

**معوقات التدريس الإبداعي من وجهة نظر أعضاء الهيئة التدريسية في
جامعة الملك فيصل بالمملكة العربية السعودية**

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بالمملكة العربية السعودية

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ملخص: لا تدمج الجامعة ما يكفي من الإبداع في بيئات التدريس والتعلم، وهو شرط ضروري في تعزيز تعلم الطلاب، للتعامل مع التغييرات العالمية. تهدف هذه الدراسة إلى استكشاف معوقات التدريس الإبداعي من وجهة نظر أعضاء هيئة التدريس بجامعة الملك فيصل بالمملكة العربية السعودية. تكونت عينة الدراسة من (348) عضو هيئة تدريس. تم بناء استبيان (33) بنداً، ودعم التحليل العملي الاستكشافي الأبعاد الأربعة: أعضاء هيئة التدريس والطلاب والمناهج وبيئة التدريس. كشفت نتائج الدراسة أن غالبية المشاركين في هيئة التدريس يعتقدون أن هناك معوقات متوسطة لتطبيق التدريس الإبداعي تتعلق بأعضاء هيئة التدريس أنفسهم، بينما كانت هناك معوقات قوية تتعلق بالأبعاد: (الطلاب والمناهج وبيئات التدريس). أظهرت الدراسة الحالية أيضاً أن "معوقات المناهج" و "معوقات الطلاب" كانت أكثر المعوقات التي تم تحديدها بشكل كبير بين الفئات الأربع من المعوقات التي تم بحثها في هذه الدراسة. جاء عامل بيئة التدريس ثالثاً بين العوامل، في حين احتلت المعوقات المرتبطة بعضو هيئة التدريس المرتبة النهائية. وأوضحت النتائج أيضاً أن الجنس والتخصص والرتبة الأكاديمية والخبرة كان لها آثار ذات دلالة إحصائية على تصورات أعضاء هيئة التدريس فيما يتعلق بمعوقات التدريس الإبداعي.

كلمات دلالية مفتاحية: التدريس الإبداعي، أعضاء الهيئة التدريسية، معوقات الطلاب، معوقات المناهج، معوقات بيئة التعليم.

The Obstacles to Creative Teaching from the Perspectives of Faculty members at King Faisal University in Saudi Arabia

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Abstract: The University does not incorporate sufficient creativity into its teaching and learning environments, which is a necessary requisite in enhancing student learning, to cope with diversity in a global context. This study aims to investigate the obstacles to creative teaching from the perspectives of faculty members at King Faisal University in Saudi Arabia. The study participants consisted of (348) faculty members. The instruments of the study were a questionnaire (33 items) was constructed, and the exploratory factor analysis supported the four dimensions: faculty members, students, curriculum, and teaching environment. The results of the study revealed that the majority of faculty participants believed there was a medium obstacle to creative teaching related to faculty members themselves, while, there were strong obstacles related to dimensions: (students, curriculum, and teaching environments). The current study also showed that ‘Curriculum obstacles’ and ‘student's obstacles’ were the most highly identified obstacles among the four categories of obstacles investigated in this study. The teaching environment category came as a third important factor, while the faculty member's obstacles category ranked at the lower end. The results also demonstrated that gender,

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specialization, academic rank, and experience had statistically significant effects on faculty perceptions regarding obstacles to creative teaching.

Keywords: Creative teaching, Faculty members; Students obstacles; Curriculum obstacles; Teaching environment obstacles.

1. Introduction

The main objective of the university is to prepare students for the challenges they will face in their daily life, work and society. As the demands of the labor market and the number of graduates grow, it is no longer acceptable that universities focus solely on the academic side. Due to increasingly complex workplace challenges, employers require that graduates demonstrate a much broader and varied skill set. The most required skills in the workplace arguably are creativity and innovation.

In recent years, emphasis has been given to creativity in educational research; and some researchers have proposed strategies to promote and support creativity in educational contexts (Sobhi ,1992; Albers- Miller, Averill, Chon & Hahn, 2001; Straughan & Prenshaw, 2001; Hosgorur & Bilasa, 2009; Sale; 2015; Holdhus, 2018). Others have sought to discuss those factors that may hinder or even prevent creative behavior in the teaching environment. In higher education, faculty members can encourage students to acquire skills of creative thinking and scientific research; these practices enable them to have self-confidence and to raise the level of motivation (Sobhi, 1992; Morris, 2006, Howard, Tang & Austin, 2015).

Studies on higher education have neglected creativity for a long time (Barrett, & Donnelly, 2008); later, studies have focused on the importance of creativity in learning (Csikszentmihalyi, 2006; Bramwell, Reilly, Kronish & Chennabathni, 2011; Potter, 2013; Egan, Maguire, Christophers and Rooney, 2017). Creative teaching enables teachers to use a tremendous amount of personal creativity to develop activities that provide many opportunities for students through which they can be creative (Starko, 2013). Teaching is creative when it is effective, so learners can link the knowledge to skills they acquire through educational processes in their daily life, and the teacher must facilitate

this by providing a challenging learning environment (Slovacek, Sinkovic, & Visnjic, 2017).

If creativity is essential, the logical question is how to facilitate it in the education system. Creative teachers should work to improve the learners' beliefs about their creative identity, increase their perception of their creative thinking, and encourage them to practice and develop creative thinking using methods and strategies that reflect the creativity (Jeffrey & Craft, 2004). Success of teaching depends on the creative teacher who can employ his creative thinking in the planning and implementation of the lessons (Bramwell et al., 2011, p. 228), and creative thinking of learners develop in environments which the teacher adopts creative teaching (Jeffrey & Craft, 2004, p. 78). Egan et al., (2017) identify several instructional methods to facilitate and develop creativity, such as problem-based learning, project-based learning, open-ended exercises, and positive teacher's attitudes towards students and promote students to think critically and use imagination.

The traditionalists identify creative teaching as moving away from conceptualization and discipline in teacher-centered learning content. Jeffrey and Craft (2001) see an effective teacher has an innate creativity. While a creative teacher considers that promoting creativity and innovativeness enhances the quality of their teaching (Sale, 2015). Runco (2014) noticed that there is a positive correlation between students' ability to think creatively and the teacher's creativity. The teacher uses creative teaching methods to make the learning process more interesting, stimulating and motivating (Morris, 2006, 3).

Many factors such as the individual, social and environmental affect creativity (Hunter, Bedell & Mumford, 2007). Personal factors such as motivation, knowledge, personality and positive emotion are seen thus by Hirt,

Deveers & McCrea (2008). Since creative teaching is associated with lesson planning, implementing, and evaluating to facilitate creativity (Sale, 2015), recent studies have encouraged creative teaching in higher education (Barshid,2017; Egan et al, 2017; Slovacek, Sinkovic & Visnjic, 2017; Holdhus, 2018), and there is an increasing pressure on faculty members to practice creative teaching and to be creative. Yet, there are various obstacles to practice creative teaching in university. Therefore, the current study seeks to identify the obstacles to creative teaching from faculty members' point of view, understand these obstacles and work effectively to overcome them.

2. Research problem

There is a divergence in researches related to the academic achievement of high education. In the past, they were focusing on predicting and supporting academic success; but nowadays they are focusing on attempting to understand the cognitive and non-cognitive processes involved in the education process. Researchers insist that the future needs better thinking, and part of that thinking requires creativity. If the fundamentals of science education in higher education are to clutch students, there must be a transfer towards teaching in more enriching and interesting ways. Creative education should become more conspicuous as there is a consent that different sciences in higher education need to be taught differently. Despite the importance of creative teaching in university education, some faculty members may assume that this type of teaching may affect adherence to educational content, and takes a long time not often available with an intensive and long curriculum. Therefore, these obstacles impede many teachers in higher education to adopt creative teaching strategies of students.

3. Research questions

3.1. What are the obstacles of creative teaching from the perspectives of faculty members related to the faculty members themselves, students, curriculum, and teaching environment?

3.2. Are there any statistically significant differences in faculty members' perceptions of obstacles to creative teaching due to demographic variables, including gender, specialization, academic rank, and teaching experience?

4. Method

4.1 Participants

The research participants consisted of (348) faculty members. Numbers and percentages of faculty participants organized by gender, specialization, academic rank, and years of experience (see Table 1).

Table.1 Demographics of the sample

	Variables	Number of Faculty	Percentage of Total Faculty
Gender	Male	156	44.82%
	Female	192	55.17%
College	Education	44	12.64%
	Applied studies	27	7.75%
	Law	20	5.74%
	Arts	33	9.48%
	Agriculture	34	9.77%
	Medicine	22	6.32%
	Engineering	36	10.34%
	Science	45	12.93%
	Business administration	36	10.34%
	Computer Science	35	10.05%
Academic rank	Dentistry	16	4.59%
	Lecturer	87	25%
	Assistant prof	136	39.08%
	Associate Prof	80	22.98%

	Variables	Number of Faculty	Percentage of Total Faculty
	Professor	45	12.93%
Experience	Less than 5 years	109	31.32%
	6-10 years	122	35.05%
	more than 11 years	117	33.62%

4.2 Instrument

The researcher developed a questionnaire to identify the obstacles to creative teaching from the perspectives of faculty members at King Faisal University.

The questionnaire has 33 items organized into four dimension. a) The obstacles to creative teaching related to the faculty members themselves = 12 items; b) The obstacles to creative teaching related to the students = 6 items; c) The obstacles to creative teaching related to the curriculum = 10 items; and d) The obstacles to creative teaching related to the teaching environment = 5 items. It has a 5-point scale as follows: strongly disagree rated 1, disagree rated 2, unsure rated 3, agree rated 4, and strongly agree rated 5.

4.3 Questionnaire's validity and reliability:

A principal components factor analysis was conducted on 33 items with Holting Varmix rotation. The Kaiser- Meyer- Olkin measure verified the sampling adequacy for the analysis, $KMO=.93$ significant at 0.001, and all KMO values for each item were greater than .88 that is above .5 (the acceptable limit). An initial analysis was conducted to obtain eigenvalues for each factor in the data. Four factors had eigenvalues over Kaiser's criterion of (1) and in combination explained 77.99% of the variance. Table (3) shows the factor loading after rotation. The items that cluster on the same factor suggest that factor 1 represent the obstacles to creative teaching related to the faculty members themselves (6) items; factor 2 represents the obstacles to creative

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teaching related to the students (12) items; factor 3 represent the obstacles to creative teaching related to the curriculum (10) items; and factor 4 represent the obstacles to creative teaching related to the teaching environment (5) items (see table 2)

Table 2. Summary of exploratory factor analysis of the SPSS obstacles to creative teaching questionnaire, (N=348)

Items	Faculty members	Students	Curriculum	Teaching environment
Most faculty members have a lack of knowledge to develop students' creative thinking strategies.	.756			
Most faculty members rely on formal and traditional educational sources.	.751			
Most faculty members tend to use traditional methods of teaching.	.742			
There is not enough time for dialogue and exchange of ideas with students.	.720			
Most faculty members have weak information about creative thinking strategies and how to develop them among students.	.668			
Most faculty members have weak educational experiences in developing creative thinking skills.	.620			
Students have a stereotypical idea that learning is limited to achievement and be ready for exams.		.940		
Most students' concern is to focus on grades more than knowledge acquisition.		.850		
Most students have a lack of the competence to overcome problems.		.762		
Most students tend to judge ideas more than generate them.		.747		
Most students prefer memorizing and recalling information for thinking		.740		
Most students do not enjoy discussions, brainstorming, and dialogue.		.685		
Most students lack motivation and enthusiasm.		.651		
Most students lack the skills of self-expression and communication with others.		.629		
Most students have negative implicit ideas about innovation and creativity.		.336		
Students do not like challenging tasks.		.937		
Most students have concerns about colleagues' ridicule and criticism of their unusual ideas.		.791		
Most students believe that creative thinking skills are limited to intellectuals		.790		
Objectives in the university curriculum focus on lower-level thinking skills.			.491	

Items	Faculty members	Students	Curriculum	Teaching environment
Lack of a culture of creative thinking among most of the curriculums' authors.			.330	
The objectives of the course content focus more on the cognitive aspect than the non-cognitive aspect.			.938	
Poor diversification in assessment methods does not help to evaluate the skills of creative thinking.			.888	
Most curriculums do not focus on reflective thinking, and experimentation.			.837	
There is no specific schedule for students to undertake educational activities.			.833	
The curriculum does not take into consideration the student preferences and individual differences			.811	
The university curriculum is lacking activities that measure the skills of creative thinking.			.789	
Creative thinking strategies require a lot of time that the set curriculum does not help.			.663	
Most students can develop their creative skills away from curriculum.			.620	
Crowded classroom limits individual attention and promotion of creative thinking skills.				.614
The educational environment is devoid of incentives to practice creative thinking.				.859
There is a lack of classroom equipment that assist in practicing interactive learning.				.799
The limited use of modern technology affects the development of creative thinking skills				.673
The weakness of the educational system limits the development of creative thinking.				-.601-
Eigenvalues	7.782	7.527	7.181	3.247
% of variance	23.58	22.81	21.76	9.84

The questionnaire reliability coefficients (Cronbach's α) of the questionnaire were (.84) for students factor, (.77) for faculty members factor, (.81) for curriculum factor, and (.88) for teaching environment.

4.4. Study Procedures:

A questionnaire of the obstacles to creative teaching from the perspective of faculty members was built, and has been sent to a group of experts in the field of creativity and psychology to be reviewed; most of their notes have been taken into consideration through the preparation of the last version and the questionnaire.

An online questionnaire was circulated to faculty members at King Faisal University to determine how they perceive obstacles to creative teaching. Data was conducted in light of independent study variables (gender, specialization, academic rank, and teaching experience), and then study questions were discussed. The results were statistically analyzed using the ‘Statistical Package for Social Science (SPSS, IBM version 18).’ Statistical methods involved descriptive analyses of means, standard deviations, and percentages to interpret the data collected about obstacles to creative teaching related to the perspective of faculty members at KFU. Further, the MANOVA test was employed to examine the significance of the difference in the mean scores and the relationships among the demographic variables.

5. Results

A statistical standard was determined to order the obstacles to creative teaching items according to their severity and to interpret mean scores as showed in table (3):

Table 3. Means score' interpretation of the obstacles of creative teaching items

Rang	Degree of agreement	Degree of obstacles of creative teaching
1-1.8	Strongly Disagree	Very weak
1.81-2.60	Disagree	Weak
2.61-3.40	Undecided	Medium
3.41- 4.20	Agree	Strong
4.21-5	Strongly agree	Very strong

According to the statistical standards, the researcher answers questions about:

5.1 What are the obstacles to creative teaching from the perspectives of faculty members at King Faisal University?

To answer this question, arithmetic means and standard deviation and degree of obstacles to creative teaching were used for each dimension of the questionnaire as follows:

Table 4. Means and standard deviation of the obstacles to creative teaching from the faculty members' perspectives related to faculty members themselves:

Items	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		M	S D
	N	%	N	%	N	%	N	%	N	%		
Most faculty members have weak educational experiences in developing creative thinking skills.	32	9.19	80	22.9	32	9.19	188	54.02	16	4.59	3.81	.83
Most faculty members tend to use traditional methods of teaching.	48	13.79	204	58.6	4	1.149	60	17.24	32	9.19	3.77	.79
Most faculty members rely on formal and traditional educational sources.	32	9.19	204	58.6	8	2.29	72	20.68	32	9.19	3.67	.76
Most faculty members have weak information about creative thinking strategies and how to develop them among students.	64	18.39	96	27.5	3	0.86	172	49.42	16	4.59	3.43	1.16
There is not enough time for dialogue and exchange of ideas with students.	32	9.19	204	58.6	13	3.73	64	18.39	32	9.19	3.05	1.31

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Items	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		M	S D
	N	%	N	%	N	%	N	%	N	%		
Most faculty members have a lack of knowledge to develop students' creative thinking strategies.	48	13.79	200	57.4	16	4.59	48	13.79	36	10.34	2.78	1.13

As shown in table.5 obstacles regarding faculty members themselves arranged in a descending way according to the means of faculty members' responses. Means ranged between (3.81- 2.78), and the degree of obstacles ranged between "Strong" to "Medium". The item "Most faculty members have weak educational experiences in developing creative thinking skills." was ranked first, (M = 3.81, SD=.83), and (32) of faculty members strongly agree this statement; then the item "Most faculty members tend to use traditional methods of teaching." was ranked second, (M = 3.77, SD=.83), and (48) of faculty members strongly agree this statement; where the obstacle " Most faculty members have a lack of knowledge to develop students' creative thinking strategies." came at last; (M= 2.78, SD= 1.13), and (48) of faculty members strongly agree this statement and degree of obstacles was medium.

Table 5. Means and standard deviation of the obstacles to creative teaching from the faculty members' perspectives related to students:

Items	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		M	SD
	N	%	N	%	N	%	N	%	N	%		
Most students prefer memorizing and recalling information for thinking.	156	44.82	128	36.78	40	11.49	16	4.59	8	0.22	4.58	.72
Most students' concern is to focus on grades more than knowledge acquisition.	200	57.47	96	27.58	6	1.72	30	8.62	16	0.45	4.42	1.2
Most students have a lack of the competence to overcome problems	80	22.98	199	57.18	16	4.59	30	8.62	23	0.66	4.21	.85
Students have a stereotypical idea that learning is limited to achievement and be ready for exams.	32	9.195	112	32.18	64	18.39	100	28.73	40	1.14	4.18	.49
Most students tend to judge ideas more than generate them.	48	13.79	168	48.27	16	4.59	100	28.73	16	0.45	4.09	.41
Most students believe that creative thinking skills are limited to intellectuals	156	44.82	128	36.78	48	13.79	12	3.44	4	0.11	4.04	.47
Most students lack motivation and enthusiasm.	32	9.19	236	67.81	32	9.19	16	4.59	32	0.91	4	.61

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Items	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		M	SD
	N	%	N	%	N	%	N	%	N	%		
Most students lack the skills of self-expression and communication with others.	48	13.79	204	58.62	16	4.59	66	18.96	14	0.40	3.77	.67
Most students have negative implicit ideas about innovation and creativity.	201	57.75	96	27.58	4	1.14	35	10.05	12	0.34	3.67	.87
Students do not like challenging tasks.	48	13.79	200	57.47	32	9.19	60	17.24	8	0.22	3.63	1.03
Most students have concerns about colleagues' ridicule and criticism of their unusual ideas.	32	9.19	80	22.98	48	13.79	108	31.03	80	2.29	3.51	.65
Most students do not enjoy discussions, brainstorming, and dialogue.	66	18.96	200	57.47	22	6.32	42	12.06	18	0.51	2.87	1.06

Note: M: Mean; SD: Standard Deviation

As shown in table.5 obstacles related to student arranged in a descending way according to the means of faculty members' responses. Means were ranged between (4.58- 2.87), and degree of obstacles ranged between " very strong" to " Medium"(according to table 2), the item " Most students prefer memorizing and recalling information to thinking." was ranked first, (M = 4.58, SD= .72), and (156) of faculty members strongly agree with this; then the item " Most students' concern is to focusing on grades more than knowledge acquisition." was ranked second, (M= 4.4, SD= 1.2), and (200) of faculty members strongly

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agree with this; where the obstacle " Most students do not enjoy discussions, brainstorming and dialogue." came at last; (M = 2.87, SD= 1.06), and (66) of faculty members strongly agree with this and degree of obstacles was medium.

Table 6. Means and standard deviation of the obstacles to creative teaching from the faculty members' perspectives related to curriculum:

Items	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		M	SD
	N	%	N	%	N	%	N	%	N	%		
There is no specific schedule for students to undertake educational activities.	200	57.47	110	31.6	6	1.72	16	4.59	16	4.59	4.63	.57
Lack of a culture of creative thinking among most of the curriculums' authors.	204	9.19	32	58.62	16	4.59	80	22.9	16	4.59	4.49	.72
The objectives of the course content focus more on the cognitive aspect than the non-cognitive aspect.	188	54.02	80	22.98	8	2.29	40	11.4	32	9.19	4.44	.78
Poor diversification in assessment methods does not help to evaluate the skills of creative thinking.	196	56.32	120	34.48	1	0.28	16	4.59	13	3.73	4.35	.93
Most curriculums do not focus on reflective thinking, and experimentation.	172	49.42	96	27.86	4	1.14	48	13.7	32	9.19	4.21	1.05
Objectives in the university curriculum focus on lower-level thinking skills.	32	9.19	230	66.09	6	1.72	64	18.3	16	4.59	4.17	.98

Items	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		M	SD
	N	%	N	%	N	%	N	%	N	%		
The curriculum does not take into consideration the student preferences and individual differences	80	22.98	98	28.16	14	4.02	146	41.9	10	2.87	3.95	.56
The university curriculum is lacking activities that measure the skills of creative thinking.	64	18.39	96	27.58	1	0.28	170	48.8	18	5.17	3.67	.87
Creative thinking strategies require a lot of time that the timetabled curriculum does not help.	201	57.75	90	25.86	16	4.59	35	10.4	6	1.72	3.33	1.25
Most students can develop their creative skills away from curriculum.	166	47.70	128	36.78	16	4.59	20	5.74	16	4.59	3.14	1.21

As shown in table.6 obstacles related to curriculum dimension arranged descending according to the means of faculty members' responses. Means ranged between (4.632- 3.149), and the degree of obstacles ranged between "very strong" to "Medium". The item "There is no specific schedule for students to undertake educational activities" was ranked first (M = 4.63, SD= .57) and (200) of faculty members strongly agree with this statement. Then the item "Lack of the culture of creative thinking among most of the curriculums' authors." was ranked second (M= 4.49, SD= .57); and (204) of faculty members strongly agree on this statement. Where the item "Most students can develop their creative skills away from curriculum.' came at last; (M= 3.14, SD= 1.21), and (166) of faculty members strongly agree with this statement. The degree of this obstacle was medium.

Table 7. Means and standard deviation of the obstacles to creative teaching from the faculty members' perspectives related to teaching environment:

Items	Strongly agree		Agree		I cannot decide		Disagree		Strongly disagree		M	SD
	N	%	N	%	N	%	N	%	N	%		
Crowded classroom limits individual attention and promotion of creative thinking skills.	48	13.79	118	33.9	16	4.59	100	28.73	66	18.96	4.22	.73
The educational environment is devoid of incentives to practice creative thinking.	128	36.78	188	54.02	6	1.72	16	4.59	10	2.87	3.95	.88
There is a lack of classroom equipment that assist in practicing interactive learning.	128	36.78	188	54.02	8	2.29	16	4.59	16	4.59	3.72	1.01
The limited use of modern technology affects the development of creative thinking skills	64	18.39	188	54.02	48	13.79	32	9.19	16	4.59	3.40	1.16
The weakness of the educational system limits the development of creative thinking.	96	27.58	172	49.42	8	2.29	40	11.49	32	9.19	3.19	1.15

As shown in the table.7 obstacles related to curriculum dimension arranged in a descending way according to the means of faculty members'

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responses. Means ranged between (4.23- 3.195), and the degree of obstacles ranged between "very strong" to "Medium". The item " Crowded classroom limits individual attention and promotion of creative thinking skills." was ranked first (M = (4.23, SD= .73); and (48) of faculty members strongly agree on this statement. Then the item "The educational environment is devoid of incentives to practice creative thinking." was ranked second, (M= 3.95, SD= .88) and (128) of faculty members strongly agree on this statement. Where the obstacle "The weakness of the educational system limits the development of creative thinking." came last, (M= 3.14, SD= 1.15), and (96) of faculty members strongly agree on this statement. The degree of these obstacles was medium.

Figure 1. Showed that ‘Curriculum obstacles’ (mean= 4.04) and ‘student's obstacles’ (mean = 3.91), were the most highly identified obstacles among the four categories of obstacles investigated in this study. The teaching environment category came as the third important factor (mean= 3.71), while the faculty member's obstacles category ranked at the lower end (mean = 3.41)

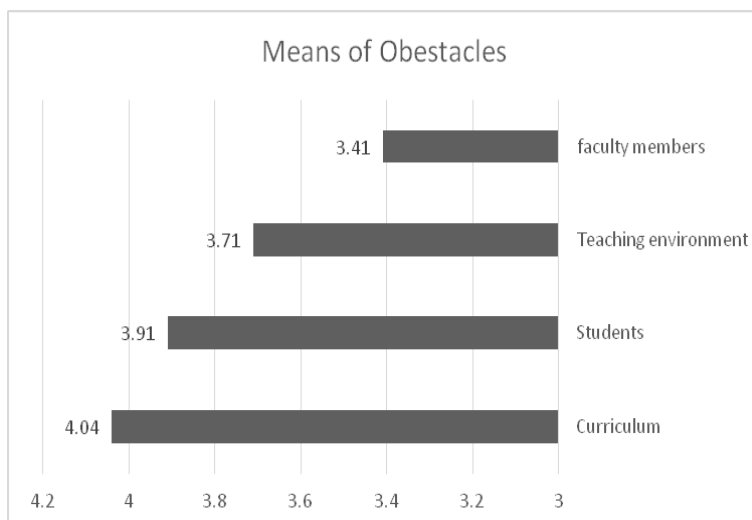


Figure1. Means of Creative Teaching Obstacles

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5.2 Are there any statistically significant differences in faculty members' perceptions of obstacles to creative teaching due to demographic variables, including gender, specialization, academic rank and years of experience?

To explore gender, specialization, academic rank and years of experience differences in creative teaching obstacles questionnaire, multivariate variance (MANOVA) was calculated to analyze multivariate main effects, as shown in table. 8:

Table 8. Tests of Between-Subjects Effects in obstacles to creative teaching questionnaire regarding gender, specialization, faculty members' rank and experience.

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Gender	students	728.087	1	728.08	89.145	.000	.208
	faculty members	804.162	1	804.16	103.289	.000	.233
	curriculum	20.667	1	20.667	1.256	.263	.004
	environment	192.619	1	192.61	137.870	.000	.289
	total	2116.75	1	2116.7	30.474	.000	.082
Specialization	students	432.626	1	432.62	52.970	.000	.135
	faculty members	484.315	1	484.31	62.207	.000	.155
	curriculum	8.684	1	8.684	.528	.468	.002
	environment	482.676	1	482.67	345.484	.000	.504
	total	565.669	1	565.66	8.144	.005	.023
academic rank	students	5347.45	3	1782.4	218.243	.000	.658
	faculty members	2846.35	3	948.78	121.865	.000	.518
	curriculum	1460.47	3	486.82	29.578	.000	.207
	environment	736.945	3	245.64	175.827	.000	.608
	total	26335.1	3	8778.3	126.379	.000	.527
Experience	students	68.649	2	34.324	4.203	.016	.024
	faculty members	198.176	2	99.088	12.727	.000	.070
	curriculum	45.920	2	22.960	1.395	.249	.008
	environment	2050.24	2	1025.1	733.748	.000	.812
	total	1518.31	2	759.17	10.930	.000	.060

As shown in table 8, there were many points of differences between faculty members concerning obstacles to creative teaching. The results present the differences in perceived obstacles in terms of demographic information including gender, specialization, academic rank, and teaching experience.

Regarding gender, statistically significant differences in the perceptions about obstacles to creative teaching were found: Wilks's Lambda= 0.144, F (500.663) $p < 0.001$. The females mean scores were more than those of males in two dimensions (faculty members and students); where the males mean scores for males in teaching environment were more than those of the females. Preliminary analysis showed that multivariate main effect regarding gender was statistically significant for all questionnaire's dimensions except curriculum. For the students' F= (89.145) $p < 0.01$, $n_2 = 0.21$; for faculty members' F= (103.29) $p < 0.001$, $n_2 = 0.23$; for curriculum F = (1.256), $p > 0.01$, $n_2 = 0.04$, finally, F for teaching environment = (137.87), $p < 0.01$, $n_2 = 0.289$.

Regarding specialization, statistically significant differences were found: Wilks's Lambda= 0.105, F (718.96) $p < 0.001$. Means of faculty members with theoretical specialization were more the means of members with scientific specialization in two dimensions (student and faculty members), in addition, the total score of the questionnaire. Reciprocally, there were significant differences between the two groups in favor of scientific specialization in learning environment, where, there were no differences between the two groups curriculum dimensions, regarding students' F= (52.97) $p < 0.01$, $n_2 = 0.135$; for faculty members' F= (62.21) $p < 0.001$, $n_2 = 0.155$; for curriculum F= (.528), $p > 0.01$, $n_2 = 0.02$, finally, F for teaching environment = (345.48), $p < 0.01$, $n_2 = 0.504$.

Regarding faculty members' rank, statistically significant differences were found in Wilks's Lambda= 0.021, F (246.16) $p < 0.001$. There were

significant differences according to faculty members' rank; multi comparison (scheffe) revealed that there were significant differences between four groups (Lecturer, Assistant Professor, Associate professors, and Professors) in favor of lecturers in all questionnaire dimension, also there were differences between associate professors and professors in favor of professors in all questionnaire dimensions too. For students' $F = (208.24)$ $p < 0.01$, $n_2 = 0.658$; for faculty members $F = (121.865)$ $p < 0.001$, $n_2 = 0.519$; for curriculum $F = (29.578)$, $p < 0.01$, $n_2 = 0.207$, finally, teaching environment $F = (175.827)$, $p < 0.01$, $n_2 = 0.527$.

Regarding experience, statistically significant differences were found: Wilks's Lambda = 0.033, $F (379.719)$ $p < 0.001$. There were significant differences according to faculty members' experience; multi comparison (scheffe) revealed that there were significant differences between three groups (less than five years, between 5-10 years, and more than 11 years) in favor of faculty members with higher experience in all questionnaire dimensions. Besides, there were differences between associate professors and professors in the favor of professors in all questionnaire dimensions too. For students' $F = (4.203)$ $p < 0.05$, $n_2 = 0.024$; for faculty members' $F = (12.727)$ $p > 0.001$, $n_2 = 0.07$; for curriculum $F = (1.395)$, $p < 0.01$, $n_2 = 0.008$. Finally, for teaching environment $F = (733.748)$, $p < 0.01$, $n_2 = 0.812$.

6. Discussion of the results

While studies have focused on creative teaching and creative teachers (Jeffrey & Craft, 2004; Csikszentmihalyi, 2006; Cremin, 2009; Potter, 2013; Egan et al., 2017; Slovacek et al., 2017), few of them have focused on barriers or obstacles to creative teaching in higher education. This study proposed to investigate the obstacles of creative teaching from the perspectives of faculty members. To achieve this goal, a questionnaire consisting of four dimensions:

faculty members, students, curriculum, and teaching environment, was designed. The questionnaire has good psychometric characteristics: validity and reliability.

The results revealed that the obstacle to creative teaching from the perspectives of faculty members related to faculty members themselves was medium. While, the obstacles to creative teaching from the perspectives of faculty members related to dimensions: curriculum, students, and teaching environment were strong, this result is comparable to Barshid's study (2017) which concluded that the level of practicing methods of creative thinking among faculty member at Tabuk University was medium. As mentioned earlier, there were interdependent factors affecting obstacles to creative teaching. Obstacles related to the faculty members include academic lack of proficiency to develop students' creative thinking strategies; most faculty members tend to use traditional methods of teaching such as lecturing, and most faculty members rely on formal and traditional educational sources. Ayob, Hussain and Abdul Majid, (2013) argue in their study that teachers do not receive any training courses in creative teaching, which would enable them to promote critical thinking in students. Some obstacles are related to the student such as students incline towards memorizing, recalling information and have neglected thinking; students were more focused on their grades than knowledge acquisition, and the students demonstrate a lack of competence in dealing with problems. These results are similar to the findings of (Aljughaiman, 2002; Howard et al., 2015).

Obstacles related to the curriculum include: There is no specific schedule for students to undertake educational activities that develop their thinking skills; there is a lack of a culture of creative thinking among most of the authors of university books, also, course content largely focuses on the cognitive aspect,

neglecting the skill or psychological aspect and poor diversification in assessment methods does not help to evaluate the skills of creative thinking. Similarly, Sen and Sharma (2009) observed in their study the inadequacy of curricula and educational methods and their inconsistency in the development of the creative aspects of the students. Finally, certain obstacles related to the environment such as overpopulation of students in the classroom precludes individual attention to all students and promoting of their creative thinking skills; the educational environment is devoid of incentives to practice creative thinking and there is a lack of classroom equipment to assist practicing interactive learning. Many researchers elucidate that creative techniques may increase student's motivation, cooperation, self- assessment, and self-confidence (Brewer, and Hogarth, 2015).

The results revealed that according to the gender differences there were significant differences in all questionnaire dimensions except curriculum. Female mean scores were more than males' in two dimensions (members and students); where male mean scores in teaching environment were more than females', this was also found in Barshid's study (2017).

The results also showed that according to the specialization variable, there were significant differences between faculty members in favor of theoretical specialization in dimension (student and faculty members), in addition to total score of the questionnaire, and this result may be caused because curriculum and teaching methods in the theoretical field ignore creative thinking and that training in critical thinking at the university is still weak, as emphasized by Ayob et al., (2013). Reciprocally, members in scientific specialization have the favor in learning environment. In contrast, there were no differences between the two groups in the curriculum dimension. Results revealed that there were significant differences according to faculty members'

rank; results revealed that there were significant differences between four groups (Lecturers, Assistant Professors., Associate Professors, and Professors) in favor of lecturer in all questionnaire dimensions.

Results of the study indicated that faculty perceptions of obstacles to creative teaching significantly differed by academic rank, in favor of lecturers (in all questionnaire dimensions) having shown less tendency towards creative teaching due to the possibility that the lecturer has less experience with teaching and has not been sufficiently trained to recognize the characteristics of creative students and how to develop their creative abilities as Kanaan (2004) observed in his study. Besides, there were differences between associate professors and professors in favor of professors. This result was also seen to be in conformity with teaching experience, which was also statistically significant in favor of faculty who had higher teaching experience in all questionnaire dimensions; as a new generation of faculty members have more knowledge with technology and modern teaching strategies that can enhance improving creative teaching.

7. Conclusion

The results of this study revealed that faculty members at King Faisal University encounter strong obstacles generally, which hinder their attempts to teach creatively. Whilst there are advantages and benefits of creative teaching, there are many obstacles, which inhibit creative practices and strategies in higher education. Although the new trend in education encourage creative teaching, many educators did not engage creative strategies in teaching. declared that the traditional education system esteems achievement, didactic, and memory-based teaching while discouraging the implementation of creative teaching strategies. Hence, many faculty members teach under pressure of measurable tasks that negatively affect implementing creative teaching methods. Moreover, most of faculty members lack experience, knowledge and

confidence that ensure creative learning for students. In few words, faculty members should facilitate creative thinking to enable students use previous knowledge and skills.

8. Recommendations of the study

Faculty members should present activities that encourage creative thinking and move away from activities that focus on information recall. In addition, they should provide an opportunity for students to exploit their prior knowledge and skills. As well as training students in research initiatives. It is important for faculty members to introduce modern methods with advanced educational technologies. Besides, emphasizing the need to develop curriculum to be consistent with the development of creative aspects of the student at the university

9. Suggestions for further research

- The role of teaching methods in developing creative thinking among university students.
- Teaching creatively and teaching for creativity.
- Enhancing creativity and innovation in higher education

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