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Elevating the competitiveness of general education schools: Perspectives from experts and educational leaders

 Fathi M Abunaser¹⁺
 Houda A Al-Housni²
 Durayra Al Maqbali³

¹,²*College of Education, Educational Foundation and Administration Department, Sultan Qaboos University, Oman.*
¹*Email:* f.abunaser@squ.edu.om
²*Email:* alhousni@squ.edu.om
³*College of Education, Curriculum and Instruction Department, Sultan Qaboos University, Oman.*
³*Email:* maqbali@squ.edu.om

(+ Corresponding author)

ABSTRACT

Education is the cornerstone of development in all its forms. Therefore, the continuous improvement of education is a fundamental necessity pursued by societies to ensure progress and advancement. Schools are the fundamental pillars for the development and growth of society in all areas, and education is the path to progress and prosperity. This study aims to uncover the essential requirements and expected challenges to enhance the competitiveness of Omani public education schools from the perspectives of educational leaders and experts. A qualitative approach was employed in collecting and analyzing the data. The study sample consisted of 43 experts and educational leaders from the Ministry of Education and Omani universities, including 19 working in higher education and 24 in the public education sector. The data gathered through semi-structured interviews centered on two main themes: the requirements and the expected challenges. The study revealed a list of requirements to enhance competitiveness in the areas of administrative, cognitive, human, and organizational requirements. It also identified the prominent expected challenges.

Contribution/Originality: This study contributes to the development of public education schools in the Sultanate of Oman and the Arabian Gulf region due to the similarity of their education systems. It also supports the realization of Oman Vision 2040 by fostering a culture of competitiveness in public education schools and integrating it into development plans.

1. INTRODUCTION

Education is the cornerstone of development in all its forms, and therefore, the continuous development of education is a fundamental necessity sought by all societies to ensure progress and advancement. This is particularly crucial in the face of challenges and changes that education encounters, given its escalating impact on building and creating knowledge economies and intellectual capacity. These are considered the reference for knowledge production and its effective utilization, which has led many countries, especially the Sultanate of Oman, to place significant emphasis on pre-university education, allocating substantial budgets to provide the requirements for competitiveness and global leadership. The statistics indicate that education expenditure in the Sultanate accounts for approximately 5.4% of the gross domestic product, compared to 5.1% in Saudi Arabia, 3.1% in the United Arab Emirates, 3.2% in Qatar, and 2.3% in Bahrain (Atheer, 2022).

Schools are the fundamental pillar for the development and growth of society in all areas, and education is how communities achieve progress and prosperity. This makes the work on developing and enhancing the competitiveness of various schools, especially in the Sultanate of Oman, a necessary and urgent matter. This commitment was emphasized with the issuance of Vision 2040, which focuses on investing in human resources. Educational institutions play a crucial role in preparing individuals scientifically and professionally. To achieve this goal, it requires the presence of efficient and high-quality educational institutions (schools). Therefore, one of the top priorities of Vision Oman 2040 is developing and improving the education system. As stated in the vision, raising the standard of education in schools and higher education, creating curricula and educational programs that equip graduates with competitive abilities, potentials, and skills to enter local and international job markets, and developing curricula and educational programs are all necessary to build self-assured, socially conscious, innovative, and economically active people (Vision, 2020).

The necessity of excellence and competition locally and globally is emphasized by the ministries concerned with educational institutions in the Sultanate of Oman. Improving performance and enhancing competitiveness is no longer optional but has become a prerequisite for sustainability. These schools face challenges and difficulties, as highlighted by Ben Ali (2022) including the absence of a comprehensive national education policy, low education quality, a focus on quantity rather than quality, rigid curricula, traditional teaching methods, limited education spending, a disconnect between education and development, teacher capacity constraints, school violence, the absence of successful administrations, and a lack of implementation of recommendations. The World Economic Forum placed Oman sixth in the Arab world and 53rd overall out of 141 participating nations in the Global Competitiveness Report 2019 regarding education parameters. Additionally, Oman achieved the 38th rank in the sixth pillar index of the study, which comprises five education indicators: graduate skills, average years of schooling, expected years of schooling, critical thinking in teaching, and the pupil–teacher ratio in elementary education (Al-Rawahi, 2022).

1.1. Significance of the Study

The study gains its importance from the following:

1. By identifying the institutional elements that influence high competitiveness in Omani public education, its findings improve the education system. It also draws attention to areas that require progress and growth.
2. Research helps relevant authorities make better judgments and allocate resources and efforts to develop the education system.
3. The results of the study will help Omani schools to become more competitive at the global level, which will enhance the country's local and international competitiveness in various fields.
4. By enhancing employment opportunities for qualified and competent school graduates, the standard of life in the community will improve.
5. Raising the level of the public education system will contribute to raising the level of awareness and knowledge in society.

1.2. Objectives of the Study

1. According to specialists and educational leaders of the Sultanate of Oman's Ministry of Education, what specifications must public schools meet to become more competitive?
2. What challenges do experts and leaders in education at the Sultanate of Oman's Ministry of Education foresee to increase the competitiveness of public education institutions?
3. Are there statistically significant differences in experts' opinions regarding public education schools' competitiveness requirements in the Delphi rounds?

2. REVIEW OF LITERATURE

The world is witnessing rapid developments, and in response to these developments, competitiveness has gained widespread attention at various cognitive levels (Elasrag, 2013). The term competitiveness refers to the ability or advantage of an entity to be better than others in its capacity and performance. The competitiveness of different entities has different meanings. For instance, the competitiveness of goods is dealt with as the ability to meet buyers' needs.

Conversely, a nation's competitiveness stems from its capacity to generate and enhance domestic output to occupy a certain place in the global labor market. An industry's competitiveness means increasing its share of gross domestic product (Melnyk & Ihor, 2013). Therefore, the competitiveness of institutions or organizations stems from their ability to exploit human and natural resources to achieve a competitive advantage related to quality, the use of technology, innovation, or development (Sadler, 2003). According to Alserhan and Shbail (2020) competitiveness is "a set of factors that give an institution the ability to face competition intensity with others by providing additional value, including market share, profitability rate, size, productivity, capital, and employees' skills." Bhattacherjee defined it as "the organization's ability to use a set of knowledge, skills, and capabilities that interact to achieve the desired progress through communication networks, information systems, education, and training" (Bhattacherjee, 2012).

In the educational context, the World Economic Forum considers the competitiveness of educational services, according to the Global Competitiveness Report, as the availability of the quantity and quality of learning services provided to individuals in primary education. It is measured by enrollment rates, education quality, and its connection to the job market, which is measured quantitatively by secondary and higher education enrollment rates, in addition to the quality of the education system, school administration, and the availability of internet services in schools and training services for both employees and students (Ameerah, 2019). Grant (2017) defined it as the extent of the role of educational services in the development of the overall economic level, and thus, the more competitive the educational services are, the more stimulating it is for increasing the national economic competitiveness of the country. From what has been previously presented, competitiveness is linked to the performance of educational institutions and their internal strengths and weaknesses. Given the importance of competitiveness, especially in the education sector, the next section addresses this aspect in more detail.

Maintaining a competitive advantage that actively welcomes continuous innovation is vital to keeping educational institutions alive and preventing them from falling into disrepair. Developing a perspective that identifies educational institutions' objectives and emphasizes the significant opportunities they wish to capitalize on is another requirement for relevance and continued success to be facilitated through strategic foresight. Furthermore, fostering a culture of innovation contributes to continuously enhancing educational institutions' performance, particularly in technology. Creating new values within educational institutions is equally crucial, impacting employees, teachers, and students. By tailoring services to meet their diverse needs, ensuring their loyalty, and fostering a positive perception of the institution, these values contribute to building a strong reputation.

Moreover, excellence in strategies, services, resources, and competencies is a paramount goal outlined by Asel. It underscores the importance of a holistic and multifaceted approach to achieving and sustaining excellence in various facets of institutional operations (Asel, 2020). Renewing resources that contribute to achieving a competitive advantage and redistributing or re-integrating them to enhance growth and retain an educational institution's position among its competitors in the long term is essential (Sanchez & Heene, 2010). It is also necessary to identify the capabilities of talented workers, determine which capabilities can lead to a competitive advantage for the educational institution, and developing these capabilities (Obeidat, Al-Shannag, Almatarneh, Alali, & Shawaqfeh, 2021) to achieve organizational effectiveness and ensure the attainment of quality, innovation, and outstanding management while achieving organizational goals (Nuruzzaman, 2015). Considering the above, the

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importance of competitive advantage for educational institutions ensures continuous development and improvement of all material and human resources, leading to performance enhancement, quality, and excellence.

As a result of the link between competitiveness and the rapid developments witnessed in the economy, spurred by the information and communication technology revolution, competitiveness comprises a set of characteristics outlined by Anderson, Potočnik, and Zhou (2014). These characteristics include a forward-looking perspective and a foundation based on the strengths and distinctive points of an institution in comparison to its competitors. It is not based on commonalities. In addition, the characteristics of competitiveness should ensure that educational institutions in the Sultanate of Oman are built on sustainability and competitiveness. The criteria for evaluating the quality of competitiveness are discussed in the next section.

Indicators which serve as criteria for evaluating competitiveness in pre-university education include visionary creative leadership. Effective leadership is fundamental to any collective effort, and achieving set goals and utilizing an institution's potential requires wise leadership that operates based on a scientific and practical approach and stands out through creativity (Hughes, Lee, Tian, & Legood, 2018). Creativity is a necessary trait that educational leadership must possess to adapt to cognitive, technological, and cultural changes, among others, for desired performance (Aljubair, 2014). By fusing the idea of creative transformation with a school's ethos, creative leadership is typified by creating an innovative and welcoming learning environment. It involves discovering and nurturing students' talents and providing activities that stimulate students' energies and innovations.

Human resources form the backbone of the education system, deriving its strength and achieving its goals from them, which is achieved through incentivizing and supporting sustainable professional development activities within the Omani education community. It includes activating the role of the Training and Evaluation Unit in the professional development of employees in schools and educational institutions. It also includes benefiting from self-evaluation and peer evaluation in developing performance and understanding, adhering to the ethical and cultural standards of society and to professional regulations. It increases confidence in the abilities of school community members, encouraging them to experiment, and providing employees with all necessary information and tools to accomplish their tasks without direct supervision through effective use of technology and leveraging material and human resources to achieve the vision and mission of Omani educational institutions (Eisa, Al-Kashef, & Noor, 2022).

Educational institutions strive to apply comprehensive quality standards by adhering to academic standards in all work areas. They employ modern technology in teaching, provide an organizational climate based on clarity, dialogue, transparency, and teamwork spirit, and utilize scientific methods to solve problems (Eisa et al., 2022).

These are represented by educational institutions' support from international and local entities and organizations to achieve competitiveness. Additionally, it involves identifying the needs of employees according to technological and economic changes. Government support is crucial, encompassing legislation that allows a shift from only performance budgets to different types of budgets that focus on both performance and efficiency. Funding is allocated to educational institutions based on performance results (Chinta, Kebritchi, & Ellias, 2016). Community support is emphasized through granting organizational, administrative, and financial independence and managing these institutions to ensure decision-making flexibility through parent and teacher councils. Accreditation institutions and private educational organizations also provide support. These revolve around an institution's culture and values, serving as the basis for competitiveness among educational institution management to outline their daily activities. It also involves the ability to change because the contemporary regulatory environment is dynamic and rapidly changing. Therefore, educational institutions and schools must adopt modern strategies to anticipate changes and not pursue them by identifying strengths, weaknesses, opportunities, and threats in a competitive environment, both internal and external. Additionally, it includes auditing the selection of both teaching and administrative human resources, investing intellectual energies, and opening communication channels among all school staff (Ibrahim & Yunus, 2022; Mehralian & Shabaninejad, 2014).

To achieve competitiveness, those responsible for education systems must fulfill the aforementioned requirements for educational institutions, enabling them to achieve comprehensive quality and a competitive performance. Profit is not the basis for this evaluation; performance and education quality are (Kabutia, 2014). Chen and Cheng (2019) concentrated on creating competitiveness dimensions for preschool instructors, highlighting the significance of many sub-dimensions as a foundation for assessing the competitiveness of teachers and schools. Another study conducted in vocational high schools in Indonesia by Palilingan and Batmetan (2019) demonstrated that a strong competitive capacity for schools can be built through effective and implementable strategies, such as using competitive intelligence techniques divided into two steps: The circle of competitive intelligence in problem formulation and the competitive intelligence framework as a management model. Moreover, a study by Aam, Hasan, Rahman, and Siti (2022) showed that introducing local reading and writing culture in early childhood enhances children's knowledge of local culture and boosts the competitiveness of schools.

In higher education, a study by Letiagina, Grinevich, and Gutko (2019) revealed the main trends for developing global higher education to enhance the competitiveness of educational programs. The study proposed ways to enhance competitiveness, such as increasing international collaboration in education, internationalizing the education process, establishing modern training programs aimed at acquiring diverse, relevant professions, and increasing the participation of professionals from teaching organizations. On the other hand, education variables were investigated as significant factors in the social and economic development levels of nations globally. The study underscored the need to evaluate the relative benefits and drawbacks of higher education in defining its competitiveness and validating the function of education in fostering economic growth and increasing global competitiveness (Yurii, Volodymyr, Olha, & Nikolenko, 2021).

3. RESEARCH METHOD

3.1. Research Design

In this study, the Delphi method was used for a series of sequential task questionnaires aimed at achieving a consensus among a group of experts (Ragin, 2014). It starts by selecting a group of experts, followed by distributing preliminary questionnaires. Responses are analyzed, and collective summaries are presented, which are rapidly modified in succession until a consensus is reached. In addition, the study used survey groups comprising education experts who discussed the issue of membership in public education schools. These are essential basic parameters to gain comprehensive and in-depth insights from a variety of experts in the field of education.

3.2. Population and Sample

The study population included all educational experts and leaders in Sultan Qaboos University, Nizwa University, the University of the East, and the Ministry of Education in the Sultanate of Oman. The study's reliance on a sample of experts from the Ministry of Education and Omani universities has strong justifications. These education experts and leaders have in-depth knowledge of the education system in Oman, making them qualified to provide accurate insights into the challenges and needs required enhance competitiveness in schools. In addition, these experts combine academic and field experience, which enhances the comprehensiveness and accuracy of the data extracted. Their presence in leadership positions also ensures that they can provide practical and implementable recommendations based on their deep understanding of educational policies and procedures (see Table 1).

The Central Supervisor at the Ministry of Education, faculty members, the Assistant Dean, and the Dean of the College of Education took part in this study. The specialists were between 45 and 65 years of age. This sample represents the elite in the field.

Table 1. Details of the study sample.

Category	Details				Total
Institution	Sultan Qaboos University	Nizwa University	University of the East	Ministry of education in Oman	
No. of staff members	**10**	**7**	**7**	**19**	
Job title	Faculty member	General manager			43
	24	19			
Gender	Male	Female			
	21	22			
Work experience in years	8–12	13–18	More than 18		
	12	14	17		

3.3. Data Collection Tools and Techniques

The data was obtained in two ways.

First: The research employed semi-structured interview investigative method, offering question order and content flexibility. Ilomäki, Ruusuvuori, and Laitinen (2021) highlighted that this approach facilitates a comprehensive exploration of participants' perspectives. The study combined three forms of validity—descriptive, interpretive, and theoretical—according to the framework developed by Maxwell (2012) to guarantee the tool's reliability. Achieving interpretive validity involved obtaining participant feedback, wherein interview transcripts were sent to participants for validation. The study received comments from ten participants, confirming the accuracy of the interview information (see Appendix 1A). The semi-structured interview was chosen as the study's investigative method because of its flexibility in organizing the questions and delving into specific topics, which allowed for a comprehensive exploration of participants' views. It also contributed to ensuring the accuracy of the data by sending interview transcripts to participants for verification, which gave the study multiple levels of validity and reliability.

Second: The results of the interviews were used to develop a questionnaire. The initial findings from the interviews were incorporated into a questionnaire with four dimensions: Administrative, Knowledge, Human, and Organizational. This questionnaire comprised 22 items, each rated on a three-point scale (Unimportant, Important to Some Degree, Important) (see Appendix 2B). The tool demonstrated high internal consistency, as indicated by a Cronbach's alpha coefficient of 0.92 (see Table 2). Moreover, the correlation coefficients between the items and their respective domains ranged from 0. 96 to 0.82, reaching statistical significance at the 0.01 level.

Table 2. Cronbach's alpha stability coefficients for the questionnaire dimensions.

Dimension	Number of items	Cronbach's alpha coefficient
Administrative	6	0.86
Knowledge	6	0.90
Human	4	0.91
Organizational	6	0.89
Total	22	0.92

3.4. Data Analysis

A thematic analysis of the qualitative data was conducted using Braun and Clarke's six-step methodology. The report was produced in phases: Familiarizing oneself with the data, creating preliminary codes, looking for themes, evaluating themes, and defining and labeling themes.

Regarding the quantitative data, the study adopted a three-point Likert scale for all dimensions of the study (Not Important, Important to Some Extent, and Important) corresponding to the raw scores 1, 2, and 3, respectively. The level of response of the sample members to the study tool is determined according to the

judgment standard shown in Table 3. Mean averages were used for quantitative data analysis, and the paired sample test was used to evaluate the sample's mean responses across two applications.

Table 3. Criteria for judging the instrument.

Grade	Mean range	Importance
1	1 to 1.66	Not important
2	1.67 to 2.33	Important to some extent
3	2.34 to 3	Important

4. RESULTS AND DISCUSSION

4.1. Results of the First Question

According to the specialists and educational leaders of the Sultanate of Oman's Ministry of Education, what specifications must public schools meet to become more competitive?

The opinions of the experts questioned in the first round were accomplished through multiple social media platforms, phone conversations, email, and in-person visits to conduct one-on-one interviews. The focus was on the requirements needed to improve the competitiveness of public education schools. Table 4 illustrates the outcomes of the interviews conducted in the initial round.

Table 4. Competitiveness requirements for public education schools from the perspective of experts and educational leaders.

No.	Overall requirements	Partial requirements	Repetition rate
1	Administrative	Existence of necessary legislation and policies to enhance the competitiveness of schools.	5.488
		Modernization of regulations, plans, and strategies in line with contemporary developments.	3.049
		Study of the labor market needs to align with its requirements.	4.268
		Adoption of competitive principles within schools.	4.878
		Activation of partnerships with public and private sectors to increase investment opportunities and school competitiveness.	7.317
		Enhancement of strategic thinking among staff and making decisions supported by accurate data and analysis.	6.098
2	Knowledge	Curriculum updates with a forward-looking vision.	5.488
		Increase knowledge production and support for research and development in the education sector.	4.878
		Elevation of academic quality levels in line with modern developments.	4.268
		Effective use of technology in the education process, including using computers and educational software to enhance students' experiences and provide additional educational resources.	4.268
		Regular assessment of students' performance to measure their progress and identify areas for improvement.	2.439
		Promotion of research and innovation among students and teachers, providing opportunities to develop projects and activities that enhance their skills and knowledge.	5.488
3	Human	Development of academic capabilities and capacities for teachers and employees in the education sector.	3.049
		Update hiring procedures and attract human competencies to schools.	4.268
		Support for innovation and creativity among those working in the education sector to increase	4.878

No.	Overall requirements	Partial requirements	Repetition rate
		competitiveness.	
		Provision of effective school management committed to sustainable development, enhancing communication with teachers, students, and parents.	6.098
4	Organizational	Openness and communication with schools and external educational institutions.	3.659
		Establishment of specialized research chairs to support and supervise scientific research to increase school competitiveness.	5.488
		Development of a long-term improvement strategy aiming at enhancing educational performance and achieving success and excellence permanently.	4.878
		Adaptability to rapid changes in the competitive environment.	4.268
		Promotion of a diverse and inclusive environment within schools.	3.049
		Use of appropriate marketing strategies for academic programs and services.	2.439

Table 4 shows the outcomes of the initial round, which led to the preparation of the initial list of competitiveness requirements based on the experts' opinions and suggestions. The list of requirements consists of 22 paragraphs distributed across four main axes representing competitiveness requirements: Administrative Requirements, Knowledge Requirements, Human Requirements, and Organizational Requirements. The table indicates that competitiveness requirements are crucial for schools in the public education system, as they contribute to improving the quality of education and provide an advanced learning environment. Among these vital administrative requirements is the existence of necessary legislation and policies that support increasing the competitiveness of schools. Regulations, plans, and strategies should also be up to date and responsive to modern developments in education and technology.

Studying the needs of the labor market and integrating its requirements in schools is essential to enhancing competitiveness (Jabbar et al., 2022). Schools should adopt competitive principles internally and establish partnerships with the public and private sectors to increase investment opportunities and enhance competitiveness. Additionally, they should promote strategic thinking among staff and make decisions based on accurate data and analysis, which enhances managerial efficiency and improves the quality of educational services provided. Enhancing schools' competitiveness leads to several positive outcomes, such as supportive legislation and policies that promote education quality and guide efforts toward developing effective curricula. Furthermore, modern regulations and strategies encourage creative thinking and continuous development within schools (Epple, Romano, & Zimmer, 2016). Moreover, activating school partnerships with the community enhances strategic thinking, achieves sustainability, improves service quality, increases parent satisfaction, and develops school human resources.

Updating curricula improves the quality of education, integrates it with modern developments in various fields, and increases cognitive output. Additionally, using technology in the educational process enhances student interaction and participation (Jabbar et al., 2022). All these efforts enable schools to direct their efforts toward improving academic performance and meeting students' needs. Encouraging research and innovation among students and teachers helps build an educational environment that fosters innovative thinking and provides opportunities to develop projects and activities that enrich students' skills and enhance their knowledge. Consequently, these cognitive requirements enhance schools' competitiveness and achieve a sustainable and advanced educational vision.

Human requirements are considered one of the basics that ensure the competitiveness of schools and play a decisive role in developing an effective and innovative educational environment. Developing the academic

capabilities of teachers and employees in the education sector enhances performance levels and improves the quality of education provided. Highly skilled teachers who embrace modern concepts can motivate and inspire students to achieve their full potential. In addition to that, updating recruitment procedures and attracting human competencies to schools contributes to bringing in the best competencies to achieve the school's goals and work toward an innovative and sustainable future. Also, supporting innovation and creativity among those working in the education sector enriches the learning experience and stimulates innovation in teaching and learning. Finally, providing teachers, students, and parents with effective and committed school management to sustainable development improves communication with them; this fosters a collaborative and positive learning environment that increases motivation to improve performance and meet learning objectives (Chinta et al., 2016). These requirements result in improved education, development of individual and collective competencies, promotion of effective communication, strong foundations for school competitiveness, and the achievement of a sustainable and advanced educational vision.

Organizational requirements specific to schools are essential to enhance their competitiveness in education. Openness and effective communication with schools and external educational institutions enhance the constructive exchange of experiences and good practices, contributing to the development of effective and updated educational programs. A long-term developmental strategy becomes necessary to achieve sustainable success and excellence, as it contributes to continuously improving educational performance (Asel, 2020). In the face of rapid changes in a competitive environment, adapting becomes crucial for schools to ensure their continuity and excellence in meeting the expectations of students and society. Encouraging a diverse and inclusive environment within schools enhances positive interaction and mutual understanding, promoting educational experience and achieving excellence (Epple et al., 2016). Finally, effective marketing strategies promote academic programs and attract more students, enhancing the school's competitiveness and achieving higher levels of excellence and quality.

4.2. Results of the Second Question

What challenges do experts and leaders in education at the Sultanate of Oman's Ministry of Education foresee to increase the competitiveness of public education institutions?

Using the same methodology as the first question, the Ministry of Education in the Sultanate of Oman polled experts in the first round to get their thoughts on the anticipated obstacles to raising the standard of public education. Table 5 presents the results.

Table 5. Competitive challenges for public education schools from the perspective of experts and educational leaders.

No.	Overall challenge	Partial challenge	Repetition rate
1	Administrative	Administrative bureaucracy and lengthy procedures in relevant ministries.	7.22
		Insufficient financial support from both the public and private sectors.	3.89
		Weak conviction in continuous education as an educational pattern.	4.44
		Addressing challenges and opportunities at both local and global levels.	7.78
		Managing performance and achieving school goals considering local perceptions.	3.89
	Knowledge	Knowledge renewal and information accumulation.	3.33
		Limited expansion of the continuous education concept.	5.00
		Handling large and complex data requiring analysis and utilization.	4.44
		Use of machine learning and artificial intelligence in creative education for schools.	3.33
		Digital transformation processes and the structural and cultural changes required in schools.	6.67

No.	Overall challenge	Partial challenge	Repetition rate
		Data and information protection in schools against cyber security threats.	6.11
	Human	Difficulty attracting human competencies and talents.	2.78
		Administrative and teaching staff reluctance toward development.	4.44
		Sectoral focus on short courses and insufficient emphasis on sustainable programs.	7.22
		Lack of skills and training for employees on modern cognitive skills.	5.00
		Enhancing diversity and inclusivity in the human workforce at the school level.	6.11
	Organizational	Difficulty providing a suitable environment for some competitive programs.	4.44
		Cessation of excellence rewards for competencies in the education sector.	5.56
		Delay of some schools in updating and developing.	5.00
		Introducing changes in organizational structures and processes.	3.33
		Pressure to achieve competitiveness and innovation in schools.	7.22

Table 5 illustrates the competitiveness challenges based on experts' opinions and suggestions, with experts identifying 21 challenges distributed across four main axes related to the competitiveness requirements.

One of these challenges is administrative bureaucracy and the length of procedures in relevant ministries hindering the ability to make effective decisions and implement necessary improvements quickly. Additionally, schools lack financial support from both the public and private sectors, undermining their ability to provide advanced infrastructure and updated technology, which negatively affects the learning experience for students and teachers. This is consistent with the results of a study that found many complications due to radical changes in policies, as bureaucracy often hinders transformation and renewal processes. The lack of enthusiasm for continuous education appears as an educational pattern hindering staff development and limiting the possibility of improving educational practices. Understanding and effectively addressing these challenges by educational leaders is considered necessary to enhance the quality of education and promote competitiveness in public education (Clark, 2023).

Other challenges include knowledge renewal and information accumulation, which require updating curricula and developing the skills of educational staff to keep up with ongoing scientific and technological advancements. Dealing with large and complex datasets poses a challenge and requires schools to develop strategies to understand and use this data effectively to improve educational decision-making processes (Chinta et al., 2016). Furthermore, digital transformation processes require structural and cultural changes in schools, presenting administrative and organizational challenges. Lastly, protecting data and information represents a major challenge that requires the adoption of effective measures to address cyber threats and ensure the safety of educational systems and sensitive data. This aligns with previous studies and is crucial for decision makers to consider when formulating any development policies. Public schools can follow multiple strategies to overcome knowledge challenges, including promoting a culture of continuous learning and providing training opportunities for educational staff. The ability to effectively use and analyze data for informed educational decision making is also essential (Jabbar et al., 2022).

Experts also indicated that schools face challenges related to the competencies and personal development of educational staff. Among these challenges, attracting human talent proves difficult, necessitating the development of attractive strategies and effective recruitment programs that highlight opportunities for development and career advancement. Moreover, administrative and teaching staff must keep up with development, which requires continuous training incentives and programs that reflect the importance of skill development and ongoing updates (Asel, 2020). Training for employees on modern cognitive skills, ensuring continuous training opportunities,

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promoting diversity and inclusivity in the workforce by adopting inclusive employment policies, and creating supportive environments for all members of the educational community are critical to mitigating human-related challenges in schools (Zancajo, 2020)

The delay of some schools in updating and developing poses a barrier that requires strategies to promote continuous renewal and improvement. Introducing changes in organizational structures and processes may face resistance and challenges in effective implementation. Finally, the pressures of achieving competitiveness and innovation in schools require the development of suitable and inspiring organizational frameworks to stimulate progress and development in education (Zancajo, 2020).

4.3. Results of the Third Question

Are there statistically significant differences in experts' opinions regarding public education schools' competitiveness requirements in the Delphi rounds?

To answer this question, the experts' responses in the first and second rounds regarding the competitiveness requirements of public schools in Oman were compared. The average opinions of all 43 experts in the two rounds were calculated, and the variations in their replies for each of the four axes between the first and second rounds were ascertained using a paired samples test, which analyzes Delphi rounds (Chang, 2006).

Table 6. Comparison of the experts' findings from the paired samples test between the first and second rounds.

Paired samples test								
Requirement	Paired differences					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
				Lower	Upper			
Administrative	0.00	0.00	0.00	0.00	0.00	1.04	42.00	0.30
Knowledge	0.00	0.00	0.00	0.00	0.00	-0.53	42.00	0.60
Human	0.38	0.10	0.01	0.35	0.41	26.17	42.00	0.00
Organizational	-0.65	0.17	0.03	-0.70	-0.59	-24.76	42.00	0.00
Total	-0.09	0.29	0.04	-0.18	0.00	-1.99	42.00	0.05

Table 6 indicates a need for more statistically significant differences in the experts' opinions regarding the competitiveness requirements for public education schools in Oman in both Delphi rounds. There were no differences in opinion concerning the sub-categories of administrative and knowledge requirements. However, statistically significant differences were observed in the experts' opinions regarding human and organizational requirements. There are several reasons why experts in Oman agree on the competitiveness standards for public schools. According to Nuruzzaman (2015) this might entail having a thorough awareness of the local possibilities and difficulties that the local educational system faces.

The agreement may be based on educational visions and national strategies directed by the government, possibly influenced by labor market needs and the local economy (Higham, 2023). International experiences and scientific research might contribute to shaping unified perspectives. Understanding Omani culture and society may also be part of this consensus.

In conclusion, variations in expert opinions on human and organizational requirements to enhance the competitiveness of public education schools may be attributed to the diversity in preferences and the cultural and educational backgrounds of the experts representing different educational institutions, including both general and higher education. Moreover, developments in technology, educational policies, and market demands may influence expert opinions and orientations, leading to divergent views on the necessary actions to improve the quality of education and enhance competitiveness in public schools (Asel, 2020).

5. FINDINGS SUMMARY

The study revealed a list of requirements to enhance competitiveness in the areas of management, knowledge, human and organizational resources. It also identified the prominent challenges expected in enhancing competitiveness and provides comprehensive insights into areas that need improvement and challenges that must be overcome to achieve competitive excellence. The results focus on these requirements given that effective management is the basis for achieving competitiveness through improving operations and making effective decisions. Knowledge is considered a vital element for development and innovation in the digital age, which enables schools to understand the market and adapt to changes. In addition, human resources play a pivotal role in implementing strategies and achieving goals, as public education schools need to develop the skills of their employees and motivate them to achieve optimal performance. Good organization ensures efficient coordination of efforts and resources, which increases the ability to achieve competitive goals and contributes to improving the school's overall performance. The study also revealed challenges in enhancing competitiveness, including lack of funding, bureaucracy, weak administrative leadership, lack of access to modern technology, lack of training and knowledge infrastructure, lack of qualified personnel, high teacher attrition rate, and lack of human incentives. Organizational challenges also include the absence of a clear vision, weak coordination, and resistance to change. Meeting these challenges requires integrated efforts from policy makers, administrators, educators and society to achieve high levels of competitiveness.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

In conclusion, increasing the competitiveness of public education schools in Oman reflects global dimensions, which include the use of technology to enhance educational processes and enable effective learning. It also includes integrating international best practices into the curriculum to prepare students to meet global challenges. This requires the development of 21st-century skills and critical thinking, with a focus on sustainability and environmental awareness. It also includes enhancing students' personal and social skills and encouraging innovation and entrepreneurship. Overall, these dimensions are based on global guidelines to improve the quality of education and prepare students for a rapidly evolving future. In addition, enhancing the competitiveness of schools seeks to achieve global excellence through modernizing the curriculum and integrating technology. It also includes developing outstanding students who are qualified and equipped with 21st-century skills and encouraging interaction with the global education community through cultural exchange and cooperation. This will lead to raising human efficiency and achieving sustainable development capable of creating added value. It reflects a commitment to global education standards and readiness to prepare a committed and qualified generation to engage with global challenges.

The results of this study are useful locally and regionally, as it sets specific visions to increase the competitiveness of general education schools and provide educational institutions that contribute to supplying universities with elite students, which increases the strength of the education system in general and provides a stable reference for general education schools in the Arab region as it is one of the pioneering studies in the field.

6.2. Recommendations

6.2.1. Recommendations for Educational Decision Makers

Professional skills development programs can be provided for educational leaders to enhance administrative skills and encourage leadership models that employ advanced technology which can be integrated into the educational process to enhance student engagement and understanding. It is also necessary to improve the curricula and develop the performance of teachers by regularly updating the curricula to meet the needs of students and

workforce requirements and providing continuous training opportunities for teachers to enhance teaching and technology skills.

6.2.2. Recommendations for Academic Professionals

A comparative study is recommended that includes multiple education systems in several different countries to determine the extent of the impact of these systems on the competitiveness of public schools and research the requirements for enhancing them according to the different systems.

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APPENDIX

Appendix 1A.

Respected Dr/Mr ……………

Peace be upon you and the mercy of Allah and His blessings.

The research team is conducting a study entitled "Elevating the Competitiveness of General Education Schools." We are pleased to invite you to participate in a semi-structured interview aimed at exploring expert opinions on ways to enhance competitiveness in public education schools. With the increasing challenges facing education in the modern era, we seek through this interview to gather in-depth insights from specialists and experts in the educational and administrative fields. We will discuss a range of vital topics related to management, knowledge, human resources, and organization within schools, with the aim of identifying effective strategies to meet current challenges and enhance the overall performance of schools. Your valuable participation will contribute to formulating practical recommendations to improve the quality of public education and raise its competitiveness in the future.

First: Interview data		
1	Day and date	
2	Time taken	
3	Place	
4	Name	

Second: Demographic data		
1	Gender	( ) Male ( ) Female
2	Age	( ) Less than 30 years ( ) From 31 to 50 years ( ) More than 50 years
3	College	( ) Science faculties ( ) Faculties of humanity
4	Academic rank	( ) Assistant professor ( ) Associate professor ( ) Professor doctor ( ) Lecturer
5	Nationality	( ) Omani ( ) Non-Omani
6	Specialization	

Third: Interview questions

Q1: What are the most important requirements for general education schools to achieve competitiveness, from your point of view?

Q2: What are the general requirements for any school to achieve competitiveness?

Q3: What are the most prominent challenges and difficulties that public education schools may face in achieving competitiveness?

Q4: What are the most prominent administrative challenges facing public education schools currently?

Q5: What role can effective leadership play in enhancing competitiveness within schools?

Q6: How can a clear and specific vision be formulated for the development of general education schools?

Q7: What are the key factors that you believe contribute to enhancing competitiveness in general education schools?

Q8: How can the community and parents be involved in efforts to improve school competitiveness?

Q9: What are effective methods to improve coordination between different departments and departments in schools?

Q10: What are your views on increasing competitiveness in public education schools?

Appendix 2B.

Respected Dr/Mr ………………

Peace be upon you and the mercy of Allah and His blessings.

The research team is conducting a study entitled "Raising the competitiveness of general education schools." We are pleased to invite you to participate in responding to this questionnaire, which came as a result of interviewing a number of experts with ability and competence in the field. You can respond about the tool according to the specified scale, and you can also express your opinion during the response, your valuable participation will contribute to formulating practical recommendations to improve the quality of public education and raise the competitiveness of its schools in the future.

Your participation is appreciated.

Second: Demographic data		
1	Gender	( ) Male ( ) Female
2	Age	( ) Less than 30 years ( ) From 31 to 50 years ( ) More than 50 years
3	College	( ) Science faculties ( ) Faculties of humanity
4	Academic rank	( ) Assistant professor ( ) Associate professor ( ) Professor doctor ( ) Lecturer
5	Nationality	( ) Omani ( ) Non-Omani
6	Specialization	

Third. Interview questions.

No.	Overall requirement	Partial requirements	Importance		
			Not important	Important to some extent	Important
1	Administrative	Existence of necessary legislation and policies to enhance the competitiveness of schools.			
		Modernization of regulations, plans, and strategies in line with contemporary developments.			
		Study of the labor market needs to align with its requirements.			

No.	Overall requirement	Partial requirements	Importance		
			Not important	Important to some extent	Important
		Adoption of competitive principles within schools.			
		Activation of partnerships with public and private sectors to increase investment opportunities and school competitiveness.			
		Enhancement of strategic thinking among staff and making decisions supported by accurate data and analysis.			
2	Knowledge	Curriculum updates by a forward-looking vision.			
		Increase knowledge production and support for research and development in the education sector.			
		Elevation of academic quality levels in line with modern developments.			
		Effective use of technology in the educational process, including using computers and educational software to enhance students' experiences and provide additional educational resources.			
		Regular assessment of students' performance to measure their progress and identify areas of weakness and strength for improvement.			
		Promotion of research and innovation among students and teachers, providing opportunities to develop projects and activities that enhance their skills and knowledge.			
3	Human	Development of academic capabilities and capacities for teachers and employees in the education sector.			
		Update hiring procedures and attract human competencies to schools.			
		Support for innovation and creativity among those working in the education sector to increase competitiveness.			
		Provision of effective school management committed to sustainable development, enhancing communication with teachers, students, and parents			
4	Organizational	Openness and communication with schools and external educational institutions.			
		Establishment of specialized research chairs to support and supervise scientific research to increase school competitiveness.			
		Development of a long-term improvement strategy aiming at enhancing educational performance and achieving success and excellence permanently.			
		Adaptability to rapid changes in the competitive environment.			
		Promotion of a diverse and inclusive environment within schools.			
		Use of appropriate marketing strategies for academic programs and services.			

Fourth. Competitive challenges for public education schools.

Overall challenges	Partial challenge	Important		
		Not important	Important to some extent	Important
Administrative	Administrative bureaucracy and lengthy procedures in relevant ministries.			
	Insufficient financial support from both the public and private sectors.			
	Weak conviction in continuous education as an educational pattern.			
	Addressing challenges and opportunities at both local and global levels.			
	Managing performance and achieving school goals considering local perception.			
Knowledge	Knowledge renewal and information accumulation.			
	Limited expansion of the continuous education concept.			
	Handling large and complex data requiring analysis and utilization.			
	Use of machine learning and artificial intelligence in creative education for schools.			
	Digital transformation processes and the structural and cultural changes required in schools.			
	Data and information protection in schools against cyber security threats.			
Human	Difficulty in attracting human competencies and talents.			
	Administrative and teaching staff reluctance towards development.			
	Sectoral focus on short courses and insufficient emphasis on sustainable programs.			
	Lack of skills and training employees on modern cognitive skills.			
	Enhancing diversity and inclusivity in the human workforce at the school level.			
Organizational	Difficulty in providing a suitable environment for some competitive programs.			
	Cessation of excellence rewards for competencies in the education sector.			
	Delay of some schools in updating and developing.			
	Introducing changes in organizational structures and processes.			
	Pressures to achieve competitiveness and innovation in schools.			