The Role of Multimedia Software on Learning and Retention Basic Foundation in Science Lessons

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Abstract: This study investigated the role of multimedia software on student learning and retention were made. The study was quasi-experimental pretest and posttest control group design was used. Statistical population of all students at the base of a fourth is elementary. and divided into two groups: test and control software with a trained teacher to teach science and other payments. The findings of the study sample was analyzed using paired T. The results suggest that the impact of software testing has a significant role in learning and retention of students.

Key words: multimedia software, Learning, Remember, science-based primary.

Introduction and Expression:

One of the most important areas of human life is education. Currently entering the field of ICT professionals and experts on new horizons, it has been. In some countries the use of technology in education as a very broad and in some countries there is very limited. And now a lot of scientific research and efforts to find effective ways to use technology in education and the way things are. ICT in different areas of human potential so that it will undoubtedly be the symbol of a new civilization emerged as a new wave of civilization. Since the last century is the period of transition from industrial age to the age of information and communication, education and training than in the past in terms of both quantity and quality and speed of delivery has evolved dramatically. Development of ICT in education programs, a step is an effective and lasting. That a qualitative transformation in the goals, plans, procedures and practices and thus create an effective education is expected to be followed. Longstanding unresolved problems such as dreams and technology development with applications to education, focusing on the abilities and needs of learners, student-centered institutional change and the role of teacher as a guide for students and originality make it a life-long learning will be achieved.

E-learning is one of the phenomena in the modern era of information and knowledge-based society in the field has existed. The main features of the e-learning, and easy access to information, communication and interactive features to it. What is needed now to our e-learning offers better ways to process, meaning the information and re-create them. For years, the field of educational materials and media has done plenty of research on teaching and learning process and the usefulness of these media is emphasized. Today, educational technology to improve learning and retention of students is essential and given The importance of learning and retention in the teaching process, it was always considered by researchers and theorists. by providing educational materials and new media. Research is also being used efficiently. Immediately after the invention of the research and production of the desired media and using them in the role of new media teaching and learning environments was compared with traditional education was one of their results suggest the usefulness of new media and educational excellence Traditional teaching methods are taught.

One of our developments in Iran in recent years ha ve seen increasing use of ICT in different fields including education, is in the field. Efforts in this area include: Iran launched a national network of schools, trying to develop a virtual university, distance education and educational multimedia products is. A new way to develop effective teaching and learning for all enthusiasts a place in any location at any time taking advantage of the features and benefits of the Internet and e-learning.

Given all the above basic question is whether the use of multimedia software to increase learning and retention of female students studying science is based on the fourth. To answer this question and other questions from the research problem.

Background Investigation:

Research entitled "Effect of training on computer assisted learning compared with traditional methods of learning English for the first year of high school" is conducted by Fazelian and Saadatmand 2004. Specific objectives of this study was the effect of computer assisted instruction on the learning aspects of English grammar and sentence structure, writing skills, comprehension, vocabulary and idioms in this quasi-experimental research technique that knowledge has been Students were divided into experimental and control groups and test groups to which the significant difference between groups was not observed. In the end and after running the test to the results of which showed significant differences between groups and interest groups have been tested. So the positive impact of research on computer-assisted instruction course to learn the English
language has been specified. Construction of multi-media study by students on their learning in science class of 16 fifth grade girls' schools in Tehran shows that:

Above average test scores of 95 test results have been assured that the construction of multimedia by students is more effective than traditional teaching methods. (Vovle, 1984) in 208 research studies conducted between 1890 and 1980 in connection with the retention factors on Mainstream is presented. The study results suggest that the type and level of difficulty of the task of learning the results are impressive. That is a simple task such as word recognition or Remember a simple statement in a short or a simple text, possibly through the provision of audio-visual presentation will be very effective. In other words, it appears that auditory presentation leads to such simple tasks are remembered better than those in different stages. While in practice there is a problem with this picture. The visual presentation of the text was effective for moderate to difficult or very difficult, increases the rate of recall.

Research hypotheses:
A-Use of multimedia software in increasing students' learning in science lessons are based on first quarter.
B-Use of multimedia software have increased the amount students learn basic science course is the first quarter.

Methods:
This study is a quasi-experimental. And the pretest and posttest control group design was used. The members of test and control groups before the start of training before they complete the test. Then randomly tested and the number of students in the group were in the control group. The group will provide software testing training, and after each test was done, and finally, after 10 days of retention testing was done both.

The statistical study of all students on the fourth of a total of 1606 students of Sari city in 2010-2009 academic year have been reported.

For the first month after the names of Education Sari elementary schools, two schools were selected from each school were tested before and after school as a random test group and control group was used as a school. Group Tests The control group received educational software, but traditionally trained. The test was done after the training and retention test was performed after 10 days.

Questionnaire used for data collection of tools that include:
A - pre-test questionnaire expressed
B - Tools for learning and retention-test questionnaire

Instruments pre-test questionnaire:
A-before the fourth Test of Basic Sciences:
The questionnaire as a test of basic science research compiled by the fourth. This questionnaire has 16 questions from easy to difficult question types (physical, anatomical) was used. Grading method, is analytical. The score for each question will be considered separately.

B-after the fourth Test at the base of empirical science:
This questionnaire has been compiled by the researcher as the science test. Includes 19 questions from easy to difficult question types (physical, anatomical) was used. Grading method is analytical. The score for each question will be considered separately.

C-Validity and reliability:
Validity of both questionnaires have been designated and approved by experts in this field. So we can say that the questionnaire has acceptable validity.

D-Reliability:
Questionnaire pre-test and post-test science-based IV by the researcher is provided for determining reliability, the questionnaire above on a 30-person of the female students on the fourth to be implemented. For the measuring of the half used. Each half-test reliability coefficient of 74 / 0 and the total test reliability coefficient of 85 / 0, respectively.

Findings:
T to test the hypothesis of a sample pair was used.

The first research hypothesis:
The increased use of multimedia software, students learn basic science in the course of the quarter.
Table 1: Statistical analysis of the first research hypothesis.

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
<th>Mean differences</th>
<th>t</th>
<th>Degrees of freedom</th>
<th>Likely amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>3.12</td>
<td>9 / 2</td>
<td>14839 / 0</td>
<td>89 / 1-</td>
<td>59</td>
<td>000 / 0</td>
<td></td>
</tr>
<tr>
<td>Test</td>
<td>56:30</td>
<td>5/16</td>
<td>59 / 2</td>
<td>89 / 1-</td>
<td>59</td>
<td>000 / 0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Commentary:
The table can be seen in the control group mean learning the 13/12 and 25/16 groups is tested. According to the statistic pairs (dependent) with a grade of 59 can see the statistics, t smaller than the table (95/1) is also the possibility that less than 05/0 is obtained the null hypothesis rejected the hypothesis of a confirmed Be.

The second research hypothesis:
The use of multimedia software to increase retention (Remember) fourth grade students of elementary science is empirical.

Paired sample t-test to check this is to be used.

Table 2: Statistical analysis of the research hypotheses.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
<th>Mean differences</th>
<th>t</th>
<th>Degrees of freedom</th>
<th>Likely amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>30</td>
<td>4.12</td>
<td>20 / 3</td>
<td>85350/3-</td>
<td>689/3-</td>
<td>59</td>
<td>000 / 0</td>
</tr>
<tr>
<td>Test</td>
<td>30</td>
<td>5/13</td>
<td>45 / 3</td>
<td>85350/3-</td>
<td>689/3-</td>
<td>59</td>
<td>000 / 0</td>
</tr>
</tbody>
</table>

Commentary:
The table can be seen in the control group mean of 4.12 and retention of the 15/13 test. The statistics on the pairs (tied) with 59 degrees of freedom is considerably larger than the table value of t statistic (95/1) is also likely that much smaller than 0 / 05 to reject the null hypothesis and confirm the hypothesis.

Conclusion:
Hypothesis 1: The use of multimedia software to enhance learning in students of primary headache is the fourth basic science?

Average experimental and control group learning 25/16 is 13/12.. According to statistics (paired t) has confirmed this hypothesis. This result and happy with the results obtained from research Fazlyan in 2004 entitled "The effect of education on computer assisted learning compared with traditional methods of learning English" is the same. Hypothesis 2: Use multimedia software to increase retention of female students studying science is based on the initial quarter. Average retention test and control groups 15/13 to 04/12. The results obtained in the test group retention rate has been significantly changed. Thus the use of multimedia software to increase retention Students are affected.

And the results obtained with the results of research on factors affecting retention in the Vlvt Mainstream is the same.

Suggestions:
- Multimedia software designed to be based on principles of learning psychology.
- Software developed by teachers according to student characteristics to be done.
- Multimedia software using a few basic classes
- The use of multimedia software for teaching children with special needs
- Using multimedia software, students in the leisure
- Similar research conducted in high school and higher and further statistical community
- Do research in math and reading software, the importance of the Thames and PIRLS.

REFERENCES