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EXPLORING CREATIVE BEHAVIOUR IN SPECIAL EDUCATION AND NUTRITION TEACHERS

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Abstract. This study aimed to assess the level of creative behaviour among special education and nutrition teachers in Abu Dhabi, United Arab Emirates, with a focus on how gender, experience, and specialization influence creativity. The sample included 144 teachers (male and female) from schools under the Ministry of Education (United Arab Emirates), with a validated questionnaire developed by the researchers to measure creative behaviour. The findings indicated that the overall level of creative behaviour was moderate, with significant differences favoring female teachers. Nutrition teachers exhibited higher levels of creative behaviour compared to their special education counterparts. Based on these findings, the study recommends the development of targeted training programmes that enhance critical thinking, problem-solving, and adaptive change management skills to foster creativity among educators.

Keywords: creative behaviour, creativity, nutrition teachers, special education teachers, United Arab Emirates.

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1. Introduction

Education represents a fundamental necessity in the modern age, serving as a primary means for individuals to fulfill their cognitive and non-cognitive needs while driving the growth and progress of human societies. It contributes to societal advancement through the investment in human capital and behavioural guidance, achieving development for both the individual and society alike. Accordingly, contemporary societies have directed their energies toward education, continuous training, and creativity to provide opportunities for the comprehensive development of the educational process, encompassing both teacher and student (Lövdén et al., 2020).

The teacher represents the cornerstone of the educational process, where investing in preparation and professional development is essential for quality education. Special education and nutrition teachers must continuously keep pace with rapid advancements in knowledge to effectively nurture creativity among their students, given that traditional teaching methods often hinder rather than support creative growth, ultimately affecting students' academic achievement and overall development (Ellala et al., 2023).

Creative behaviour refers to the unique actions individuals practice in the workplace, encompassing the discovery of opportunities, generation of new ideas, scientific verification, and implementation efforts at any organizational level, while reflecting intellectual fluency, flexibility, and originality in professional practice.

This study aims to assess the level of creative behaviour among special education and nutrition teachers in Abu Dhabi, examining differences based on gender, qualification, experience, and specialization, while identifying obstacles from the teachers' perspectives. Its significance lies in enriching the Arab literature on this subject, offering a research tool for future studies, and providing insights for educational officials in Abu Dhabi to develop strategies that enhance creative behaviour and align with global standards.

The above is a clear indication that the teacher needs continuous training to know the basic features of creative behaviour and practice it within the educational institution, and that there are some obstacles that hinder the teacher between themselves and their creative behaviour with the students, both within the classroom and the overall school environment, alongside the teachers and the remaining school administration and restrict and unable to achieve appropriately and unable to practice active and effective creative behaviour. Accordingly, the desire came to conduct the current study that sought to know the level of creative behaviour among special education and nutrition teachers in Abu Dhabi, and the problem of the current study can be crystallized by answering the following questions:

Question 1. What is the level of creative behaviour among special education and nutrition teachers in Abu Dhabi?

Question 2. Are there statistically significant differences at the significance level (0.05) in the level of creative behaviour among special education and nutrition teachers in Abu Dhabi attributable to the variable of gender?

Question 3. Are there statistically significant differences at the significance level (0.05) in the level of creative behaviour among special education and nutrition teachers in Abu Dhabi attributable to the variable of specialization?

2. Literature review

Creative behaviour can be defined from multiple perspectives, including psychological perspective. Some authors (Zeitlen et al., 2025) believe that creative behaviour depends on the integration of mental processes (such as divergent thinking) and emotional (such as positive responses to new situations), which allows individuals to develop innovative solutions in daily life (Zeitlen et al., 2025).

Creative behaviour from a psychological perspective revolves around the internal psychological factors that motivate individuals to generate new and unconventional ideas. This concept includes many psychological aspects such as motivation, flexibility of thinking, the ability to think critically, and emotional management.

Creative behaviour indicates the teacher's ability to use a set of concepts and ideas in a unique, purposeful, and creative way with the aim of developing the work in the institution or organization to reach the highest level. The teacher's creative behaviour is a pattern through which he can learn and train intensively on scientific thinking patterns and enables him to adapt to the individuals around him and the emergency conditions of society, and deal with school and life issues with creative and innovative means; therefore, the presence of a teacher with creative behaviour contributes to the search for solutions in new ways for school work, and envisions many alternatives for interacting with students' problems and

making the appropriate decision to solve the problem at the appropriate time, and presents new proposals and ideas that can be applied on the ground (Kamalov et al., 2023).

Institutions that foster creative behaviour contribute to a competitive and productive environment; however, educational bodies must actively remove barriers such as authoritarian leadership and traditional teaching methods (Aldoseri et al., 2024). Creative behaviour among special education and nutrition teachers is vital for improving educational outcomes, particularly for students with special needs who deserve innovative instructional strategies (Fujino & Ikeda, 2023), yet personal, administrative, and economic obstacles continue to hinder its full practice (Pulimeno et al., 2020). The intersection of special education and nutrition is noteworthy, as diets rich in omega–3 fatty acid and essential vitamins have been shown to enhance brain flexibility and creative thinking, enabling teachers to design more effective educational strategies (Abu-Attiyeh et al., 2024) with school environments integrating nutrition similarly demonstrating improvements in teaching creativity (Cotton et al., 2020). Al-Saraireh (2012) found a moderate level of creative behaviour among 358 teachers in Karak Governorate, Jordan, raising questions about influencing factors, while Al-Zoubi (2014) reported a high level of creative behaviour among 159 teachers in King Abdullah II Schools for Excellence, Irbid Governorate, Jordan, with no statistically significant differences based on gender, qualification, or experience, suggesting the influence of common institutional practices or training (Hamadneh & Asi, 2015; Hamadneh, 2016).

Naser (2016) found that Palestinian government school teachers (n (number) = 502) demonstrated high levels of creative behaviour, with statistically significant differences favoring males, bachelor's and master's degree holders, and those with 5–10 years of experience.

Regarding technology, Gündoğdu and Merç (2022) revealed that electronic applications and cloud technologies substantially contribute to developing creative thinking, while some authors (Su et al., 2024) emphasized that flexible and stimulating teaching strategies are essential for fostering creativity among high school students.

Environmental factors also play a pivotal role; open spaces, natural lighting, and appropriate tools stimulate creative thinking (Al-Tkhayneh et al., 2023; Al-Tkhayneh, 2024), collaborative social interactions facilitate idea exchange and creative problem-solving (Al-Tkhayneh, 2024, 2025; Al-Tkhayneh et al., 2023; Amabile, 2018), while organizational flexibility, managerial support, and a risk-tolerant culture are key to nurturing creativity (Amabile, 2018).

3. Methodology

3.1. Design and sample

The study adopted a descriptive correlational design. The sample consisted of 144 teachers (72 males and 72 females) from special education and nutrition teachers in Ministry of Education schools, selected through stratified random sampling.

3.2. Research instrument

A questionnaire of 28 items was used, distributed across five dimensions: 1) fluency; 2) flexibility; 3) originality; 4) details; and 5) sensitivity to problems, rated on a five-point Likert scale (Al-Zoubi & Al-Tkhayneh, 2019).

The instrument was developed based on prior studies and validated through expert review and pilot testing on 35 participants. Correlation coefficients ranged between 0.621–0.895 and Cronbach's alpha reliability coefficients ranged between 0.698–0.855, with an overall reliability of 0.877.

3.3. Data collection and analysis

The questionnaire was distributed electronically over four weeks with full ethical considerations observed. Data were analyzed using *SPSS* version 26 through descriptive statistics (mean and standard deviation) and inferential statistics (analysis of variance and Student's *t*-tests).

3.4. Description of demographic variables

The Table 1 shows the characteristics of the study sample members according to the variables of gender (male, female) and specialization (special education, nutrition).

Table 1. Characteristics of the study sample individuals (source: created by authors)

Gender		Frequency	Percent
Valid	Male	60	42%
	Female	84	58%
	Total	144	100%
Specialization		Frequency	Percent
Valid	Special Education	77	53%
	Nutrition	67	47%
	Total	144	100%
Years of experience		Frequency	Percent
	1–5	59	41%
	6–10	48	33%
	11+	37	26%
	Total	144	100%
Academic qualification		Frequency	Percent
	Bachelors	94	65%
	Masters	50	35%
	Doctors of Philosophy	0	0%
	Total	144	100%

4. Results

Question 1. What is the level of creative behaviour among special education teachers and nutrition teachers from their point of view?

To assess the level of creative behaviour among special education teachers and nutrition teachers from their point of view, the arithmetic means and standard deviations were calculated as in Table 2.

Table 2. Arithmetic means and standard deviation of the study objectives scale (source: created by authors)

Level	Arithmetic mean	Standard deviation	Items	Field	#
Medium	3.210	1.1103	"I strive hard to make excellence the dominant feature of my work method".	Fluency	1
Medium	3.303	1.1000	"I have the ability to generate new ideas in my work".		2
Medium	3.344	1.2445	"I feel bored due to repeating the same routine procedures in completing the work".		3
High	3.800	1.1202	"I can contribute new and rare ideas in order to achieve the goals of the institution".		4
Medium	3.102	1.0679	"I analyze matters and issues from several angles before judging them".		5
Medium	3.505	1.1445	"I am careful not to be biased in my ideas".		6
Medium	2.666	1.0666	"I am careful to hear opinions that differ from my view in order to evaluate it and benefit from it in my work".		7
Medium	3.000	1.0303	"I seek to think in ways different from normal thinking".	Flexibility	8
High	3.911	.6678	"I can express my ideas in a language and in ways that everyone understands".		9
Medium	3.454	.7895	"I have the ability to think quickly under various work conditions".		10
Medium	2.002	1.0201	"I care about analyzing developments to search for alternative ways of working".		11
High	3.957	.9918	"I focus on determining the details of the work and its stages before beginning to implement it".		12
Low	2.330	1.0013	"I have the ability to foresee problems at work before they occur".	Originality	13
High	4.100	.8033	"I focus on my work problems and strive hard to solve them quickly".		14
Medium	3.332	.9208	"I care about participating in solving problems that hinder the work of others".		15
High	3.936	.8800	"I am keen to know the weaknesses and shortcomings in my work".		16
Medium	2.674	1.0859	"The organization in which I work supports continuous change in work methods and approaches".		17
Medium	3.226	.7874	"The organization in which I work encourages change and supports new idea and practices".		18
Medium	3.222	1.4211	"I try/implement new ideas and methods at work".		19
Medium	3.420	1.0223	"I encourage others to change their ways of working and I seek to help them do so".	Details	20
High	4.445	0.788	"I reject all incorrect professional practices even if they are common in my work environment".		21

End of Table 2

Level	Arithmetic mean	Standard deviation	Items	Field	#
Medium	3.000	0.99520	"I take risks and difficulties in performing tasks related to my work".	Sensitivity to Problems	**22**
Medium	3.545	1.1004	"I like to work in a team that tends to take risks and is characterized by a spirit of chance".		23
Medium	3.333	.9636	"I have enough courage to initiate creative work even if it is characterized by risk".		24
Medium	2.600	1.1997	"I initiate useful and constructive discussions in work meetings".		25
Low	2.230	0.7204	"I have full knowledge of the information issued and received from and to my department at work".		26
Medium	2.810	1.1361	"I work on improving my personal relationships with my colleagues and superiors to develop my abilities and skills".		27
Medium	2.700	.6544	"I seek to strengthen my relationships outside my organization with people and experts in the same specialty".		28
Medium	3.600	0.7012	Total		**29**

Table 2 reveals that the overall level of creative behaviour among special education and nutrition teachers was moderate, with a mean of 3.600 and a standard deviation of 0.70. Paragraph 21, "I reject all incorrect professional practices even if they are common in my work environment", ranked first under the details domain (M (mean) = 4.445, SD (standard deviation) = 0.0788), followed by paragraph 12, "I focus on determining the details of the work and its stages before beginning to implement it", under the flexibility domain (M = 3.957, SD = 0.9918).

The majority of remaining paragraphs fell at a moderate level, reflecting varying degrees of creativity while indicating a weakness in information exchange and management that may hinder creative cooperation and innovative problem-solving. Notably, paragraph 7, "I am keen to know the opinion that differs from my view of the work to evaluate it and benefit from it", recorded the lowest mean (M = 2.666), suggesting a need to improve openness to criticism and differing perspectives, possibly attributed to differences in experience or the institutional environment in which teachers operate.

Question 2. Are there statistically significant differences at the significance level 0.05 in the level of creative behaviour among special education and nutrition teachers in Abu Dhabi attributable to the variable of gender?

Results showed a statistically significant difference in creative behaviour based on gender (t (t-value) = 4.451, Sig. (significance) = 0.04), with female teachers scoring a higher mean (3.522) compared to their male counterparts (3.096) (Table 3). This may be attributed to females' greater tendency to adopt new ideas and express creativity, driven by their heightened sensitivity to detail and flexibility in dealing with students.

Table 3. Independent sample Student's *t*-test (gender) (source: created by authors)

First hypothesis (gender)	Group	Arithmetic mean	Standard deviation	The difference between the two averages	Calculated *t*-value	Significance	Result
	Males	3.096	.539	0.426	4.451	0.04	Reject
	Females	3.522	.633				

Question 3. Are there statistically significant differences at the significance level (0.05) in the level of creative behaviour among special education and nutrition teachers in Abu Dhabi attributable to the variable of specialization (special education, nutrition)?

Table 4. Independent sample Student's *t*-test (teacher specialization) (source: created by authors)

The second hypothesis (teacher specialization)	Group	Arithmetic mean	Standard deviation	The difference between the two averages	Calculated *t*-value	Significance	Result
	Special education	3.0720	.7052	0.588	3.611	0.020	Reject
	Nutrition	3.6600	.8111				

The results revealed a statistically significant difference in creative behaviour between special education and nutrition teachers (t = 3.611, Sig. = 0.020), favoring nutrition teachers who scored a higher mean (3.66) compared to special education teachers (3.07) (Table 4). This may be attributed to the nature of nutrition work, which demands greater innovation in applying scientific knowledge, while special education teachers tend to operate within more structured environments requiring stable and specific strategies.

5. Discussion

The findings of the first question revealed that "rejecting professional misconduct" received the highest mean (4.445), reflecting teachers' strong commitment to professional values, which some authors (Su et al., 2024) confirmed fosters an ethical and creative learning environment where teachers become more open to critical thinking and innovation. Additionally, "defining the details and stages of work before starting" (mean: 3.957) highlighted the importance of systematic planning as a pillar of creativity, as Mehta and Sharma (2023) demonstrated that planning improves performance analysis and enables teachers to identify problems early and explore possible solutions. On the other hand, poor access to incoming and outgoing information (mean: 2.230) and low acceptance of criticism (mean: 2.666) reflected significant challenges facing educational institutions, findings that are consistent with Al-Saraireh (2012), Al-Zoubi (2014), Hamadneh (2016), and Naser (2016). Regarding the second question, female teachers scored significantly higher in creative behaviour (3.522 *versus*

3.096), a difference explained by their greater sensitivity to workplace needs and flexibility in adopting new ideas, as women tend to use creativity more in supportive environments due to societal roles that demand innovative and responsive performance in fields requiring sensitivity and flexibility.

The organization of knowledge in memory influences creative thinking; however, the developmental relationship between them over time remains unclear. A longitudinal study of elementary school students found that thinking-based instruction improves knowledge structures, leading to the development of semantic networks and enhanced creativity (fluency, flexibility, and originality). The results also showed that baseline cognitive flexibility and originality predict later improvements in originality, confirming that optimizing knowledge structures supports the development of creative thinking (Wang et al., 2026).

These results differed from Al-Zoubi (2014) and Hamadneh (2016), who found no gender-based differences, and from Naser (2016), who found differences favoring males. As for the third question, nutrition teachers outperformed special education teachers in creative behaviour (3.66 *versus* 3.07), attributed to the nature of nutrition work which involves flexible, practical applications of scientific knowledge that inherently demand creative thinking, whereas special education teachers operate within structured frameworks designed to meet specific student needs that can limit opportunities for experimentation (Wang et al., 2026; Hamadneh, 2016), with institutional support playing a key role in fostering creativity among nutrition teachers. These findings confirm that specialization significantly influences creativity levels, recommending the development of targeted training programmes to enhance creative thinking among special education teachers through adaptive strategies.

6. Conclusions and recommendations

The study revealed that creative behaviour among special education and nutrition teachers in Abu Dhabi was generally at an average level, with varying degrees of creativity observed across different groups. Female teachers demonstrated notably higher creative behaviour compared to their male counterparts, which may reflect the influence of professional environments and social expectations in encouraging innovation among women.

Regarding specialization, nutrition teachers outperformed special education teachers in creative behaviour, likely because their field inherently demands continuous renewal and practical application of evolving scientific knowledge, whereas special education teachers often operate within more rigid and structured environments.

The study recommends developing supportive professional environments that encourage creativity and experimentation, with training programmes designed to account for gender differences. Institutions should foster cultures of knowledge sharing, organize workshops centered on critical thinking and innovation, and establish individualized professional development plans tailored to each teacher's needs. Regular assessments of creative practices should further be implemented to monitor progress and guide continuous improvement, ultimately enhancing teaching quality and better preparing students for future challenges.

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