RESEARCH ARTICLE

The Effectiveness of Blended Learning on Students' Academic Achievement in Arabic Language and the Development of their Creative Thinking

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ABSTRACT

This study examines the effectiveness of Blended Learning approach on fourth grade students' achievement in Arabic Language and the development of their creative thinking. The samples of this study comprised 59 male students of which 30 are in the Experimental Group and 29 are in the Control Group. The study found that there is a statistically significant difference between the mean scores of the two studied cohorts in their achievement posttest and creative thinking posttest carried out. The students in the experiment group who were taught using the Blended Learning approach outperformed the Control Group in both tests. Thus, learning Arabic Language using Blended approach was found more effective than the traditional approach for the samples of this study in terms of their academic achievement in Arabic language and the development of their creative thinking skills. Therefore, this study recommends the use of Blended approach in learning Arabic Language.
Key words: Blended learning, Academic Achievement, Arabic Language, Creative Thinking, Saudi Arabia

INTRODUCTION

Blended Learning is a modern strategy in the realm of education, is gradually replacing E-Learning in most of the educational institutions. The Blended Learning is an alternative for E-Learning. It is easy for the teacher to blend traditional classroom with computer based virtual classroom (Milheim 2006). Blended Learning combines traditional learning with E-Learning, while opines that Blended Learning comingles teachers with students, and audio visual illustration or internet to improve the educational process (Alexander 2004).

Blended Learning is a form of direct and indirect learning. Usually, on one hand, it is a direct learning with the use of internet and intranet; on the other hand, it is an indirect learning when it occurs in the traditional classroom (Krause 2007). It is a kind of E-Learning which employs a range of tools and educational aids in order to create an interactive learning environment synchronously or asynchronously, serves both student and teacher, enhances the learning process for offering programs and courses electronically via different multimedia communication tools including e-mail, instant messaging, mailing lists and forums to overcome the traditional problems of environment where the teacher has limited opportunities to observe students and correct their mistakes during learning process (Ziyabaat 2013).

The Blended Learning environment is a learning environment that combines electronic and traditional learning. It enables student-teacher interaction, or student-content interaction, or student-student interaction through direct dialogue or discussion in order to overcome the obstacles of electronic and traditional learning environments and develops students' knowledge and skills effectively. The Blended Learning environment overcomes the social isolation imposed by the E-Learning, by mixing it up with traditional education inside the classroom. In the context of Blended Learning, students are the main focus in order to meet their actual needs through studying educational content which is far away from the routine traditional environment via direct meeting and online communication (Qadi 2011). The concept of Blended learning which stems as a real

information technology solution integrates E-Learning with traditional learning in a single model to take advantage of both learning styles in achieving the desired educational goals (Wold 2013).

PROBLEM STATEMENT

The problem of this study emerges as a need to the diversification of the teaching methods especially in Arabic Language Textbook; a book recently written in Saudi Arabia that includes all branches of the Arabic language namely; (reading, grammar, dictation, speaking, and calligraphy). The book was written purposely to address the difficulties teachers face in the delivery of content of this textbook to the students which reflected negatively on their level of achievement. This requires the teachers to search for alternative teaching methods to help students learn. Blended Learning is a modern learning method that blends the traditional learning and learning via computer and internet to increase students' achievement.

SIGNIFICANCE OF STUDY

Blended Learning will display the positive aspects of traditional and E-Learning to overcome the disadvantages of each learning approach. This study will provide those in charge of teaching the Arabic language an insight to inculcate Blended Learning in teaching Arabic language. The results of this study will provide the curriculum designers specific guidelines to plan when developing it.

RESEARCH QUESTIONS

1. What is the effectiveness of using Blended Learning on students' achievement in Arabic Language Textbook?
2. What is the effectiveness of using Blended Learning on students' development of creative thinking skills?
3. Is there a statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of Arabic Language Textbook in terms of learning method?
4. Is there a statistically significant difference at ($\alpha \leq 0.05$) in the students' creative thinking in terms using Arabic language textbook using the Blended learning approach?

RESEARCH HYPOTHESES

H_1: There is no statistically significant difference ($\alpha \leq 0.05$) between the average scores of the students in the control and experimental groups in the post achievement test according to the Blended learning approach.

H_2: There is no statistically significant difference ($\alpha \leq 0.05$) between the students' creative thinking skills in the control and experimental groups in the post test according to the Blended learning approach.

METHOD

This study used experimental research method to examine the effectiveness of the Blended Learning approach on the students' achievement in the new Arabic Language Textbook. The samples of this study comprised 30 students in the experimental group who learnt the newly written Arabic language textbooks using Blended Learning approach and the 29 students in the control group who learnt the same textbook through the traditional learning approach.

SAMPLE

The sample of this study comprised 59 students who are in the fourth grade. Those students were divided into the experimental group which consisted of (30) students who learnt the newly written Arabic language textbook using the Blended Learning approach

and the control group which consisted of (29) students who learnt the same Arabic textbook using the traditional learning approach.

INSTRUMENTS

The research instrument used is of two folds. The first instrument was the achievement test for the newly Arabic Language Textbook to measure students' achievement of the concepts and language skills in the unit six, book two of the Arabic Language Textbook. The second instrument was a verbal creative thinking using Torrance test which is an appropriate measure that has been empirically tested in the Arab environment locally and the Arab literature educationally starting from the fourth grade through the University Level.

RESEARCH DESIGN

Figure 1
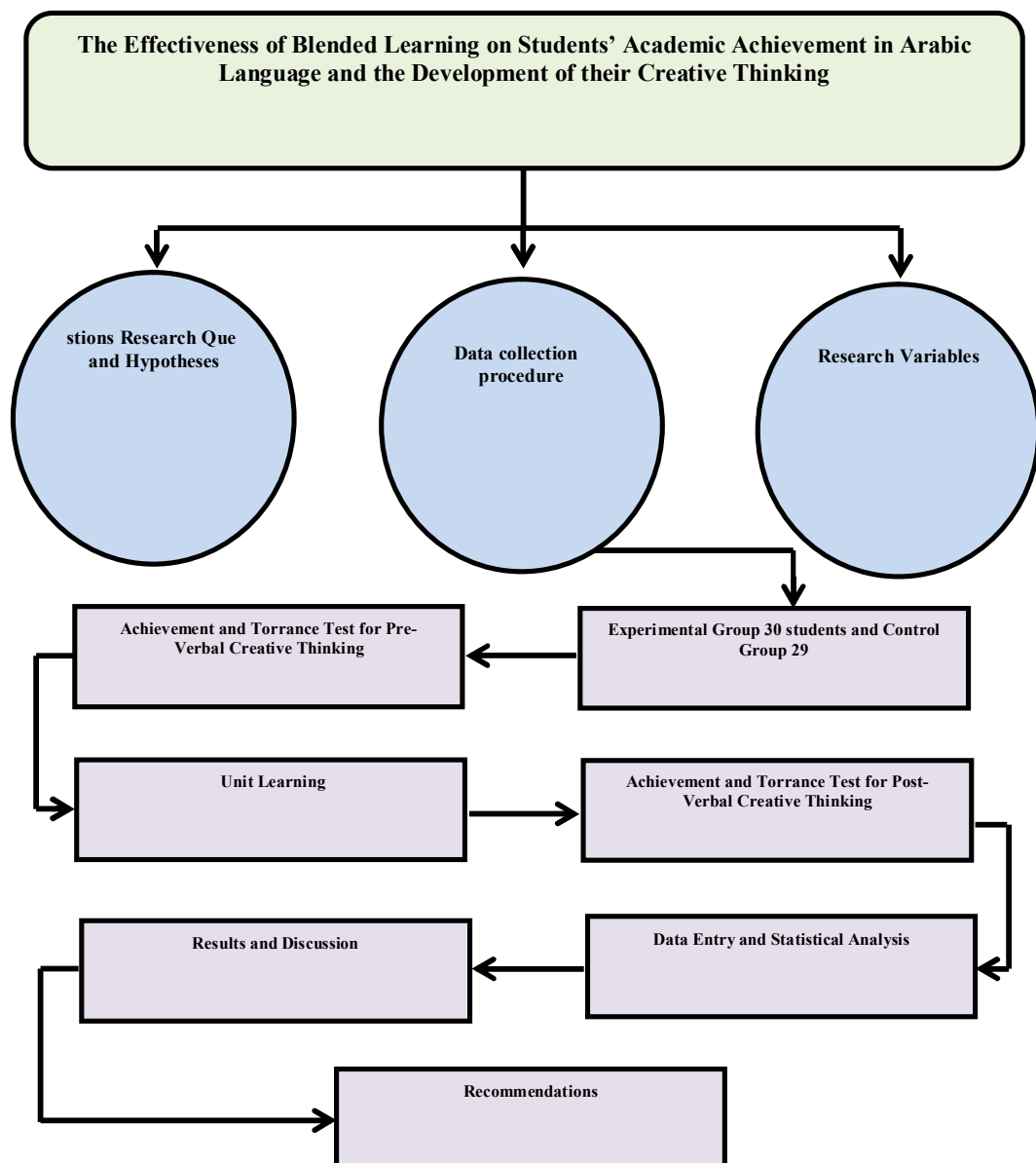
RESULT AND DISCUSSION

The First Hypothesis:

Table 1: Mean scores and Standard Deviations for the two groups in the pre and post achievement tests

Cohort	Sample	Pretest		Posttest	
		Mean	Std	Mean	Std
Experimental Cohort	30	18.56	7.43	28.2	8.42
Control Cohort	29	17.83	6.16	24.83	6.65

Table 1 shows that the mean score of the students in the experimental group in the pre achievement test is (M= 18.56) with a standard deviation of (SD= 7.43) and in their mean score in the post achievement test is (M= 28.2) with a standard deviation of (SD = 8.42). Also, Table 1 shows that the mean score of the students in the control group in the pre achievement test is (M = 17.83) with standard deviation of (SD = 6.16) and in their mean score in the post achievement test is (M = 24.83) having a standard deviation of (SD = 6.65). All these average scores are in favor of the students in the experimental cohorts who were taught using flipped approach. In order to test for the statistical significant difference between the two cohorts, Table 2 of the Analysis of Covariance (ANCOVA) shows the results.

Table 2: ANCOVA Results for the two groups in the pre achievement test

Source	Sum of Squares	df	Mean Square	F	Sig.
Pretest	2677.641	1	2677.641	884.107	0.000
Learning method	83.464	1	83.464	27.558	0.000
Error	139.317	46	3.029		
Corrected Total	36188.000	49			

Table 2 shows that the value of F- statistics for the learning method adopted is (27.55) and significance level is (0.000) indicating a statistically significant difference at ($\alpha \leq 0.05$) between the students' mean scores in the post achievement test in favor of the students in the experimental group who studied through flipped learning approach. The null hypothesis indicates that the use of Blended learning method effectively increases the students' achievement.

The Second Hypothesis:

Table 3: Mean and Standard Deviations for the two groups' pre and post verbal creative thinking test scores

Cohort	No	Pre Creative test		Post Creative test	
		Mean	Std	Mean	Std
Experimental cohort	30	88.36	20.79	94.64	19.48
Control cohort	29	91.16	21.70	92	21.35

Table 3 shows that the mean score of the students' grade in the experimental group with regards to their pre creative thinking test is (M =88.36) with standard deviation of (SD= 20.79) and the students' mean score in post creative thinking test is (M=94.64) having a standard deviation of (SD= 19.48). The same table shows that the average students' grades in the control group with regards to their pre creative thinking test are (M= 91.16) having a standard deviation of (SD=21.70) and the mean score of the students in the control group with regard to their post creative thinking test is (M= 92) having a

standard deviation of (SD = 21.35). These results are in favor of the students in the experimental group. In order to test for the significant difference between the two groups, the ANCOVA Table 4 shows the results.

Table 4: Results of ANCOVA for the two groups in the post creative thinking test

Source	Sum of Squares	df	Mean Square	F	Sig.
Pretest	20940.35	1	20940.35	5686.21	0.000
Learning method	346.84	1	346.84	94.18	0.000
Error	169.40	46	3.68		
Corrected Total	21195.10	48			

Table 4 shows that the value of F statistics for the Blended learning method used is (94.18) with a significance level (0.000) indicating a statistically significant difference ($α ≤ 0.05$) between the students' mean scores in both groups in the post creative thinking test which is in favor of the students in the experimental group who studied using Blended learning approach. These results lead to the rejection of the research null hypothesis and clearly indicate that the Blended learning approach employed effectively increases the learning efficiency of the students' creative thinking skills.

Fluency Skill:

Table 5: Mean and Standard Deviations for the two groups' fluency skill in the pre and post creative thinking test

Group	No	Pre fluency test		Post fluency test	
		Mean	Std	Mean	Std
Experimental Group	30	42.04	4.96	43.68	4.40
Control Group	29	42.79	5.26	43.04	5.27

Table 5 shows that the average students' scores in the experimental group with regards to the fluency skill in the pre creative thinking test are (M= 42.04) having a standard deviation of (SD=4.96) and the average students' scores in the experimental group with regards to the fluency skill in the post creative thinking test are (M= 43.68) with a standard deviation of (SD= 4.40). The same tables shows that the average students' scores in the control group with regards to the fluency skill in the pre creative thinking test are (M= 42.79) with a standard deviation of (SD=5.26) and the average students' scores in the control group with regard to the fluency skill in the post creative thinking test are (M= 43.04) with a standard deviation of (SD= 5.27) all indicating that the difference was in favor of the students the experimental group. The results of ANCOVA show the significance of this difference as in Table 6.

Table 6: Results of ANCOVA for the students' grades in two groups in fluency skill in the pre creative thinking

Source	Sum of Squares	df	Mean Square	F	Sig.
Pretest	1185.71	1	1185.71	1277.98	0.000
Learning method	21.69	1	21.69	23.38	0.000
Error	42.67	46	0.92		
Corrected Total	1233.38	48			

Table 6 shows that the value of F statistics for the Blended learning is (23.381) in the fluency skill, the level of significance (0.000) indicates that there is a statistically significant difference at ($α ≤0.05$) between the students' mean scores in the two groups with regards to the fluency skill in the pre creative thinking test in favor of students in the

experimental group who learnt using Blended learning method. These results lead to the rejection of null hypothesis meaning that the Blended learning method effectively increases the students' efficiency in the development of fluency skill.

Flexibility Skill:

Table 7: Means and Standard deviations for both two groups in the flexibility skill in the pre and post creative thinking

Group	No	Pre creative test		Post creative test	
		Mean	Std	Mean	Std
Experimental Group	30	22.84	7.98	25.52	7.44
Control Group	29	23.91	8.31	24.16	8.25

Table 7 shows that the mean students' scores in the experimental group with regards to the flexibility skill in the pre creative thinking test are (M= 22.84) with a standard deviation of (SD=7.98) and the average students' scores in the experimental group with regards to the flexibility skill in the post creative thinking test are (M= 25.52) with a standard deviation of (SD = 7.44). Similarly, Table 7 shows that the average students' scores in the control group with regard to the flexibility skill in the pre creative test are (M= 23.91) with a standard deviation of (SD=8.31) and the average students' scores in the control group with regards to the flexibility skill in the post creative thinking test are (M= 24.16) with a standard deviation of (SD= 8.25) indicating that the difference in the flexibility skill in the pre and post creative thinking tests is in favor of the students in the experimental group. The significance of this difference is as shown in ANCOVA Table 8.

Table 8: Results of ANCOVA for students' grades in both groups in the flexibility skill in post creative thinking

Source	Sum of Squares	df	Mean Square	F	Sig.
Pretest	3023.16	1	3023.16	3620.19	0.000
Learning method	69.40	1	69.40	83.10	0.000
Error	38.414	46	0.83		
Corrected Total	3084.00	48			

Table 8 shows that the value of F statistics for the flexibility skill is (83.10) in the post creative thinking skill and the level of significance (0.000) which indicates that there is a statistically significant difference ($\alpha \leq 0.05$) between the mean scores of the two groups in flexibility skill in post creative thinking test in favor of students in the experimental group who learned using Blended learning approach. These results lead to the rejection of null hypothesis meaning that Blended learning effectively increases the students' efficiency in the development of flexibility skill.

Originality Skill:

Table 9: Mean and Standard Deviations of two groups in the originality skill in both pre and post creative thinking

Group	No	Pre creative test		Post creative test	
		Mean	St.d	Mean	St.d
Experimental Group	30	23.48	8.24	25.44	8.15
Control Group	29	24.45	8.54	24.79	8.20

Table 9 shows that the average students' grades in the experimental group in originality skill with regards to the pre creative thinking test are (M= 23.48) with a standard

deviation of (SD=8.24) and the average students' scores in the experimental group in originality skill with regards to the post creative thinking test are (M=25.44) with a standard deviation of (SD= 8.15). Similarly, Table 9 shows that the average students' scores in the control group in originality skill with regards to the pre creative thinking test are (M= 24.45) with a standard deviation of (SD=8.54) and the average students' scores in the control group in originality skill with regards to the post creative thinking test are (M= 24.79) with a standard deviation of (SD= 8.20) indicating that the difference in originality skill between the post and pre creative thinking tests is in favor of the students in the experimental group. The results of the statistical significance of this difference are as shown in Table 10 of ANCOVA.

Table 10: Results of ANCOVA for both two students' grades in the originality skill in post creative thinking test

Source	Sum of Squares	df	Mean Square	F	Sig.
Pretest	3306.36	1	3306.36	3620.19	0.000
Learning method	31.25	1	31.25	83.10	0.000
Error	53.75	46	1.16		
Corrected Total	3365.26	48			

Table 10 shows that the value of F statistics for the originality skill is (3262.19) and the level of significance (0.000) which indicates that there is a statistically significant difference (α ≤0.05) between the mean scores of the two groups in the originality skill with regards to the post creative thinking test. These results indicate the rejection of the null hypothesis meaning that Blended learning effectively increases the students' efficiency in the development of the originality skill.

CONCLUSION

This study concludes based on the above illustrated results that Blended learning effectively improves the overall students' performance and academic achievement in the new edition Arabic Language Textbook and enhances the students' level of creative thinking skills in Saudi Arabia.

RECOMMENDATIONS

This study recommends:

1. The approval of Blended Learning approach for teaching and learning Arabic language in Saudi Arabia and in other countries as well.
2. Constantly training the Saudi teachers in the education departments on how to effectively implement Blended learning approach.
3. Providing schools with a conducive learning and supporting environment lovable for the successful implementation of Blended learning in Saudi Arabia.
4. Designing an effective curriculum and Arabic textbook by the Government and educational stakeholder in Saudi Arabia to be distributed the schools and students at the beginning of the school academic year.
5. Encouraging teachers to use Blended learning and other effective teaching methods for progress the education in Saudi Arabia.

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