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DESIGN AND PRODUCTION OF MULTIMEDIA TRAINING PROGRAMS FOR PROBLEM SOLVING SKILL AND ITS EFFECT ON THE MENTAL HEALTH OF HIGH SCHOOL FEMALE STUDENTS IN KERMANSHAH

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ABSTRACT

This paper addresses the design and production of multimedia training programs for problem solving skill and its effect on the mental health of high school female students in Kermanshah. The studied group included students sponsored by Imam Khomeini Relief Foundation. From five Relief Foundations in Kermanshah, Foundation Office Region 2 was randomly selected; female students were selected from all male and female students sponsored by the foundation. High school students were selected among students of elementary, middle school and high school. Finally, first grade students were randomly selected among high school students (multi-stage cluster sampling). This quasi-experimental study (pre-test/post-test) was conducted using an experimental group and a control group. The control group was trained in problem solving skill without training, and the experimental group was trained in the same skill through multimedia environment for 10 sessions. Data relating to mental health was gathered by standardized questionnaire(28-GHQ), which was administered in three phases: pre-test, post-test and retention test. In order to analyze data, both methods of descriptive statistics(frequency distribution, mean, standard error, graphs and tables) and inferential statistics (covariance and t test) was used. The results showed that multimedia-training programs for problem-solving skills is effective on the mental health of students, and its educational effects will be relatively stable over time.

Keywords: Multi-media, Problem solving skills, Mental health, Retention.

Contribution/ Originality

This study reviews literature and to-date research done on the subject, in Iran and other countries to develop all aspects of the dependent variable and independent variable. This study uses a new estimation method which distinguishes this study from other researches. This new method is retention test to determine the effect of multimedia training for problem solving skills in the context of time. This study presents a new formulation in training young educating people. Due to

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inactivity of the audience, previous practices were less effective; in this method, while, learners are a main part of the teaching process. This study is one of the few studies addressing the problem solving skills. Problem solving is a key process to overcome the problems. Success in learning this skill leads to success in other aspects of life. In this paper, the role of rational analysis is to compare the effect of multimedia training for problem solving on audience. The main contribution of this paper is to find solutions to the problems through a process. Contribution of multimedia teaching style is very important and valuable. This study evaluates the effect of multimedia problem solving training on mental health of students.

1. INTRODUCTION

Although advances in technology and industry have increased the power and wealth, they eliminated the chances of a peaceful life. In fact, quality has been sacrificed for quantity; moderation and appropriateness have been replaced by neurological-mental and psychosomatic diseases. Adolescence is considered as an important step in the social and emotional growth [1]. in this period, the most important needs of adolescents include the need for emotional balance, especially the balance between emotions and intellect, understanding of the existential value of self, self-consciousness, real goal setting in life, emotional independence from family, mental and emotional balance against environmental stress factors, healthy relationships with others, acquisition of necessary social skills, and understanding of a healthy and effective life. Thus, it is necessary to help adolescents in development and growth of essential skills for effective life, creation or increase in confidence in dealing with problems and solving them for adjustment with social environment and effective and productive life in the society [1].

Life skill training focusing on the most important personal and social problems of adolescents is an important and undeniable principle. Despite the special attentions paid by many countries and the special emphasis of World Health Organization (WHO), the curriculum of Iranian schools lacks this. Recently, some attempts have been made that require more scientific and academic attention. According to Bandura's social learning theory, learning is an active experience-based process; thus, children actively engage in learning life skills during learning and teaching processes. Therefore, this method of teaching calls for approaches facilitating active participation of children and adolescents in training. These approaches include formation of small binary groups, brainstorming, role-playing, discussion and debate [2]. Life skill training has been effective in a variety of programs.

2. LITERATURE REVIEW

2.1. Training Multimedia

Training multimedia can provide organized programs of learning experiences for individuals or groups by particular emphasis on learning through different senses [3]. Training multimedia can be used for application of various education theories [3].

One of the important discussions raised in educational technology is how to select appropriate training media; therefore, teachers are provided with a growing mass of visual–audio materials which make it difficult to select things that are most likely to help them in their task. Media are

selected by a variety of factors including the nature of learning situation, the desired efficiency of learning, characteristics of learners, learning environment, educational-cultural level of development in the target society, and practical factors including accessibility, acceptability and costs [4].

Characteristics of an appropriate training medium include 1) consistency with goals, content and methods oftraining,2) the ability to convey the desired message,3) compliance with characteristics oflearners,4) validity,5) good technical and artistic quality, 6) practicality, 7) economic justification [5].

There is a wide range of multimedia training software including foreign language teaching software, programming languages, diets, tutorial programs, cooking, scientific entertainment, music training [6].

Schools are concerned with mental-social development of students besides emphasis on their intellectual development; regarding the role of schools in preventing and promoting mental health, school-based preventive programs have been developed. In fact, objectives of education and mental health are the same because both focus on growth of healthy, helpful and happy people [7].

Currently, the advent of new educational technologies and computer applications in teaching have preoccupied the concern of learning experts in all sciences as well as behavioral scientists and psychologists. Therefore, multimedia environments due to the explosion of information and knowledge have replaced common trainings in schools and have seriously changed the training procedures [8].

2.2. Mental Health

Mental health refers to the feeling of well-being and ensured self-effectiveness, self-reliance, competitiveness, attachment between generations and self-actualization of potential intellectual-emotional abilities, etc. considering the differences between cultures, however, providing a comprehensive definition of mental health seems impossible. Nevertheless, there is consensus that mental health is more than just the absence of mental disorders. Understanding mental health, and in a broader sense, psychological functioning is important, because it provides a basis for a fuller understanding of how psychological and behavioral disorders appear [9].

Health as a wide range to enable individual or group realizes the hopes and aspirations and satisfies the needs on the one hand and on the other hand changes environments or copes with the environment. According to the above definition, it seems that health is a resource for everyday life, rather than a means to live; it is a practical and positive concept emphasizing both physical ability of individuals and their personal and social resources [10].

2.3. Problem Solving

By definition, one is faced with a problem when the learner is faced with a situation in which he cannot immediately respond using information and skills available at the time or when one sets goals but does not know how to realize. Given the definition, problem solving refers to detection and application of knowledge and skills which lead to a correct respond of the learner to the situation. Thus, the essential element of problem solving is the application of knowledge and skills

already learned in new situations. Problem solving is emphasized and is defined as the application of knowledge and skills to achieve specific goals.

As Gagné [11] theorized, problem solving is called as learning the higher-order rules. According to his theory, learner combines simple rules to make higher-order rules, which causes a problem to be solved. Thus, prior learnings, especially rules or principles already learned, must be combined in a new way to solve a problem.

2.4. Current Study

The acquisition of skills for life, along with education and appropriate changes in attitudes and values, as well as reinforcement of appropriate behaviors, will lead to healthy behaviors which in turn eliminate obstacles and problems of mental health, and thus enhance mental health. Programs promoting mental health are based on primary prevention through education; considering the prominent role of life skill trainings on mental health, the role of schools, organizations and departments is of great importance in developing and promoting new trainings in the present Iranian society. According to above, the present study tries to find out that whether training problem-solving skills through multimedia approaches enhance the mental health of high-school female students.

3. METHODOLOGY

The research study is a quasi-experimental (semi-empirical) research using pre-test and post-test for control group and random sampling.

3.1. Participants and Samples

Participants in this study included 1813 students sponsored by Imam Khomeini Relief Foundation in Kermanshah during academic years 2012-2013. From five Relief Foundations in Kermanshah, Foundation Office Region 2 was randomly selected. Then, female students were selected among all male and female students sponsored by the foundation. In the next stage, high school students were selected among students at all grades. At last, first-grade students were randomly selected among high school students (multi-stage cluster sampling). Using multi-stage cluster sampling, 30 students were selected as convenient samples.

3.2. Materials

3.2.1. Goldberg's General Health Questionnaire (GHQ-28)

In order to measurement a health, this study used General Health Questionnaire proposed by Goldberg. Goldberg has developed GHQ for non-psychotic mental disorders in medical centers and communities. This study used the 28-item questionnaire developed by Goldberg and Hillier [12]. Respondents were asked to complete the questionnaire by marking one of the four choices (Not at all, a little, much, very much and not at all, no more than usual, more than usual, much more than usual).The questionnaire consists of four scales each of whichhas7 items. The four scales of questionnaire include somatic symptoms, anxiety and insomnia, impairment in social interaction, and critical depression. A total score is obtained by sum of all scores. Goldberg’s General Health

Questionnaire (G.H.Q) has been evaluated in many studies, and its reliability and validity have been proved.

3.2.2. Training Materials (Multimedia Training in Problem Solving)

In fact, students go beyond the limitations of traditional training methods; teachers as a guide in the direction of education are the cores of educational system. Elements of multimedia systems for problem solving include.

1. Text

Writing is combined with other media to create a successful and powerful collection to deliver information; in multimedia problem solving, texts are used for titles, menus and expression of project contents.

2. Audio

Audio plays an important role in effectiveness of videos, texts and images on students. Texts convey messages to audience; however, they clearly lack an element, i.e. sound, which is considered in this multimedia approach. Videos and music are consistent with content of texts.

3. Pictures

Pictures used in this multimedia pursue only one goal: to facilitate understanding and learning by providing complex information in order to help learners innovatively perceive pictures available in the multimedia.

4. Videos

By playing good videos, beautiful demonstrations are provided for multimedia a projects of problem solving; admittedly, video and audio will be more effective than text. Therefore, a good training environment was provided using pre-prepared videos for introduction of people successful in overcoming difficulties, training ways to deal with problems, and solving problems among animals. In training sessions, problem-solving skills were presented by multimedia to students. Considering the content of this multimedia including videos, texts, hobbies, pictures and assessments, students were enables to solve problems by using previous knowledge and skills in new situations. Problem solving multimedia lead to effective and efficient learning, and help students follow instructions provided in the multimedia and choose the best for their personal, educational and professional choices. By advances in computer sciences and emergence of multimedia systems, information shifts from merely text to videos, audios, images, etc. Learning will be more enjoyable and interesting by multimedia training environments.

4. METHODS

Educational content in the present study is derived from Seif [13], Seif [14] “Modern Educational Psychology”, Hasan Sha’bani’s “Education Skills”, and George Pólya’s “How to Solve It”.

Using this training program, materials of training sessions and practical exerciseswereorganizedin10sessions. Referring to the office advisor and determining the subjects, the test was conducted for subjects. It is noteworthy that instructions were read aloud by the time the test was distributed, and subjects were asked to complete the test carefully according to specifications. After the pretest, scoring and obtaining the results, 15 subjects who had earned higher scores(lower mental health) were maintained in the experimental group; the remaining15 cases were placed in the control group. Accordingly, the experimental group was exposed to multimedia problem solving trainings to evaluate their effects on mental health. Training course of problem solving skills were divided into ten 45-minute sessions based on the number of training topics. The first 15 minutes were devoted to presentation of facts on the topic. In the second half of the session, students work personally on exercises and practical activities presented in the multimedia content.

4.1. Data Analysis

Data analysis was performed at two levels: descriptive (mean, standard deviation) and analytic (analysis of covariance, t-test) by SPSS software.

5. RESULTS

Table 1 reports descriptive indicators of variables for pretest scores of experimental group and control group.

Table-1. Central distribution of mental health and its indicators

Variables	Pre-test of control group		Pre-test experimental group	
	Standard deviation	Mean	Standard deviation	Mean
Physical symptoms	5.27	11.46	4.79	12.33
Anxiety	5.63	11.26	5.36	12.80
Impairment in social interaction	4.43	12.13	3.22	12.60
Depression	5.56	10.73	5.54	13.20
Mental Health	20.21	46.66	15.24	50.93

Table 2 reports descriptive indicators of variables for post-test scores of experimental group and control group.

Table-2. Central distribution of mental health and its indicators

Variables	Post-test of control group		Post-test experimental group	
	Standard deviation	Mean	Standard deviation	Mean
Physical symptoms	8.46	4.06	9.20	2.87
Anxiety	7.33	3.88	9.80	3.02
Impairment in social interaction	8.20	3.07	12	3.52
Depression	7.73	4.28	10.93	3.28
Mental Health	30.41	10.28	40.86	8.86

Table 3 reports descriptive indicators of retention in experimental group and control group.

Table-3. Central distribution of retention

Variables	Experimental group		Control group	
	Mean	Standard deviation	Mean	Standard deviation
Physical symptoms	7.53	3.09	9.46	3.15
Anxiety	6.73	3.55	10.33	2.94
Impairment in social interaction	6.53	2.16	11	2.90
Depression	7.20	3.16	12	3.40
Mental Health	27.33	6.62	42.80	8.91

Covariance assumptions were evaluated to test hypothesis.

Table-4. Kolmogorov-Smirnov test for normal distribution of variables(Pre-tests of control and experimental groups)

Significance level of the Kolmogorov Smirnov test	Variables
0.24	Physical symptoms
0.06	Anxiety
0.06	Impairment in social interaction and relationships
0.54	Depression
0.20	Mental Health

According to Table 4 and the significance level of all variables, which is > 0.05, it can be concluded that all variables follow a normal distribution.

Table-5. Kolmogorov-Smirnov test for normal distribution of variables (Post-tests of control and experimental groups)

Significance level of the Kolmogorov Smirnov test	Variables
0.92	Physical symptoms
0.92	Anxiety
0.33	Impairment in social interaction and relationships
0.38	Depression
0.83	Mental Health

According to Table 5 and the significance level of all variables, which is > 0.05, it can be concluded that all variables follow a normal distribution.

Table-6. Kolmogorov-Smirnov test for normal distribution of variables (Retention tests of control and experimental groups)

Significance level of the Kolmogorov Smirnov test	Variables
0.95	Physical symptoms
0.75	Anxiety
0.73	Impairment in social interaction and relationships
0.33	Depression
0.89	Mental Health

According to Table 6 and the significance level of all variables, which is > 0.05, it can be concluded that all variables follow a normal distribution.

In order to examine whether multimedia training for problem solving skills leads to the enhancement of mental health, covariance analysis tests were used.

Table-7. Descriptive statistics

Tests	Groups	number	Mean	Standard deviation
Pre-test	Control group	15	46.66	20.21
	Experimental group	15	50.93	15.24
Post-test	Control group	15	40.86	2.86
	Experimental group	15	30.41	10.28

Given that significance level of Leuven test should be > 0.05, as it is true here (0.19), the error rate of both groups is equal, and there is no difference. Therefore, the precondition is true for the test, that is, covariances are equal. Therefore, covariance test can be used.

Table-8. ModelTesting

Significance level	Value
0.0001	16.25

The significance level of the test (Table 8) is equal to 0.0001 which is < 0.05 suggesting a significant difference in means of pre-test and post-test of mental health. In general, training through problem solving multimedia leads to the improvement in students' mental health.

In order to examine whether training through problem solving multimedia decreases the anxiety of students covariance analysis tests were used.

Table-9. Descriptive Statistics

Standard deviation	Mean	Number	Groups	Tests
5.63	11.26	15	Control group	Pre-test
5.36	12.80	15	Experimental group	
6.02	9.80	15	Control group	Post-test
3.88	7.33	15	Experimental group	

Given that significance level of Leuven test should be > 0.05, as it is true here (0.06), the error rate of both groups is equal, and there is no difference. Therefore, the precondition is true for the test, that is, covariances are equal.

Table-10. ModelTesting

Significance level	Value
0.0001	16.2

The significance level of the test (Table 10) is equal to 0.0001 which is < 0.05 suggesting a significant difference in means of pre-test and post-test of anxiety.

In general, training through problem solving multimedia leads to the decrease in students' anxiety.

In order to examine whether training through problem solving multimedia decreases the depression of students covariance analysis tests were used.

Table-11. Descriptive Statistics

Standard deviation	Mean	Number	Groups	Tests
5.56	10.73	15	Control group	Pre-test
5.54	13.20	15	Experimental group	
3.28	10.93	15	Control group	Post-test
4.28	7.73	15	Experimental group	

Significance level of Leuven test showed that error rate of both groups is equal, and there is no difference. Therefore, the precondition is true for the test, that is, covariances are equal.

Table-12. Testing Model

Significance level	Value
0.0001	8.64

The significance level of the test is equal to 0.0001 which is < 0.05 suggesting a significant difference in means of pre-test and post-test of depression. In general, training through problem solving multimedia leads to the decrease in students' depression.

In order to examine whether training through problem solving multimedia decreases the dysfunction of social interaction among students covariance analysis tests were used.

Table-13. Descriptive Statistics

Standard deviation	Mean	Number	Groups	Tests
4.43	12.13	15	Control group	Pre-test
3.22	12.60	15	Experimental group	
3.52	12	15	Control group	Post-test
3.07	8.20	15	Experimental group	

Significance level of Leuven test showed that error rate of both groups is equal, and there is no difference. Therefore, the precondition is true for the test, that is, covariances are equal.

Table-14. Testing Model

Significance level	Value
0.0001	9.63

The significance level of the test (Table 14) is equal to 0.0001 which is < 0.05 suggesting a significant difference in means of pre-test and post-test of dysfunction of social interaction. In general, training through problem solving multimedia leads to the decrease in students' dysfunction of social interaction.

In order to examine whether training through problem solving multimedia decreases the physical symptoms of students covariance analysis tests were used.

Table-15. Descriptive Statistics

Tests	Groups	Number	Mean	Standard deviation
Pre-test	Control group	15	11.46	5.27
	Experimental group	15	12.33	4.79
Post-test	Control group	15	9.20	2.78
	Experimental group	15	8.46	4.06

Significance level of Leuven test showed that error rate of both groups is equal, and there is no difference. Therefore, the precondition is true for the test, that is, covariances are equal.

Table-16. Testing Model

Significance level	Amount of Testing
0.0001	5.35

The significance level of the test (Table 16) is equal to 0.0001 which is < 0.05 suggesting a significant difference in means of pre-test and post-test of physical symptoms. In general, training through problem solving multimedia leads to the decrease in students' physical symptoms.

In order to examine whether the effect of training through problem solving multimedia is constant over time t-tests was used.

Table-17. Descriptive Statistics

		Mean	Standard deviation	standard error of deviation
Physical symptoms	Experimental group	8.46	4.06	1.05
	Retention	7.53	3.09	0.79
Anxiety	Experimental group	7.33	3.88	1.003
	Retention	6.73	3.55	0.91
Impairment in social interaction and relationships	Experimental group	8.20	3.07	0.79
	Retention	6.53	2.16	0.55
Depression	Experimental group	7.73	4.28	1.10
	Retention	7.20	3.16	0.81
Mental Health	Experimental group	30.40	10.28	2.65
	Retention	27.33	6.62	1.71

Table-18. Paired t-test

Examined variable	T test	Degrees of freedom	Level of significance	Differences in mean
Retention in Physical symptoms	0.71	14	0.48	0.93
Retention in Anxiety	0.63	14	0.53	0.60
				Continue

Retention in Impairment in interactions	1.44	14	0.17	1.66
Retention in Depression	0.51	14	0.61	0.53
Retention in mental health	1.39	14	0.18	3.06

According to Table 18, significance levels listed in t-test table are greater than 0.05; therefore, the effect of training by problem solving multimedia is constant over time. Descriptive statistics of Table 17 show no significant difference in means. There is no significant difference in means of post-test and retention of the experimental group for all mental health variables as well as mental health itself; according to the above test, particularly the mental health, the above hypothesis can be accepted.

6. DISCUSSIONAND CONCLUSIONS

The purpose of this study was to design and produce multimedia training programs for problem solving skills and its effect on mental health of high school female students in Kermanshah.

The results of covariance analysis indicated that multimedia training of problem solving skills increase mental health among students. The results of the present study are consistent with Shamsi Khani, et al. [15], Baba, et al. [16]. Application of multimedia training for problem solving skills significantly increases the motivation of female students. Due to effective use of information and communication technology, students reveal their abilities and capabilities quickly and teachers have more choices in teaching, assessment and communication with students. Multimedia technology for training problem solving skills will result in an increase in the quality of education, by facilitating the basic skills acquisition. It also acts as a transferring means when it is applied correctly, provoking students to listen and engage in content. In such a situation, students are active rather than passive. They are encouraged to be independent thinkers and problem solvers. They are provoked to get real answers and earn the opportunity for hypothesizing, analyzing and predicting the consequences of implementing the solutions. Communication and collaboration with others on assignments are other basic components of multimedia training for problem solving skills; students are enabled to expand their ideas and concepts. Reliance on God is an active approach in dealing with issues and problems; Reliance is an active approach, it will lead to motion, activities, vivacity, and utilization of the available tools, hope, and expectation to find innovative ways to solve the problem.

The results of covariance analysis tests showed that multimedia training of problem solving skills decreases anxiety among students. The results of the present study are consistent with Izadi Tamh [17], Shahbazi and Rahim Ali Mehr [18], Fallahi [19], and Baba Shahabi and Zahra [20]. Multimedia training of problem solving skills results in positive self-concept in students because problem solving as a shield protects the individual against negative events. It is possible by educational movies, creative exercises and educational texts. Adolescents have destructive inter personal relationships and academic problems; multimedia training for problem solving skills creates qualifications to deal effectively and efficiently with current and future challenges by

Promotion of adjustment and employment of cognitive skills including problem-solving skills. Multimedia training for problem solving skills decreased anxiety in students because they were able to solve their problems by studying the correct ways to solve the problem; in this manner, they were able to recognize the reasons for their failure by reviewing the solution if they were not successful in solving their problems. This will reduce their anxiety in dealing with everyday issues, and these coping skills increase self-confidence. Trust in God and believe in His wisdom change our attitudes towards daily events; in this regard, we can see the hidden meaning of all events, which reduces many unnecessary stresses.

The results of covariance analysis tests implied that multimedia training of problem solving skills decreases depression among students. The results of the present study are consistent with Sahebi [21], Bapiri [22], Sharifi Gholam [23], Elliott, et al. [24]. Multimedia training for problem solving skills allows students to learn how to use systematic approaches of problem solving instead of hasty reactions to deal with problems. This increases social competence and raises the level of their inter personal relationships; moreover, self-sufficiency and relationships with peers reduces depression. Multimedia training helps students describe the problem, describe the negative or limiting factors involved in the problem, describe the positive and constructive elements, describe the scope of the problem, describe the consequences of a solution for the problem, and ultimately provide a list of existing solutions. Being aware of the barriers, students learn to not suffer from depression when solving problems and to make correct decisions by a positive inner dialogue (I can solve my own problems). These methods increase mechanism of impulse control and optimism, which brings motivation.

The results of covariance analysis tests implied that multimedia training of problem solving skills decreases dysfunction in social interaction. The results of the present study are consistent with Mo'tamedi, et al. [25], Sodani, et al. [26], Hatami Fard, et al. [27] and Mobaleghi [28]. Multimedia training for problem solving skills lead to a significant learning and effective ways to solve problems by students. It will increase their motivations because they find a chance to experience inner happiness in the process of problem solving. It enables students to engage actively in the process of acquiring meaning or knowledge and to pave the way for education through personal experiences and interactions with others. Thereby, directed exploratory learning method is presented. According to features of multimedia-based learning, the teacher plays the role of facilitator, the students encounter with real problems, the system is dynamic, and the educational goals are met. Students are prepared for eagerly systematic study of an issue or problem from different perspectives with their own views; they will have a greater tendency to identify, examine and assess different ways and a special emotional readiness to deal systematically with assignments and complex problems. Multimedia training for problem solving skills improves decision-making and adoption of appropriate solutions, and provokes students to learn the knowledge according to present requirements, to fulfill their potential abilities, and to convert them to desired behaviors in their lives.

The results of covariance analysis tests implied that multimedia training of problem solving skills decreases physical symptoms among students. The results of the present study are consistent with Bahrami, et al. [29], Shahni [30], Rastgoo [31], Shafi Abadi and Soraya [32]. Multimedia

training for problem solving skills changes students' beliefs regarding their ability to solve problems, which results in an increase in their enjoyment and motivation for solving the future problems in their daily lives. Positive attitude toward their capabilities in dealing with problems, creativity, saving time, eliminating unhelpful activities, spending more time to communicate with others, discussions, presentations, identifying different styles of learning, active learning with feedback, repeatability as well as control over the learning process, facilitating participation in the activities and balance and mutual relationship with the user are characteristics of students who are trained by the multimedia approach. They learn correctly to combine reading, writing, listening and speaking skills. At last, multimedia training for problem solving skills is consistent with students' capabilities away from detrimental competitions.

Results of t-test revealed no significant difference in all mental health variables as well as mental health itself as a variable for means of post-test of experimental group and retention of experimental group; the effect of multimedia training for problem solving is constant over time. The results of this study are consistent with Zahra Kar, et al. [33], Ganji and Kamran [34]. multimedia training for skills which eliminates extra and unnecessary cognitive loads, is applied by combining the body of contents with learning materials mostly in form of text(written and oral), image(photo, shape, etc.) and videos. It enhances the efficiency of working memory, and provides significant learning by attaching new information to former knowledge. If students feel academic success and learn new things, their level of motives will be enhanced, and finally, the level of recovery will met the minimum rate. Unprocessed information leaves only a temporary emotional influence (sensory memory), repeated information are processed superficially (short-term memory), and the information processed more than others is relegated into long-term memory. Multimedia training for problem solving skills contains both subjective and objective types of experiences. Appropriate learning experience for learners begins in the lower stages, moves toward the higher stages, and includes a proper collection of learning experiences by combining senses. All these together provide the representation system through a variety of stimuli (images sound and motion) and different learning needs(cognitive, affective, and psychomotor).

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