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The Degree to Which Teachers Practicing Teaching in Shobak University College by Using Creative Thinking Skills as Perceived by Students

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ABSTRACT The study aims to evaluate the degree to which teachers in Shobak University College practice teaching by using creative thinking skills as perceived by students, in addition to finding out the impact of students' gender and level on their assessment to their teachers. In order to answer the questions of the study, the researcher selected a study sample consisting of 85 students for the academic year 2015/2016 by applying the stratified random method. A questionnaire consisting of 37 items distributed among the three skills was used to measure creative teaching skills: fluency, flexibility, and originality. The validity of the tool has been examined by being presented to a set of referees. The results of the study have shown that the students' assessment for each of the three skills separately, and for all skills collectively was medium. Also the results showed no statistically significant impact of students' gender, or level on their assessment of their teachers.

INTRODUCTION

Historically, studying mental abilities has occupied prominent position in psychological studies. Whereas the educational institution is keen to prepare the individual to become more active in his community, it relies on thinking as one of the most important areas to build individual's character. According to John Dewey, thinking is the most important tool to analyze, simplify and overcome problems. The results of thinking will be clearly reflected through the individual's reactions to various stimuli (Qutami 2003). Sternberg (2005) indicates that thinking skills enable individual of handling any type of future changes or information, and through it we can gain knowledge, look at differences between things, conduct comparisons, and make decisions. Also, thinking skills enable us to gain knowledge regardless of time and place.

Creative thinking has gained an important position due to its importance in preparing a new productive generation that is capable of taking initiative. In general, researchers in the field of education have conducted several studies involving the creative thinking, and called for training students on how to use its various kinds.

According to Larry (2003) and Jarwan (2008), creative thinking is an open type of thinking, which is not restricted to a specific pattern, in which the individual solves a problem responding to a stimulator, by which the outcome enjoys special characteristics.

According to Willson (2002), creative thinking is the responsiveness process of an individual to the problems in verbal and kinetics way, in order to realize, understand and accept a lot of issues, also, his skills are mental processes which use procedures of analyzing, planning, evaluating, concluding, identifying assumptions, and testing reaching to the solution then making the right decision.

Furthermore, Titi (2004) reveals that it is the finest human activity, as the scientific and technological progress requires that the individual should be creative to keep pace with the very accelerating progress of technology and to control any resulting side effects.

Guilford highlighted two creative thinking skills, the first is the fluency, which means individual's ability to produce great number of ideas or problem solutions in a short period of time when he finds himself in a perplexing situation since it requires sharp mental abilities capable of finding solutions, including verbal fluency

which reflects individual capability to produce the largest possible number of words that contain certain specifications, and thinking, which means giving a large amount of meanings or solutions (Bahmam 2007).

The second is the flexibility, which means the individual's ability to simultaneously propose a variety of approaches to a specific problem, according to the type of problem or situation he faces, which causes a change in the thinking path depending on any change in the situation or stimuli. It also includes the resilience that makes the individual able to switch from one point of view to another one easily and quickly, or adapting behavior according to different situations, and also automatic flexibility that reflects the individual's ability to give a variety of responses which do not belong to one mode, but have multiple interpretations. Here, the focus is on the diversity of ideas, while fluency is focusing on the qualitative recall of ideas. Originality comes in the third place of the creative thinking skills and means individual's ability to produce new, original ideas, such as adding new details to a particular idea, or providing a distinctive story titles, or think about the number of consequences for something to happen (Huwaidi 2004).

The teacher as one of the educational situation's elements, in his personal features and professional and scientific structure, may develop these skills in the classroom using several methods including: combining the opposites by linking between the different elements, and brainstorming to find as many possible answers and solutions, and role-playing embodying the scholar, teacher or a doctor in a way that fits students' abilities and creative inclinations (Ibrahim 2005), or problems' creative method of solution; which involves using the previous experiences in the recognition of new relations between the information and data available to find the largest possible number of alternatives and solutions to the problem (Mufti 1997).

Moreover, the teacher's questions in the classroom are considered the most important skills that help in the development of capabilities of creative thinking among students of universities in order to give them the opportunity to participate by responding in a way that encourages them to collect data for the question. The questions include the divergent questions which evoke thinking, offer a variety of alternatives, lead to different and acceptable solutions, or questions in the upper levels of the cognitive level of analysis, combination and evaluation, or sounding questions to encourage them to think more deeply (Mohammed 1997). The role of the teacher is to organize the classroom environment in the physical, psychological and administrative dimensions, and stay away from ideological exclusion to achieve innovation that is the result of good interaction between thinking and the emotional characteristics on one hand, and the environment conditions facilitating the creativity on the other hand, to achieve the psychological reassurance and self-freedom (Kanani 1990).

A study by Ciltas (2012) came to measure the effect of modeling method on the level of creative thinking among university students in one of the Turkish universities, and the results showed that the teaching of the experimental group had a positive effect in the search for different ways to the correct answer, which leads students to high levels of creative thinking.

Al- Naqa's (2011) study aimed to identify the level of creative thinking among secondary school students in the scientific culture, and the encouraging degree provided by the science teachers as perceived by students. The results reflected the low level of creative thinking among general secondary students in the scientific culture, while the degree of encouraging creative thinking by science teachers in the classroom for the scientific culture was very high as perceived by students, there were no differences attributed to gender, experience, or educational qualification.

Hamadna's (2009) study aimed to find out the level of using creative thinking skills by teachers practicing maths and science among students of higher basic stage as perceived by the supervisors in the governorate of Irbid. The results indicated that the degree was medium.

On the other hand, Shdifat's study (2008) aimed to identify the role of social studies teachers in the development of creative thinking among the first secondary grade students in the schools of Mafraq Borough in Jordan, as perceived by teachers and students. The results indicated the absence of teachers' role in the development of creative thinking among students as perceived by teachers, and the absence of any effect attributed to the variables of gender, educational qualification, experience. While

the study showed the presence of the effect as perceived by students attributed to gender in favor of males.

Inan and Ozgen (2008) conducted a study aimed at evaluating the efficiency of teachers in teaching creative thinking skills, and the results showed that the efficiency of teachers is low in general, with no impact of gender or academic stream.

Rashidi (2005) conducted a study to show the impact of a studying strategy in solving problems regarding creative thinking. The study revealed a statistically significant difference in achievement, in the fluency and flexibility skills, and the overall capability of creative thinking in favor of the experimental group, while no statistically significant difference has been shown between the control and the experimental groups in the skill of originality.

Shehab (2003) conducted a study on the teachers' practices of educational activities and the assessment of its impact in the field of creative thinking development among school students, from their perspective. The result showed that the assessment result was high with no differences attributed to gender, experience or qualification.

Most of the previously mentioned studies addressed the level of creative thinking exercised by teachers towards their students and, showed the impact of some variables especially students' gender. It is clear that the current study comes in line with previous studies in addressing teachers' practice level of creative thinking skills development methods and, the promotion of that practice among their students, in addition to studying the impact of some variables. However, this study focuses on university students, to see the level of their teachers' practice of creative thinking skills, and the effect of students' gender and level.

Study Problems

The university study is closely linked to the thinking processes, and the student cannot get or utilize thinking without intellectual skills, teaching methods, and organized educational activities governed by a scientific method. As the scientific method leads to mastering the skill of creative thinking, which began occupying a prominent position in the educational researches, investment in the creative thinking skills has become a requirement of human societies to achieve the development, which calls for reconsideration of the university curricula, regular reviewing of the teaching process in the classroom, and conducting performance follow-up activities to enhance and boost the educational process to the desired level. Accordingly, this study came to verify that in Shobak College from the perspective of students.

Objectives of the Study

1. Finding out the level of educational practices of Shobak College teachers', through students' responses.
2. Investigating the effect of students' gender and level on their responses.
3. Enriching this relatively trackless field regarding university creative thinking research in Jordan.

The Study Problem

Question 1: How the students in Shobak University College assess the performance of their teachers' in using creative thinking skills (fluency, flexibility, originality) separately and collectively?

Question 2: Is there a statistically significant difference at the level of 0.05 in Shobak College students' assessment of the performance of their teachers in using creative thinking skills; fluency, flexibility, originality that attributed to the variables of students' gender and level?

The Importance of the Study

To find out the level of Shobak College teachers performance in practicing the methods of creative thinking as perceived by college students, and to what extent such practices achieve the objectives of higher education institutions, aiming at improving these practices. Also, the effect of both student's gender and level on these practices were studied. A questionnaire was distributed to the study sample to find out students' opinions about this topic.

MATERIAL AND METHODS

Methodology

The descriptive survey method using a questionnaire was applied as a tool to collect data for the study.

Study Population

The study population consisted of all students enrolled in Shobak College/Balqa' University in the bachelor's program in all disciplines, for the academic year 2015/2016 totaling 386 student. Table 1 shows the distribution of the study population in terms of gender and level.

Table 1: Distribution of the study sample

Gender	*Students' level*		
	First year	*Second and above*	*Total*
Male	29	91	120
Female	55	211	266
Total	84	302	386

Study Sample

After excluding the exploratory sample, the study sample consisted of 85 male and female students which accounted twenty-two percent of the study population. The study sample was selected by stratified random sampling. Table 2 shows the distribution of the study sample.

Table 2: Distribution of the study sample

Gender	*Students' level*		
	First year	*Second and above*	*Total*
Male	6	20	26
Female	12	47	69
Total	18	67	85

Study Tool and Validity

The researcher prepared the study questionnaire on the level of Shobak University College teachers in using the skills of creative thinking as perceived by students and according to the students' assessment of the three skills; fluency, flexibility and originality utilizing what is stated in the educational literature, and previous studies. In order to ensure its validity, the researcher presented it to a group of educators to give their opinion. After the judgment, the questionnaire has been composed of 37 items distributed on the three skills. The responses to the questionnaire items were graded according to the Likert scale that consists of five grades, where the lowest grade (very low) was given one point, and the highest grade (very high) was given five points. Number 5 holds the maximum degree for the paragraph, while number 1 holds the minimum degree. The achieved arithmetic means were considered as references to compare degrees of evaluation as follows; high for results greater or equal 3.7, medium for results less than 3.7 and greater or equal 3, and weak for results less than 3.

Tool Reliability

To ensure the reliability of the tool, the researcher distributed and applied it to an experimental sample composed of 17 students out of the study sample. Reliability coefficient was calculated using the Cronbach's alpha for each area of the questionnaire, and for the questionnaire as a whole, as shown in Table 3.

Table 3: Values of study skills reliability coefficients

Area	*No. of items*	*Reliability coefficient*
Fluency	13	0.91
Flexibility	13	0.88
Originality	11	0.90
Total reliability coefficient	37	0.90

Study Procedures

After identifying the study sample, verifying the tool's validity and reliability, about 85 questionnaires were distributed to the study sample. After collecting and extracting the data, it was processed using the arithmetic mean and standard deviation for responses to the first question, in addition to analyzing the two-way analysis of variance (Two-Way Anova) for responses to the second question.

RESULTS AND DISCUSSION

The study results regarding the first question: How the students in Shobak University College assess the performance of their teachers' in using creative thinking skills (fluency, flexibility, originality) separately and collectively?

Table 4 shows the degree of the students' assessment of the three skills of the questionnaire arranged by strength as well as the degree of the assessment of the three skills collectively. The three skills got medium assessment degree according to the adopted study measure, the

Table 4: The order of the three skills by strength

Area	*Arithmetic mean*	*Standard deviation*	*Order of skill by strength*	*Degree of practice*
Flexibility	3.28	0.49	1	Medium
Originality	3.27	0.50	2	Medium
Fluency	3.23	0.56	3	Medium
Total	3.26	0.43		Medium

highest was the skill of flexibility (3.28), followed by the skill of originality, and the lowest was the skill of fluency (3.23), while, the arithmetic mean of the assessment of the three skills collectively reached (3.26) a medium degree of assessment according to the standard adopted by this study.

The results of the first question on the skills and the overall results indicated that the skills came at medium level, which agreed with Hamadna's study (2009). The researcher believes that the results remained in the medium degree and did not go up to the high degrees due to the following reasons:

Firstly, teacher's understanding of the class execution is limited to the completion of the subject according to the pre-prepared plan, in addition to relying on repeated methodology in the teacher style that doesn't achieve the two-way interaction between the two parties, which reflects a boring routine for the students.

Secondly, the class does not begin with sounding questions, and does not provide mentality-based knowledge, and that is demonstrated in the examinations given to the students. Moreover, the concept of creative thinking is not clear to the teaching staff as a trend that must be handled to adapt to the cognitive development that surrounds the student.

Thirdly, the disparity of teachers' disciplines that is, educational, scientific and linguistic have the greatest impact on education. Some of them may practice thinking skills while some others are not aware of its contents, which affected the results of the student's responses in the questionnaire.

Fourthly, the poor classroom environment in the physical, administrative and educational aspects contributes to drive the result to the medium degree. In general, most of our educational institutions have poor classroom environment, not to mention that creativity as skills requires programs and training, which is not available in our universities, also, the sustainable development for teachers are still wishes and dreams.

Fifthly, the students in universities seek the certificate and the high marks only, while self-building, analytical and constructive thinking are no longer within their plans.

The study doesn't agree with the studies of Al-Naqa (2011) and Inan and Ozgen (2008), the result of which came weak. It also doesn't agree with Ciltas (2012) and Shehab (2003) studies, the results of which were high. It also doesn't agree with Shdifat's study (2008) which showed the progress of certain skills and the regress of others, where some affected the fluency and the flexibility, while others affected the flexibility and the originality.

The study results regarding the second question of the study: Are there significant differences at the level of 0.05 in Shobak College students' assessment of the teachers using the creative thinking skills; fluency, flexibility, originality attributed to the variables of students' gender and level?

The two-way analysis of variance at the level of statistical significance of 0.05 using the statistical program SPSS has been used, and the result showed absence of any statistically significant effect for students' gender and level, or the interaction between them at the significance level, $\alpha = 0.05$ on all areas of the questionnaire, and for the questionnaire as a whole, where the probability value was P-Value >0.05. This may be due to the educational and training equality of opportunities between students, regardless of students' level and gender, where classroom environments are similar, all students have the same teachers, and the educational programs adopt the rotation style where you find male and female students of different levels in one classroom. The results agreed with the studies of Al-Naqa (2011), Inan and Ozgen (2008) and Shehab (2003) on the absence of gender effect but didn't agree with Shdifat study (2008) on the same issue.

CONCLUSION

The study aimed at evaluating the teachers' performance level in using creative thinking skills as perceived by the students. After analyzing the responses of the 37 items of the questionnaire including fluency, flexibility, originality

skills, and the interaction with the students' responses; it has been found out that the results of each skill came in the middle level and the overall result came in the middle level as well. The study also showed no students' gender or level impact and that it doesn't make any variance between the study samples.

RECOMMENDATIONS

The present study recommends the following:

1. Designing and executing training programs that aim at improving teachers' capability in the field of creative thinking.
2. Encouraging students to start objective dialogue and create genuine thoughts starting from school education stage.
3. Preparing educational environment that allows the college teachers to practice creative thinking methods in the classroom.
4. Conducting follow up studies to pursue the educational programs periodically.

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