who received training were more motivated to achieve their goals. Principals feel proud of being leaders, and when they are satisfied with themselves, this encourages them to work harder and shoulder the workload. This is reflected in their school staff, as principals who possess internal motivation feel responsible and

motivate them to work. Also, because the principal is responsible for solving problems in the school, they have a sense of responsibility. They are responsible for providing a good environment for teachers and students and working with them to achieve the school's goals, most importantly raising student achievement. This motivates them to work as successful, self-satisfied leaders. This is consistent with studies by (Faisal, 2023; Rohim et al., 2023 ; ÇETİN et al., 2023 ; Velody & Koskei, 2023 ; Ekren et al., 2025)

The results also showed that school principals who received training through the Educational Leadership Diploma are more extrinsically motivated, as they prefer to perform their jobs well in order to receive recognition, praise, or thanks from their superiors at the Ministry of Education. Their sense of social value among the public also motivates them to prove themselves and appear as influential leaders who are respected in the community. Furthermore, the community's confidence in the principal's performance at the school makes them supportive of the school, both materially and morally, which increases the principal's sense of extrinsic motivation. On the other hand, the results showed that the principal who received training is able to work as a team and motivate his employees, which makes them more confident in him and work with all their energy to gain his trust and support. This is consistent with the studies of (Hernandez et al., 2022 ; Zeinstra et al., 2023; Berhanu & Naidoo, 2024; Hasibuan, 2022).

The results also showed that principals with a leadership diploma have a sense of responsibility for their team and the development of their schools. Principals are responsible for making administrative and educational decisions that directly relate to the work of school staff, and they are also responsible for the consequences of these decisions. Principals are also responsible for enacting school rules, regulating internal and external relationships, and providing a safe and attractive environment for learning and teaching. Principals are also responsible for the professional development of teachers, contributing to their nomination for training courses according to their needs and the requirements of their work in the school. This results in many accomplishments and the creation of trust between principals and staff, consistent with studies by (Berhanu, 2024 ; Fabersunne et al., 2023; Zeinstra et al., 2023 ; Alene et al., 2025).

On the other hand, the results showed that principals who received training and earned an Educational Leadership Diploma were more efficient, as they possessed sufficient knowledge and skills to lead teams and achieve their school's goals. These skills include effective communication skills, team leadership and direction skills, and social intelligence, which enables principals to understand teachers' feelings and desires. This motivates them to lead and work because they achieve success and gain external motivation when they receive appreciation from their team and administrators, as well as internal motivation through their sense of self-satisfaction. This is consistent with studies by (Collie et al., 2024 ; Ramos-Pla et al., 2021 ; Boudouaia et al., 2024 ; Alene et al., 2025 ; Prakash et al., 2024).

Results related to the second hypothesis:

There are no statistically significant differences at a significance level of ($\alpha \leq 0.05$) between the average levels of motivation due to the variables of gender, age, qualification, specialization, and experience.

The PERAM-ANCOVA results indicate that both gender and specialization variables are not statistically significant at a significance level of ($\alpha = 0.05$). The resampled F values were 0.8264 and 0.7146, respectively, which are greater than the statistical significance level. Therefore, these two variables do not have any effect on the post-application of the intrinsic motivation level after controlling for the post-application of the level. However, the variables

of academic qualification, years of experience, and age were statistically significant at a significance level of ($\alpha = 0.05$). The resampled F values were 0.0230, 0.0014, and 0.0034, respectively, which are less than the statistical significance level. Therefore, these variables have an effect on the post-application of the intrinsic motivation level.

Regarding the post-test of the extrinsic motivation level, after controlling for the pre-test effect, it was found that both gender and specialization variables were not statistically significant at a significance level of ($\alpha = 0.05$). The resampled F values were 0.6110 and 0.5816, which is greater than the statistical significance level. Therefore, these two variables had no effect on the post-test of the extrinsic motivation level after controlling for the pre-test effect. Meanwhile, the academic qualification, years of experience, and age variables were statistically significant at a significance level of ($\alpha = 0.05$). The resampled F values were 0.0260, 0.0024, and 0.0102, respectively, which is less than the statistical significance level. Therefore, these variables had an effect on the post-test of the extrinsic motivation level.

Regarding the post-test of the sense of responsibility, after controlling for the effect of the pre-test, it was found that the variables of gender, specialization, academic qualification, and age were not statistically significant at a significance level of ($\alpha = 0.05$). The resampled F values were 0.9134, 0.1290, 0.0680, and 0.051, respectively, which are greater than the statistical significance level. Therefore, these variables had no effect on the post-test of the sense of responsibility after controlling for the pre-test. Meanwhile, the variable of years of experience was statistically significant at a significance level of ($\alpha = 0.05$). The resampled F value was 0.0014, which is less than the statistical significance level. Therefore, this variable had an effect on the post-test of the sense of responsibility.

Concerning the post-test of self-efficacy, after controlling for the pre-test effect, it was found that the variables of gender, specialization, academic qualification, and age were not statistically significant at a significance level of ($\alpha \leq 0.05$). The resampled F values were 0.6078, 0.1730, 0.7976, and 0.0814, respectively, which are greater than the statistical significance level. Therefore, these variables had no effect on the post-test of self-efficacy after controlling for the pre-test. Meanwhile, the years of experience variable was statistically significant at a significance level of ($\alpha = 0.05$). The resampled F value was 0.0010, which is less than the statistical significance level. Therefore, this variable had an effect on the post-test of self-efficacy (Appendix C).

The variables of academic qualification, years of experience, and age had an impact on the post-application of the level of intrinsic motivation. The value of the difference between the two categories of the academic qualification variable was -0.444, and the p.value of this difference was 0.0207, which is statistically significant at a statistical significance level of ($\alpha \leq 0.05$). The difference was in favor of the category (diploma - bachelor's). As for the variable of years of experience, the difference between the two categories (from 1-5 years) - (5-10 years) was -0.8246, and the p.value of this difference was 0.0017, which is statistically significant at a statistical significance level of ($\alpha \leq 0.05$). The difference was in favor of the category (5-10 years). The value of the difference between the two categories (5-10 years) – (more than 10) was 0.8558, and the p.value of this difference was 0.0013. It is statistically significant at a statistical significance level of $\alpha = 0.05$, and the difference was in favor of the category (5-10 years). For the age variable, the difference between the categories (25-35 years) - more than 46 was 0.811, and the p.value for this difference was 0.0025, which is statistically significant ($\alpha \leq 0.05$), and the difference was in favor of the category (25-35 years).

Regarding the post-application of the level of extrinsic motivation, the variables of academic qualification and years of experience had an impact on the post-application of the level. The

value of the difference between the two categories of the academic qualification variable was -0.424, and the p-value for this difference was 0.0271, which is statistically significant ($\alpha = 0.05$), and the difference was in favor of the category (diploma - bachelor's). As for the years of experience variable, the difference between the categories (1-5 years) - (5-10 years) was -0.80865, and the p-value This difference is 0.0020, which is statistically significant at a statistical significance level of ($\alpha \leq 0.05$). The difference was in favor of the (5-10 years) category. The value of the difference between the (5-10 years) - (more than 10) categories was 0.80051, and the p-value for this difference is 0.0031, which is statistically significant of ($\alpha \leq 0.05$). The difference was in favor of the (5-10 years) category.

Regarding the post-test of the level of sense of responsibility, the variable of years of experience had an impact on the post-test of the level. The difference between the two categories (1-5 years) and (5-10 years) was -0.8078, and the p-value for this difference was 0.0010, which is statistically significant at a statistical significance level of ($\alpha \leq 0.05$). The difference was in favor of the category (5-10 years). The difference between the two categories (5-10 years) and (more than 10 years) was 0.7744, and the p-value for this difference was 0.0023, and the difference was in favor of the category (5-10 years).

Regarding the post-test of self-efficacy, the variable of years of experience had an impact on the post-test of the level. The difference between the two categories (1-5 years) and (5-10 years) was -0.8638, with a p-value of 0.0009, which is statistically significant at a statistical significance level of $\alpha=0.05$. The difference was in favor of the (5-10 years) category. The difference between the (5-10 years) and (more than 10) categories was 0.7870, with a p-value of 0.0033, and the difference was in favor of the (5-10 years) category. It can be concluded from the comparisons that years of experience (5-10 years) had an impact on the post-test of motivation levels (Appendix D).

The results related to the fourth question showed that gender and specialization variables had no statistically significant effect on the field of motivation at all its levels (level of intrinsic motivation, level of extrinsic motivation, sense of responsibility, and self-efficacy). In contrast, the results indicated that variables of age, academic qualifications, and years of experience had a clear effect on some levels of the motivation field. The researcher explains this by stating that the Leadership Diploma program is designed to ensure that all managers are equipped with the same knowledge and skills, regardless of their gender or specialization. Therefore, the uniformity of training content and activities assures that all principals benefit from the program. This result is similar to the findings of a study by (Bibi et al. (2022) which indicated that gender and age variables do not explain differences in leadership practices, while the variable of years of experience play a clear role in principals' performance. concerning age, academic qualifications, and years of experience, the results showed that they had a clear effect on the principals' intrinsic and extrinsic motivation. It was clear that principals with intermediate experience applied what they had learned from the training better than those who haven't join the training. This is similar to what (Causirhom et al. (2024) indicated about years of experience which enhances principals' leadership competencies, increase their motivation, and employ the leadership skills to improve their performance. Some studies disagreed with this result such as the study by Jambo & Hongde (2020) which showed that leadership skills are not different due to variables such as age or years of experience.

Regarding the level of sense of responsibility and self-efficacy, the results showed that the variables (age, gender, specialization, and academic qualification) were not statistically significant among school principals. However, years of experience is the only statistically significant variable, favoring the 5–10-year group. This is consistent with the study by Kiling

et al. (2023), which demonstrated that principals' competence does not improve with age or change depending on gender. The results also indicated that years of practical experience gained through administrative work positively impacts principals' sense of responsibility and self-efficacy, with the effect of training being most evident among principals with intermediate experience (5-10 years). The researcher explains this by suggesting that this group possesses a good understanding of the school's reality and sufficient flexibility to adopt new strategies. This is consistent with the study by Rohim et al. (2023).

Recommendations

According to the study results, the researcher suggests many recommendations to improve school principals' performance and increase their achievement motivation. These recommendations are:

- Disseminating the Leadership Diploma program to all school principals in all directorates, because of its positive effect on principals' motivation.
- Continuous development of the knowledge and leadership skills acquired from the training every year after completion, so that principals can update their knowledge and skills.
- Enroll school principals in the Leadership Diploma program from their first year of work as principals, and continue updating it through workshops and training courses during the following years.
- Include a training course in leadership with artificial intelligence applications that helps improving principals' motivation.
- Conduct future studies to address the effect of the Leadership Diploma program on student academic achievement.
- Conduct studies on the role of technology and digital transformation in developing leadership skills among school principals.

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Appendices

Appendix A

PERAM-ANCOVA analysis results for the effect of the (control and experimental) group on the post-test of motivation levels.

Intrinsic motivation					
	SS	df	F	parametric P(>F)	resampled P(>F)
Group	92.069	1	93.057	0.0000	0.0002
Pretest	1.408	1	1.423	0.2343	0.2350
Residuals	194.910	19 7			
Extrinsic motivation					
Group	94.026	1	95.40	0.0000	0.0002
Pretest	1.833	1	1.86	0.1742	0.1656
Residuals	194.162	19 7			
Sence of responsibility					
group	90.0387	1	106.37 0	0.000	0.0002
pretest	0.2827	1	0.334	0.564	0.5604
Residuals	166.754 1	19 7			
self-efficacy					
Group	121.783	1	145.57 1	0.00000	0.0002
Pretest	4.332	1	5.178	0.02395	0.0242
Residuals	164.808	19 7			
Total (Motivation)					
Group	94.650	1	130.8	0.0000	0.0002
motivation Pretest	1.809	1	2.5	0.1155	0.1138
Residuals	142.542	19 7			

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Appendix B

Pairwise comparisons and MME (means marginal estimated) for the (experimental and

Intrinsic motivation					
Group	emmean	SE	df	lower.CL	upper.CL
Control	1.94	0.131	197	1.69	2.20
Experimental	4.08	0.131	197	3.82	4.34
binary comparison					
Contrast	estimate	SE	df	t.ratio	p.value
Control-experimental	-2.14	0.222	197	-9.647	<.0001
Extrinsic motivation					
Control	1.91	0.124	197	1.67	2.16
Experimental	3.91	0.124	197	3.67	4.16
binary comparison					
Control experimental	-2	0.205	197	-9.767	<.0001
Sense of responsibility					

control) groups with respect to the post-application of motivation levels.

Control	1.92	0.12	197	1.69	2.16
Experimental	3.99	0.12	197	3.76	4.23
binary comparison					
control – experimental	-2.07	0.201	197	-10.314	<.0001
Intrinsic motivation					
Control	1.74	0.117	197	1.51	1.98
Experimental	4.11	0.117	197	3.88	4.34
binary comparison					
Control- experimental	-2.36	0.196	197	-12.065	<.0001
Total (motivation)					
Control	1.87	0.112	197	1.65	2.09
Experimental	4.04	0.112	197	3.81	4.26
binary comparison					
control - experimental	-2.17	0.189	197	-11.437	<.0001

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Appendix C

PERAM-ANCOVA analysis results for the effect of the variables (gender, academic qualification, specialization, age, and practical experience) on the post-test of motivation levels.

Intrinsic motivation					
	SS	df	F	parametric P(>F)	resampled P(>F)
Gender	0.07231	1	0.04965	8.239e-01	0.8264
Pretest	96.08121	1	65.97259	4.918e-14	0.0002
Residuals	286.90700	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Qualification	7.717	1	5.444	2.065e-02	0.0230
Pretest	72.305	1	51.006	1.738e-11	0.0002
Residuals	279.263	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Specialization	0.1884	1	0.1294	7.194e-01	0.7146
Pretest	84.3540	1	57.9438	1.094e-12	0.0002
Residuals	286.7909	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Years of experience	20.21	2	7.423	7.808e-04	0.0014
Pretest	67.44	1	49.551	3.175e-11	0.0002
Residuals	266.77	196			
	SS	df	F	parametric P(>F)	resampled P(>F)
Age	17.25	2	6.267	2.301e-03	0.0034
Pretest	82.81	1	60.177	4.647e-13	0.0002
Residuals	269.73	196			
extrinsic motivation					
	SS	df	F	parametric P(>F)	resampled P(>F)
Gender	0.3913	1	0.2678	6.054e-01	0.6110
Pretest	68.9064	1	47.1672	8.322e-11	0.0002
Residuals	287.7968	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Qualification	7.078	1	4.96	2.707e-02	0.0260
Pretest	51.540	1	36.12	8.839e-09	0.0002
Residuals	281.110	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Specialization	0.4563	1	0.3124	5.768e-01	0.5816
Pretest	66.9909	1	45.8663	1.424e-10	0.0002
Residuals	287.7317	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Years of experience	18.77	2	6.827	1.360e-03	0.0024
Pretest	48.95	1	35.609	1.111e-08	0.0002

Residuals	269.42	196			
	SS	df	F	parametric P(>F)	resampled P(>F)
Age	12.24	2	4.346	1.423e-02	0.0102
Pretest	64.10	1	45.529	1.655e-10	0.0002
Residuals	275.95	196			
Sence of responsibility					
	SS	df	F	parametric P(>F)	resampled P(>F)
Gender	0.01487	1	0.01141	9.151e-01	0.9134
Pretest	106.61274	1	81.79327	2.220e-16	0.0002
Residuals	256.77797	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Qualification	4.223	1	3.294	7.105e-02	0.0680
Pretest	87.439	1	68.201	2.109e-14	0.0002
Residuals	252.570	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Specialization	2.946	1	2.286	0.1321	0.1290
Pretest	108.271	1	84.025	0.0000	0.0002
Residuals	253.847	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Years of experience	18.13	2	7.442	7.667e-04	0.0014
Pretest	78.14	1	64.171	9.970e-14	0.0002
Residuals	238.67	196			
	SS	df	F	parametric P(>F)	resampled P(>F)
Age	7.774	2	3.06	4.915e-02	0.051
Pretest	96.668	1	76.09	1.110e-15	0.0002
Residuals	249.018	196			
self-efficacy					
	SS	df	F	parametric P(>F)	resampled P(>F)
Gender	0.3847	1	0.2648	6.074e-01	0.6078
Pretest	88.3592	1	60.8190	3.559e-13	0.0002
Residuals	286.2061	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Qualification	2.786	1	1.934	1.659e-01	0.1730
Pretest	72.645	1	50.426	2.198e-11	0.0002
Residuals	283.805	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Specialization	0.09443	1	0.06493	7.991e-01	0.7976
Pretest	82.99339	1	57.06772	1.544e-12	0.0002
Residuals	286.49642	197			
	SS	df	F	parametric P(>F)	resampled P(>F)
Years of experience	20.12	2	7.398	7.988e-04	0.0010
Pretest	62.50	1	45.969	1.379e-10	2,00E-04

Residuals	266.47	196			
	SS	df	F	parametric P(>F)	resampled P(>F)
Age	7.064	2	2.477	8.665e-02	0.0814
Pretest	79.707	1	55.889	2.497e-12	0.0002
Residuals	279.527	196			

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Appendix D

Pairwise comparisons and MME (Mean Marginal Estimate) for statistically significant variables in the motivation domains.

Intrinsic motivation					
Qualification	emmean	SE	df	lower.CL	upper.CL
Postgraduate	2.71	0.155	197	2.40	3.02
Diploma - Bachelor's	3.15	0.103	197	2.95	3.36
Contrast	estimate	SE	df	t.ratio	p.value
Postgraduate- Diploma - Bachelor's	-0.444	0.19	197	-2.333	0.0207
Years of experience	emmean	SE	df	lower.CL	upper.CL
1-5 years	2.87	0.124	196	2.62	3.11
5- 10 years	3.69	0.195	196	3.31	4.08
more than 10	2.84	0.139	196	2.56	3.11
Contrast	estimate	SE	df	t.ratio	p.value
(1-5 years)- (5-10 years)	-0.8246	0.236	196	-3.501	0.0017
(5- 1 من year)- more than 10	0.0313	0.187	196	0.167	1.0000
(5- 10 years)- more than 10	0.8558	0.239	196	3.580	0.0013
Age	emmean	SE	df	lower.CL	upper.CL
35-25 year	3.26	0.116	196	3.04	3.49
36-45 year	2.89	0.147	196	2.60	3.18
more than 46	2.45	0.208	196	2.04	2.86
Contrast	estimate	SE	df	t.ratio	p.value
(35-25 year)- (36-45 year)	0.378	0.188	196	2.016	0.1354
(35-25 year)- more than 46	0.811	0.239	196	3.391	0.0025
(36-45 year)- more than 46	0.432	0.254	196	1.701	0.2715
Extrinsic motivation					
Qualification	emmean	SE	df	lower.CL	upper.CL
Postgraduate	2.62	0.155	197	2.31	2.93
Diploma - Bachelor's	3.04	0.104	197	2.84	3.25
Contrast	estimate	SE	df	t.ratio	p.value
Postgraduate- Diploma - Bachelor's	-0.424	0.19	197	-2.227	0.0271
Years of experience	emmean	SE	df	lower.CL	upper.CL
1-5 years	2.75	0.123	196	2.51	3.00
5- 10 years	3.56	0.195	196	3.18	3.95
more than 10	2.76	0.140	196	2.49	3.04
Contrast	estimate	SE	df	t.ratio	p.value

(1-5 years)- (5-10 years)	-0.80865	0.234	196	-3.458	0.0020
(1-5 years)- more than 10	-0.00815	0.187	196	-0.044	1.0000
(5- 10 years)- more than 10	0.80051	0.240	196	3.330	0.0031
Age	emmean	SE	df	lower.CL	upper.CL
35-25 year	3.13	0.117	196	2.90	3.36
36-45 year	2.76	0.148	196	2.47	3.05
more than 46	2.49	0.210	196	2.08	2.90
Contrast	estimate	SE	df	t.ratio	p.value
(35-25 year)- (36-45 year)	0.374	0.189	196	1.979	0.1476
(35-25 year)- more than 46	0.645	0.240	196	2.682	0.0238
(36-45 year)- more than 46	0.270	0.257	196	1.053	0.8813
Sense of responsibility					
Years of experience	emmean	SE	df	lower.CL	upper.CL
1-5 year	2.79	0.116	196	2.56	3.02
5- 10 years	3.60	0.184	196	3.24	3.96
more than 10	2.83	0.132	196	2.57	3.09
Contrast	estimate	SE	df	t.ratio	p.value
(1-5 years)- (5-10 years)	-0.8078	0.221	196	-3.653	0.0010
(1-5 years)- more than 10	-0.0335	0.176	196	-0.190	1.0000
(5- 10 years)- more than 10	0.7744	0.226	196	3.422	0.0023
Self-efficacy					
Years of experience	emmean	SE	df	lower.CL	upper.CL
1-5 years	2.73	0.123	196	2.49	2.98
5- 10 years	3.60	0.194	196	3.22	3.98
more than 10	2.81	0.139	196	2.54	3.09
Contrast	estimate	SE	df	t.ratio	p.value
(1-5 years)- (5-10 years)	-0.8638	0.234	196	-3.696	0.0009
(1-5 years)- more than 10	-0.0769	0.187	196	-0.411	1.0000
(5- 10 years)- more than 10	0.7870	0.238	196	3.310	0.0033

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