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The Sensing of Jump rope Training Courseware and its Role in Psychomotor Performance of Learners

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ABSTRACT

The study aimed to design courseware jump rope skills and psychomotor performance of the students. The method of this study was quasi-experimental research. The sample was of all male students in fourth grade in city of Kermanshah. The sample included 70 male students in fourth grade that was splitted in 2 classes of 35 people in the control and experimental groups. This students was selected by assignment multistage random sampling method among 3 region of Kermanshah which 2 classes of Sa'adi school was included in jump rope program. Data were gathered by a researcher made questionnaire to assess the performance of learners. The validity of the questionnaire confirmed by the supervisor and several education experts of jump rope and validity achieved by Cronbach's alpha coefficient was 86%. This study was designed to teach the skills training program jump rope mental performance-encompassing movement in 5 components of (imitation skills, independent performance, accuracy and speed, coordination skills and normalization of functional skills) was studied. The findings showed that the performance of learners trained on skills training courseware of jump rope and the common difference is significant and Learners who have been trained to use the courseware, showed better performance than learners who have been trained in the common plan. The results of the present study examined the effect of all elements of the approved courseware. It can be concluded that the use of courseware has an effective role in developing psychomotor skills of students.
KEYWORDS: Instructional design, motor skills, Jump rope, psychomotor skills.

INTRODUCTION

Long time books, the main source of information in education was considered. But the progress of man undergoes a fundamental change, and one of the key areas of education. The students and teachers, in terms of flexibility, the development process is learning to Teaching-(Razidas, 2004). Today's multimedia in teaching and learning is used, because on the one hand to attract learners, and the other with a variety of features that provide for teaching, learning guarantees (Razavi, 2007). Period training, curriculum seeks to change and gain the skills, knowledge and attitudes of learners, provided (Mick, 2001). Basic elementary school curriculum, and the moral of the child. In this period, the foundation and basis of the student's behavior, it is made. Accordingly childhood, the most important period of life. Childhood is a time when, as a fertile land, whatever it be used in the future, you will reap. Children, citizens are small, they need an independent citizen, the intellectual and social development, planned for them. Games such as running and jumping rope, the children are doing many activities, large and small muscle growth, training, force, speed, endurance and muscle Rapid action, and fast-moving joints helps the baby's circulation has increased, and blood the more likely the child's brain. The game also has a variety of classification is that, of the kind that can be pointed out that educational games. The games in general, and educational games, in particular, have a wide range and can include thoughts, gestures and actions that affect the body and soul, and strengthens all mental faculties, mental physical, spiritual and material used. Educational games, the most important means of education and personality development of children in the primary school. Physical education, as part of the public education system, including the most important lessons is that, in practice in schools, and navigate through In Business and maintain health and wellbeing of students is effective. Educational games, each kind of social purpose, with them, and because many educational games,

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some activities relating to physical education and sports lies in determining the status of the game in the exercise of Elementary, of special importance (Soltani, Salehipoor, 2011). Educational planning, forecasting and planning training events, based on the objectives, content and resources available, according to demographic characteristics and construction students. The aim of education is to provide learning opportunities, and so it can be prescribed instructional design, or prediction methods appropriate for achieving the desired changes in knowledge, attitudes, and skills of the students knew (Rigless quoted Fardanesh, 2011).opportunities in fields where the problem is found, the tool is selected, the content of the national curriculum guidelines, and coordinating and matching the levels of the educational system. Using Courseware training courses on various topics, can serve as a stimulus for learning is (Ghaffari, 2003). Education is the key to conquering the future, and has long been expected of education, the education of tomorrow's people, and generations to live in society and prepare for tomorrow. The slogan "destruction is waiting for you, unless you are creative and innovative," humans are facing, and education, to encourage creativity and innovation, as well as the proper use and navigate, and the direction of talents and abilities of the individual, as it is important that, in turn leading to the development of cultural, social and economic society. It is necessary, educational planners and policy makers, teachers and education officials, to understand the requirements and demands of life, knowledge and insight necessary to help children and young people to develop community action tomorrow (Style of Physical National Plan, 2011). Current world every day, evolving and improving. Technology can be seen in all aspects of human life, and certainly the teaching of this subject is no exception. Making E-Learning Courseware, and the use of computers in the classroom, can serve as a stimulus for learning to be considered (Ghaffari, 2003). Now sports schools after years of stagnation and failed to reach its original nature, and what is seen in the ring sport, something that is close to the main goal, and sometimes can even be said alarm sport in schools, victim of difficulty mathematics, science and the extracurricular classes. Whereas, for the development of athletics in the country, according to Sports students form is compulsory, and the starting point for many sports disciplines, elementary school, but school students in third grade, even in some cases, teachers do not exercise and the lack of sports facilities, schools, also instigates problems. In our country, often due to lack of information on the benefits Rope making, to the important and valuable work as it should, and probably will not notice. Since Rope making, on the one hand all the factors of physical fitness, motor positively affect humans, and the other is available to the public, in addition to practicing the specified location, and time is needed, therefore, to consider This activity is beneficial for enhancing level of physical fitness, mobility of students, schools and the public to exercise in their leisure time, and finally creating opportunities for students to participate in the races (Style of Physical National Plan, 2011). The use of educational technology in the schools, has led to interest and motivate students to learn by themselves, which is involved in learning, learn faster and better take (Ritchie, 2008). One advantage of courseware, increasing interaction among students and between the instructor and the learner. This is a goal that, in recent years, highly regarded practitioners of education, with titles such as active learning methods are (Khazaei, 2001, p. 45). Therefore, the Physical Education Department of Education, the goals and mission of their existence, the association rope woman (Rope making) schools, and the inclusion of basic skills Rope making, teaching physical education in the season in fourth grade, step and useful removed (Style of Physical National Plan, 2011). Although research in the field of E-Learning Courseware features has been done, but the characteristics of students' cognitive mental content, have been less studied. So it is necessary, given the content of the psychological aspects of students in the preparation of E-Learning Courseware desirable, as the basic criterion, the provision of e-Learning Courseware be evaluated. Skills in physical education course objectives, a special place, and a significant portion of the overall objectives of the account. Due to the diversity and attractiveness of courseware can be very effective at displaying skills. In such a case, the skills, the teacher provides a complementary description. Obviously, the use of different methods of presentation skills, work less uniformity, and the more motivated students (Soltani, Salehipoor, 2011), in our times is the fact that the behavior of the situation and Several factors are most important to them, their family, school and community. Philosophy of education today, is different from previous years, which means that the purpose of education, the training courses and other intellectual content, but a

growing body and mind in general, to the (Shamloo, 2008, p. 173). Although education, long a major role in the maintenance and survival of human societies and traditions, attitudes and skills needed by society, often through education, has been transferred and durability, but nowadays Education, as a social phenomenon, an integral part of social life, is (Poorebad, 2005, p. 1) study and implement a useful exercise, fun and science, the critical extension. In this regard, the Center for Health, Physical Education and the Ministry of Education, sport utility and scientific study and implementation of policies and priorities put. Therefore, the basic skills Rope making, and association woman rope schools, the sports foundation, useful, practical, modern, scientific, and practical, in order to achieve the goals of education, the importance of physical education that is, it should be noted, successful countries in the field of sports schools, including Canada, America and Malaysia very useful to understand the impact Rope making exercise, physical, mental and social health of students, this exercise in school sports programs In terms of their own (Tnavrz design style, the Thsyly91-90). Because, in the style of the project is that movement and physical activity, including instinctive physiological needs of man, that man's physical and mental health related. Dedication to the sport and regular physical activity daily, boost performance and increase the body's vital systems (cardiovascular, respiratory, nervous), improves the performance of other devices, better absorption of calcium and bone strength is. One of the World Health Organization, "Health mobility password" in the world. People to exercise, invites (Style rope design intern, Academic year, 2012-2011). Considering the importance of education Rope making, the educational system and the impact of the use of electronic environments, adequate and effective training, the research design, and production of courseware teaching psychomotor skills Rope making paid, and how much the effect of training on the performance of students is discussed. Sports and physical education lessons, in turn, plays a major role in the education of children in primary school has found that, in the absence of balance and harmony in body and soul disappears. The use of such technology, the design of educational software course, it has become commonplace in the developed world. The remarkable thing we learn, by the technology of positive excitement and interest among the students. According to the latest theories of psychology, positive emotional learning, the greater will be the depth and durability. So you can take advantage of teaching, courseware to improve student learning by teaching aid.

Research Objectives

The overall objective

Rope making teaching courseware design and production skills, mental model - a move Bloom teaching, and study its role in mental function - embracing movement.

Partial goals

1. Determine the skills of students trained Rope making teaching, using courseware, students learn about the teaching of the common training in imitation of Operation
2. Determine the skill Rope making teaching students trained using courseware, teaching to the students, independent of the implementation of common training
3. Determine the skills of students trained Rope making teaching, using courseware, teaching to students with a common education in accuracy and speed performance
4. Determine Rope making students trained teaching skills, students learn to use the software of course, consistent with current teaching practice
5. Determination Rope making students trained teaching skills, students learn to use the software of course, the normal functioning of the common

Research questions

The main question

Rope making courseware teaching skills, how to design, and to what extent the teaching and learning of psychomotor performance, effective?

Sub-questions

• courseware Rope making skills, how to design?
• The role of courseware Rope making skills in mental function - encompassing movement, how?

Research Hypothesis

• Use Rope making training courseware, in imitation of the performance of students.
• Use Rope making training courseware, independent in the performance of students is effective.
• Use Rope making training courseware, the accuracy and speed of practice is effective.
• Use Rope making training courseware, students in coordination function effectively.
• Use Rope making courseware training in the performance of students is normal.

Research Methods

This study, for the purpose of application of the method and the nature of descriptive survey. The population of this study, all male students in fourth grade Kermanshah city, where 7255 people. The sample of the study, 70 male students in the fourth grade of primary, is. Sampling, first as a cluster of three area city of Kermanshah, then choose a school of elementary education expert, random assignment between the two groups (two classes), respectively. In this study, in order to describe the variables descriptive statistics, such as mean, standard deviation and frequency table is used. Descriptive statistics are presented to describe the raw data, and they are frequency, frequency, mean, tables and charts, displays, and also used in the analysis of covariance analysis. Remarkably, all of grading and analyzing data, the computer takes place, and the software used SPSS18

Measuring Tools

"Self-made Czech Lists mental performance - mobility of students in fourth grade," which, according to Rope making training, preparation, and includes 15 components Rope making skill is based on the success rate of the sample in the training be evaluated.

Validity and reliability

Measuring Tools narrative: the purpose of the narrative is that, measured by the fact that, being told what to measure, not else's (Seif, 2001). To obtain a valid Czech list of comments supervisor, and another several professors University of Physical Education and Physical Education specialists Rope making competitions, and training experts Rope making the one, two and three Kermanshah city education, and physical education teachers is used, and the questions about the relevance of research, surveys and reforms in the Czech list was applied.

Czech Lists of reliability

The reliability of the questionnaire, the measurement accuracy, stability and reliability concerns. Generally Czech list if it is valid, free of measurement error is non-systematic. Measurement error civilian Drake, impact on test scores, unpredictable, and reduces the reliability of the test. The purpose of the validity of a measure that, if the attribute being measured with the same instrument (or similar device), measured under the same conditions again, the results are similar to what extent, accurate and Trust.

To evaluate the reliability of the questionnaire, the data obtained from the questionnaire using Cronbach's alpha, the analysis was that, Cronbach's alpha coefficient of the questionnaire of 8, 6%, so we can say that, the questionnaire more have reliability is high.

Software Design Course

Reliability and validity Rope making teaching lesson plans, based on psycho-motor Bloom: To determine the validity of the lesson plan, lesson plan after it was written, provided by experts and teachers, and its validity was confirmed after three correction. Reliability, lesson plans based on groups of 5, abbreviated run, and then run through the grades earned by students, 86% reliability, Cronbach's alpha was calculated using the formula.

Findings

Table 1: The mean pre-test and post-test for each dependent variable

The sample size	Standard deviation		mean		group	Dependent variables
	Posttest-	Pretest	Posttest-	Pretest		
35	84/4	59/3	54/54	43/34	Experiment	Imitation skills
35	3.42	3.71	33.63	33.11	Control	
70	11.32	3.68	44.09	33.77	Total	
35	90/8	38/4	26/43	91/20	Experiment	Independent implementation
35	4.44	4.63	23.77	22.91	Control	
70	12.04	4.59	33.51	21.91	Total	
35	42/8	32/4	49/46	86/21	Experiment	The accuracy and speed of operation
35	4.42	4.42	23.43	23.43	Control	
70	13.39	4.41	34.96	22.64	Total	
35	05/7	26/4	00/48	54/21	Experiment	Coordination function
35	4.10	3.56	24.77	31/23	Control	
70	13.02	4.00	36.38	42/22	Total	
35	47/7	64/3	83/47	37/23	Experiment	Normal performance
35	3.98	4.78	24.60	24.29	Control	
70	13.12	4.24	36.21	23.83	Total	

Inferential statistics

Hypothesis 1

Rope making training courseware, in imitation of mental skills - move students in fourth grade, is effective.

Table 2: Comparison of grades imitation skills

CI 95 percent		Standard error	Average Adjusted	Groups
Top	Lower			
56.21	52.88	4.841	53.73	Experiment
34.80	32.45	3.422	33.06	Control

Table 2 shows the mean scores of the two groups at post-test, which is adjusted according to initial differences, as expected, are arranged in two groups. It can be seen that the average performance of the group in the first place, the next step is placed in the control group. As a result, it is said, courseware training Rope making the most impact on student grades imitation skills experimental group had.

Table 3: Summary of analysis of covariance, impact Rope making training courseware, the variable imitation skills

Eta	Sig	F	MS	SS	Source Change
0.039	0.104	2.709	43/46	43/46	Pretest
0.562	0.001	419.995	7198.99	7198.99	Posttest
			17.141	1148.42	Error

ANCOVA results in Table 3, after adjusting for the effect of pre-test shows that rope training courseware, students studied the promotion of imitation skills, psychomotor skills, positive effects. And significantly using this method (0/001 = Sig, 419/995 = F) was approved, and by taking the ratio of ETA can tell, this method after adjusting for the effect of the former and 56% of the variance in post-test score imitation skills as will be explained.

Hypothesis 2

Rope making courseware training, psycho-motor independent in the performance of students in fourth grade, is effective.

Table 4: Comparison of the post-test scores of independent

CI	Standard error	Average Adjusted	Groups

95 percent				
Top	Lower			
46.32	40.20	8.903	41.76	Experiment
22.24	22.30	4.446	23.02	Control

Table 4 shows the post-test scores of the two groups, which is adjusted according to initial differences, as expected, are arranged in two groups. It can be seen that the average performance of the group in the first place, and the control group, the next step is. As a result, it is said, courseware training Rope making the most impact on the post-test scores of individual students in the experimental group, has.

Table 5: Summary of analysis of covariance effect of making ropes course training program, the implementation of the independent variable

Eta	Sig	F	MS	SS	Source Change
0.290	0.000	27.355	116/976	116/976	Pretest
0.407	0.001	209.126	7462.173	7462.173	Posttest
			35.683	2390.741	Error

ANCOVA results in Table 5, after adjusting for the effect of pre-test shows that, of course Rope making training programs, the promotion of independent performance of students in study skills, mental skills - mobility is positive. And significantly using this method (0/001 = Sig, 209/126 = F), was approved, and by taking the ratio of ETA can tell, this method after adjusting for the effect of the former, 40% of the variance of the test independent implementation, will be explained.

Hypothesis 3

Rope making courseware training, student performance in accuracy and speed of psychomotor skills to be effective.

Table 6: Comparison of accuracy and speed grades

CI 95 percent		Standard error	Average Adjusted	Groups
Top	Lower			
48.38	43.59	8.427	45.07	Experiment
24.95	21.91	4.228	22.70	Control

In Table 6, the average test scores of the two groups, which is adjusted according to initial differences, as expected, are arranged in two groups. It can be seen that the average performance of the group in the first place, and the control group in the next stage, is placed. As a result, it is said, rope course training program, the most impact on grades accuracy, speed and performance of the experimental group had.

Table 7: Summary of analysis of covariance effect Rope making training courseware, the precision variable speed operation

Eta	Sig	F	MS	SS	Source Change
0.189	0.000	15.567	954/580	954/580	Pretest
0.497	0.001	263.759	9843.159	9843.159	Posttest
			37.319	2500.360	Error

ANCOVA results in Table 7 show that after adjusting for pre-school education program Rope making, to upgrade the skill level of accuracy and speed performance of students in the study of mental skills - mobility is positive. And significantly using this method (0/001 = Sig, 263/759 = F), was approved, and by taking the ratio of ETA can tell, this method after adjusting for the effect of the former and 49% of the variance score test accuracy , and speed performance is explained.

Hypothesis 4

Rope making training courseware, in coordination with student performance in mental skills - effective action.

Table 8: Comparison of grades coordination function				
CI 95 percent		Standard error	Average Adjusted	Groups
Top	Lower			
50.42	45.58	7.050	46.81	Experiment
26.18	23.36	4.102	24.04	Control

Table 8 post-test scores of the two groups, which is adjusted according to initial differences, as expected, are arranged in two groups. It can be seen that the average performance of the group in the first place, the next step is placed in the control group. As a result, it is said, rope course training program, the most impact on the performance of students in grades coordination group, has.

Table 9: Summary of analysis of covariance effect Rope making training courseware, the variable coordination function					
Eta	Sig	F	MS	SS	Source Change
127/0	0.003	9.756	524/287	524/287	Pretest
0.531	0.001	329.245	9703.612	9703.612	Posttest
			29.476	1974.674	Error

ANCOVA results in Table 9 show that after adjusting for pre-school education program rope, to promote the coordination skills of students studied in rope skills is positive. And significantly using this method (0/001 = Sig, 329/245 = F) was approved, and by taking the ratio of ETA can tell, this method after adjusting for the effect of the former, 53% of the variance in the post-match function, is explained.

Hypothesis 5

Rope making courseware training, student performance in normal mental skills - movement, is effective.

Table 10: Comparison of normal grades of performance				
CI 95 percent		Standard error	Average Adjusted	Groups
Top	Lower			
50.40	45.26	7.473	46.57	Experiment
25.97	23.23	3.987	26.00	Control

Table 10 post-test scores of the two groups which, according to initial differences adjusted, as expected, arranged in two groups. It can be seen that the average performance of the group in the first place, and the control group, the next step is. As a result, it is said, courseware training Rope making the most impact on the performance of students in grades ordinary experimental group had.

Table 11: Summary of analysis of covariance effect Rope making training courseware, the normal range of performance					
Eta	Sig	F	MS	SS	Source Change
0.087	0.014	6.397	602/212	602/212	Pretest
0.512	0.001	290.033	9639.356	9639.356	Posttest
			33.235	2226.769	Error

ANCOVA results in Table 11 show that after adjusting for pre-school education program Rope making, to improve the level of ordinary skill in the performance of students in the study, the skills Rope making is positive. And significantly using this method (0/001 = Sig, 290/033 = F)

was approved, and by taking the ratio of ETA can tell, this method after adjusting for the effect of the former, 51% of the variance in the post-normal of performance, is explained.

DISCUSSION AND CONCLUSION

The study, titled "Design Course Rope making skills training program, and its role in the performance of psychomotor learning", a quasi-experimental method with pre-test-post-test and control groups was carried out. Overall results indicate a positive influence Rope making training courseware, the 5 variables of the study, compared to Rope making skills in five areas of imitation skills, independent performance skills, accuracy, speed, coordination and performance of the function was normal. The research hypothesis was 5. The results of the hypotheses, a summary of the analysis of covariance, as follows: The research hypothesis 1, entitled "Making ropes course training program, in imitation of mental skills - mobility of students." The results of Table (2) on the basis of analysis of covariance showed that Rope making courseware training, the promotion of pupils studied imitation skills, psychomotor skills, have a significant effect application of this method was confirmed, and the ETA Factor- can tell, this method after adjusting for the effect of the former, 56% of the variance in test scores imitation skills, will be explained. In hypothesis 2 study, titled "Lessons Rope making software training, implementation independent mental skills - move students to be effective." ANCOVA results in Table 7 show that after adjusting for pre-testing, Rope making training courseware, to enhance the skill level of students' independent study on mental skills - mobility is positive. And significant impact of the application of this method was confirmed, and it can be said with regard to the room rate, this method after adjusting for the effect of the former, 40% of the variance in the post-test scores alone, is explained. In Hypothesis 3 study, titled "Rope making courseware training, student performance in accuracy and speed of mental skills - effective mobility." The analysis of covariance, the table (9) after adjusting for the effect of pre-test that, of course Rope making training program, to enhance the skill level of accuracy and speed performance of students in the study of mental skills - mobility is positive. And significant impact of the application of this method was confirmed, and it can be said with regard to the room rate, this method after adjusting for the effect of the former, 49% of the variance in test scores accuracy, speed and performance is explained. In the research hypothesis 4, entitled "Rope making training courseware, in coordination with the students, the mental skills - effective action", the results of analysis of covariance, the table (11) after adjusting for the effect of pre-test shows that Lessons Rope making training program, to promote coordination of the students studied the mental skills - mobility is positive. And significant impact of the application of this method was confirmed, and it can be said with regard to the room rate, this method after adjusting for the effect of the former, 53% of the variance in test scores coordination function, will be explained.

In this hypothesis, No. 5, entitled "Rope making training courseware, the normalization of pupils' performance in mental skills - effective action", the results of analysis of covariance, after adjusting for the effect of pre-test shows that, courseware training Rope making, to promote the normalization of the students in the study of mental skills - mobility is positive. And significant impact of the application of this method was confirmed, and by taking the ratio of ETA, one can say that the type of teaching method, after adjusting for the effect of the former, 51% of the variance of a normal test score performance, tasks. In this study, the role of courseware design Rope making skills, mental performance - encompassing movement, in 5 components of (imitation skills, independent implementation of skill, precision and speed skills, organization skills and normalization of functional skills), and examined was investigated. The results of the study, the efficacy of all elements studied, the course of the program, approved. Although theoretical work, also supports these results. Comparison of the results with the experimental foundations, following the results of an internal investigation, confirmed the results of the present study is considered in relation to the appearance of rope (Rope making) is disagreement among scholars, some The researchers believe that, in ancient Greece started jumping rope, and some believe that, first started in China and Egypt, and then spread to other parts are currently millions of men and women, young and old in all rope round the world, and enjoy it (Style National Physical Plan 2011). Rope making activity that, in its simplest form for children 4 to 5 years, and

as he advanced to the championship is appropriate. In 1980, the International Organization rope, and the Association of rope Canada was established, and the doctor Bortz 1 in the Journal of the Medical Association of America, in 1982, he said, is now a drug that is, able to exercise, guarantee health During his life. Bortz also ask, what kind of aerobic exercise that right, and low cost is also proposed to deal with aging? And he answered, saying, roping. Not only is it a good old exercise, aerobics, but also, and in 1991 established the International Federation of rope (Style National Physical Plan, 2011). Parvin Mazhari, in the year (2012) research, design and production of teaching English language training program, based on the concept of pattern, and its effects on academic achievement, and motivation of learners progress made, the objective of this research , experimental and quasi-experimental designs -Ps test, compared with the control group. The population, all the region 3 girls and boys Kermanshah, in the 2012-2011 school year. Of these students, 60 boys and 60 girls second base, using cluster sampling, the sample was selected. The results showed that the use of courseware researcher with academic achievement and high achievement motivation of learners, there is a significant relationship, however, between girls and boys, there was no significant difference.

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