

The Degree of Achievement of Learning Organisation Dimensions in the Schools of the Royal Commission in Jubail by Using Senge's Model

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This research used Senge's model to examine the extent to which the Royal Commission schools in Jubail achieved, according to school leaders, learning organisation dimensions. It explored the differences among the respondents based upon work experience, school stage, and current position. To achieve the aims of this research, the researchers adopted a descriptive approach. They constructed a survey as the main data gathering tool and applied it to all 83 respondents, which included 29 school principals, and 54 school deputies. The results indicated that school leaders believed the degree of achievement of learning organisation dimensions to be very high in the Royal Commission schools in Jubail. The average mean across all areas of the survey was 4.20, with the highest in systems thinking (4.24), and the lowest in shared vision (4.16). The results also showed a statistically significant difference in the mental models among the school leaders who had worked the most. However, no statistically significant differences emerged in terms of the school stage. Based on the findings, the researchers recommended the need to include school staff in formulating the school's vision and objectives, as well as engaging in the ongoing review and evaluation of the vision, in order to help steer its course and achieve its goals.

Keywords: *Mental models, Personal master, Shared vision, System thinking, Team learning.*

Introduction

The learning organisation represents an effective option for supporting organisations in keeping pace with successive steps of development, due to the contribution it makes to progress and growth through continuous improvement and collective cooperation to achieve a common

vision. A learning organisation is defined as an “organization that can acquire new knowledge and skills and spread it among individuals to achieve a common vision and goals that it seeks efficiently and effectively” (Al-Rawashda, 2018, p. 212).

The idea of learning organisations did not appear suddenly, but rather developed over many years starting in the nineteen-seventies. Its idea derives from Argyris and Schon’s work, as mentioned in Al-Hawajrah (2010) on organisational learning, and Revanz’s (1983) study. Senge (1990) is considered the pioneer of the learning organisation and was the first to identify the dimensions and principles of learning organisations (Al-Rifai, 2013, p. 127). Senge (1990) identified five dimensions: personal mastery, mental models, shared vision, team learning, and system thinking.

Several models of the learning organisation are worth noting, including those of Redding (1992), Marquardt (1996), Addleson (1998), Al-Otaibi (2000), and James (2003), as reported in Al-Nsour (2010), in addition to the models of Pedller et al. (1995) mentioned in Al-Taweel and Ababneh (2008), and Marsick and Watkins (1999) mentioned in Al-Sharifi (2016). All these models share common characteristics that make the learning organisation a model for modern organisations that work to develop and change continuously. Among the most prominent characteristics are the presence of a strategic learning plan, self-development programs for individuals, a safe working environment, the stimulation of creativity and innovation, high flexibility in dealing with the environment, encouragement of participation in decision-making, and organisational thinking (Al-Otaibi, 2015).

Based on these characteristics, a learning organisation is an ideal case for the system based on development, intonation, and continuous learning, especially in educational institutions that use the learning organisation as a tool to address changes and surrounding external influences, in which the workers engage in continuous learning in a way that helps develop their profession. Syed and Al-Jamal (2012) defined such an organisation as those organised and continuous efforts that aim to improve the cognitive, skills, administrative, and technical capabilities of individuals, bringing about a positive change in their behaviours and attitudes towards working in order to raise the level of performance and achieving quality in the organisation. This definition is in line with the recommendations of previous studies, such as Abu Zaid (2013), who recommended that schools must have the “tools and supplies that enable them to create an appropriate educational environment by spreading a culture of continuous learning and involving employees in building a common vision that strengthens bridges of communication between the school and local society” (p. 189).

However, few studies have investigated the schools of the Royal Commission in Jubail, Saudi Arabia, as learning organisations. Thus, the current study aims to identify to what degree these schools achieve the dimensions of learning organisations, as well as the obstacles to their application from the viewpoint of the schools’ leaders by answering the following questions:

1. According to their leaders, to what degree do the Royal Commission schools in Jubail achieve the dimensions of a learning organisation?
2. Are there statistically significant differences at the $\alpha \leq 0.05$ level in the degree to which the schools have realised the dimensions of a learning organisation, specifically from their leaders' perspective, based on the years of experience, stage of study, and/or current work (leader/dubiety)?
3. According to the leaders, what obstacles do the schools of the Royal Commission in Jubail face in applying the learning organisation dimensions?

This research examines the learning organisation dimensions using Senge's model (i.e., personal mastery, mental models, shared vision, team learning, and system thinking) in the schools of the Royal Commission in Jubail, specifically from the perspective of their leaders. This research was conducted during the second semester of the year 2019 (i.e., 1439–1440 Hijri), and included primary, intermediate, and secondary schools located in the eastern region of the Kingdom of Saudi Arabia.

Literature Review

The concept of a learning organisation did not appear suddenly; it emerged over years, through many attempts to educate the system and promote learning among individuals and working groups. Taylor, the father of scientific management, attempted to transfer his knowledge regarding the principles of scientific management to the personnel of an organisation in order to achieve the efficiency and effectiveness of the organisation (Abu Zaid, 2013). In addition, Fayol asserted the need to teach managers administrative principles that guarantee their success in their administrative work (Al-Salem, 2005). Furthermore, Max Weber attempted to focus efforts on managing large organisations according to the conditions that must be met to improve productivity and increase effectiveness and efficiency to achieve organisational goals (Al-Salem, 2005).

Senge (1990), the creator of the learning organisation, was the first to operationalise the learning organisation to specific dimensions and principles in his book, *The Fifth Discipline* (Al-Rifai, 2013). He identified five dimensions: personal master, mental models, shared vision, team learning, and system thinking (Senge, 1990).

A learning organisation can be defined in several ways, yet these definitions are consistent in their essence and complement one another. One reason for the multiple definitions is due to researchers' differences in terms of their specialties, experiences, and administrative philosophies. Senge (1990) defined a learning organisation as an organisation in which "members seek to develop their capabilities and skills to achieve the desired results, through innovative methods of group thinking within a continuous learning environment" (p. 4). In the context of education, Al-Daihani (2015) defined a learning organisation as:

[being] distinguished from its counterparts from other educational organizations, in terms of its educational leadership and organizational structure associated with reciprocal educational processes between leaders and followers, enabling them to participate in decision-making, and make information available and share knowledge among organizational members. (p. 20)

Abu Deeb (2018) concluded that adopting the learning organisation method is necessary to transform an organisation from a stagnant system characterised as having a boring routine to a continuous learning system that contributes to employees' development.

A learning organisation encourages its members to develop their skills through creative thinking when solving work problems. It also promotes their self-confidence without being afraid of making mistakes because the organisation provides opportunities to learn and develop social communication skills among employees, while helping the organisation adapt to the environment by understanding and dealing with internal and external variables (Ababneh & Al-Tawil, 2009). According to Senge (1990), a learning organisation can increase organisational performance and enable it to achieve competitive advantages; help it ensure users' satisfaction; improve the quality of work; encourage creativity and innovation; help manage change; avoid risks surrounding the organisation; and help the organisation grow and expand by increasing its commitment, community service, and partnerships. Looking at processes from different perspectives contributes to developing work methods, thereby encouraging workers to increase productivity while providing a fertile environment for collective thinking when solving problems. It also helps individuals face challenges and invest in opportunities.

A learning organisation helps employees understand their importance, as well as the importance of the work they are doing to achieve their goals, and the organisational goals. In this way, it develops their capabilities and skills within organised working groups focussed on development and growth, building a knowledge base that can be referred to when needed. It also gives employees an opportunity to experiment and attempt to reach exceptional positive results (Al-Sahli, 2017).

Al-Sakarna (2011) mentioned that a learning organisation has several goals that include:

- Promoting employees' acquisition of new ideas and knowledge to help them do the job better;
- Sharing and exchanging ideas and knowledge among employees;
- Sharing knowledge and skills in all departments of the organisation and among organisational members;
- Achieving positive change in organisational behaviour among employees as a result of acquiring new knowledge; and
- Measuring and judging the consequences of change.

The goals also include increasing organisational intelligence and raising individuals' abilities and willingness to accept constructive criticism, which gives them the ability to deal with change positively (Al-Taweel & Ababneh, 2008).

However, researchers disagree about the characteristics of a learning organisation and what distinguishes it from other organisations. Braham (1995) suggested that a learning organisation is characterised by learning being an inseparable part of the work, learning being a continuous process rather than temporary or associated with a specific occasion, and cooperation being the basis of good relationships. Indeed, employees' participation contributes to their development and creates changes in the organisation, thereby encouraging creativity and innovation while associating members' pride in the learning organisation with the organisation.

Cummings and Worley (2009) summarised the characteristics of a learning organisation as follows:

- *Organisational structure*: the structures of a learning organisation help the team learn regardless of their levels and build working network relationships inside and outside the organisation, which contributes to participation in decision-making and the ease of accessing and disseminating knowledge among organisational members.
- *Information systems*: learning organisations collect and process data and convert data into information that can be used in developing the work.
- *Human resources*: positive practices (e.g., letters of appreciation, praise, and recognition) encourage and motivate employees to acquire and share knowledge to reach an optimal performance for developing knowledge and skills.
- *Organisational culture*: learning organisations possess strong organisational cultures that support innovation and creativity and provide an appropriate environment for trial and learning from mistakes.
- *Leadership*: learning organisations are based on effective and influential leadership, which supports continuous learning and provides support and assistance to workers in an atmosphere of openness to all new changes in a timely manner.

Peter Senge Model

Senge (1990) developed and explained his model of a learning organisation in his book, *The Fifth Discipline*. This model includes five dimensions that the organisation must adhere to in order to transform into a learning organisation (Senge, 1990). These dimensions are as follows:

- *Personal mastery*: this refers to the continuous work to define the personal vision accurately and clearly, determine the objective vision of reality, and focus efforts and perseverance on achieving employees' individual aspiration. Ababneh (2007) defined personal mastery as adopting a continuous learning approach, professionalism, and proficiency in work to achieve the desired goals.
- *Mental models*: these are mental images, acquired values, and assumptions rooted in the depths of the human psyche, influencing the human perception of the world and the way it explains what is happening around it, as well as determining ways to deal with it.
- *Shared vision*: this is the ability of workers in the organisation to draw a collective group picture of the future of the organisation and work to achieve it. Ababneh and Al-Tawil (2009) emphasised the need for all individuals to be convinced of this vision and not to have it imposed upon them by force, in order to generate a strong desire for change to bridge the gap between the current reality and the future vision.
- *Team learning*: this refers to the process of training workers and developing their capabilities and skills within learning groups with a view to achieving the goals. This comes after providing the appropriate environment for collective learning based on dialogue and discussion, the opportunity to gain skills, and the ability to solve problems. Abu Ahmed (2016) argued that the workers within an organisation should be divided into learning work teams with the aim of learning from each other to develop their capabilities and improve work performance within the organisation.
- *System thinking*: this methodology and conceptual framework provide a comprehensive view and understanding of the relationships that bind the parts together. Gibran (2011) stressed the importance of organisational thinking in providing an intellectual structure to link decisions and events together to form a holistic view of events, and events that helps make decisions more flexible and effective.

Methodology

A survey descriptive approach was used in this research because it is appropriate for the nature of the research, which aims to collect and analyse data, and to determine the degree to which the schools of the Royal Commission in Jubail have achieved the dimensions of a learning organisation, according to their leaders, using the Senge model. A specific questionnaire was developed to measure the achievement of the five dimensions (i.e., personal mastery, mental models, shared vision, team learning, and system thinking), considering each as an independent variable and building a sufficient number of sections within the questionnaire.

The research population consisted of all leaders and principals in the schools of the Royal Commission in Jubail, in the second semester of the 2018–2019 year, which totaled 83 individuals. The questionnaire consisted of two main parts.

Part One: Demographic data

The first part consists of the respondents' demographic data, namely, the years of experience in administrative work, school stage, and current position (e.g., school leader, school principal).

Part Two: Axis of the questionnaire

The second part consists of 35 paragraphs, distributed along two axes. The first axis is the reality of achieving the learning organisation dimensions in the studied schools. It contains 30 paragraphs, divided into five areas: personal empowerment, shared vision, group learning, mental models, and organisational thinking. The second axis is the obstacles to applying the learning organisation dimensions in the studied schools; it consists of five paragraphs.

The content validity of the questionnaire was verified by referring to experienced and specialised experts in judging the content of each item of the tool and estimating its relationship with the overall construction of the research tool. The internal consistency of the questionnaire was verified by using the Pearson correlation coefficient to measure the relationship between each paragraph and the total degree of the field to which it belongs, as well as between each item and the overall degree of the measurement to which the questionnaire belongs. This coefficient is considered statistically significant at the 0.01 significance level.

To verify the reliability of the questionnaire, Cronbach's alpha was determined for the variable of the questionnaire. Cronbach's alpha coefficients for the variables were high: for the reality of achieving the related dimensions it was 0.805, whereas for the obstacles to applying the dimensions of the learning organisation it was 0.935. Thus, the obstacles to applying the learning organisation dimensions had a higher reliability.

Given the nature and aims of the current research, descriptive statistical methods were used, and the SPSS program was used to analyse data and obtain results using the following steps:

1. Extract frequencies and percentages to describe the respondents' characteristics.
2. Extract mean and standard deviations to identify the respondents' responses in each of the paragraphs.
3. Extract the Pearson correlation coefficient to verify the validity of the internal consistency of the questionnaire.
4. Extract the Cronbach's alpha to determine the reliability of the measurement.
5. Conduct a Mann–Whitney U test to determine the significance of the differences between two independent groups.

6. Conduct a Kruskal-Wallis test to determine the significance of the differences between more than two independent groups.

Findings, Discussion, and Interpretation

The results related to the first question (i.e., According to their leaders, to what degree do the Royal Commission schools in Jubail achieve the dimensions of a learning organisation?) are presented based on the descriptive information of the variables.

Personal Mastery

The arithmetic means, standard deviations, and rankings of the respondents' responses were calculated for the items related to the level of achieving the learning organisation dimensions in the field of personal mastery in the studied schools (see Table 1 below).

Table 1: *Participants' Responses on Personal Empowerment: Mean and Standard Deviations*

Rank	Statement	Mean	Standard deviation	Level	Rank
5	The school administration ensures that workers use modern technology during their work	4.60	0.492	Very large	1
2	The school administration strives to inform the workers of what is emerging in their field of work	4.39	0.713	Very large	2
4	The school administration seeks to involve workers in workshops and courses devoted to raising their specialised and professional competencies	4.24	0.774	Very large	3
1	The school administration works to provide continuous learning opportunities for all employees	4.22	0.827	Very large	4
3	The school administration contributes to developing creativity and critical thinking among its employees	4.04	0.633	Large	5
6	The school administration encourages workers to obtain professional and academic certificates that help them in their work	3.59	1.094	Large	6
	Overall mean score value	4.18	0.484	Large	

The Table 1 shows that the total overall average mean value is 4.18, which is considered large. Thus, the degree of achieving the personal mastery dimensions in the studied schools was significantly high from the perspective of their leaders. The researchers attribute this result to the keenness of the General Education Department in the education sector of the Royal Commission in Jubail to attract and employ teachers and administrators with the best human competencies. This is done via a mechanism for admission requirements and procedures for personal interviews that are subject to high standards, as well as the inclusion of new teachers in courses to educate them on all the steps and processes related to education in the Royal Commission in Jubail, and the teachers' necessary skills and competencies. This significant achievement can also be attributed to teachers' involvement in internal and external training courses to enhance their teaching competencies and professional development, as well as the existence of an integrated technical system that supports the educational process in all aspects. The schools develop an attractive and stimulating work environment for thinking and creativity through a specialised centre for thinking that involves robots and artificial intelligence laboratories. This result is consistent with the findings of Al-Nuwairi (2016), which showed significant personal mastery in secondary schools in the governorates of Gaza, according to its leaders, although the result differs from the findings of Al-Harbi (2019), who found only an average degree of approval in general education schools in the Al-Rass City Governorate from the teachers' point of view.

Shared Vision

The mean averages, standard deviations, and ranking of the respondents' responses were calculated for the statements related to the degree of a shared vision in the studied schools (see Table 2 below).

Table 2: *Participants' Responses on Shared Vision: Mean and Standard Deviations*

Rank	Statement	Mean	Standard deviation	Level	Rank
5	The school administration emphasises that its success in its mission is a success for all school employees	4.69	0.603	Very large	1
4	The school administration is keen on enhancing the feeling of school staff	4.57	0.666	Very large	2
2	The school administration cooperates with employees to achieve the shared vision of the school	4.24	0.742	Very large	3
1	The school administration builds a common vision and goals in cooperation with all employees	4.00	0.911	Large	4

6	The school administration markets visibility into the school community	3.92	0.913	Large	5
3	The school administration reviews with the staff the vision of the school permanently and continuously	3.57	0.913	Large	6
Overall mean score value		4.16	0.614	Large	

The Table 2 shows that the overall mean score value was 4.16, indicating a large degree of achievement. Thus, the degree of achievement of the shared vision dimensions in the studied schools from the leaders' point of view was high. The researchers attribute this result to the schools holding periodic meetings with staff, listening to their opinions, and notifying them of their importance, and promoting and sponsoring quality initiatives that contribute to developing work methods. They also allocate materials and moral rewards to staff and promote participation on school teams to develop quarterly and annual plans according to the framework of the general plan for schools. The schools contribute to the definition of their activities for the surrounding community by implementing external panels or evening programs and providing a comfortable and supportive environment for workers' psychological stability through teachers' rooms, amenities, and entertainment. Finally, the schools direct all internal and external activities and educational processes towards achieving the vision and mission of the General Education Department in the education sector of the Royal Commission in Jubail.

This result is consistent with the findings of Al-Swainea (2019), who showed that the College of Social Sciences at Imam Muhammad bin Saud Islamic University showed a significant application of shared vision. However, the result differs from the findings of Al-Nuwairi (2016), who showed an exceptionally large degree of shared vision in the secondary schools in the Gaza governorates, according to their principals.

Team Learning

The arithmetic means, standard deviations, and rankings of the respondents' responses were calculated for the items related to the level of achieving the learning organisation dimensions in the field of team learning in the studied schools (see Table 3 below).

Table 3: *Participants' Responses on Team Learning: Mean and Standard Deviations*

Rank	Statement	Mean	Standard deviation	Level	Rank
1	The school administration is keen on working with one team spirit	4.60	0.697	Very large	1
2	The school administration encourages workers to exchange experiences that are in the interest of work	4.53	0.591	Very large	2
3	The school administration is keen to find participatory relationships between the workers	4.30	0.777	Very large	3
5	The school administration organises periodic meetings between workers to discuss ways to develop school performance	3.99	0.773	Large	4
6	The school administration promotes employees' self-knowledge and experience	3.96	0.740	Large	5
4	The school administration encourages workers to seek group learning opportunities inside and outside the school	3.95	0.747	Large	6
	Overall mean score value	4.22	0.531	Very Large	

The Table 3 shows that the studied schools' leaders believed that group learning was achieved to a very large degree (mean = 4.22). The researchers attribute the achievement of the collective learning field to such a large degree to administrators' keenness to promote exchanges among workers by organising exchange class visits and attending explanatory (model) classes, organising periodic meetings aimed at discussing ways to develop performance in work within the school, and implementing training to develop teaching methods and others. They also take advantage of teachers' personal experiences and skills to enrich their other colleagues and activate the role of social committees within schools to create positive relationships between teachers.

This result differs from the findings of Al-Harbi's (2018) study, which showed an average degree of collective learning in government secondary schools for boys in Tabuk from the viewpoint of its managers and teachers. The result also differs from Al-Harbi's (2019) finding of an intermediate degree of group learning in general education schools in the Al-Rass City Governorate from the teachers' point of view.

Mental Models

The arithmetic means, standard deviations, and rankings of the respondents' responses were calculated for the items related to the level of achieving the learning organisation dimensions in the field of mental models in the studied schools (see Table 4 below).

Table 4: *Participants' Responses on Mental Models: Mean and Standard Deviations*

Rank	Statement	Mean	Standard deviation	Level	Rank
3	The school administration directs all employees to adopt positive attitudes towards excellence	4.31	0.731	Very large	1
6	The school administration is working to change the negative attitudes of employees towards educational systems and practices	4.23	0.786	Very large	2
2	The school management encourages workers to raise important issues for work	4.17	0.746	Large	3
5	The school management treats mistakes as learning and development opportunities	4.16	0.724	Large	4
1	The school administration strives to have a constructive professional dialogue between employees	4.14	0.798	Large	5
4	The school administration adopts a vision to develop practices and procedures to achieve the school's vision	4.13	0.777	Large	6
	Overall mean score value	4.19	0.623	Large	

The Table 4 shows a large degree of mental models in the studied schools', according to leaders (mean = 4.19). The researchers attribute this result to efforts to create a comfortable and supportive work environment for workers' psychological stability; to motivate workers to achieve advanced positions in local, regional, and global competitions; and promote professional learning societies and the application of some schools to them effectively. The school leadership also seeks to ensure workers' satisfaction and apply the principle of justice and equality by encouraging initiatives aimed at developing the school environment and the educational process.

This result is consistent with Al-Anzi's (2017) finding, that mental models obtained a large degree of availability in government secondary schools for girls in Tabuk. It differs from Al-Harbi's (2019) finding, that mental models were available to only a medium degree in general education schools in the Al-Rass City Governorate from the teachers' point of view.

System Thinking

The Table 5 summarises the arithmetic means, standard deviations, and rankings of the respondents' responses calculated for the items related to the level of achieving system thinking in the studied schools.

Table 5: *Participants' Responses on System Thinking: Mean and Standard Deviations*

Rank	Statement	Mean	Standard deviation	Level	Rank
4	The school administration notifies every employee of the importance of their role in the school's success	4.58	0.665	Very large	1
1	The school itself is considered a microcosm of the local community	4.37	0.728	Very large	2
3	The school administration is keen on delegating powers to the workers	4.34	0.785	Very large	3
5	The school management promotes creative methods and approaches to decision-making and problem solving	4.30	0.745	Large	4
6	The school administration views the environment around the school as an external learning environment that should be utilised	3.96	0.930	Large	5
2	The school administration emphasises that the school exceeds its size in its capabilities and aspirations	3.88	0.929	Large	6
	Overall mean score value	4.24	0.577	Large	

As Table 5 indicates, system thinking occurred to a very large degree (mean = 4.24) in the studied schools, according to their leaders. The researchers attribute the achievement of this organisational thinking to the close link between the local community and all school workers in terms of culture, customs, and values, as open systems that affect and are affected by the surrounding environment. Another factor is the implementation of preventive programs that help the school community deal with problems that may occur, and how to benefit from such efforts, including an accumulation of experiences for solving and dealing with them. Finally, the clarity of the regulations defines the work as a response of school staff, without any overlap or duplication.

This result differs from Al-Harbi's (2019) findings, which showed that organisational thinking occurred to an average degree in public education schools in the Al-Rass City Governorate

from the teachers' point of view. The result also differs from Al-Harbi's (2018) findings, which showed a great degree of organisational thinking in government secondary schools for boys in Tabuk from the managers' and teachers' perspectives.

The Table 6 summarises the arithmetic means, standard deviations, and arrangement of the participants' responses regarding the degree of verification of the dimensions of the learning organisation in the schools of the Royal Commission in Jubail.

Table 6: *Participants' Responses on All Learning Organisation Dimensions: Mean and Standard Deviations*

Rank	Statement	Mean	Standard deviation	Level	Rank
4	System thinking	4.24	0.577	Very large	1
1	Team learning	4.22	0.531	Very large	2
3	Mental models	4.19	0.623	Large	3
5	Personal master	4.18	0.484	Large	4
6	Shared vision	4.16	0.614	Large	5
Overall mean score of learning organisation		4.20	0.494	Very Large	

The Table 6 shows that all fields obtained an arithmetic mean of 4.20, and a very large degree of verification, according to the leaders of the studied schools. The researchers attribute this result to the Royal Commission's continuous support of schools to improve education, starting with attracting the best national human resources, and training and qualifying them to lead the educational process in the schools; and providing a safe and stimulating work environment for creativity, innovation, and thinking. It also promotes interaction with the surrounding environment in order to build community partnerships with various government agencies and industrial companies in Jubail, as well as encouraging participation in local, regional, and global competitions, and the pursuit of excellence.

This result differs from the results of previous studies, which ranged from large to medium degree. Al-Harbi (2019) found an average degree of the availability of all dimensions in general education schools in the Al-Rass Governorate from the teachers' point of view. Al-Swainea (2019) found a great degree of applying these dimensions in the College of Social Sciences at Imam Muhammad bin Saud Islamic University. One reason for these differing results is the privacy of the Royal Commission schools in Jubail and the great support they receive from the

General Education Department, which works to achieve excellence through the best education and educational practices, while promoting the attractive school environments, as well as stimulating creativity, innovation, and reflection.

The results related to the second research question — Are there statistically significant differences at the $\alpha \leq 0.05$ level in the degree to which the schools have realised the dimensions of a learning organisation, from their leaders' perspective, based on the years of experience, stage of study, and/or current work (school leader or school agent)? — are presented next, according to the leaders' years of experience, school stage, and current position.

Years of Experience

The Table 7 summarises the results of the Kruskal–Walls test, which was used to address the second research question in terms of the leaders' years of experience.

Table 7: Leaders' Years of Experience: Kruskal–Walls Results

Variable	Years of experience	Number	Mean	Chi-square	Degree of freedom	Significance level
Personal mastery	Less than 5	20	37.20	1.645	2	0.439
	From 5 to 10	15	39.40			
	More than 10	48	44.81			
Shared vision	Less than 5	20	31.13	5.543	2	0.063
	From 5 to 10	15	43.57			
	More than 10	48	46.04			
Team learning	Less than 5	20	38.33	0.935	2	0.627
	From 5 to 10	15	40.13			
	More than 10	48	44.11			
Mental model	Less than 5	20	29.73	7.068	2	0.029
	From 5 to 10	15	43.80			
	More than 10	48	46.55			
System thinking	Less than 5	20	36.30	1.498	2	0.473
	From 5 to 10	15	43.37			
	More than 10	48	43.95			
Learning organisation	Less than 5	20	33.03	4.195	2	0.123
	From 5 to 10	15	40.87			
	More than 10	48	46.09			

The Table 7 shows that the value of the significance level was less than 0.05 in the mental models only, indicating statistically significant differences in the degree to which the mental models in the studied schools are attributed to the leaders' years of experience. In addition, the

rank averages show that the degree of achievement of the mental models in the studied schools increases as the leaders' experience increases. Finally, the leaders' views of the other areas in the studied schools are similar regardless of the years of experience. The researchers attribute this result to the positive attitudes and values of work of the school leaders and agents with extensive related experience, motivating them to influence others, be creative, and develop effective work methods.

This result is consistent with Al-Zahrani and Al-Sharif's (2017) findings, which showed a statistically significant difference in participants' responses related to mental models in terms of the obstacles to applying the learning organisation dimensions to girls' secondary schools in Tabuk, due to the leaders' years of experience. The result differs from the result of the Al-Harbi study (2019), which showed no statistical significance in participants' responses related to the mental models in public education schools in the Al-Rass City Governorate, due to the leaders' years of experience.

School Stage

The Table 8 summarises the results of the Kruskal–Walls test, which was used to address the second research question in terms of the school stage.

Table 8: *School Stage: Kruskal–Walls Results*

Variable	Year of experience	Number	Mean	Chi-square	Degree of freedom	Significance level
Personal mastery	Primary	42	45.04	1.374	2	0.503
	Secondary	19	38.58			
	High school	22	39.16			
Shared vision	Primary	42	44.54	1.820	2	0.403
	Secondary	19	43.16			
	High school	22	36.16			
Team learning	Primary	42	43.89	1.539	2	0.463
	Secondary	19	44.11			
	High school	22	36.57			
Mental model	Primary	42	43.49	5.440	2	0.066
	Secondary	19	49.58			
	High school	22	32.61			
System thinking	Primary	42	44.54	1.606	2	0.448
	Secondary	19	42.66			
	High school	22	36.59			
Learning organisation	Primary	42	45.62	3.167	2	0.205
	Secondary	19	42.82			
	High school	22	34.39			

The Table 8 shows that the significance levels were greater than 0.05 in all fields, indicating no statistically significant differences in the degree to which the learning organisation dimensions in the studied schools can be attributed to the school stage. This result also indicates a similarity in the school leaders' views about the degree to which the dimensions are achieved at different educational levels. The researchers attribute this result to the unification of administrative procedures among all levels of education in the schools of the Royal Commission in Jubail, as well as the continuous rotation of school leaders and agents between the stages of general education and their acquisition of multiple experiences from all levels in which they work.

Leaders' Current Position

The Table 9 summarises the results of the Mann–Whitney U test, which was used to address the second research question in terms of the leaders' current position.

Table 9: *Leaders' Current Position: Mann–Whitney U Results*

Variable	Year of experience	Number of	Mean	Cumulative mean	Mann–Whitney	Z value	Significance level
Personal mastery	Leader school	of 29	49.17	1426.00	575.00	-2.001	0.045
	Agent	54	38.15	2060.00			
Shared vision	Leader school	of 29	51.31	1488.00	513.000	-2.593	0.010
	Agent	54	37.00	1998.00			
Team learning	Leader school	of 29	51.02	1479.50	521.500	-2.512	0.012
	Agent	54	37.16	2006.50			
Mental model	Leader school	of 29	52.17	1513.00	488.000	-2.835	0.005
	Agent	54	36.45	1973.00			
System thinking	Leader school	of 29	50.24	1457.00	544.000	-2.297	0.022
	Agent	54	37.57	2029.00			
Learning organisation	Leader school	of 29	52.66	1527.00	474.000	-2.953	0.003
	Agent	54	36.28	1959.00			

The Table 9 shows that the significance level values were less than 0.05 in all fields, meaning that statistically significant differences exist in the degree of verification of the learning organisation dimensions in the studied schools, due to the leaders' current position. The

average levels of the ranks show that the school leaders' views of the degree to which the studied schools achieve these dimensions was higher than the school agents' views. The researchers attribute this result to school leaders having a broader vision compared to their agents, given their extensive administrative and organisational experiences over the long years spent in administrative work.

The result of this research differs from that of Al-Zahrani and Al-Sharif's (2017) study, which showed no statistically significant differences in the participants' responses to the obstacles to applying the learning organisation dimensions in secondary schools for girls in Tabuk, due to the leaders' current position. It also differs from the Al-Harbi (2018) study, which showed no statistically significant differences in personal empowerment, shared vision or organisational thinking, although it showed statistically significant differences in the mental models and group learning in government secondary schools for males in the City of Tabuk from the viewpoint of the schools' managers and teachers.

Finally, the discussion addresses the third research question: according to the leaders, what obstacles do the schools of the Royal Commission in Jubail face in applying the learning organisation dimensions? To answer this question, the arithmetic means, standard deviations, and order of the participants' responses were calculated for the paragraphs related to the obstacles. These results are summarised in Table 10.

Table 10: *Obstacles to Applying the Dimensions: Mean and Standard Deviations*

Rank	Statement	Mean	Standard deviation	Level	Rank
2	The lack of a common vision and goals between the school administration and its employees	2.02	0.749	Small	1
4	Failure to establish the art of dialogue and discussion between individuals and groups inside the school	1.86	0.798	Small	2
1	Not providing continuous learning opportunities for all employees	1.82	0.628	Small	3
5	Weak work in the principle of empowering workers and notifying them of the importance of their role in school	1.72	0.611	Very small	4
3	Poor coordination between school personnel to exchange experiences and knowledge	1.67	0.607	Very small	5
	Overall mean score of learning organisation	1.82	0.403	Small	



The Table 10 shows that the total number of paragraphs had an arithmetic mean of 1.82, and a low degree of influence, suggesting that these paragraphs did not represent obstacles for leaders when applying the learning organisation dimensions in the studied schools. The researchers attribute this result to the full support of the Department of General Education of the Royal Commission in Jubail, as well as the work to overcome all obstacles that may prevent the achievement of educational excellence, upgrading of the educational practices, and achievement of workers' satisfaction, in a way that guarantees psychological and social stability for them while creating a comfortable environment and stimulating thinking, creativity, and innovation.

This result differs from Al-Swainea's (2019) finding, which showed a high degree in the organisational and cognitive obstacles, and a medium degree in the human obstacles to applying the learning organisation dimensions in the College of Social Sciences at Imam Muhammad bin Saud Islamic University. Meanwhile, Al-Zahrani and Al-Sharif (2017) showed an average score for participants' responses related to the obstacles facing school administration when applying the dimensions in secondary schools for girls in Tabuk. The result of the current research also varies from Al-Angari's (2017) study, which showed a medium degree in skills development obstacles at King Saud University.

Conclusion

Based on the results presented herein, we can provide a set of recommendations emphasising the establishment of programs and meetings that contribute to developing workers' creativity, innovation, and critical thinking. It is also advisable to encourage workers to develop themselves and obtain professional and academic certificates that help them carry out their work efficiently. On the other hand, educational leaders should ensure that workers participate in building the school's vision and goals and be an effective part of achieving them. Spreading the school's vision and goals through the surrounding community, as an open system that affects and is affected by its surroundings, increases the achievement of the learning organisation dimensions. The school administrators' and employees' continuous review and evaluation of the school will lead to amending its course and achieving its goals. Finally, periodic meetings with all school employees should be organised to discuss ways to develop work methods.



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