

The Degree of Organizational Ambidexterity Among Female Public Secondary School Principals and Proposals for its Development

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Abstract

The study aims to identify the degree of organizational ambidexterity practiced by female public secondary school principals. The study sample comprised a stratified sample of 30 female principals and 278 female teachers at girls' public secondary schools in the Mubarraz Education Office in the Al-Ahsa Governorate of Saudi Arabia. A descriptive survey and questionnaire were used to ask the study participants to reveal the extent to which they agreed with the development proposals to activate organizational ambidexterity.

The findings show that the degree of organizational ambidexterity practiced among secondary school principals and the development proposals for activating organizational ambidexterity were high. Considering these results, the study recommends organizing specialized training courses to enhance organizational ambidexterity among secondary school female principals and teachers and its importance for schools. Educating and training these professionals on how to develop the dimensions of ambidexterity is recommended, in addition to distributing educational awareness brochures to spread the culture of exploiting available opportunities among secondary school teachers and to increase their awareness of their positive role in achieving the general development of their schools.

Keywords: Development Proposals, General Education, Organizational Ambidexterity, Organizational Development, Pre-University Education, Secondary School.

1. Introduction

Administration is considered the main engine of institutions in its different fields and the key to their renewal, progress, and prosperity. Considering that schools are among the most important institutions that work to develop and prepare students to serve society, their administrations must be aware of the current situation and keep up with the changes and developments taking place in their internal and external environment accurately and quickly. When these two contexts are examined together, it becomes apparent that school administration is an essential component of the school work system: It exploits human resources and available material potential to fulfill the individual and the group's aspirations and form positive attitudes toward school (Tamin, 2014). This process relies on the educational institution's capabilities, preparations, and creative skills in exercising its various administrative tasks, as well as its ability to resist the limiting obstacles, thus enabling the institution to achieve permanent development in its performances, programs, and activities (Al-Awad, 2014).

Amer (2020) noted that in schools, the principal is primarily responsible for advancing the institution and optimally improving it to compete with others. This standpoint indicates that educational institutional managers should develop orientations that suit current requirements and repercussions. Many management specializations are unlocked via the exercise of organizational ambidexterity, which constitutes a key factor that aids in developing educational institutions and increasing their ability to work efficiently and adapt to changing circumstances (Al-Bashqali & Al-Dawoud, 2015). At an institutional level, Soares et al. (2018) explained that this requires educational institutions to work and strive to develop constantly, exploiting all available opportunities and discovering new ones in a way that helps them adapt to their environment, achieve their goals, and prove their ability to deal with different circumstances and challenges.

As organizational ambidexterity is a basic requirement for developing and achieving higher performance levels and increasing effectiveness to overcome difficulties and continual changes (Bodwell & Chermack, 2010), education ethics have increasingly emphasized the importance of practicing it in schools. For example, studies by Hussein and Al-Ani (2018), Al-Mahasneh (2017), and Klinger (2016) underscore that organizational expertise keeps an educational institution in constant motion as it confronts environmental challenges by, for example, consolidating its current position with competitors while it strives to anticipate new, emerging fields via exploitation and exploration and working to advance the school by simulating progress and development. This improves organizational effectiveness, response speed, and adaptation to developments and environmental changes. It also places the school in a strong position through its capabilities and talents that qualify it to achieve its goals successfully.

Given the importance of practicing organizational ambidexterity in schools, there is a clear need to prepare principals who can assess the various areas of their work with new means and different methods within dimensions and visions that surpass the limits with which they were previously familiar. At the school level, institutions must reach their goals of encouraging creativity in performance and improving the organization's work. They must adopt modern administrative trends and develop in ways suited to their natures. Accordingly, this study seeks to identify the degree to which female school principals practice organizational ambidexterity and, based on those results, offer proposals for developing it.

2. Research problem

Organizational ambidexterity is one of the modern administrative trends and one of the new concepts in the educational field through which educational institutions seek to provide renewed ideas to their members and maintain their existence according to different organizational methods to achieve strategic excellence, increase productivity, and creativity and achieve success and continuous competitive advantage. For example, Tarody (2016) found that an institution characterized by organizational ambidexterity can seize opportunities and reduce threats resulting from changes, solidifying it as a leading learning institution that can compete with others and innovate to ensure its success in the long term.

Studies have indicated that the degree of organizational ambidexterity among female school principals was high, such as those of Al-Awda (2020), Al-Jumai & Al-Harthi (2021), Al-Zaidi (2022), and Al-Shehri (2023). Conversely, some have found shortcomings in school principals' practice of the dimensions of organizational ambidexterity. For example, Al-Awda's (2020) study found that the exploitation of opportunities among secondary school female leaders occurred to a moderate degree due to the weak desire of female leaders to seek new experiences

and opportunities, in addition to a low spirit of adventure among some of them. Al-Sarhani's (2019) study found that the level of organizational ambidexterity in public schools, according to their female leaders, was moderate, potentially due to these leaders lacking the ability to exploit and explore new opportunities with merit. Al-Subaie's (2019) and Muaqil's (2017) studies also confirmed that the exploitation of opportunities among female secondary school leaders was moderate due to a lack of recognition of the school's internal strengths and weaknesses, threats, and external opportunities.

Considering these indicators, the importance of organizational ambidexterity among managers and the need to conduct more studies in this field have been emphasized in many studies, including Al-Jumaili & Al-Harhi (2021), Al-Sarhani (2019), and Pietsch et al. (2022). In addition, Al-Mekhlafi's study (2019) recommended that secondary school principals should focus on exploiting available human expertise to develop school performance, employ electronic programs to facilitate administrative tasks and ensure innovation and development in thought and performance.

Based on the literature's description of the status of organizational ambidexterity in the educational environment and its role in enhancing and developing the motivation of school principals to exploit and discover potential, this study focuses on the degree to which organizational ambidexterity is practiced among public secondary school female principals and the extent to which the study members agree on the development proposals.

Therefore, this study seeks to answer the following questions:

1. According to these principals and teachers, what is the degree of organizational ambidexterity among female public secondary school principals in the Al Mubarraz Education Office?
2. To what extent do the participating female principals and teachers agree that development proposals are used to activate the practice of organizational ambidexterity among the female principals of government secondary schools in the Al Mubarraz Education Office?

3. Research importance

This study's two researchers hope to enrich the educational literature with a study on the reality of how organizational ambidexterity and development proposals are applied in government secondary schools, as each may help education departments work on developing their institutions on the ground. The study attained useful results and information for education departments regarding how organizational ambidexterity can be developed and applied to reduce shortcomings in its application.

4. Theoretical framework

Stemming from organizational learning theory, the historical roots of which go back to psychology, the concept of organizational ambidexterity arose from a fundamental topic in management literature: "the learning paradox" (Aboudi & Kharofa, 2018). Organizational theory developed due to the work of many researchers, including Duncan (1976), who coined the term "ambidextrous organization" to refer to an organization's ability to apply different stages of innovation, keep up with its business requirements, and simultaneously adapt to environmental variables (Raisch & Birkinshaw, 2008). Fifteen years later, the concept of organizational ambidexterity—coined by Marsh (1991)—gained prominence in organizational learning research. Marsh (1991) explicated a fundamental difference between exploitation and exploration activities

in organizations: Exploitation activity is linked to processes such as improvement, efficiency, selection, and implementation, while exploration activity is related to processes such as search, variation, and experimentation. Moreover, he stated that exploitation and exploration activities are specific to radical learning, which requires institutional managers to distribute their resources to achieve success and continuity (Marsh, 1991; Simsek, 2009).

Al-Bashqali & Al-Daoud (2015) indicated that proficient and superior performance is expected to arise in ambidextrous organizations and described the structural mechanisms through which two different approaches to creativity and application of ambidexterity can be followed: The first is implementing or deploying ambidextrous activities, creativity (i.e., exploitation), while the second is initiating or developing creative activities.

More recently, Gibson & Birkinshaw (2004), Sollander et al. (2018) observed that the concept of organizational ambidexterity references how organizations deal with a surrounding environment that imposes many contradictions, each of which must be dealt with positively. A prime example includes the need to direct capabilities and resources to current needs while directing them to future needs. Although resolving such contradictions is not easy—it is a complex, difficult process—skilled institutions can often achieve extensive reconciliation by doing so. Accordingly, Al-Awda (2020) stated that educational institutions should acquire and expand this concept.

Both Mahrous (2022) and Bhandari (2017) posit that one of the goals of organizational ambidexterity is to manage the educational crises facing the school in a manner that contributes to achieving a sound strategic orientation. Nemanich & Vera (2009) highlighted that organizational ambidexterity aims to achieve the short-term goals of activating exploitation and socializing new workers, which helps in finding the necessary knowledge and skills, as well as making progress toward various longer-term goals of effectiveness, innovation, and exploration.

Papachroni et al. (2014) confirmed five necessary propositions for managers to achieve organizational ambidexterity, thus enabling schools to manage the two activities of exploitation and exploration. These propositions are as follows:

1. Clarify the school's strategic purpose, which strongly highlights the importance of both exploitation and exploration.
2. Know the school's shared identity by articulating visions and values across the exploitative and exploratory units.
3. Have an integrated team making up clear and balanced exploitative and exploratory strategic units capable of dealing with situations of change that occur in the external environment.
4. Ensure that the senior leadership possesses qualities such as tolerance and conflict resolution and
5. Differentiate between exploitative and exploratory activities (Papachroni et al., 2014).

Regarding the fifth item, differentiation is crucial, as each unit explores a specific work, structure, process, culture, or system. Therefore, keen attention to the specific needs of each benefit of all organizational units in the school is necessary. Moreover, many educational institutions—especially schools—face obstacles in applying organizational ingenuity in their management, leading to poor exploitation of information and experiences among employees and a weak ability to explore and search for new experiences that generate future innovation and creativity (Qarni, 2019). Finally, Jabour (2020) confirmed the existence of obstacles to organizational ambidexterity related to the material, human, and organizational aspects. As such, this study will focus on these

two dimensions of exploitation and exploration—particularly the optimal exploitation of opportunities—as part of the broader concept of organizational ambidexterity.

As for exploration activities, Muhammad (2020) defined this dimension as involving the study of the external environment, exploring new services, and providing these new services in a way that exceeds the needs and desires of employees and beneficiaries.

5. Previous studies

By examining previous studies related to the research subject and objectives, discrepancies as well as commonalities were observed in the literature. For example, Al-Sarhani (2019) stressed that, according to the leaders of the Al-Kharj Governorate, the impact of organizational ambidexterity on public schools was moderate in that institution, whereas Al-Gharabawi (2019) indicated that there is a significant impact of leadership practices on organizational ambidexterity. Qarni (2019) concluded that there was a moderate degree of availability of organizational ambidexterity practices in general secondary education and that the presence of statistically significant differences in organizational efficiency is due to the variable of job title. Jabour (2020), however, indicated that the level of organizational ambidexterity among leaders was high. A further contrast was observed between the results of a study by Al-Janazra (2020), who identified a moderate degree of organizational ambidexterity among private school principals, and another by Amer (2020), who found that there was a high degree of organizational ambidexterity demonstrated at public education schools in some governorates in the Arab Republic of Egypt. Al-Awda (2020) concluded that the perceived level of organizational ambidexterity among female leaders of government secondary schools according to teachers in the Qassim region was high, although it was higher in the dimension of exploration than of exploitation. Muhammad (2020) identified a weak-to-moderate degree of organizational ambidexterity in public education schools in Minya Governorate ranges. By contrast, Al-Jumai & Al-Harithi (2021) concluded that there was a high level of organizational ambidexterity among female leaders of private schools in Taif, according to those institutions' female teachers, and that the availability among private school leaders to exploit ingenuity was higher than the availability to explore ingenuity.

Al-Jarayda (2021) found a high availability of organizational ambidexterity dimensions in the schools of the Interior Governorate in the Sultanate of Oman. Likewise, Al-Zaidi (2022) stressed that secondary school principals often engaged in the practice of inspiring others as leaders. This study found that all dimensions had high degrees, that organizational ambidexterity in secondary schools in Makkah Al-Mukarramah obtained a high score, and that the results revealed a positive correlation between two variables: inspirational leadership and organizational ingenuity (Al-Zaidi, 2022).

Al-Subaihat (2022) explained there was a moderate level of organizational ambidexterity among public school principals in the Mafraq Governorate. Muhammad et al. (2022) found a weak level of organizational ambidexterity among the management of basic education schools in the Fayoum Governorate and obstacles that prevent the achievement of organizational ambidexterity in the management of basic education schools there, and there was a moderate degree of organizational ambidexterity practiced among the principals of government secondary schools in this district.

Al-Shehri (2023) revealed a positive correlation between the extent to which the organizational ambidexterity of school principals and the organizational adaptation of teachers in North Sharqiyah Governorate in the Sultanate of Oman, explained that organizational

ambidexterity has a significant impact on school accreditation achievement. Pietsch et al. (2020) found that school principals engage in exploitative activities much more than in exploratory ones. In schools, the former are carried out at the expense of the latter, and according to school principals, both are positively correlated with competition between schools. Pietsch et al. (2020) also noted that the principals' exploration activities increased significantly during the pandemic. Although their exploitation activities decreased significantly, managers who could practice both activities before the pandemic could respond to the pandemic innovatively and could shift quickly between the two modes of exploitation and exploration.

6. Study methodology and procedures

6-1 Research methodology

The descriptive survey method relies on describing phenomena as they are in reality and collecting data that researchers can use to interpret and analyze, thereby revealing insights and conclusions. This method is considered the most appropriate for the present study and was thus selected as its methodological approach.

6-2 Community and sample for the study

The study community constituted 30 female principals and 805 teachers at government or public secondary schools for girls in the Al Mubarraz Education Office of the General Administration of Education for the academic year 1443/1444 AH. Each was registered with the Information Technology Department in the General Administration of Education in Al-Ahsa for that same year. The researchers employed a stratified random sampling method and used the Thompson equation to calculate a study sample size that could fully represent the study population, totaling 308 female principals and teachers. More specifically, as the original population for the study consists of two classes—female principals and teachers—the appropriate sample size for each category, according to the equation in Table (#), was determined as 278 female teachers and 30 principals.

6-3 Study tool

The present study relied on a questionnaire given to and completed by female principals and teachers in order to collect the necessary data. After 29 specialized arbitrators judged the questionnaire, 43 statements were approved for final use, at which point the Research Ethics Committee approved the study application for implementation with participants.

6-3-1 Validity

The two researchers verified the apparent validity of the questionnaire tool by relying on 29 arbitrators from educational leadership, educational administration, educational policies, and research methods, employing Pearson correlation coefficients as a measure of internal consistency to determine the questionnaire's validity. The validity was calculated in SPSS software (Version #) using data from an exploratory sample of 40 female principals and teachers at government secondary schools in the Al Mubarraz Education Office. This was done by calculating the Pearson correlation coefficient between the score for each statement and the total score for the dimension or axis to which it belongs. The correlation coefficient between the total score for each of the two dimensions of the first axis was also calculated, as shown in the following table:

Table (1) Pearson correlation coefficients of the first axis items: The degree of government secondary school female principals’ practice of organizational ambidexterity, including all scores in each dimension (n = 40)

Dimensions of organizational ambidexterity							
Exploiting Opportunities				Discovering New Opportunities			
N.	Correlation coefficient	N.	Correlation coefficient	N.	Correlation coefficient	N.	Correlation coefficient
1	**0.7030	8	**0.8926	1	**0.8099	8	**0.8737
2	**0.8459	9	**0.8159	2	**0.9085	9	**0.8626
3	**0.8721	10	**0.8060	3	**0.8109	10	**0.8522
4	**0.8557	11	**0.8206	4	**0.8469	11	**0.8653
5	**0.8050	12	**0.8712	5	**0.8676	12	**0.8216
6	**0.8682	13	**0.8974	6	**0.9000	13	**0.8741
7	**0.8274	14	**0.8301	7	**0.8668	14	**0.8122

**significant at the level of 0.01

Table (1) shows the correlation coefficients of the items of the first axis—the degree to which public secondary school female principals practice organizational ambidexterity—which are positively and statistically significant at the level of 0.01. Therefore, internal consistency has been achieved at the level of the first axis’s items and overall for each axis.

Table (2) Correlation coefficients for the items of the first axis: the degree of government secondary school principals’ practice of organizational ambidexterity with the total score of the axis (n = 40)

Dimensions of organizational ambidexterity							
Exploiting opportunities				Discovering New Opportunities			
N.	Correlation coefficient	N.	Correlation coefficient	N.	Correlation coefficient	N.	Correlation coefficient
1	**0.7141	8	**0.8613	1	**0.8513	8	**0.8545
2	**0.7920	9	**0.9782	2	**0.9186	9	**0.8289
3	**0.8792	10	**0.8083	3	**0.8280	10	**0.8311
4	**0.8364	11	**0.8331	4	**0.8687	11	**0.8346
5	**0.7938	12	**0.8470	5	**0.8409	12	**0.8485
6	**0.8585	13	**0.8819	6	**0.8879	13	**0.8371
7	**0.8585	14	**0.8226	7	**0.8269	14	**0.7680

**significant at the level of 0.01

Table (2) and the Pearson correlation coefficients shown in it demonstrate that all statements related to the first axis—the degree to which public secondary school principals practice organizational ambidexterity with the total score of its dimension—are positively and statistically significant at the level of 0.01. Therefore, internal consistency was achieved at the level of the statements on the first axis.

6-3-2 Stability

The two researchers employed Cronbach’s alpha, a reliability coefficient, to measure the reliability of the study tool. Table (3-13) shows the reliability coefficient results for the different fields and for the total tool (i.e., the dimensions and axes of the questionnaire):

Table (3) Cronbach’s alphas for the dimensions and axes of the questionnaire (n = 40)

Dimension/Axis	Number of items	Cronbach’s alpha
Exploiting available opportunities	14	0.97
Discovering new opportunities	14	0.97
The first axis: the degree to which female public secondary school principals practice organizational ambidexterity	28	0.98
The second axis: Development proposals to activate the practice of organizational ambidexterity among female public secondary school principals	13	0.96

Table (3) shows that the reliability coefficients of the dimensions and axes of the questionnaire were high using Cronbach’s alpha coefficient, as they were limited to between 0.96 and 0.98. All are coefficients that indicate high reliability; therefore, the stability of the overall questionnaire has been verified, giving the researchers confidence in using and applying the tool.

7. Presenting, discussing, and interpreting the results of the study

7-1 The first research question

This question inquiries about the degree of organizational ambidexterity practiced by the female principals of public secondary schools in the Mubarraz Education Office, according to those female principals and teachers.

The two researchers used frequencies, percentages, arithmetic means, and standard deviations (SDs) to answer this question. The answer to this question included two dimensions of this axis of organizational ambidexterity: *exploiting available opportunities* and *discovering new opportunities*. The results are shown in the following tables:

Table (4) Arithmetic means and SDs measuring the reported degree of organizational ambidexterity practiced among the principals and teachers at government secondary schools in the Al Mubarraz Education Office, shown in descending order.

Dimensions	SMA	SD	Order
Exploiting available opportunities	3.87	0.94	1
Discovering new opportunities	3.84	0.94	2
Overall organizational ambidexterity exercised	3.85	0.93	-

*The total possible arithmetic average is 5.0

Table (4) demonstrates that the show the degree of the teachers' and principals' agreement on the overall level of the practice of organizational ambidexterity among female principals and teachers; the general average for this axis was 3.85 out of 5.0 (with an SD of 0.93), corresponding to a high level of agreement. Therefore, the survey participants broadly agreed that public secondary school principals often engaged in the overall practice of organizational ambidexterity.

The participant responses to the survey items regarding the practice of organizational ambidexterity were calculated as shown in the following sections.

7-1-1 The first dimension: Exploiting available opportunities

Table (5) Frequencies, percentages, arithmetic means, and SDs, shown in descending order among the study sample for answers on the degree of organizational ambidexterity practiced in the exploitation of available opportunities among principals and teachers at public secondary schools in the Al Mubarraz Education Office.

S	Statement	SMA	SD	Order	Degree of practice
11	It uses the equipment and technologies available at a school.	4.06	1.03	1	High
8	School employees feel the importance of their role in the school.	4.02	1.04	2	High
1	The expertise of school personnel is dedicated to improving school performance.	4.0	1.05	3	High
3	Communication channels are used to help facilitate work procedures.	3.94	1.09	4	High
7	School employees are encouraged to participate in creative training programs.	3.9	1.09	5	High
4	It invests in available opportunities to serve school employees.	3.9	1.12	6	High
2	It is interested in improving the services provided to school employees.	3.87	1.09	7	High
10	It seeks to meet the professional requirements of school employees.	3.86	1.08	8	High

13	Periodic meetings are held for school employees to obtain their opinions and suggestions.	3.82	1.15	9	High
12	School facilities are invested to establish community programs.	3.81	1.13	10	High
9	School staff are involved in determining priorities for solving problems.	3.77	1.15	11	High
6	It provides a competitive climate that motivates school employees to be creative.	3.76	1.1	12	High
5	It benefits the local community in your educational planning process.	3.72	1.1	13	High
14	It benefits from parents' opinions in improving school services.	3.70	1.14	14	High
Dimension average		3.87	0.94	High	

*The total possible arithmetic average is 5.0

Table (5) shows the degree of the perceived opportunity exploitation practice among the survey participants. Specifically, the table shows the statements reflecting the dimension of “exploiting available opportunities.” The overall arithmetic mean for this dimension is 3.87 out of 5.0 (with an SD of 0.94), thereby indicating a high degree of practice perceived among the sample. In other words, the female principals and teachers in public secondary schools in the Al Mubarraz Education Office agreed that they generally exploit available opportunities and thus extensively practice this dimension of organizational ambidexterity.

Regarding individual statements, the arithmetic means for each statement measuring this dimension ranged from 3.70 to 4.06 out of 5.0, corresponding to a high level of agreement with the notion that they exploit available opportunities. In other words, the survey participants strongly agreed with all statements for this dimension. The arithmetic means, and SDs for the questionnaire statements that tested this dimension have been arranged in descending order.

7-1-2 The second dimension: Discovering new opportunities

Table (6) Frequencies, percentages, arithmetic means, SDs, and their descending order of the answers on the degree of organizational ambidexterity practiced regarding the dimension “discovering new opportunities” from the principals and teachers at government secondary schools in the Al Mubarraz Education Office.

S	Statement	SMA	SD	Order	Degree of practice
9	Discover the strengths of the school's personnel in order to benefit from them.	3.92	1.05	1	High
10	It works to provide a distinguished school environment.	3.92	1.08	2	High

5	An effort is made to innovate new services with the aim of improving the school's performance.	3.90	1.09	3	High
4	Looking for modern technical means that enrich the educational process.	3.88	1.09	4	High
14	It helps school employees go beyond traditional work practices.	3.87	1.07	5	High
7	Searching for successful educational models in administration and teaching.	3.87	1.06	6	High
13	Benefit from the successful experiences of schools or other institutions.	3.87	1.05	7	High
8	Learn about modern scientific methods to solve school problems.	3.83	1.07	8	High
11	Determines the school's future directions in cooperation with its employees.	3.83	1.11	9	High
2	Looking for innovative ways to meet school requirements.	3.79	1.10	10	High
13	It is concerned with discovering the needs of the community related to the work of the school.	3.79	1.10	10r	High
3	It helps school employees acquire administrative skills.	3.78	1.14	12	High
1	Motivating teachers by submitting new development proposals.	3.78	1.08	13	High
12	Study the changes occurring in the surrounding environment.	3.73	1.07	14	High
Dimension mean		3.84	0.94	High	

** The total possible arithmetic average is 5.0

Table (6) shows that the responses from this sample show a degree of approval to the statements examining the dimension of "discovering new opportunities." Specifically, the general arithmetic mean for this dimension was 3.84 out of 5.0, with an SD of 0.94. Therefore, the sample of female principals and teachers at public secondary schools in the Al Mubarraz Education Office highly agreed that they could generally discover new opportunities, one of the dimensions of organizational ambidexterity.

Regarding specific statements, the arithmetic mean approval ratings for the responses ranged from 3.73 to 3.92 (out of 5.0), corresponding to a high degree of agreement with these statements. In other words, the respondents highly agreed with all questionnaire statements for this dimension. The results have been arranged in descending order according to their arithmetic means.

7-2 Presenting, discussing, and interpreting the results of the answer to the second research question

The second question research question explores the second axis. This was explored through questions that asked to what extent the female principals and teachers at government secondary schools in the Al Mubarraz Education Office agreed that development proposals are used to activate the practice of organizational ambidexterity.

Table (7) Exploring agreement among principals and teachers at government secondary schools in the Al Mubarraz Education Office with statements regarding the extent to which development proposals are practiced to activate organizational ambidexterity, arranged in descending order.

S	Statement	SMA	SD	Order	Degree of practice
1	Providing provide opportunities for individuals to present ideas that support the success of the business.	3.94	1.09	1	High
2	Opening channels of communication with other schools to benefit from their expertise in applying organizational ambidexterity.	3.85	1.08	2	High
4	Employing new and different technologies to exploit available opportunities.	3.79	1.08	3	High
7	Establishing a standard of organizational ambidexterity in selecting school principals.	3.77	1.09	4	High
3	Building a partnership with higher education institutions to develop the capabilities of school employees in organizational ambidexterity.	3.72	1.12	5	High
6	Including an item on discovering opportunities and exploiting them in evaluating job performance.	3.71	1.17	6	High
12	Delegating school principals with more powers to employ ingenuity in their administration.	3.7	1.08	7	High
11	Holding periodic meetings to enable female managers to apply organizational ambidexterity.	3.7	1.1	8	High
10	Providing quality training programs for school principals on organizational ambidexterity.	3.69	1.09	9	High
8	Developing procedures that support organizational ambidexterity.	3.69	1.13	10	High
9	Spreading the culture of organizational ambidexterity among school principals.	3.68	1.13	11	High
13	Allocating incentives for teachers and principals who excel in organizational ambidexterity.	3.67	1.16	12	High
5	Creating an electronic platform that supports organizational ambidexterity.	3.68	1.17	13	High
Overall average**		3.74	0.95	High	

**The total possible arithmetic average is 5.0

Table (7) shows the responses from the sample regarding the degree of approval for statements that pertain to the extent to which development proposals are used to activate the practice of organizational ambidexterity among the principals of public secondary schools. The general arithmetic mean for this axis reached 3.74 out of 5.0 (with a standard deviation of 0.95), corresponding to a high degree of agreement with the overall questionnaire. Therefore, female principals of public secondary schools generally highly agreed that development proposals are used to activate the practice of organizational ambidexterity.

Regarding individual questionnaire statements, the approval ratings of the female principals and teachers at government secondary schools in the Al Mubarraz Education Office had arithmetic means that ranged from 3.66 to 3.94 (out of 5.0), corresponding to a high degree of approval. Therefore, the respondents showed high agreement in response to all statements on this axis. The results have been arranged in descending order according to their arithmetic means.

8. Discussing the study results and limitations and future proposals

8-1 Results discussion

The researchers of the present study found the degree of organizational ambidexterity and ambidexterity practiced by public secondary school female principals at public secondary schools in the Al Mubarraz Education Office to be high. This finding is evidenced by the high reported awareness among secondary school principals and teachers of the importance of providing organizational ambidexterity through ambidexterity in their schools and the school principals' demonstrated provision of a positive, competitive climate. The study also found that principals motivate teachers and students to develop, excel, and innovate in their performance by exploiting the best existing resources and capabilities and achieving leadership and success in all fields. This finding aligns with those of Al-Jabour (2020), Al-Jarayda (2021), and Al-Zaidi (2022). Regarding the two dimensions and axes, the participating members agreed to practice each to a high degree. As discussed in the preceding section, the dimension "exploiting the available opportunities" had the highest level of agreement. This result may be due to the ease with which available opportunities can be exploited—all the principal and teacher must do is exploit them optimally, use them to develop the educational process, and improve the level of performance in the school. In addition, the nature of the competitive environment within public secondary schools affiliated with the Al Mubarraz Education Office means that principals and teachers are urged to exploit every opportunity in the external environment and employ them to benefit the school and take advantage of it. This result aligns with those of Amer (2020), Al-Jumai & Al-Harithi (2021). The dimension "discovering new opportunities" had the second-highest level of agreement among this study's respondents. Regarding why this dimension scored less high than the first one, the researchers posit that discovering new opportunities requires comparatively more effort from the school principal and teachers; moreover, it requires that the school principal be empowered to employ her capabilities—including technical knowledge, future vision, and strategic planning—for the betterment of her school. Undoubtedly, the discovery process requires that female principals and teachers possess many experiences and courses. This result differs from those found in Al Odah's (2020) study, where the dimension "discovering new opportunities" was found to be more prominent than the other. This discrepancy may have arisen due to female managers' keenness to discover and practice new creative ideas, enabling them to face emergency matters and deal with them smoothly.

The following statements illustrate the ways in which organizational ambidexterity or ambidexterity was practiced:

8-1-1 Taking advantage of available opportunities

-Statement No. (11), “The devices and technologies available in the school are used” was found to have the highest level of agreement among respondents. This result may be due to the high-level training that the school principal underwent. Likewise, she has scientific, educational, administrative, and technical qualifications and possesses a strong desire to keep pace with development, facilitate the educational process, and meet the desires of teachers and students, thus making the educational process distinct and attractive. This finding aligns with those of Al-Jumai & Al-Harithi (2021) and Al-Subaihat (2022). However, this result differs from those of Muhammad (2022), who found that this statement was agreed with to a low degree. This discrepancy in results may be due to differences in the educational system where these studies were applied or the large burdens of school members, their lack of powers, and their lack of good initial selection-making of the means to improve the educational process and benefit the school with them.

-Statement No. (8), “Female school employees feel the importance of their role in the school” had the second-highest level of agreement among the respondents. This result may be due to the school principal’s confidence that appreciation and the formation of human relationships with school members are the primary drivers for raising work quality, pushing teachers to achieve, and providing a competitive environment that encourages creativity and innovation and grants pride in the work that they do. This finding differs from those of Subaihat (2022), who found that this statement was agreed with to a moderate degree. This discrepancy in results may be due to the study’s documented principal-centered bureaucracy, the principal’s weak communication with members, and his lack of involvement with them in school affairs, which led to a lack of a positive climate among employees and a spirit of cooperation and participation.

-Statement No. (1), “The expertise of school employees is invested in improving school performance” had the third-highest level of agreement among respondents. This result may be due to the school principal’s dual vision, which is that she has distinguished and innovative human cadres with diverse energies capable of achieving excellence for her school and that development and advancement are difficult to achieve or obtain without the participation of teachers. She also has important experience that enables her to present creative projects in her field of specialization, enabling them to compete with other schools. This result coheres with those of Amer (2020), who identified a high degree of agreement, describing it as follows: “In order to achieve distinguished performance in our schools, we must discover the skills, experiences, and abilities of the school members. Specifically, those that have not been expressed, supported and promoted before” (p. #).

In addition, even those results with comparatively lower means measuring agreement showed a high degree of agreement with the statements, as the following discuss:

-Statement No. (6), “Providing a competitive climate that motivates school employees to be creative” had the twelfth-highest level of agreement among respondents; the degree of agreement was still high overall. This finding may have arisen due to a competitive school environment that requires the school principal to provide many diverse incentives—tangible or intangible—to the teachers regularly; these incentives may be provided in limited quantities by the school principal for several reasons. These include the rigidity of cumbersome laws, the many tasks placed on the manager’s responsibility, and the routine followed in managing administrative affairs. This result

differs from those of Muhammad (2020) and Subaihat (2022), who each found that the statement was agreed upon to a medium extent. This discrepancy in results may be due to the tendency of some principals toward centralization, a weak focus on final outcomes and strategic planning, and a lack of authority granted to school members because the manager adopts an authoritarian administrative style (e.g., believing that he is the only one with experience and knowledge and that he does not need an atmosphere dominated by participation, creativity, and the exchange of experiences with others).

-Statement No. (5), “Benefiting from the local community in the educational planning process” had the thirteenth-highest level of agreement among respondents. This result may be due to the lengthy procedures involved in obtaining official approval to benefit from the local community and the school principal’s fear of making decisions to benefit the local community on her own to avoid responsibility. This set of behaviors and tendencies ultimately leads to a lack of enthusiasm among some female leaders and a loss of desire to exploit the positive aspects of the external environment. This finding coheres with Amer’s (2020) study, which recommended the achievement of effective participation between the school, business people, opinion leaders, and those interested in education to support and promote modern methods for developing education and the performance of educational institutions, especially public education institutions.

-Statement No. (14), “Benefiting from parents’ opinions in improving school services” had the fourteenth-highest level of agreement among respondents; in other words, this item scored the lowest among respondents. This result may be due to the excessive preoccupation of parents with teachers’ and principals’ private lives, which hinders them from communicating, participating in decision-making, giving opinions, and giving advice to school faculty in developing and improving the school’s services. As such, this may indicate a weakness in some people’s knowledge of the nature of the educational process and its goals or in the preparedness of some parents regarding participation and cooperation with the school. This finding contrasts with those of Al-Jami and Al-Harhi (2021) and Subaihat (2022), who found that this statement had a moderate level of agreement. The differences in these results may be due to the high aspirations for the services that parents want from the school, which exceed the established systems and its material and human resources.

8-1-2 Discover new opportunities

-Statement No. (9), “Discovering the strengths of school female personnel with the aim of benefiting from them” had the highest level of agreement among respondents. This result may be due to the principals’ keenness to establish relationships with teachers, represented by employing inner peace in the workplace, ability to communicate and communicate, earnest performance, enjoyment of a positive spirit, and preference for teamwork, which enables them to optimally discover the opportunities among their employees and their existing skills. They would thus enjoy any task assigned to them as appropriate for their performance and in cases where it can benefit their school’s work by improving outcomes and the educational system. This result aligns with those of Amer (2020).

-Statement No. (10), “It works to provide a distinguished school environment” had the second-highest level of agreement among respondents. This result may be due to the principals’ awareness and familiarity with the importance of providing a positive and comfortable work environment, which leads to them encouraging the best skills and talents of teachers and creating a spirit of camaraderie among school members. Accordingly, this leads to a sense of ownership, resulting in

creativity and innovation at work and increasing satisfaction that is reflected positively in their productivity.

-Statement No. (5), “An effort is made to innovate new services to improve the school’s performance” had the third-highest level of agreement among respondents. This result may be due to the principals’ awareness that the ability to compete and excel is directly linked to innovation. The principals may see innovation as a means of finding solutions to the problems the school faces and generate different ideas from what was previously practiced to facilitate flexibility and organization at work. The school principals may also believe that a culture of innovation has a role in raising performance efficiency, exchanging knowledge between institutions, the flow of information, and applying all new technologies. This result coheres with those of Al-Jabour (2020), Al-Jumai & Al-Harithi (2021), and Muhammad (2022). The latter emphasized the necessity of encouraging and assisting the school administration to develop creative and innovative attempts that help design guidance programs and seminars.

In addition, even those results with comparatively lower means measuring agreement showed a high degree of agreement with the statements, as the following discuss:

-Statement No. (3), “It helps school employees acquire administrative skills” had the twelfth-highest agreement among respondents. This result may be due to the weak awareness among female principals that administrative skills are an integral part of the organizational structure of school work. Since many changes and challenges face the school, they may forget to involve their members in administrative skills of all kinds and introduce them to these latter so that they have complete knowledge of what the school seeks to achieve (in terms of reaching its goals, purpose, and mission), can express their opinions, and can benefit from these opinions in development and advancement. This result aligns with those of Amer (2020).

-Statement No. (1), “Motivating female teachers by submitting new development proposals” had the thirteenth-highest level of agreement among respondents. This result may be due to principals neglecting to appreciate the benefit of motivating teachers—whether material or moral—specifically in regard to presenting proposals that help in dealing with difficult situations, getting rid of traditional routine practices, and using all available resources in the minimum amount of time, to create an environment. Indeed, healthy positivity can lead to employees feeling satisfied, that their work is fair, and that they are appreciated. This result aligns with those of Al-Jumai & Al-Harithi (2021). The result differs from Al Janazra’s (2020) study, which found that this statement was moderately agreed upon, potentially due to the abundance of formal procedures that cannot be bypassed or ignored and the administration’s anxiety about implementing anything new and fearing its consequences.

-Statement No. (12), “It studies the changes occurring in the surrounding environment” had the fourteenth-highest level of agreement among respondents. This result may be due to the principals’ excessive preoccupation with work within the school, which kept them away from interacting with the surrounding environment, as well as their fear of practicing new activities and becoming familiar with traditional ones. This finding aligns with Al-Awda’s (2020) recommendation that management respond to and interact positively with environmental changes.

8-1-3 Development proposals to activate the practice of organizational ambidexterity among public secondary school female principals and teachers:

-Statement No. (1) “Providing opportunities for individuals to present ideas that support the success of work” had the highest level of agreement among respondents. This result may be due to a positive and comfortable work environment, which allows its members to express their

opinions and beliefs, encourages them to take risks and put forward ideas that support the excellence and success of the work, and rewards them for that to prepare them to feel safe when presenting creative ideas and accepting them, whether they are familiar or otherwise.

-Statement No. (2) “Open channels of communication with other schools to benefit from their experiences in applying organizational ambidexterity” had the second-highest level of agreement among respondents. This result may be due to the need for female managers to be aware of the experiences and expertise of others and to learn what they have discovered of new sciences and different knowledge in ingenuity to use and employ them. In addition, there is a desire to meet the needs of learners and employees, confront and mitigate challenges, and develop their institutions with everything new in the field of organizational ambidexterity and competition with other institutions.

-Statement No. (4) “Employing new and different techniques to exploit available opportunities” had the third-highest level of agreement among respondents. This result may be due to the scientific and technological challenges that imposed e-learning, the use of the Internet, the development of curricula, and interest in technical developments. This may be due to what was imposed by the COVID-19 pandemic, which transformed education into distance learning through technologies, and it was fully utilized and correctly exploited. This may be due to compatibility with digital transformation technology, which provided opportunities for optimal exploitation because of its features and facilities for general institutions that save them time, effort, and money. Their services are transformed from their traditional form to an electronic one, consistent with what Al-Subaihat (2022) found.

The results were also the least responsive and had a (high) degree, arranged in descending order according to the arithmetic mean, as follows:

-Statement No. (9) “Spreading the culture of organizational ambidexterity among school principals” had the eleventh-highest level of agreement among respondents. This result may be due to the lack of information sources supporting the dissemination of the culture of organizational ingenuity, such as courses and activities, as well as the high costs of printing and publishing books and the lack of interest in reading them. Finally, it may also be due to directors’ excessive preoccupation with work and lacking time, preventing them from researching and learning novel insights regarding organizational ambidexterity.

-Statement No. (13) “Allocating incentives to teachers and principals who excel in organizational ambidexterity” had the twelfth-highest level of agreement among respondents. This result may be due to the emergence of negative competition (conflict) between teachers or principals—preventing the administration from providing incentives—and the difficulty in measuring achievement that deserves incentives. Moreover, it arises from low flexibility in the administrative system, which prevents it from providing incentives, and a lack of communication channels between workers and management to facilitate learning about their work, their goals, and their excellence in ingenuity.

-Statement No. (5) “Creating an electronic platform that supports organizational ambidexterity” had the thirteenth-highest level of agreement among respondents—in other words, this was the lowest-scoring item. This result may be because educational platforms require a great effort to create them, as they face many obstacles. Firstly, human lack of awareness of an open learning culture (accessible via platforms on the Internet) among principals or teachers, weak competencies in using electronic platforms, and a lack of support and maintenance supervisors for the platforms can all hinder their creation. Secondly, administrative obstacles to these platforms include weak follow-up and supervision of training centers for the platform, lacking motivation for educational

leaders and teachers to join the platform and benefit from it, and increasing job burdens on members, which limits the follow-up of the electronic platform. Thirdly, technical obstacles include low Internet availability with appropriate quality for use by principals or teachers, a low level of protection and security while using the school's electronic platform, and a lack of technical guidance provided to female principals and teachers on using such platforms.

8-2 Study limitations, recommendations, and proposals for future studies:

Identifying the degree to which public secondary school female principals practice organizational agility, including the opinions of all secondary school principals in Al Mubarraz Education Office under the Education Administration in Al-Ahsa, is a difficult proposition. In addition to using a sample of female teachers to investigate the degree to which secondary school female principals practice organizational agility and development proposals, this study involved fieldwork during the second semester of the academic year 2022. Thus, considering the results of this study, the two researchers recommend the following:

- Organize specialized training courses to enhance the concept of organizational ambidexterity among secondary school principals and teachers and its importance for schools;
- Educate them on how to develop the dimensions of ambidexterity and train them on it;
- Develop a clear system and work mechanism that helps female principals and teachers discover new opportunities through scientific research;
- Support and enable them to develop their abilities and provide the required capabilities to improve the quality of school services provided to them; and
- Develop an effective system of incentives and rewards to encourage school employees to submit initiatives and proposals to develop school performance so that clear standards and conditions are available for obtaining these rewards.

It is suggested that future studies (1) expand the research with a different methodology using quantitative and qualitative approaches, such as interviews with female principals, teachers, and educational supervisors; (2) conduct a study on the role of organizational ambidexterity in achieving some variables such as motivation and achievement; and (3) build qualitative scientific standards to identify the degree of practice of organizational ambidexterity in educational institutions.

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Conflicts of Interest:

This manuscript has not been published or presented elsewhere, in part or entirety, and is not under consideration by another journal. There are no conflicts of interest to declare. On behalf of all authors, the corresponding author states that there are no conflicts of interest.

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