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Creativity and Achievement Tests in the Jordanian High School English Classes

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Abstract:

This study investigates whether Jordanian high schools apply creativity tests or not and what the reasons are for applying them or not. The creativity test that was introduced in Torrance's hypothesis of creative thinking was chosen because it is one of the best tests to develop students' creativity levels. The results show that the educational systems used in Jordan are similar to the ones used in Kuwait and most, if not all, Arab countries, and they do not support this kind of developmental testing methods. It was determined that in all cases, the reason creativity tests were not used was not the choice of the teachers but because of the Jordanian educational system. The study concludes by suggesting that Jordan, as well as all Arab educational systems, would benefit by updating the testing methods used to better develop students who can become fully productive, successful adults in their societies.

Keywords: *English classes, Jordanian high schools, creative thinking, education, creativity test*

1. Introduction

Students learn differently and their abilities to acquire knowledge also vary. Because of this, both educational methods and teacher philosophy are crucial for students' learning and are reflected in the development of attitudes, intelligence and creative thinking. Intelligence is the brain's capacity to acquire different knowledge and skills, and creativity is one of the intelligence indicators. Moreover, using different methods in teaching, including those that make use of the latest aids and technology, can improve a student's ability to learn more as well as develop their attitudes and skills. Educational programs in the Middle East generally do not prioritise deep learning—the internalization of useful, lifelong skills such as critical thinking, analyzing and problem-solving—that will benefit the students and society well onto the future (Nathir, 1975). Deep learning also helps students to gain deep and useful knowledge that they will remember and benefit from for the rest of their lives (Lecun, Bengio & Hinton, 2015). Furthermore, in using new teaching and testing methods that help students learn how to develop their weaknesses and prepare them for the future, with the exponential growth of technology and science, students can be much better prepared by their education.

A good teacher not only teaches the required content but can inspire students in many ways to help them find their passions. This can be done by providing interesting individual homework and projects that challenge them and help them to learn more about themselves as well as the required educational topics. This will enhance their critical and creative thinking skills. Therefore, educators need to know how to nurture their students' creative power to take them to higher levels of thinking and improve their skills and abilities in different fields.

Many educators believe that a student with a high score on a traditional achievement test has better cognitive ability than students who achieve lower scores (Ohnmacht, 1966; Chamorro-Premuzic, 2006; Freund & Holling, 2008). In fact, the traditional achievement tests are often compared to tests that measure creativity or an intelligence trait of an individual (Cicirelli, 1967; Dollinger, 2011; Anwar et al. 2012; Dziedziewics, 2013; Gajda, Karwowski & Beghetto, 2016; and Gajda & Karwowski, 2017).

According to many researchers, such as Nathir (1975), educational systems in the Middle East obligate educators to look at scores in standardized achievement tests rather than improving students' ability to do well on these tests and assume that students with high scores are more intelligent than students with lower scores. However, until recently, very few researchers have looked at the effect of improving the traditional achievement tests. Those who have include Taylor (1959), Anderson (1961), Torrance (1974, 1984, 1990, 1998), Kim (2011), and Lehrer (2012). Moreover, these studies have not explored the reasons for the continued dependency on traditional achievement tests and how these tests benefit student's development.

Although many educators believed in a relationship between traditional achievement test scores and individuals' intelligence levels, such as Cicirelli, 1967; Niaz, Nunez, & Pineda, 2000; and Kim, 2005, many other studies found the opposite,

including Edwards & Tyler, 1965 and Grigorenko et al., 2009. In fact, many researchers have argued about this discrepancy, including Bennet (1999 & 2001), who emphasized the need to update the evaluation of students with standardized tests because their lifestyles and cognitive abilities cannot be measured by questions on a piece of paper, nor can these standardized tests reflect the speed technological development that is used by the current generation.

Achievement test scores are used in the traditional educational system to determine the level of instruction for which a student is prepared. High achievement scores usually indicate a mastery of grade-level material and the readiness for advanced instruction. Low achievement scores can indicate the need for remediation or repeating a course grade. In other words, achievement tests are made to assess the proficiency of students or to measure what they know about a certain subject. Achievement test items are used to measure the most important skills and knowledge attained in a given grade-level. In brief, the results of these achievement tests measure whether or not students are making adequate progress and can also identify any gaps in knowledge a student might have. Although this kind of test is preferred by most if not all the Arabian educational systems, the tests are not without flaws and some serious limitations. For instance, some students who have the appropriate knowledge to score well on the exam may be poor test takers or get nervous, which can cause them to score lower than their true ability. Other students may not understand the questions or they may lack outside knowledge that could help them better comprehend the questions. In fact, achievement test items do not assess higher-level thinking skills. Therefore, some other educational systems use a test that cover learning as well as creativity, such as creativity tests.

This field was examined by many researchers. For example, Piaget (1962 and 1981), Mednick (1963), Sawyer (2012), Guilford (1967), and Gajda & Karwowski (2016) questioned relating students' scores in traditional achievement tests with intelligence and creativity, while others (e.g., Edward & Tyler, 1965; Grigorenko et al., 2009) argued that there is a weak—or no—relationship between creativity and students' scores in traditional standardized tests.

However, there is a place for creativity in schools, and some studies argue that creativity is related to and mostly the result of good learning (e.g., Guilford, 1967; Vygotsky, 1967, 2004; & Beghetto, 2016a). For instance, many investigations asserted that there are strong interrelations between creativity and good learning and that creativity is the product of learning process, such as Wallas, 1926; Guilford, 1950; Cicirelli, 1967; Piaget, 1962, 1981; Donovan & Bransford, 2005; Alexander et al., 2009; and Beghetto, 2016a.

Some studies argued that learning is positively related to creativity but it is not necessarily measured through traditional testing and can be seen in different ways. For example, Piaget's theory of genetic epistemology investigated the interrelation between creativity and learning (Piaget, 1962, 1981). Piaget suggested that traditional styles in teaching, following instructions, and traditional testing methods do not necessarily reflect children's intelligence levels and creativity but can encourage them to be creative, since a creative child may not be the one following adult instructions but the one who has the ability to reinvent (Gruber in Bringuier, 1980).

Many other researchers, including Gralewski & Karwowski (2012) and Gajda & Karwowski (2016), argued that the relationship between creativity and traditional achievement test scores can show a positive relationship, negative relationship or no relationship at all, depending on the educational system and what kind of methods are used for the test. In fact, Gajda & Karwowski (2016) looked closely at the relationship between creativity and traditional achievement tests by analyzing meta-analysis studies conducted since the 1960s to compare how creativity was measured by creativity tests with self-report measures used in standardized achievement tests. They found that there was some, albeit little, positive relationship between creativity and standardized achievement tests.

Because students are expected to provide standardized answers for questions about the presented subject material, creativity is often negatively affected. Many researchers, including Beghetto (2013), argued that the way teachers evaluate students in standardized achievement tests encourages students to not risk showing their skills and creativity in their responses, which results in killing originality and creativity.

Some researchers also found that some teachers depending on traditional educational systems and testing methods show negative reaction toward creativity. For example, many researchers, such as Westby & Dawson, (1995), Scott (1999), Karwowski (2007, 2010), and Gralewski & Karwowski (2013 and 2016), provide evidence for negative reactions by some teachers toward intelligent and creative students.

In addition, many researchers looked at how students' general progress, in the form of Grade Point Averages (GPAs), is evaluated in the traditional educational systems. For instance, Brookhart (1997) argued that students' GPAs are evaluated by measuring students' frequent effort in the taught subjects' materials. Moreover, Nitko (2001) argued that GPAs are evaluated by students' progress in the subjects' requirements, and Wortham (2004) argued that a GPA is the result of how well or not students follow the teacher's instructions and demands. In other words, it is clear from these studies that creativity and intelligence is not measured or even considered when evaluating students. Teachers focus on testing the subject requirements, and how students memorize the material, which is more important than considering the growth and development of their intelligence and creativity levels. However, many studies, such as Barbot et al. (2015), suggest that there is an essential need for developing testing methods to involve measuring creativity in order to produce divergent as well as convergent creative thinkers.

However, there are tests that are designed to specifically measure creativity, and many studies have investigated how to best assess students' capacity for creative, original, and intelligent thinking. For instance, the Torrance Test of Creative Thinking (TTCT), mentioned earlier, is highly recommended by many educational researchers, such as Davis (1997) and Kim

(2006). Furthermore, the TTCT was used as a reliable reference for many subsequent creativity tests, such as Lissitz & Willhoft (1985), who argued about how the TTCT is reliable, valid and effective, and successfully meets its requirements and norms.

1.1. Creativity

There are many different creativity tests, and while they have many aspects in common, such as measuring the development of the students' creative capacity and encourage them learning as well as creating original ideas, there are also differences among them, such as designing these tests and deciding their priorities. In addition, as there is no one set specific definition of creativity, the different tests may reflect different concepts of creativity.

The main reason for focusing on developing the individual creativity and intelligence in this study is that usually developing the individual skills and mentality affect the social development. For instance, Thurstone (1952) argued that it doesn't make any difference whether or not society regards an idea as novel. Rather, an act is creative if the thinker reaches a solution that shows some novelty of the thinker. Moreover, Barchillon (1961) emphasized that thinking processes involved in creativity are of two types. They are either cogito or intelligo. On one hand, cogito refers to creating thoughts. On the other hand, intelligo refers to choosing from and/or distinguishing between different alternative possibilities, which resulted in synthesizing and binding elements in new and original ways. In addition, Kubie (1958) proposed a similar idea about creativity and cogito when he stated that conceptualization takes place in preconscious operations. In fact, preconscious operations can peruse experience and memories to condense, associate opposites and explore relationships at speeds impossible to achieve in the system of conscious operations. Moreover, Kubie (ibid) also added that the resulted intelligence and creativity are not very precise.

Moreover, creativity as a concept is not restricted to one aspect nor in creating new ideas. According to Thurstone (1952), the idea of creativity might be artistic, mechanical or theoretical and Stewart (1950) shared with Thurstone (1950) that creative thinking may occur with ideas that have been produced by someone else at an earlier time.

Creativity as a concept usually is affected by the society it appears in. For instance, Stein (1953), insisted that creativity must be defined in terms of the culture in which it appears. He believed that when someone shows creativity in works produced by others previously, this someone's novelty or creativity usually creates a new form of the same work. In fact, Stein hypothesized that studies of creativity may reveal a sensitivity to the gaps in knowledge that exist in culture it appears in and creativity maybe manifest itself by calling attention to these gaps. Therefore, societies and cultures interact with this concept differently. As a result, we cannot generalize this concept on any culture without testing their reaction to it.

Moreover, creativity is supposed to be found in a higher level of mentality and originality. For instance, Crutchfield (1962) and Wilson (1956), have defined creativity by contrasting it with conformity. They argued that creativity produce original ideas, different points of views, and new ways of making solutions, while conformity has been seen as doing what is expected. Moreover, Lefrancois (1982) argued that creativity has many levels, such as very low intelligence (stupidity) and very low creativity (ordinariness) (ibid: 264). In addition, providing creative environments in the educational systems are very important to nurture the individual creative thinking. For instance, Anderson (1959a and 1959b) insisted that the creative environment provides the freedom for individuals to respond and react differently using what s/he sees and understands. Therefore, this study contrasts the evaluation of traditional achievement tests, which rely on what is expected to evaluate students, with creativity tests, which seek learning as well as developing individual originality and creativity.

Furthermore, there are levels of creativity in which the individual perceives when occurs in educational environment that seek improving creativity of individual within learning. Taylor (1959) sought to reconcile some of the apparent differences in opinion concerning creativity by suggesting that creativity occurs in terms of levels. Moreover, he suggested five levels of creativity such as expressive creativity, productive creativity, inventive creativity, innovative creativity, and emerge native creativity. In fact, expressive creativity as he stated include spontaneous drawings of children. Productive activity includes the artistic or scientific products. Inventive creativity is where ingenuity is displayed with materials, methods, and techniques; whereas, innovative creativity occurs where there is improvement in modifying and conceptualizing skills. Finally, emerge native creativity occurs where there is entirely new principle or assumption, which new schools and movements can flourish. Moreover, Guilford (1956,1959,1960, and 1986) argued that creativity reflects high mental abilities that is involved in creative achievement. Following Tylor (1959) and Guilford (1956,1959,1960, and 1986), it is possible to assume that adopting creativity tests and involving creativity improvements in the priorities of educational systems prepare students with high level of creativity and originality, which resulted in developing different fields in their societies, which this study seeks and as a result recommend this testing method.

1.1.1. Torrance Test of Creative Thinking (TTCT)

While there are many different types of creativity tests, such as Test for Creative Thinking- Drawing Production (TCT-DP)(Urban & Jellen, 1996 and Urban, 2005) and Scientific Creativity Structure Model (SCSM) (Hu &Adey, 2002), one very well-known creativity test provides a good example of the nature of all creativity tests used in schools. The Torrance Test of Creative Thinking (TTCT) was developed by E.Paul Torrance in 1966. As an international leader in creativity research, he was—and is—considered "the father of creativity. Moreover, the TTCT has been revised four times and has been translated into more than 35 languages (Millar, 2002). The TTCT takes two versions: the verbal and the figural. The figural version has two parallel forms and consists of five activities. The activities are: ask and guess, product improvement, unusual users,

unusual questions and just suppose. The stimulus for each task includes a picture to which people respond in writing. The verbal version also has two parallel forms, and it consists of three activities. The three activities are picture construction, picture completion and repeated figures of lines or circles. Ten minutes are required to complete each activity. When administering the test, Torrance recommended creating a game-like, thinking, or problem-solving atmosphere and encouraging students to have a good time. This would allow them to work within a psychological climate that is as comfortable and stimulating as possible and reduce any test-taking anxiety (Ball & Torrance 1984). The TTCT can be administered as an individual or group test. It requires 30 minutes, so time and speed are important. Artistic quality is not required to receive credit (Chase, 1985).

1.1.2. English Classes in the Jordanian High-Schools

The Jordanian educational system recognizes English language as one of the most important languages in the world. It is the language of science and business. In light of this and the growing international and global interest in English, the Jordanian educational systems and curriculum pay a lot of attention to learning English as a foreign language in all levels, from beginner to advanced.

To evaluate students' English ability, traditional achievement tests are the general tool used. While teachers are allowed to use additional tools in the classroom, they are limited. For example, blended learning, which uses internet and online games and puzzles, is not allowed—even as an assignment or homework—if it requires grading by the teacher. The questions of any achievement test should be explicit enough and from the given curricula of the subject or discussed inside the classroom. In addition to students' scores in the standardized achievement tests, students' participation, attendance, homeworks, and some home assignments are included in their evaluation and should be based only on the information presented in the subject itself, nothing additional. Furthermore, teachers are only allowed to use limited additional tools in their classes. For example, wall charts, pictures, some videos shown via data show, and songs presented via cassette to present their lessons and explain their structures and vocabularies. Significance of the Study

Creativity tests are absent in the Jordanian curriculum; in fact, they are absent in most, and perhaps all Arabian curriculum. This study discusses a new type of testing that has not been used in the Jordanian educational systems and shows how this type of test can greatly improve educational outcomes. It also alerts teachers of English as a foreign language to a variety of strategies that could be applied in their classroom activities and in examinations. This study looked exclusively at English classes in Jordanian high-schools due to this subject's international standing and importance. It was also assumed that the nature of language learning provides a lot of relevant opportunities for using various learning methods. This study tries to shed light on teaching methods and philosophies that are rejected by many Arabian educators and ignored by many Arabian educational systems. This study aims to contribute to the body of knowledge for Arab English as a foreign language classrooms. It is hoped that this study will encourage Arabian educational systems to adopt creativity achievement tests, either as a replacement for the traditional achievement tests currently used or as an additional assessment tool.

2. Questions of the Study

This study aims to answer the following questions:

- a) Is there a significant correlation between using new testing methods, such as creativity tests, and better achievers?
- b) What is the Jordanian English teacher's in high-schools background of the concept of creativity tests and do they prefer using them in their class?

3. Methodology

This study used both qualitative and quantitative methods. A questionnaire was provided (see Appendix) and the testing and the evaluation methods in Jordanian high school English classes were observed. The subjects were 40 English teachers teaching in more than 80 English classes in twelve Jordanian high schools. The teaching experience ranged from one to 10 years. For the purpose of data analysis, the sample was divided into two groups: 20 Jordanian teachers (from 21 to 50 years old) teaching in the private sector and 20 teaching in the public sector; this was done to capture any differences between the educational public and private sectors. The questionnaire was distributed manually to all 40 teachers and consisted of primarily open questions, with closed questions used only to collect background information. The questionnaire was designed to elicit the teachers' preferences between traditional achievement tests and creativity tests as well as their understanding of the concepts of these two types of tests; it also sought information about preferred teaching methods and activities. Although the response rate was 100%, with all questionnaires returned completely answered, five had to be excluded due to unreadable or incomprehensible answers.

4. Results and Discussion

The questionnaire results showed that 80% of respondents consider achievement tests to be the only trusted and effective way to test and grade their students' language learning. However, I would argue that this may come at a price—the price of ignoring creative thinking and developing the learners to give them the best chance of a good future. Many respondents stated that they used the traditional achievement tests not only as a trusted way of scoring students, but also to avoid the parents' rejection. Many responses reflect negative cultural reactions toward using any new testing or scoring

methods, such as that Jordanian parents think that using new testing methods may be subjective and unreliable. For example, 20% of teachers felt that if they used a creativity test, parents might not understand its efficacy since it would be a new method. In addition, some respondents mentioned that traditional achievement tests are the only allowable form of grading in the Jordanian ministry of education.

After analyzing the questionnaires, it was found that there were no significant differences in relation to gender, sectors (private or public), age, or years of experience among the Jordanian teachers and their responses concerning the creativity tests. Moreover, some teachers expressed interest in using creativity tests with the traditional achievement tests, while others did not know what "creativity tests" meant. For instance, about 66% preferred using a combination of both creativity and traditional achievement tests to develop the proficiency of their students, while more than 77% showed a clear unfamiliarity and seemed not to understand or have any background on creative testing so preferred going with the rejection. Moreover, about 40% related the idea of creative thinking to critical thinking and some had difficulty differentiating between them.

In the questionnaire responses about comparing Jordanian achievers studying in Jordan with their counterparts studying abroad, there was an overall negative response towards the students themselves rather than the Jordanian educational system. For instance, 90% agreed that Jordanian students studying abroad are better achievers and related this to the good educational systems attended abroad, students being more serious to learn when abroad, and needing to use English in their daily lives if abroad in an English-speaking country.

In asking about the reasons behind the continuous dependence on traditional achievement tests in Jordan, about 21% related the idea of using the achievement tests over the creativity tests with cultural reasons and/or acceptance. The concept of blended learning received different responses. For example, 30% of participants were welcoming and positive about said that the only reason they did not use it was because it is banned in the Jordanian educational system. In addition, about 10% think that blended learning is more useful only for early stages, such as first, second, and third grades. However, about 96% showed that their job is only to help students to speak English fluently, with 40% rejecting the idea of blended learning and considering it to be useless for their classes.

Overall, about 30% would be very welcoming to use creativity tests in their classes, and they think creativity testing methods may benefit and attract their learners. However, about 40% said that they have not asked their students to use new vocabulary and grammatical structures in their hobbies because they think that this is beyond their responsibilities, which are about introducing and explaining the vocabulary and grammatical structures required by the taught subject. Nor do they believe it is their role to upgrade their students' critical or creative levels of thinking.

In sum, the responses towards the questions about using creative tests or testing methods in Jordanian high-school English classes show a cultural rejection and a non-readiness towards new testing methods. This may also suggest that the reliance on using traditional achievement tests is much more a result of social factors rather than academic or educational benefits.

5. Conclusion and Recommendations

Variation in testing procedures can affect scores (Swartz, 1988). In order to ensure that test scores are as accurate as possible, many alternative tools are advocated to achieve better accuracy. Creativity tests are one such tool, and they appear to be a good measure, not only for assessing and educating students but also for encouraging creativity in all. While traditional achievement tests have long played an important role in the Arab educational system, I argue that introducing some additional, different types of tools, such as creativity tests, could enhance the Arabic educational system even more. The Jordanian educational systems currently make frequent use of achievement tests, and it is possible that this can be challenging for some learners, particularly those who become nervous during exams or do not understand questions. Many responses from the questionnaire in this study, and the Jordanian cultural stereotype, suggest that learners in a typical Jordanian classroom are considered lower achievers than those who have studied abroad. In other words, the typical educational system used in Jordan only tests the student's knowledge of the subject taught and does not seek development of their creativity, skills or way of looking at the world.

Well-developed learners can contribute so much to develop their societies. Therefore, students need to learn in such a way that will improve their skills and help them to achieve the most they can in their lives. Most would agree that this is the major purpose of education. However, this would require methods of teaching and ways of testing that could be very difficult for most Jordanian English high-school teachers. A cultural shift toward the 'west' may be necessary for both teachers and learners to effectively adapt to this relatively developmental learning style. Using new testing methods, such as creativity tests, can increase learners' comfort, and this may help them to enjoy the subject and therefore learn more. This is to say, learners should become comfortable in the foreign language classroom, otherwise learning language might be ineffective.

Many researchers found that creativity test methods appear to be beneficial for enhancing the learners' knowledge and upgrading their personalities, including Cicirelli, 1967; Getzels & Jackson, 1962; and Niaz, Nunez, & Pineda, 2000. At the very least, it shows a great promise in prompting learners to speak with great confidence. Therefore, this suggests that using creativity tests may contribute to students' fluency and sufficiency in English classes where students are allowed to express their real ideas, concepts and use their skills and hobbies within learning and evaluated by how creative they are.

Anything new is naturally held under suspicion until proven effective. Therefore, it is important to persuade not only the Jordanian high-school English educators but also the Jordanian Ministry of Education and other Arab educational systems to implement creativity and critical thinking tests, as they may provide more promising results as a more attractive way of teaching that can increase both knowledge and overall intelligence at the same time. What is needed now is more research on the current Arab educational testing methods used to verify if the suggested changes should be further investigated.

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Appendix 1
Questionnaire

A. Background information

Please circle the appropriate answers:

- 1. Gender: M F
- 2. Teaching experience (in years): 1-3 4-6 6-10 11 or more
- 3. Teaching in a public or private school: Private sector Public sector Other (If "Other," please specify): -----

B. Questions

- 1. Please read the introduction below and answer the following question from your own perspective, philosophy and experience as an English language teacher:

Introduction

We all know that students learn easily when the subject matter is interesting, clearly explained, joyful, attractive, and the learning environment is interactive. Most of the ministries of educations in the Arab countries follow achievement tests that examine the students' learning progress. On the other hand, most western countries use creativity tests to examine learners' critical thinking, promote creativity, enhance their talents and connect them to the process of education.

Question: What would you prefer to use in your school or classroom, achievement tests or creativity tests? Why?

- 2. What do you think of the concept of blended learning?
(Note: Blended learning is a combination of a face to face teaching and online interactions where teachers can enhance existing courses with games, activities, exercises and many other things.)

- 3. Have you ever tried open-book exams or quick answers in order to train the learners to think and answer rapidly?

4. Have you ever asked your students to use new grammatical structures or new vocabulary in their hobbies or elsewhere, and then graded them according to that? Why or why not?

5. Why do you think Jordanian students achieve more when they study abroad in English-speaking countries than when they study in their homeland?

6. What do you think you should do to enhance students' achievement and upgrade their personalities at the same time?

7. How would you describe achievement tests and creativity tests?

8. Would you like to add any further information, ideas or comments that are related to achievement tests and creativity tests that you think are important?

Thank you for taking the time to answer these questions.

**Best regards,
A.S. AI-ENEZI**