

# Reengineering the Leadership Competencies of the Leaders at the Jordanian Ministry of Education According to the Contemporary Leadership Trends

Amira Yousef Thaher Mustafa

Ministry of Education, Amman, Jordan

**Email address:**

am.yo77@yahoo.com

**To cite this article:**

Amira Yousef Thaher Mustafa. Reengineering the Leadership Competencies of the Leaders at the Jordanian Ministry of Education According to the Contemporary Leadership Trends. *International Journal of Education, Culture and Society*. Vol. 8, No. 3, 2023, pp. 86-97.

doi: 10.11648/j.ijecsc.20230803.12

**Received:** October 31, 2022; **Accepted:** November 28, 2022; **Published:** May 18, 2023

---

**Abstract:** This study aimed to present a restructuring of the competencies of educational leaders in the Jordanian Ministry of Education based on contemporary leadership trends. The study population consisted of all leaders, officials, administrators, and heads of departments at the Ministry of Education center who are in charge of their work during the year 2020/2022. To achieve the goal of the study, the researcher used the developmental survey methodology, and a questionnaire consisting of (51) items was developed distributed over (5) domains whose validity and reliability were confirmed. Then, it was distributed among the (260) members of the study, including all leaders, officials, administrators, and heads of departments in the Jordanian Ministry of Education. The results of the study showed: The reality of the availability of engineering competencies among the educational leaders in the Jordanian Ministry of Education was average from their point of view, with statistically significant differences, when comparing the reality with the upper limit of averages (5). Based on these results, a restructuring of the competencies of educational leaders in the Jordanian Ministry of Education was presented based on contemporary leadership trends. The researcher recommended several recommendations, including: training qualified educational leaders to bring about innovative developmental changes in the ministry and its institutions, and enabling them to direct the charisma of leadership to raise motivation towards standard practices among human cadres. She recommended that the Ministry of Education adopt the restructuring of leadership competencies to achieve change and development of distinguished educational learning that is capable of making a difference and achieving added value. And the adoption of engineering to enable educational leaders to achieve creativity, innovation and comprehensive institutional change in their positions.

**Keywords:** Competencies, Engineering Competencies, Educational Leaders, Ministry of Education

---

## 1. Introduction

The educational and educational development was accompanied by the latest developments in educational theories And administrative, and he was able to do a lot to raise the level of education and improve it, and raise the quality and level And quality And based on the importance of the prominent and fundamental role of education in the development of the system as a whole, comes the concern for the leader The educational administrator, who achieves the required development and achievement of the requirements of the role he takes in the educational institution, as it determines the needs needed in the present, and works on

planning and forecasting in the future, and he is the one who drives and mobilizes energies to achieve the best levels of achievement, influencing leadership in the overall level of performance in the organization. This triggers a highly effective leadership capacity capable of unifying educational development; She goes to education with proactive competencies, who innovates and manages entailed conflicts The present crises and challenges by building flexible strategic plans aware of the immediate moment and its developments, and of the importance of Investing intellectual capital through the development of professional capital in order to upgrade the institution and its outputs and value added [1].

The Jordanian Ministry of Education seeks to prepare leaders in an integrated manner. According to a clear socio-political and intellectual vision, which society is satisfied with and agreed upon by its various groups and institutions; to ensure a high level of the desired education and its outputs, by enabling them to have contemporary skills and competencies to compete effectively at the national and international levels; by continuously improving the education system and the quality of outputs and achievements by building efficient educational leadership capabilities with sufficient powers and powers to lead change, Covey mentions that: competent leaders are the ones who have the competencies necessary to remove obstacles and provide requirements in light of a forward-looking vision of internal and external developments to serve the community through the enterprise with flexible strategies that exploit opportunities and expand the skills base [2]. Leadership competencies are the basis for development and perfection, as Shavaran, Rajaeepour, Kazemi, & Zamani, assert: that skills, knowledge and attitudes are what contribute to achieving goals in an efficient and effective manner that leads to excellence and change in line with contemporary developments [3].

The process of development and change requires an institutionalization related to changing the overall picture of the cultural and educational component, leaders must be found capable of building policies, general frameworks for evaluation, and providing technical and logistical support necessary to achieve the desired development and change, and take responsibility for employing the results of self-review to improve learning, and build Sustainable professional capabilities, and the concept of re-engineering administrative processes (engineering) is one of the most important approaches to development that is based on redevelopment, by rapid and radical re-design of strategic administrative processes, as well as systems, policies and organizational structures, with the aim of improving performance and increasing the productivity of the institution in terms of quantity and quality, with the least cost, time and effort [4].

Engineering restructures the institution, regardless of its circumstances or level, and leads it to develop and develop with a selection flexibility, in order to reach the planned and announced goals, with a real desire to bring about the desired change following the example of pioneering references and models in the same field, keeping pace with the new developments in response to the requirements of the times [5].

The management starts from scratch, and focuses on the administrative processes of the highest activities and is concerned with the results and needs, so the work structure works on building it and enables to find radical solutions to the problems by seeing the overall picture of the institution outside the routine. It is the most effective way to achieve the goals of the educational institution by introducing radical adjustments to meet the challenges of developments and to achieve efficiency and effectiveness in performance [6].

This study adopts contemporary leadership trends modern

educational leadership theories to enable educational leaders at the upper, middle and executive levels to have a clear understanding of their roles and personalities, and to enable motivation to reach the best levels of planned achievement, and the implementer and follower with clear and understandable mechanisms to be questioned during his leadership of the required role Through the innovative contemporary competencies that modern theories refer to, through which it can achieve balance and effective organized action based on adopting an ideology that blends between all the styles with a clear policy for himself, the higher authorities and the subordinates. According to Al-Amer, Youssef Abdullah: The competencies of the leadership personality enhance performance to make it at higher levels, and useful in crisis situations as it can obtain inputs from all team members, integrated information from all parties, and the competencies of the leadership personality periodically linked to leadership success at lower levels of organizations [7].

There are many modern theories on which this study was based, including:

- 1) reciprocal theory: it is a high-quality exchange between the leader and his team, motivating members with the principle of reward and punishment and assigning tasks to them with confidence, so they assume additional tasks [8].
- 2) Transformational theory: a process in which leaders and his team raise each other to higher levels of morality and motivation, by appealing to idealistic ideas and inspiring followers [9].
- 3) Service theory: The leader feels that he is based on serving others and does not track mistakes, but asks inspecting the progress of work, as he has responsibilities towards followers and society [10].
- 4) Leadership with love: It focuses on values and the social capital that it raises by developing the emotional intelligence of the team, and training them to manage and express their emotions, to return the organization to its integration, balance and flexibility in light of self-development [11].
- 5) Adaptive leadership: in which the leader is the person who mobilizes people to face difficult challenges, build ties to deal with them with a new perspective, create an emotional arena that addresses the tension of the challenge, and encourages focus in collaborative ways, and hearing voices inside and outside [12].

By tracking events on the ground in the Jordanian Ministry of Education, you see deep-reaching visions that are translated by the Ministry's objectives, the development of learning strategies and approved programs for planning, development that lack close follow-up and impact measurement. The policies adopted with the aim of change to achieve visions, tests, multiple training programs without actual empowerment of manpower, and tangible improvement of the performance of the human element in the field. The urgent need arises for educational leaders in the Jordanian Ministry of Education to choose strong

personalities capable of coordinating, organizing efforts, linking individuals within an integrated chain that realizes the positive goals, effective strategies, the possibilities that can be invested in order to reach a state of balance and stability in developing individuals in the ministry, as leaders capable of achieving visions within the Ministry's continuous trends towards change and renewal that keep pace with the developments of the times and the requirements of globalization; By being able to make the best use of knowledge growing in a rapid and explosive increase as intellectual capital it is worth investing in [13].

Thus, this reengineering has been applied to the competencies of leaders, competent (operations) skills concerned with organizations, with its comprehensiveness and details and everything related to leadership, team leadership and its internal and external environment, to develop, change and transform institutions to adopt new contemporary roles to innovate methods and techniques whose primary focus is on operations. This is consistent with the trends of contemporary leadership to achieve a high level of effectiveness in educational institutions. Achieving high level effectiveness in educational institutions; To create leadership empowerment at higher levels that includes leaders at various levels in the Jordanian Ministry of Education and its departments, and is reflected in leaders at all other levels in educational institutions that fall under the umbrella of the Ministry in the Hashemite Kingdom of Jordan. Everyone works according to a systematic policy that understands aspects of engineering tracks in their stages and fields.

The researcher studied the re-engineering of leadership competencies in the Jordanian Ministry of Education, within several paths, stages, and fields that are compatible with the ministry's vision, aspirations, and success.

Study problem and questions:

The importance of re-engineering the competencies of educational leaders in the Jordanian Ministry of Education based on the contemporary leadership trends is one of the recent trends in the state's policy in the development of education, the adoption of modern methods capable of improvement, development effectively and efficiently. The education sector is the main tributary of all other sectors. Leadership improves the level of overall performance in the organization. As for the leader, he moves and directs energies to achieve the best levels of achievement through his contemporaries. The competencies that lead to work on engineering the competencies of the educational leader in the Ministry of Education are based on a five-stage engineering process that will bring about comprehensive development and qualitative change [14].

The importance of engineering is evident in a framed methodology that defines the competencies of educational leaders within clear paths, stages, and fields. In addition to the competencies that each leader will exercise in his place to achieve the vision, mission and goals of the ministry, the problem of the study is to answer the following main question:

What is the appropriate engineering of the leadership competencies of leaders in the Jordanian Ministry of Education based on contemporary leadership trends?

The study questions are:

- 1) What is the degree of need for leadership competencies of leaders in the Jordanian Ministry of Education based on contemporary leadership trends from their point of view?
- 2) What is the appropriate engineering of the leadership competencies of leaders in the Jordanian Ministry of Education based on contemporary leadership trends?

The importance of studying:

The importance of the study lies in the practical and theoretical importance, which is detailed as follows:

Application importance:

It is hoped that the results of the study will provide benefits to the following entities:

- A. Educational leaders in the Ministry of Education: it helps them to master the educational leadership competencies that they will practice during their period of leadership, within clear templates for all those concerned with the leadership role entrusted to the leader in his position.
- B. Planners: Take advantage of the importance of the subject of engineering competencies of educational leaders to avoid the negatives, and focus on the positives in the planning criteria for selecting leaders in the ministry, directorates of education and schools.

Theoretical significance:

Hope that the results of the study will provide:

- 1) A new form of educational leadership competencies needed for leaderships in the Ministry of Education.
- 2) Preparing development studies in educational leadership and its fields, in an effort to improve the effectiveness and efficiency of leadership at all levels.
- 3) Specifically, for handing the competencies of educational leaders in the Jordanian Ministry of Education, and for leaderships in other ministries in Jordan.

Purpose of the study:

This study aimed to develop an engineering of the educational leaders' competencies in the Jordanian Ministry of Education based on contemporary leadership trends.

Terminology of study:

The study adopted the definition of terms as follows:

- 1) Competencies: The necessary skills that the individual possesses to carry out his tasks effectively, with high quality that achieves the goal, and provides satisfactory results.
- 2) Procedural educational competencies: It is a set of knowledge, experiences, skills, practices, abilities and trends that appear as behaviors and professional patterns that the educational leader possesses and enables him to perform his abilities and achieve goals and objectives based on the requirements and needs of the age.
- 3) Engineering competencies: the competencies that enable the leader to radically rethink the principled and

fundamental re-design of processes to achieve substantial improvements in cost, quality, speed and service. It is a strategy for encouraging innovation and for making major improvements in operations as any organization can become a competitor and more successful in the market [15].

- 4) Procedural: They are the competencies of radically rethinking and radically redesigning educational leadership processes to achieve contemporary critical perceptions and goals with effective and efficient performance, with new innovative methods.
- 5) Procedural leaders: They are the people who influence the behavior and attitudes of individuals, and who possess competencies and strategies that enable other leaders at lower levels to achieve the set goals by directing their behavior to influence individuals, groups and coordinating their efforts towards the planned achievement, to achieve specific optimal outcomes.
- 6) The Jordanian Ministry of Education: It is a Jordanian government agency responsible for the education system in the primary, basic and secondary levels in the Hashemite Kingdom of Jordan. The Ministry of Education was established in 1956.

The limits of the study:

The study defines the following:

Spatial boundaries: The Ministry of Education in the Hashemite Kingdom of Jordan.

Time limits: The researcher conducted the study in the 2020/2022 academic year.

Human Frontiers: Leaders in the Ministry; Minister and Secretary General, Administrative Directors, Concerned Directors, and Heads of Departments.

Previous studies:

Many previous studies have dealt with the subject of the current study, including:

- 1) A study aimed the reality of the performance of the school administration in the schools of the State of Kuwait and arriving at a suggested scenario for the application of the administrative engineering approach. The researcher used the descriptive approach to describe the reality of school administration performance and the degree of applicability of the engineering approach to the three administrative processes (curriculum management, teacher professional development, and financial resources management), and he used a questionnaire he developed for the purpose of describing the reality, and this was done by analyzing and interpreting data. One of the most important findings of the study was: that there are many obstacles related to: curriculum management, teacher professional development and management of financial resources, which calls for the adoption of the principle of restructuring those schools or educational institutions, and the necessity of reconstruction and change [16].
- 2) A study aimed identifying the impact of engineering on the development of university education outputs in

light of academic accreditation in the College of Education at King Saud University, and to know the relationship between engineering and the satisfaction of female graduates with the quality of the outputs of the College of Education and its compatibility with the needs of the labor market. The descriptive survey approach and the questionnaire were used as a research tool. It was applied to a stratified random sample of (50) graduate students, and the results were: that the handicap has a direct role in the quality of university education. And it increases the productivity and efficiency of faculty members, and it is one of the important concepts of our time to develop performance [17].

- 3) A study aimed to examining the various aspects of the method of re-engineering administrative processes and computerizing them in higher education institutions in Gaza, and to present a proposed concept for the application of the method of re-engineering. The researcher followed the descriptive and analytical approach and used the interview card to know the reality of administrative operations at the university. The results were that engineering leads to: an increase in the level of job satisfaction among university employees at all their administrative levels, and that the application of engineering has led to fundamental modifications to the university's administrative systems in line with the requirements of re-engineering and service improvement. The researcher recommended the necessity of spreading and strengthening the concept of engineering for all the Islamic University staff, including administrators and academics [18].
- 4) A study aimed identifying obstacles to re-engineering in public schools in Gaza governorates and ways to reduce them. It followed the descriptive and analytical approach and used the questionnaire as a tool that was applied to a sample of (398) managers and principals. The study reached conclusions: Financial obstacles prevent the application of re-engineering administrative processes, then technical and administrative processes, and it was suggested to reduce the obstacles of administrative processes engineering [19].
- 5) A study aimed identifying the reality of the performance of department heads in the education directorates in the governorates of Gaza in light of the method of re-engineering administrative processes and engineering. The researcher used two approaches: the descriptive, analytical and constructive approach to suggest the perception. Department, and reached conclusions, the most important of which are: The overall degree of the reality of the performance of department heads in the education directorates in the governorates of Gaza obtained a relative weight (44.84%), and suggested a scenario for development in light of the recommended administrative process

engineering method [20].

- 6) A study aimed analyzing the impact of investing in intellectual capital on the application of re-engineering administrative processes in Jordanian public institutions, and to achieve the objectives of the study, a questionnaire was developed for the purpose of collecting data and distributed to (435) employees, who were chosen by the random sample method. The study reached a set of results, the most prominent of which is that (engineering) in public institutions is of a high degree. It recommended strengthening the dimensions of investment in intellectual capital in order to implement the approach of re-engineering administrative processes [21].
- 7) A study aimed analyze the application of the process engineering process in Ethiopian higher education institutions, and the effectiveness of its application, and the researcher collected data through (160) questionnaires that surveyed faculty members. In the process of communicating and achieving the objectives of process engineering [22].
- 8) A study aimed ascertain the Nigerian experience in university education using the re-engineering of information management. Federal universities in Nigeria, and the results revealed that despite investments in information management in universities, they have not been re-engineered through strategic information management technology [23].
- 9) A study aimed uncovering the most important leadership competencies that make a leader effective. It targeted (195) leaders worldwide from (15) countries and belong to (30) international organizations. A questionnaire was applied to them, and the results were that: The most important competencies are "High ethical and moral standards", followed by "Communicating with clear expectations". The researcher recommended that: The leader should have leadership competencies, high ethical standards, and be committed to achieving justice [24].
- 10) A study in Kenya that aimed to find out ways in which principals gain the leadership competencies needed for the effective management of secondary schools. Qualitative and quantitative methods were adopted in collecting data, and the stratified random sample consisted of (30) schools, (30) principals and deputy principals, (60) heads from departments, (120) teachers, (180) student leaders and (20) As a member of the boards of directors, data were collected using questionnaires, focus group discussions, and interview guides, and the results were that leadership competencies were acquired through previous service, in-service, on-the-job and training [25].
- 11) A study at Washington State University aimed to study the personal capabilities of six school principals who developed the leadership capabilities of other leaders in their schools. Participants were purposefully selected by two teams of researchers in two states from the United

States, and the results indicated that principals possess a strong commitment to development and leadership capacity, through leadership development as a process of increasing organizational leadership capacity, through the characteristics and competencies that principals possess in schools as leaders. Educators [26].

By reviewing previous studies, it was noted that many recommendations were made, and different results were reached: Adopting engineering in schools and educational institutions. Engineering achieves quality and increases productivity and efficiency. Developing the performance of faculty members. Popularizing the concept of engineering, as it introduces fundamental modifications to systems. Reducing the obstacles of engineering administrative operations. Re-engineering to improve performance. Re-engineering processes enhance investment in intellectual capital. Lack of personnel training negatively affects process engineering. That vital processes such as education, research and university administration have not yet been redesigned.

On the leadership side, the results that: there is a need to develop the competencies of leaders, including that the leader acquires the necessary competencies through pre-service, during service and training. A leader must have standard leadership competencies to be effective. Developing the leadership capabilities of leaders by developing their characteristics and competencies as educational leaders.

All studies confirm the importance and role of engineering as well as personal characteristics and competencies because of their capabilities and effectiveness in bringing about change, development and improvements to develop the performance of all institutions at different levels of leadership. With regard to the current study, it aims at engineering the competencies of educational leaders, and it differs from previous studies in that it presented: Reinforcement of the competencies of educational leaders in the Ministry of Education, while none of the previous studies combined the competencies of educational leaders. And it provided a new form of educational leadership competencies needed for leaderships in the Ministry of Education, and it presented engineering in a different way, as it separated engineering into three tracks comprising the five phases of re-engineering, and it was clarified within areas that the person familiar with the engineering could easily and easily understand.

## 2. Methodology and Procedures

This study adopted the descriptive survey approach, for its suitability for conducting the study.

### 2.1. Study Population

The study population consisted of all leaders, officials, administrators and heads of departments in the Ministry of Education Center who are at the head of their work, and their number is: (260). This statistic was obtained from the Ministry of Education website in Jordan, and they are distributed as follows:

**Table 1.** Distribution of the numbers of the study population according to the position, qualification and gender [24].

variable	Category	Repetition	percentage
Job title	Principal department manager and above	24	.92
	Director of an administrative unit	44	.169
	Head of the Department	192	.738
	Total	260	100
Qualification	Bachelor of	79	.304
	M. A.	98	.377
	PhD	83	.319
	Total	260	100
Sex	Male	198	.762
	female	62	.238
	Total	260	100

Source: Jordanian Ministry of Education www.moe.gov.jo 2020/2022

**2.2. Study Tool**

To achieve the objectives of the study, a questionnaire was developed based on contemporary leadership trends (contemporary leadership theories) and based on previous literature and relevant previous studies such as.

The questionnaire included 51 paragraphs, distributed on (5) areas were degrees of (1-5) according to the Likert scale of the five - year, measure the reality of leader’s practices, to compare the value of the upper balance which is (5) It included the following areas: (components of engineering, raising performance rates, standard infrastructure engineering, innovation and change, control and empowerment). I give each paragraph graded according to the weight of the five - Likert scale (very large degree, significantly, moderately, to a low degree, degree rare), and represent digitally order (1, 2, 3, 4, 5). The following scale has been adopted for the purposes of analyzing the results:

The scale was calculated by the following equation = upper limit of scale - (5) lower limit of scale (3) / (1).

$$1.33 = 3/1 - 5$$

Of = 2.33 - 1 Low

Of = 3.67 - 2.34 medium

From = 5 - 3.68 high degree

Study variables

The study included the following taxonomic variables:

- a) The job.
- b) Sex.
- c) Experience.

**2.3. The Validity and Reliability of the Tool**

The validity of the tool was extracted through the validity of the content, by presenting it to (13) arbitrators of the arbitrators, to indicate the validity of the paragraphs and their suitability to be within the approved fields, and the tool as a whole, and based on the opinions of the specialized arbitrators, the language was formulated, and then it was approved in its final form consisting of (51) a paragraph, since none of its paragraphs was excluded according to the opinion of the arbitrators whose amendments were linguistic.

To calculate the stability of the study tool, the internal consistency coefficient (Cronbach Alpha) was used for the fields of the study tool, and Table 2 shows that the values of the stability coefficients using (Cronbach Alpha) for the subfields are suitable for the purposes of the study, and that the tool has an appropriate degree of stability.

**Table 2.** The values of the stability coefficients for the main dimensions using the internal consistency coefficient) Cronbach Alpha.

Study variables	Stability coefficient
The field of engineering components	0.956
The field of raising performance rates	0.943
The field of modular infrastructure engineering	0.937
The field of innovation and change	0.940
Domain of control and mastery	0.941

**3. Statistical Processing**

The statistical analysis process was carried out to answer each of the study questions as follows:

- a) were extracted averages and standard deviations and the order of the results of the first question.
- b) The differences between the averages for the second question were extracted using multiple analysis of variance (MANOVA).

**4. Results**

The results of this study were as follows:

Results related to the first question :What is the degree of need for engineering competencies among the educational leaderships in the Jordanian Ministry of Education from their point of view?

To answer this question, calculated the averages and standard deviations for each dimension of the dimensions of

a questionnaire and each paragraph of the paragraphs of the reality of availability of competencies Reengineering the educational leadership in the Ministry of Education of Jordan

from their point of view ,the following presentation of these results and Table 3 shows that:

**Table 3.** The arithmetic averages and standard deviations of the responses of the study community about“ the reality of availability of engineering competencies among the educational leaders in the Jordanian Ministry of Education from their point of view ”arranged in descending order according to the arithmetic averages.

Degree of availability	Arrangement	standard deviation	SMA	The degree of availability of leadership competencies among leaders in the Jordanian Ministry of Education based on contemporary leadership trends	the number
Average	1	0.92	2.88	Elements of engineering	1
Average	2	0.93	2.68	Raise performance rates	2
Average	3	0.92	2.63	Infrastructure engineering	3
Average	4	0.93	2.60	Innovation and change	4
Average	5	1.02	2.53	Control and mastery	5
Average		0.84	2.7	The total score of the instrument	

The results in Table 3 show the arithmetic averages for the dimensions (the availability of engineering competencies among educational leaders in the Jordanian Ministry of Education from their point of view), ranged between (2.88 and 2.53), as the engineering competencies of educational leaders in general obtained an average My arithmetic total amounted to (2.70), which is from the average level, and it came in the first place (elements of engineering) with an arithmetic mean of (2.88) and a standard deviation of (0.92), and in the second place came (raising performance rates) with an arithmetic mean of (2.68) and a standard deviation It reached (0.93), which is from the average level, and in the third place came (Infrastructure Engineering), which obtained an arithmetic

mean of (2.63) and a standard deviation of (0.92), which is from the average level, And in fourth place came (Innovation and Change), which has an arithmetic mean of (2.53) and a standard deviation of (0.93), which is from the average level. In the last place came the availability of (control and mastery) with an arithmetic mean of (2.53) and a standard deviation of (1.02), which is from the average level.

After that, “t” values were extracted for all items and domains included in the scale, to know the degree of need that was calculated by finding the difference between reality and the upper value. The results of “t” values indicated that there were statistically significant differences for all items, and Table 4 explains this:

**Table 4.** Arithmetic averages, standard deviations, and (T) values to denote the differences between availability (reality) and importance (hope) for the items of the study tool.

Statistical significance	Value (V)	Difference from value (5.00)	Standard deviation	Sma	Paragraph	The field
* 0.00	-22.700	-1.76	1.25	3.24	Q1	
* 0.00	-25.374	-1.83	1.16	3.17	Q2	
* 0.00	-27.982	-1.97	1.14	3.03	Q3	
* 0.00	-27.784	-2.03	1.18	2.97	Q4	
* 0.00	-27.736	-2.05	1.19	2.95	Q5	
* 0.00	-23.936	-1.93	1.3	3.07	Q6	
* 0.00	-29.192	-2.07	1.15	2.93	Q7	
* 0.00	-29.296	-2.17	1.19	2.83	Q8	The Field of Engineering Components
* 0.00	-29.341	-2.12	1.16	2.88	Q9	
* 0.00	-31.809	-2.18	1.11	2.82	Q10	
* 0.00	-28.348	-2.18	1.24	2.82	Q11	
* 0.00	-36.479	-2.46	1.09	2.54	Q12	
* 0.00	-34.421	-2.35	1.10	2.65	Q13	
* 0.00	-35.258	-2.35	1.07	2.65	Q14	
* 0.00	-34.149	-2.38	1.12	2.62	Q15	
* 0.00	-37.397	-2.12	0.92	2.88	MACRO	
* 0.00	-31.401	-2.32	1.19	2.68	Q16	
* 0.00	-30.620	-2.31	1.22	2.69	Q17	
* 0.00	-30.330	-2.29	1.22	2.71	Q18	
* 0.00	-28.263	-2.19	1.25	2.81	Q19	
* 0.00	-29.534	-2.18	1.19	2.82	Q20	
* 0.00	-33.206	-2.32	1.13	2.68	Q21	The Field of Raising Performance Rates
* 0.00	-33.865	-2.25	1.07	2.75	Q22	
* 0.00	-35.386	-2.43	1.11	2.57	Q23	
* 0.00	-34.472	-2.40	1.12	2.60	Q24	
* 0.00	-33.540	-2.42	1.16	2.58	Q25	
* 0.00	-32.941	-2.40	1.18	2.60	Q26	
* 0.00	-40.190	-2.32	0.93	2.68	MACRO	
* 0.00	-33.912	-2.40	1.14	2.60	Q27	The Field of Modular
* 0.00	-36.039	-2.45	1.09	2.55	Q28	
* 0.00	-34.211	-2.38	1.12	2.62	Q29	Infrastructure

Statistical significance	Value (V)	Difference from value (5.00)	Standard deviation	Sma	Paragraph	The field
* 0.00	-34.418	-2.48	1.16	2.52	Q30	Engineering
* 0.00	-34.805	-2.36	1.09	2.64	Q31	
* 0.00	-33.835	-2.33	1.11	2.67	Q32	
* 0.00	-32.462	-2.29	1.14	2.71	Q33	
* 0.00	-33.797	-2.33	1.11	2.67	Q34	
* 0.00	-33.491	-2.36	1.14	2.64	Q35	
* 0.00	-41.761	-2.37	0.92	2.63	MACRO	
* 0.00	-34.169	-2.37	1.12	2.63	Q36	
* 0.00	-34.924	-2.39	1.10	2.61	Q37	
* 0.00	-34.176	-2.35	1.11	2.65	Q38	
* 0.00	-35.079	-2.40	1.10	2.60	Q39	The Field of Innovation and Change
* 0.00	-34.750	-2.38	1.10	2.62	Q40	
* 0.00	-33.386	-2.38	1.15	2.62	Q41	
* 0.00	-33.876	-2.43	1.16	2.57	Q42	
* 0.00	-34.323	-2.43	1.14	2.57	Q43	
* 0.00	-33.540	-2.42	1.16	2.58	Q44	
* 0.00	-41.623	-2.40	0.93	2.6	MACRO	
* 0.00	-32.329	-2.43	1.21	2.57	Q45	
* 0.00	-33.551	-2.41	1.16	2.59	Q46	
* 0.00	-33.970	-2.43	1.16	2.57	Q47	
* 0.00	-35.128	-2.49	1.14	2.51	Q48	Domain of Control and Mastery
* 0.00	-33.681	-2.50	1.20	2.50	Q49	
* 0.00	-33.695	-2.51	1.20	2.49	Q50	
* 0.00	-33.527	-2.49	1.20	2.51	Q51	
* 0.00	-39.171	-2.47	1.02	2.53	MACRO	
* 0.00	-44.153	-2.30	0.84	2.70	Leadership Competencies as a Whole	

\*: A function at the level of significance (0.05), the difference: the difference between the arithmetic means and the value (5.00) as the highest value of importance

Third: The results related to the second question: What is the appropriate engineering of leadership competencies of leaders in the Jordanian Ministry of Education based on contemporary leadership trends?

To answer this question, the correlation coefficients were calculated for each paragraph with the domain to which they belong, and the correlation coefficients were calculated for each paragraph with all domains, and the result indicated that all the correlation coefficients were statistically significant at the level (0.01 = ∞), as it was found that the correlation coefficients The paragraphs of the total score ranged between (0.667 - 0.778), and all of these values are statistically significant at the level of significance (0.01 = ∞). It was also found that the paragraphs correlation coefficients for the domains were statistically significant, as the paragraph correlation coefficients with its domain ranged between

(0.733 - 0.733) 0.818) for paragraphs (1-15), which was a function at the level of (= 0.01), and it was found that the coefficients of the paragraph correlation with its domain raised performance rates ranged between (0.753 - 0.838) for paragraphs (16-26), which was a function at the level of = 0.01), and it was found that the paragraph correlation coefficients with its field of infrastructure engineering ranged between (0.764-0.877) for paragraphs (27-35), which was a function at the level (0.01 = ∞), and it was found that the paragraph correlation coefficients with its field of innovation and change It ranged between (0.734 - 0.857) for paragraphs (36-44), which was significant at the level of (0.01 = ∞). That the paragraph correlation coefficients with its domain of control and ability ranged between (0.788 -0.900) for paragraphs (45-51), and Table 5 illustrates that.

Table 5. Paragraph correlation coefficients with domain and paragraph correlation with overall score (significance).

Total Marks	Control and Mastery	Innovation and Change	Infrastructure Engineering	Raise Performance Rates	Elements of Engineering	Paragraph
.702 **					.757 **	1
.737 **					.793 **	2
.721 **					.815 **	3
.707 **					.818 **	4
668 **					.782 **	5
.714 **					.807 **	6
.739 **					.800 **	7
765 **					.812 **	8
.725 **					.778 **	9
.732 **					.775 **	10
.722 **					.780 **	11
.686 **					.733 **	12
.725 **					.769 **	13

Total Marks	Control and Mastery	Innovation and Change	Infrastructure Engineering	Raise Performance Rates	Elements of Engineering	Paragraph
.741 **					.775 **	14
.778 **					.794 **	15
.762 **				.790 **		16
.747 **				.801 **		17
.761 **				.823 **		18
.762 **				.838 **		19
.711 **				.801 **		20
.722 **				.809 **		21
668 **				.773 **		22
.684 **				.779 **		23
.736 **				.817 **		24
.727 **				.786 **		25
.731 **				.753 **		26
.743 **			764 **			27
.694 **			.775 **			28
.716 **			.804 **			29
.721 **			.832 **			30
.774 **			.877 **			31
.746 **			.858 **			32
.734 **			.845 **			33
724 **			.812 **			34
.743 **			.783 **			35
667 **		.734 **				36
.709 **		.796 **				37
.686 **		.814 **				38
.758 **		.857 **				39
.738 **		851 **				40
.732 **		.850 **				41
.747 **		.849 **				42
.763 **		.843 **				43
.759 **		.809 **				44
.714 **	.788 **					45
.721 **	.845 **					46
.711 **	.860 **					47
.747 **	.900 **					48
.753 **	.889 **					49
.766 **	.876 **					50

\*\* : a function at the level (0.01)

In order to present the engineering in its final form, all the paragraphs representing the stages of engineering and the competencies of the educational leaders, which were found to be effective, were linked through the correlation coefficients that were calculated between the paragraph, the field, the

paragraph and all the tool.

And based on the results of the previous questions, the leadership competencies were re-engineered and were represented in the following form:

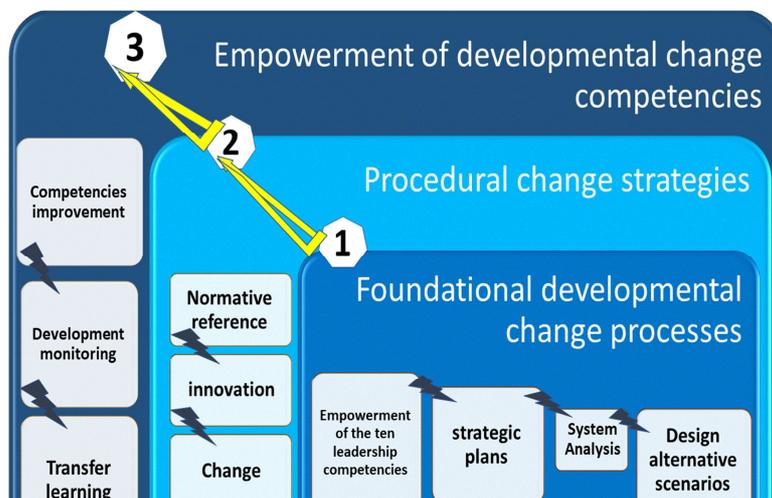


Figure 1. Designing stages of engineering competencies of educational leaders.

## 5. Results

First: Discussing the results related to the first question: What is the degree of need for leadership competencies among leaders in the Jordanian Ministry of Education based on contemporary leadership trends from their point of view? To answer this question, the questionnaire was built as a study tool to measure the degree of need for engineering competencies among the educational leaders in the Jordanian Ministry of Education based on contemporary leadership trends from their point of view, and based on the analysis of the results of the response of the leaders in the ministry, and the results of this question indicated that the degree of need came The overall degree is at an average level for all fields, and the reason for this result may be attributed to the fact that competencies were not previously re-engineered, addressed and improved by engineering processes that bring about an innovative and renewed change in competencies and their proficiency according to the literature, perspectives and engineering surveyed. A new management concept, applied in its nature to rebuild the structure as a whole. Renewed, and it focuses mainly on improving special operations, on operations-specific activities, on policies, trends, practices and activities, as well as to restructure human cadres, and the competencies of leaders have not been discarded as an independent part, and this may be due to the lack of capabilities and resources of all kinds due to the lack of education allocations In the country and the need for financial support and continuous financing to achieve development and improvement, as it is due to the lack of a consistent methodology And serial programs with modern mechanisms concerned with the competencies of educational leaders, as it is attributed to the successive changes in development policies in the ministry according to ministerial changes in short periods of time and following the approach of the responsible rather than ministerial policy institutionalized with long-term fixed strategic plans. It is attributed that the majority of graduates today do not have the broad background necessary to understand responsibility and leadership on a large scale with the aim of ensuring the development of the mentality required for leaders to take full responsibility for the success of their organizations in aligning operations with real needs to achieve full participation with an individual's sense of self and a sense of purpose to enhance the true nature of operations, Because of the lack of training and empowerment of the necessary competencies in internal training at all stages, both personal and technical. The results of this study are in agreement with [20] in that the overall score of the reality of the performance of department heads in the directorates of education in the governorates of Gaza obtained a relative weight (44.84%), and it differed with the results of the study of [21] that the re-engineering of administrative processes (engineering) in public institutions was High degree.

Second: Discussing the results related to the answer to the second question: What is the appropriate restructuring of

leadership competencies among leaders in the Jordanian Ministry of Education based on contemporary leadership trends? After measuring the reality of the application of refining leadership competencies among leaders in the Jordanian Ministry of Education based on contemporary leadership trends through the application of the study tool, refining of leadership competencies was developed in accordance with the Jordanian Ministry of Education, within paths, stages and areas that include educational leadership processes and procedures, which enable for the success of this study. The engineering was developed after making sure that the structure is integrated for all the tool and that the paragraphs are of appropriate effectiveness. The effectiveness of the paragraphs was known by calculating the correlation coefficients for each paragraph with the domain to which it belongs, and calculating the correlation coefficients for each paragraph with all fields. The result indicated that all the correlation coefficients were Statistically significant at the level of ( $0.01\infty =$ ), as it was found that the correlation coefficients of the paragraphs for the total degree, and all these values are statistically significant at the level of significance ( $0.01\infty =$ ), and it was also found that the correlation coefficients of the paragraphs for the domains were statistically significant at the level of ( $0.01\infty =$ ).

This proposed re-engineering combines the re-engineering of the competencies of the educational leader as a holistic leader of the operations related to all inputs in the educational institution, who directs the procedures and leads the operations towards the quality and excellence of the educational outputs as planned in the light of modern developments and innovations, and the re-engineering of the institution as a whole. The regeneration of the competencies of the educational leader in his organization is reflected in the institution and the team, so he enables him to develop the competencies of reconnaissance by developing himself with a continuous change that coincides with developments, developing the members of his team, transferring the reconfiguration process to them and empowering them with it, which establishes a culture of change and comprehensive and renewable development for the educational institution, so the organization is tirelessly re-engineered, and this is an advantage of re-engineering the competencies of the leader given that he is the main axis in leading all that is done in the institution and the decision-maker, delegated and empowered, capable of adopting the necessary policies, directing and assigning to implement them and follow up on their implementation. This engineering is characterized by being separated into three paths that include five stages that show the competencies that the leader must be able to master at each stage, and what this will bring about in terms of developmental change processes that will be reflected in the organization and team members, in a way that guarantees continuous improvement and development to achieve the radical change that is reflected in the outputs of the process. Educational learning and its products, which should be of high quality and competitiveness at the local and global

levels.

Engineering begins with the path of foundational developmental change processes, which begin with strategic planning to bring about change, through the leader's analysis of the institutional system in order to be able to know and realize the nature of the developmental competencies that must be possessed, and assess the needs. The refining of the competencies of the educational leader leads to creativity and innovation by providing the necessary appreciation for the members of the educational team and their achievements, and by achieving institutional self-returns that the leader and his team plan for realistically and creatively. The educational institution, to support creativity and institutional innovation that leads to the total radical change reflected in learning and its outcomes.

Engineering contributes in its second phase, which is located in the second track, by creating development opportunities to improve the competencies of the engineering leader through the selection of a standard external reference, from outside the educational institution represented in exemplary, globally successful leaders as a role model, which contributes to the development of internal leaders at legal levels, which is directly reflected in Developing standard internal institutional educational processes based on a comprehensive institutional analysis.

While the third stage of engineering the competencies of the educational leader, which is located in the second track of reengineering, represents the empowerment of the educational leader with the engineering design competencies for the engineering of the educational institution. Innovative concepts and processes, then selects the appropriate work mechanism to bring about change, adapts and tests it, and then purifies, improves and develops it as a transformational plan based on a technological vision based on information technology.

In its third and final track, reengineering achieves the empowerment of the developmental change competencies by applying the fifth and final stage of reengineering, which is assessment and follow-up. Here, the skilled leader improves his competencies, and thus the competencies of the members of the educational team, through continuous improvement based on continuous development keeping pace with developments and owning their newly developed competencies.

This result, in turn, in achieving the active developmental change of educational institutions and their cadres, is consistent with the results of previous studies that reinforced the importance of engineering and recommended its practice, and showed its role in preparing leaders, including studies [18] recommended adopting reengineering in schools and educational organizations to achieve reconstruction and change the role of the principal to a leader facilitating change, and [17] which emphasized that reengineering achieves quality and increases the productivity and efficiency of faculty members and develops their performance, as well as [16] which recommended the deployment and strengthening of The concept of engineering is that it makes fundamental modifications to systems, enhances job satisfaction and improves services. And [19] who suggested reducing the

obstacles of engineering administrative processes (reengineering) by preparing training courses to enhance the concept of entrance to re-engineering among school principals and informing them of reengineering models in other institutions. [20] also proposed reengineering to develop the performance of department heads in the directorates of education, and [21] emphasized that reengineering operations enhances investment in intellectual capital. This result came as a new result, since none of the previous studies combined engineering with the competencies of educational leaders. The study population is also a new society that has not been studied in this subject previously.

This re-engineering has been detailed in paths and stages to help in its easy understanding for the purposes of serious and effective application. To provide a new, highly-engineered form of the educational leadership competencies necessary for leaders in the Jordanian Ministry of Education.

## 6. Recommendations

- 1) Creating strategic plans that change and achieve a competitive advantage for the educational institution.
- 2) Training qualified educational leaders to innovative developmental changes in educational institutions.
- 3) Directing leadership charisma to stimulate motivation towards standard practices among human cadres.
- 4) Applying creative service-learning programs adapted to the size of the capabilities of the educational institution.
- 5) Investing time by looking forward to restructuring the flexibility of the educational institution as a renewable learning environment.
- 6) Refining the leadership competencies in the ministry to achieve change and development of distinguished educational learning that is capable of making a difference and achieving added value.
- 7) Adopting engineering to enable educational leaders to achieve creativity, innovation and comprehensive institutional change in their positions.
- 8) Simulating globally distinguished educational models as a standard measure for the success of the educational institution.

## 7. Conclusion

This reengineering is the result of a well-thought-out scientific and practical effort, and this study is the first to apply reengineering to the competencies of educational leaders in the Jordanian Ministry of Education, and presents them with clear practical steps that enable educational leaders to bring about change and development continuously and permanently, to develop education according to developments and achieve change [27]. The quality necessary to develop the educational process as a whole, in ways that are commensurate with the available and available capabilities and resources that can be invested and planned for optimal employment that contributes to meeting needs and solving problems.

The importance of this re-engineering is related to what it can bring about in the world of educational institutions concerned with the development of society in its inclusiveness. Preparedness within team members to implement them.

---

## References

- [1] Schoemaker, P. & Krupp, S. (2015). Overcoming Barriers to Integrating Strategy and Leadership. *Strategy and Leadership*, 43 (2), 23-32.
- [2] Covey, F. (2018). <https://www.franklincovey.com/2018/11/23/>
- [3] Shavaran, S., Rajaeepour, S., Kazemi, I. & Zamani, B. (2012). Development and Validation of Faculty Members Efficacy Inventory Higher Education. *International Education Studies*, 5 (2), 175-205.
- [4] Choquet, Ch. & Corbiere, A. (2006). Reengineering Framework for Systems in Education, *Educational Technology & Society*, 9 (4): 228-241.
- [5] Serban, A. & Iorga, C. (2016). Employee Resistance to Organizational Change Through Managerial Reengineering. Proceedings of the 10th International Management Conference "Challenges of Modern Management", November 3rd-4th, 2016, Bucharest, Romania.
- [6] Bougherra, Awatef, Bougherra, Halima (2020), Re-engineering of Administrative Processes in School Administration, 1st Edition, Dar Al-Ayam for Publishing and Distribution, Amman.
- [7] Al-Amer, Youssef Abdullah (2020), The Impact of Administrative Operations Reengineering on Human Resources Performance in Irbid Electricity Company, *Al-Quds Open University Journal for Administrative and Economic Research*, Volume (5), Issue (14), December 2020.
- [8] Erdogan, B. & Bauer, T. (2015). *Leader – Member Exchange Theory*. Elsevier Ltd, Portland State University, Portland, USA.
- [9] Al-Jaroudi, Majida bint Ibrahim (2011). Transformation leadership in organizations is an introduction to leadership theories. Riyadh: Cordoba for Publishing and Distribution.
- [10] Northouse, P. (2016). *Leadership: Theory and Practice*. (7th ed.). Thousand Oaks, CA: Sage Publishers, Inc.
- [11] Sanders, J. (2016). Leading With Love. <http://odb.org/2016/11/03/leading-with-love/> 23/11/2022
- [12] Al-Hammadi, Ali (2006). *The Road to Excellence 15 Ways to Change*. Amman: Dar Ibn Hazm.
- [13] Tost, P., Francesca G., & Richard L. (2016). When Power Makes Others Speechless: The Negative Impact of Leader Power on Team Performance. *Academy of Management Journal* (forthcoming), Harvard University.
- [14] Khattab, Ahmed; and Khayal, Amjad (2020), a proposed framework for testing the relationship between process re-engineering in organizations Higher education and the quality of educational service, *The Future of Arab Education Journal*, The Arab Center for Education and Development, Vol 119-158, pp. 125, Issue 27.
- [15] Hadidan, Sabrina; And Khaled, Asmaa (2021), (Re-engineering of administrative processes (engineering): a conceptual reading, *Journal Intellectual excellence for the social and human sciences*, University of Shazly bin Jadid El-Taref, Issue 5, pp. 47-57.
- [16] Al-Dajani, Iyad (2013). A suggested model for re-engineering and computerizing administrative processes in higher education institutions (the Islamic University), *Damascus University Journal*, 1 (29), 317-334.
- [17] Aoun, Wafa (2011). The Impact of Engineering on the Development of University Education Outcomes from the Perspective of Female Graduates of the College of Education at King Saud University, Saudi Women's Education Conference, Muhammad bin Saud University, Saudi Arabia, 201-2017.
- [18] Al-Dihani, Sultan (2009). Administrative engineering and its possibility of applying it in the schools of the State of Kuwait, unpublished PhD thesis, Kuwait University, Kuwait.
- [19] Rihan, Shady (2014). Obstacles to the Application of Administrative Process Engineering (Engineering) in Governmental Schools in Gaza Governorates and Ways to Reduce Them, Unpublished Master Thesis, Islamic University, Gaza.
- [20] Bran, Naglaa (2015). A proposed scenario for developing the performance of department heads in the education directorates in the governorates of Gaza in the light of the method of re-engineering the administrative process, an unpublished master's thesis. Islamic University of Gaza.
- [21] Al-Azab, Hussein (2016). The impact of investing in intellectual capital on the application of re-engineering of administrative processes in Jordanian public institutions. *The Jordanian Journal of Business Administration*, The University of Jordan, Deanship of Scientific Research, 12 (4), 731-731.
- [22] Sibhato, H. & Singh, A. (2012). Evaluation on Implementation in Ethiopian Higher Education Institutions, *Global Journal of Management and business research*, 12 (11), 1-29.
- [23] Ibezim, N. & Obi, Ch. (2013). Re-engineering University Education through Strategic Information Management: The Nigerian Experience, *Scientific Research*, 6 (4), 783-800.
- [24] Giles, S (2016). *The Most Important Leadership Competencies, According to Leaders Around the World*. Harvard Business Publishing is an affiliate of Harvard Business School.
- [25] Florence, W. (2017). Ways Through Which Principals Acquire the Leadership Competencies Required for Effective Management of Secondary Schools in Nairobi County, Kenya, *Journal of Education and Practice*, 8 (9), 1935-2100.
- [26] Huggins, K for sale, Klar, H for, Hammonds, & H for Buskey, F. (2017). Developing Leadership Capacity in Others: An Examination of High School Principals' Personal Capacities for Fostering Leadership, *International Journal of Education Policy & Leadership*, 12 (1), 1-15. [www.moe.gov.jo/2017/11/23/](http://www.moe.gov.jo/2017/11/23/)
- [27] Maiteeq, Mostafa (2018), Re-engineering of Administrative Operations as an Introduction to the Development of Misrata University Administration: College Education as a model, *Scientific Journal of the College of Education*, Misrata University, Volume 1, Issue 11, pp. 310-329.