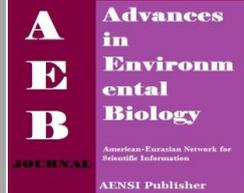




AENSI Journals

Advances in Environmental Biology

ISSN-1995-0756 EISSN-1998-1066

Journal home page: <http://www.aensiweb.com/aeb.html>

The Effect of Spelling Multimedia on Learning and Retention Process of Second Grade Primary School Students

¹Azar Akhondi, ²Mohammad H Yarmohammadian

¹PhD Student, Department of educational sciences, Khorasgan (Isfahan) Branch, Islamic Azad University, Iran

²Professor, Education, Khorasgan (Isfahan) Branch, Islamic Azad University, Iran

ARTICLE INFO

Article history:

Received 25 March 2014

Received in revised form 20 April 2014

Accepted 15 May 2014

Available online 10 June 2014

Key words:

Spelling Multimedia, Learning, Retention, E-Curriculum.

ABSTRACT

The present study aimed to investigate the influence of spelling multimedia on learning and retention process of second grade female students of primary schools. The study was carried out in control and study groups and the samples were given pre- and post-tests. Primary school students of Kermanshah in the academic year of 2013 served as the statistical universe of this study. The sample, including 40 individuals, was selected according to simple random sampling method and grouped into control and study groups. While the study group received instruction via spelling multimedia in 12 sessions (45 minutes each), the control group were traditionally instructed by teacher in the same period. To collect data, a researcher-constructed test for spelling, was utilized. This very test revealed 83% reliability, estimated via test-retest method. The content validity of the test was then confirmed by teachers. Students' grades in the two groups were then analyzed and contrasted via independent and dependent T-test. The pre- and post-tests grades of female students, examined through dependent T-test, revealed the significant level of %000 which is lower than %05. This very finding demonstrates that the multimedia was of influence on the learning process of female students and thus the researcher's first hypothesis proved to be true. Two weeks later, the students in control and study groups were once more given a post-test. Students' grades were then analyzed using independent T-test. Given that the estimated independent T-test, 4/125, was greater than the T-table, 1/725, the second hypothesis, concerning the influence of multimedia upon female students' retention, proved to be true.

© 2014 AENSI Publisher All rights reserved.

To Cite This Article: Azar Akhondi, Mohammad H Yarmohammadian., The Effect of Spelling Multimedia on Learning and Retention Process of Second Grade Primary School Students. *Adv. Environ. Biol.*, 8(7), 2284-2286, 2014

INTRODUCTION

Advances in information technology have brought dramatic changes to the means and methods of learning. Recent researches disclosed the positive effect of educational multimedia and software on students' academic achievements. As the technology keep flourishing, educational system is required to both revise the curriculum to equip students with computer literacy and to enrich and renew learning environment to pave the way for the learners' reliance on learning sources. Accordingly, the need is increasingly recognized to modify traditional teaching methods and replace them with modern approaches. Researches demonstrated that the multimedia-based instruction exercises a positive influence on students' comprehension and retention [6]. It is also showed that visual-based curriculum greatly affects students' learning and retention [7]. Indeed, multimedia simultaneously involves and engages all of students' senses and thus proves to be of great influence on their learning process [8]. [13], revealed that educational networks are of utmost importance in language skills acquisition and holds that the use of computers for language acquisition alters students' outlook toward writing skill and spelling. [16] Similarly highlights the effect of computer use on the improvement of language skills, particularly spelling and correct pronunciation. Given the fact that Persian is our formal language, the instruction of language skills is vital in all levels of education, especially in primary levels [17]. Writing enjoys prime importance among language skills. Thus, correct spelling carries weight as long as it matters to sustain Persian language [5]. Denoting the act of correctly writing down other's utterances, spelling appears as the foundation for learning other courses. Yet, the prevalent methods fail to remove the students' educational problems with this very skill. Unfortunately, spelling is still assumed to be an assessment instrument rather than an educational one in Iran's educational curriculum. It mostly serves teachers to assess students' mastery and knowledge of words. In this very system, students are merely suggested to rewrite the correct spelling of the misspelled words.

Corresponding Author: Azar Akhondi, PhD Student, Department of educational sciences, Khorasgan (Isfahan) Branch, Islamic Azad University.

Literature review:

Arqavani [4] grouped 85 students into control and study groups. As the former were normally instructed by a teacher, the latter were trained via software in six sessions. The findings, drawn from the comparison of students' pre- and post-tests, brought the researcher to the conclusion that educational software positively influences the retention process of primary schools' students. Noruzi [11] conducted a research to investigate the effect of Math multimedia on fifth grade primary school students. He also utilized control and study group and declared that Math multimedia improved students' learning. Examining the impact of multimedia on students' handwriting, Qamin [12] reported a dramatic change in this very skill. Similarly, Asgari [2] and Mehr Mohammadi (2011) reported in separate studies that student's learning and academic performance would demonstrate a significance advance when software and multimedia are used. Finally, Mahdizadeh [10] recounted that Science multimedia was of considerable influence on students' learning.

The Purpose of Study:

Investigating the effect of spelling multimedia on learning and retention process of second grade female students of primary schools.

Hypotheses:

1. Instruction via spelling Multimedia positively affects the learning process of second grade female students of primary schools.
2. Instruction via spelling Multimedia positively affects the retention process of second grade female students of primary schools.

*Methodology:***2-1- Statistical universe, Samples, Sampling method:**

The study was carried out in control and study groups. Female students of primary schools of Kermanshah in the academic year of 92-93 served as the statistical universe of this study. Using random sampling method, 20 students were positioned into control group. Another 20 students formed the study group. Given that only a few schools enjoy computer sites, Anahita Girl School, from educational district one was selected.

2-2- Instrument:

Researcher-Constructed Spelling Test Spelling test contains a passage of 100 terms. It enjoys 83% reliability, estimated via test-retest method in a month and its content validity was confirmed by five teachers.

Researcher-Constructed Spelling Multimedia:

Curriculum designed for spelling is presented in a multimedia. This spelling curriculum contains various drills extracted from six chapters of second grade student book, transformed into Auto run file via different types of software like Macromedia Flash Player, PowerPoint, Auto play Media, and Aveda software. The multimedia was then written on CD so that it could be readily played in personal computers. It should be mentioned that an educational technologist and a number of primary school teachers confirmed the product's content validity and technical features.

2-3-Variables:

Researcher-constructed spelling multimedia served as the independent variable. Female students' extent of learning and retention functioned as the dependent variable. Students' mental and physical health, gender, grade, and age are the control variables of the study.

2-4- Implementation:

In the first step, the control and study group were given a researcher-constructed spelling pre-test. The study group was subsequently instructed via researcher-constructed spelling multimedia in 12 sessions (45 minutes each). The control group was simultaneously trained by a teacher in 12 sessions. To assess the impact of multimedia on students' learning and retention, the control and study group were given a post-test after two weeks.

3- Statistical Data Analysis:

Independent and dependent T-Test were employed to analyze data.

The estimated T equals 3.394, whereas the T-table is 1.725. As the result $1.725 < 3.394$ indicates there is a significance difference between the control and the study groups scores. It reveals the effect of multimedia software on female students' learning. Thus, the first hypothesis of the research proved to be true.

Table 1: Independent Sample T-Test of Control and Study Groups.

		T-test for Equality of Means Test						
		t	Freedom Degree	Sig. significance	Mean Difference	Standard Error of Mean Difference	%95 Confidence Interval for Mean Difference	
							Low Extreme	High Extreme
Post-test scores of control and study groups of female students	Equal Variance Assumption	3.394	38	.002	1.86250	.54877	.75158	2.97342E0
	Unequal Variance Assumption	3.394	24.379	.002	1.86250	.54877	.73084	2.99416E0

Table 2: Retention T-Test of Control and Study Groups.

		T-test for Equality of Means Test						
		T	Freedom Degree	Significance Level	Mean Difference	Standard Error of Mean Difference	%95 Confidence Interval for Mean Difference	
							Low Extreme	High Extreme
Retention	Equal Variance Assumption	4.124	38	.000	1.45000	.35159	.73823	2.16177
	Unequal Variance Assumption	4.124	26.731	.000	1.45000	.35159	.72825	2.17175

The estimated T equals 4.124, whereas the T-table is 1.725. As the result, $T = 4.124 > 1.725$, indicates multimedia was of influence on female students' retention scores. Thus, the second hypothesis of the research proved to be true.

Discussion:

The findings of this study demonstrated that spelling multimedia positively influences the learning and retention process of second grade female students of primary schools. Thus, the two hypotheses of this study proved to be true.

REFERENCES

- [1] American Psychiatric Association, 2000. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition Text Revised. MR Translation Nykikhv and Hamayak Vadys variance.
- [2] Asgari, R., 2010. Designed and Familiarity with centers of learning materials. Tehran: the side.
- [3] Arare, B. & N. Seif, 2009. Education of Exceptional Children. Tehran: Payam Noor.
- [4] Argavani, O., 2010. Introduction to learning theories Translator: Saif, Ali Tehran: Publication time.
- [5] Birjand, A., 2010. Way of teaching spelling and writing Persian Tehran: Publication school.
- [6] Campell, G., 2009. Mapping pedagogy and Tools Effective Learning design, Journal of computers & Education, pp: 17-33.
- [7] Gall, M., 2007. Qualitative and Quantitative Methods in Education and the University Press.
- [8] Khormizi, T., 2012. ICT Effectiveness in Instruction and Learning Multilevel Transformation Theory and a Pilot Project in Secondary Education, Journal of Computers & Education, pp: 24-55 .
- [9] Mehrmohammadi, A., 2011. Applied Probability and Statistics in Psychology and Education . Tehran : Publication of growth.
- [10] Mahdizadeh, R., 2009. Online Communication in School, Educational Technology , pp. 137.
- [11] Norozi, A., 2012. Multimedia learning. Translation: Mahsa Mousavi , Tehran : Institute for Research and Training in management and planning .
- [12] Qmrany, A. & H. Jafari, 2011. Computer and its impact on teaching - learning process . Journal Exceptional Children 40-41 numbers.
- [13] Saif, A., 2009. Educational Psychology Tehran: Cognizant.
- [14] Samuel, G., 1999. Learning disorders and academic development . Translated by S. boom, Z. Khanjani , M VOSOUGHI leader. Tehran: Organization of Special Education.
- [15] Yarmohammadian, M., 2012. Principles of curriculum planning. Tehran: yadvareh Book.
- [16] Zvnfn, S.h., 2010. Application of new technologies in education. Tehran: the side.
- [17] Zandi, B., 2012. Methods Persian language. Tehran: publisher side, pp:155.