Explanation of different aspects of cooperative learning and its implications for higher education system

Ali Akbar Ajam

Department of Educational Sciences, Payame noor University,IR of Iran

Aliakbarajam1387@gmail.cim

Abstract—Due to the rapid changes and advances in science, our students need methods through which gain learning skills to learn science better, faster and synchronized by progress. The purpose of this research was to explain different aspects of cooperative learning and its implications for higher education system. The research method: for this, theory research method is used. The purpose of theory research is creation and criticism of conceptual schemata which makes the fundamental nature, structure of phenomena and curriculum processes understandable. The results of this research showed that in the method of learning, students learn through collaboration and participation within groups and feel responsible towards learning of each other. When their classmates need help, they hasten to help them and the success of others is their success and the failure of others is their failure. These show the necessity of identifying and applying active methods such as learning through collaboration. Conclusion: due to the sovereignty of traditional methods in Iranian schools, the necessity of developing a spirit of camaraderie and cooperation and development of social skills, identifying, the study and application of this approach in the classroom at all levels and fields of study are important more than ever.

Keywords— cooperative learning, active learning, cooperation, higher education.

I. INTRODUCTION

One of the most influential educators of the early twentieth was the famous philosopher, John Dewey. He believed that education is a process of life and schools have the responsibility for motivating the students' interests and develop their intellectual prospects and help them to appropriately react to new ideas and emotions. Moreover, learning must be an active and dynamic process which relies on students' increasing curiosity about their worlds. In this context, Dewey believed that schools are responsible to develop the children's natural interests in their social environments through developing interpersonal

communications and group cooperation. Students will receive a series of feedbacks about their activities through interaction with other students, and also will learn appropriate social behavior and will understand that they are working and participating with others. Dewey's thought set up a revolution at that time and had a profound impact on education. Especially, its growing effects were done and understood in the area of group dynamics[1].

John Dewey has well introduced the concept of cooperative learning during the first half of twentieth century. According to the Dewey, cooperation is considered as the first basis for development of a number of training patterns and the activity of pioneer association in education and supports the active period of research and development in education. However, the cooperative learning theory is very old that can be found in the works of Plato, Aristotle and Roman philosophers such as Marcus Aurelius and in the works of Christian thinkers in the Medieval education such as Thomas Aquinas and then in the works of Renaissance thinkers such as John Amos Comenius. Its new state appears in the works of Jean- Jacques Rousseau in France, John Locke in England and Thomas Jefferson and Benjamin Franklin in America. Horace Mann and Henry Barnard strongly advocate the element of social activeness in education[2]. Moreover, the cooperative learning in the area of education has been introduced by Jonson and Jonson's works (1992). They introduced the cooperative learning as a pedagogical use of small groups of two or more students who work together to maximize the amount of their and each other learning [3]. Cooperative learning has rooted in the social interdependence theory, cognitive development theory and behavioral learning theories[4]. The cognitive development view is based on Piaget and Vygotsky theories. Piaget's view refers to the fact that when people work together, cognitive- social conflicts occur and create cognitive imbalance which motivate the ability of adopting a view and cognitive development. Vygotsky's theory defines knowledge as a social product. The behavioral learning theories are based on the work of different psychologists who emphasize the effect of strengthening and

Dr. Ali Akbar ajam is The assistant professor, Department of Educational Sciences, Payame noor University, Iran (corresponding author to provide phone: 915-934-1880; e-mail: aliakbarajam1387@gmail.com).

group rewards in learning assuming that students will attempt hard in their works to get various types of rewards. The social interdependence theory looks at cooperation as a result which arises from the positive interdependence of individual goals [3]. Given the importance of cooperative learning in education system, in this research, different aspects of learning through collaboration has been analyzed and implications of learning through cooperation for higher education system has been explained.

II. COOPERATIVE LEARNING

A. Review Stage

Cooperative learning is an umbrella term for a variety of educational approaches including joint efforts of students or students and teachers together and needs a number of students who work together in a common field and activity and support and encourage each other to improve their learning[5]. In cooperative learning, students are replaced in small groups to do a work or task, solve a problem, analyze a case scenario, complete a project profoundly or to do an experiment. Any member of group has a responsibility for a part of work and students should attempt to complete the task. The researches of Alberson (2001), Kanklys (2003), Michel (2003) and Tanner et al. (2003) has shown that in cooperative learning, students are more engaged in desired contents, learning becomes easier for students and students looks more positively at this education method[6]. The Hinsez, Tidal and Volrath's researches (1997) in the field of information processing in groups showed that groups work more effectively in decision making and solving complex problems than when people work individually. Also according to the research by Hans and Berger (2007) and Bandura (1997), the group performance is better than individual performance and successful working groups increase the results of personal learning through collective self-effectiveness [7].

The behavior of student's help plays an important role in the classroom. Gillies and Ashman's researches (2000) showed that stimulating coworker to help each other can have much more learning interests and benefits than when people do not help each other in learning. However, this depends on the quality of their helping. For example, Web and Namer (2006) concluded in their researches that when students help each other in learning but the level of these aids is very low, they negatively affect the interests of learning. Only cooperative behavior (helping) with high quality can be positively related to the learning benefits and interests. Web defines the cooperation at high level as follows: cooperation at high level is the kind of help behavior that is described masterfully and is accurate and timely, has a relation with the person need to this kind of help and allows the person receiving it to apply it. Teacher can positively affect the student use of high quality cooperation behavior. Also, cooperative behavior at high level is identified by asking, presenting and using descriptions [8]. Any real learning activity can be associated with learning through cooperation and can be known compatible. Learning

through cooperation motivates students to work with each other cooperatively to achieve common goal.

Students who attempt for learning should act as an independent team together and their slogan should be that: «All for one and one for all». When students find a real act cooperatively, they learn thinking skills at a high level and the skill of communication through cooperation, application and profiting of social skills. Cooperation classrooms change the basis of «my class» to «our class» and learning through cooperation gives an opportunity to students to work together in small groups and the groups composed of people with different abilities. The role of teacher is assigned from students' proponent and transmitter. Moreover, students by working in cooperative group integer with learning process more than ever. Those who are responsible only to learn context and skill offered, but they also have responsibility towards their group members' learning [9].

Objectives and assumptions of learning through cooperation

The underlying assumptions of the formation of learning communities based on cooperation are as follows:

1. The created synergy in learning areas based on cooperation provides more motivation than competitive and individualistic environment. Therefore, integrated social groups are something more than sum of its parts and thus, a group members' feeling of solidarity produce a positive force.

2. The members of learning group based on cooperation learn subjects from each other. Compared to the productive structure of segregation and separation, each learner has a better readiness to help others. Studies of Brown (1989), Farivar (1994) and Stevens (1995) showed that working together provide more opportunities to learn from others, talking about lessons and learning during teaching0[10].

3. Compared with individual study interacting with each other; creating mobility, a cognitive and social richness and the provision of more mental activity increases the amount of learning.

4. Cooperation causes the positive feelings toward each other increase, isolationism and alienation decrease and relationship with others establish and create positive perceptions toward others at the heart.

5. Cooperation leads to self- confidence not only through increasing the learning, but also through creating a sense of attention by others.

6. Students can experience tasks which require cooperation through increasing their ability in doing work with the help of each other. In other words, the more the cooperation opportunity with each other is given to children, the better performance in that context they reach and the more they will benefit from their social skills.

7. Students and primary school children can learn how to increase their ability to collaborate with others through training programs [11].

8. The application of this type of learning not only allows people to learn from their experiences, but also provide

opportunities and situations for people to learn from each other so that their learning speed accelerates more [12].

9. The cooperative learning when groups are organized and the rewards based on individual learning of group members are allocated to group will be more effective.

10. Group goals and individual accountability provoke the students to help each other and provoke the individuals' maximum efforts [13]. Also, empirical findings show that cooperative learning could: Enhance learning and acquiring knowledge (Lu, Abrams, Dapolonia, 2001), develop the details of course subjects (Carroll, Johnson, Weinman, Vander linden, 2004), cause to enhance people awareness (Lambiot, 1988, Salmon and Globerson, 1989) and reinforce the social and motivational processes (Gupta, 2004) [7]. The cooperative learning approach come out successful from more than nine hundred research studies which was about the effectiveness of cooperative learning versus individual and competitive efforts [4].

Sharon (1990) stated that the important question for us is that whether cooperative groups generate a force in act which leads to learning improvement or not? The available evidence greatly confirms this point. In the classroom where students work in pairs or in larger groups, they teach each other and they are shared in the gained rewards; and compared to the classrooms that take advantage of the conventional patterns of individual studying or memorizing, more dominant can be seen on offered maters. In addition, shared responsibility and interaction with each other in students who have had a little progress at the past, provide more positive feeling toward assignment and others, led to better intergroup relationship and ultimately will constitute self-concept. Overall, the obtained results confirm the fundamental assumptions of use of other methods based on cooperation.

Surprisingly, we found that some parents and teachers believed that successful students in the individualistic environments do not benefit in the learning areas based on cooperation. This belief is expressed sometimes that talented students prefer individual work to group work and abundant evidence put this belief into question (Joyce, 1991; Slavin, 1991). Maybe a kind of misunderstanding about the relationship between individual and collective research led to the continuity of this belief. Developing of membership in the learning groups does not mean that individual effort is not necessary. In this pattern, people learning do not fade, but also become more known through cooperation with others in a group. Students who have intrinsically less willing to cooperate are not the successful students. Sometimes they learn in the highly individualistic areas to belittle weaker students, the work that is harmful to them both at school and in the future [2].

Harley Davidson (1990) believed that learning through cooperation strengthen the following learning principals efficiently:

1. Motivation: students need to dependence together. Primarily, they come to school to be with their friends. With cooperation, the level of trust grew and students' sensitivity

and vulnerability in doing teacher works became reduced, compared to the whole class, they feel more relax. Working in groups converts the students' excessive anxiety to confidence so they work without concern and with passion and enthusiasm. This method provides different sources of motivation. Intrinsic and instinctive motivations such as interest, the sense of curiosity and the desire to understand is often created in group researches and explorations. The motivations of «my unity» are obtained in group interaction. The sense of ability and competence in group grows while answering the questions and solving the problem. Members of group attempt to train and confirm each other, mutual respect began to grow without racial and ethnic boundaries and social classes. Moreover, partnership groups encourage member to act so that inner motivation are created in group.

2. Practice: Researches has shown that partnership and cooperation have a strong effect on the action learning model (pattern making) of cooperators. Different structures are created from the practice of the two groups and the group progress in practice together.

3. Maintaining the content: preservation and retention of information is precisely related to the concepts and schemas. Schemas and concepts changes and develops in the group discussion through the relationship with others. Vygotsky (1962) believed that cognitive functions appear initially at the social level and then at the individual level. Also, cognitive strategies, mental rehearsal and practice enhance the memory power and all of these are obtained in group quickly.

4. Transmission: According to the experts' opinion, learning through cooperation facilitates the knowledge and contents transmission from one environment to another. The social skills process provides the situation of transition from school environment to outside of the classroom or even out of school.

5. Learning styles: With companionship and cooperation of cooperative groups, a wide variety of styles and structures of learning are created. That is, small groups are useful to give attention to the learners toward internal and external events when they think as a binary and give feedback to each other. Moreover, they work through the manipulation of subjects, class description, audio- visual structures, painting and drawing and etc.

6. Development of thinking in students: Working in small groups is useful to develop and continue thinking in students for all the next classification levels. The social skill processes in some models of learning with cooperation method raises the level of thinking. Moreover, subjecting different perspectives which occur naturally in the cooperation develop the imagination, combination and evaluation powers [14].

III.   THE IMPLICATIONS OF COOPERATIVE LEARNING FOR HIGHER EDUCATION SYSTEM

The cooperative learning involves certain and special structures and practices. In this combination, they obtain the maximum benefit and use of students from working together.

1. Homogeneous group: When groups is composed with the maximum variety of difference, students' background, experience and skills can be identified and have been used in the best way. In its most basic level, the group members can include genders, different races and different learning styles. Depending on the type of activity that is done, the teacher can divide the class into very different small groups so that causes the more discussion and expressing opinion. For complex projects, Students can share their individual expertise, researches, positions, drawings and writings. Ideally, group members can discover others' talents in themselves. Especially when group members remain stable in prolonged projects or multiple smaller tasks, students can develop complex strategies and high level of division of work [15]. The researches have shown the effectiveness of cooperative learning groups which include students with high, medium and low ability work together. There is also evidence that students with high ability become theoretically richer when they cooperate and participate with coworker with medium and low ability than when they work alone. Working in nonhomogeneous groups had advantages for students with low ability, because it allows them to see the strategies of students with high ability. Similarly, students with high ability can learn new strategies when they teach to other students in their group [13]. Referring to the Vygotsky's opinion about the approximate range of growth, many authors emphasize on the benefits of nonhomogeneous groups in the situation in which students with high ability learn through externalizing, elaborating and explaining their knowledge and students with poor ability benefit from descriptions and aids of their partners [7].

2. Group independence and autonomy: the basic notion of cooperative learning is that students have a significant control on learning through independence and key decisions. They are accountable for their learning in terms of results and processes. Teacher and students are located in the same sides of learning and an equitable transaction is replaced by a hierarchical system. In this pattern, guidelines must be submitted step by step. The cooperative learning can be threatening to some teachers: how students work well without the presence and direct instructions of the teacher. A mutual trust and respect must be established before the cooperative learning climate arises. Like other cooperative skills, the ability to work does not appear autonomously and automatically. Teachers must teach the students in the field of self-leadership techniques. At the beginning of the work, usually an adult offers the structure that group work and defines the short term time framework and divide the activities into small and manageable steps. Surveillance is close and extensive and the class spent considerable time discussing the dynamics of group and brainstorming methods to improve the group management. As the groups become more dependent to their tasks, they can obtain more independence. But the group

as a whole and students in each group are always accountable for their works and has responsibility [15].

Accountability and Group Responsibility: If any person independently does his own individual tasks and activities in a group, that learning is not cooperative learning, even if students are seated at the same table. In cooperative learning, each student may do a special work, but all those activities are interrelated in a group and group should be responsible for learning of each member. For example, if a student knows the answer to the question and he only offers to the others, it will not make any of cooperative learning, unless the student answers the question with a description and describes how he has answered the question and provides the opportunity so that other members of the group can learn. Otherwise, studies have shown that not much learning will happen. Thus, instead of emphasizing only on answers and solutions, the focus should be on the learning of all students, so the students need to know how to answer the question. They should ask clear questions and do various issues with members of the group, in order to make sure that whether a person can solve the problems in class in the coming days (Ellis, 2003, p 53).

The necessity of accountability and positive group responsibility is that members working together to achieve a common goal shall be based on the perception that individual success depends on success (Siegel, 2005, p 221).

1. Accountability and Group Responsibility: It is intended that each member of the group in proportion to their contribution are responsible for achieving the objectives (Carroll, 2008, p 344). A chain is as strong as its weakest loop of the chain. Cooperative learning depends of the best efforts of every individual. Students must be convinced that cooperative groups help them learn, but it does not replace with their learning. Fortunately, the cooperative groups facilitate the way for the students to succeed; young children in the group quickly find that it is not necessary not to do school work to prevent failure. When learning through cooperation becomes an integral part of the class, we can predict that the quantity and quality of each student will increase intensively [16].

In cooperative learning environments, each student, against his achievements and complete the corresponding task, and apart from achieving the goals of the group as a whole is accountable. In traditional models of cooperative learning, the students will be asked to contribute the definition of their cooperation in special projects. Also, the individuals can be responsive and responsible through a degree based on academic achievement and social skills training and assessment which are conducted by teachers.

2. Positive Interdependence: Positive interdependence means that students consider themselves to be dependent on other group members so that they cannot succeed unless the other members succeed. Students should really understand that they should be together, for instance, whether all the

individuals drown or they swim and survive. Positive interdependence creates a situation in which the students work together in small groups in order to maximize the learning of all members; be aware of resources and share them with each other; report mutually and celebrate their joint success [13]. In traditional classrooms, where the emphasis is on competition, the students will experience negative interdependence and they compete with each other for educational resources and academic knowledge. Competition encourages superior students to store themselves and they sacrifice other students to celebrate their success. In cooperative learning classrooms, the students to ensure the success of each student work together. Positive interdependence teaches the students that school life for each of them increases when all of them succeed [17].

3. Face to Face Interaction: Verbal and face to face interaction among the students and groups can be established to achieve the goals, decisions and discussions [18]. In cooperative learning situations, students interact with each other, they help each other with learning tasks and they proceed them successfully. Places related to small group allow the students to work directly with each other, they share ideas and opinions with each other, the common understanding has been achieved and they work to ensure the success and acceptance of each member of the team [17].

4. The Creation and Development of Social Skills: Students not only learn subjects, but also they learn skills to communicate and work with each other through this approach [19]. Cooperative learning allows students to develop interpersonal skills to succeed in school, work and in the community. Among these skills, effective and efficient communication, understanding and acceptance of others, decision making, problem solving, conflict resolution and compromise play major role. The student cannot be placed among a group and expect him to perform these skills. Teachers should actively use the social skills they have learned to review them. This issue requires an accurate diagnosis of students' social goals. Teachers should actively ask the students the social skills they have been taught every day. Teachers use these skills through cooperative group work and they provide feedback regarding the group interaction and social processes.

5. Group Evaluation: Student groups need to evaluate and discuss what actions help the groups on how to achieve the goals and what actions hurt the group interaction. They can develop these evaluations during class discussions. Or they can provide advanced reports in written forms to their teachers. Students also need find a way to inform the teacher of problems of the group. Teachers should create a plan to help the students engaging in problem solving and conflict resolution (same).

6. Equal Opportunity for Success: All members of the group find the same opportunities for grow, reporting, talking,

thinking, writing, solving, leadership and criticizing. Thus, educational opportunities are not just bound to few students in the classroom. Setting times and division of labor can improve these characteristics.

7. The Role of the Teacher as a Guide: Kagan (2004) states that although the mission of the teacher in this approach is harder than lecture approach, his primary role is to lead and assist when necessary. By careful and continuous monitoring the performance of the students in the groups, the teacher can determine when and how students need guidance. Teacher never transfers material in the form of package to the minds, because he does not want to take away golden opportunity to get students thinking. He begins his career with questions and to get students to answer in class will form a working group and helps them to achieve the correct answer. The nature of achieving the answer is not also valuable. What happens in the process of moving from the unknown to the known position is surely nourishing the thought [20].

IV. CONCLUSION

As Mehr Mohammadi (2005) states one of the interesting feature of learning which is based of cooperation is organizing the students in groups of two or three is not an easy task and it will result very soon. The combination of social support and the increase of the richness of cognitive activity that arises from social interaction have gentle and yet fast effects on learning content and skills. In addition, membership in learning groups provides an appropriate experiment to nourish social skills and feeling empathy with others. In this case, the behaviors relating to the learning task decrease and the students feel the desired learning situation and positive feelings toward themselves and others improve. Another positive aspect of this model is that the weaker students can benefit from it too fast. Joining a group leads to the increase of the participation and given the learning based on cooperation, reduces isolation and increases individual responsibility for learning. While this pattern of learning material has gentle, yet persistent impact, its effect on social learning and students' self-esteem compared with individualistic classmates would be considerable. Given that traditional methods of teaching and training students will lead to passive the learning process and on the other side, effects and positive results that can be achieved through cooperative learning which include positive interdependence, individual accountability, interpersonal skill, group processing, sense of group responsibility, mutual respect between members, are equal opportunity for members such as the cooperative learning features and the importance of this approach in the educational system makes it more sensitive. Although the experts have provided different methods and styles of cooperative learning approach, teachers, educators and practitioners can choose with regard to educational level,

subject, structure, education system, educational facilities, expertise of teachers and other relevant factors, among the different styles which are presented according to the characteristics of students in cooperative learning and environmental requirements so that the students can actively achieve learning the material and the desired result, and also, the positive implications of implementing this approach arises benefit to the students, and based on numerous studies that have been pointed, the effectiveness of this method are upheld.

REFERENCES

[1] R. M. Gillies, M. Robyn. and,A. F. Ashman, cooperative learning: the social and intellectual outcome of learning in groups. Taylor and Francis e-library group, Lindon and Newyork. Poutledge falmer.2005.

[2] B. Joyce, and M. Weil, "New models of teaching", translated by MR Behrangi, Tehran, Taban Publications in collaboration with Kamal Tarbiat Publication.2001.

[3] El-Deghaidy & Nouby, Ahmed, Effectiveness of a blended e-learning cooperative approach in an Egyptian teacher education program, computer and education, Vol 51: 988-1006.2007.

[4] P. M. Nguyen, & J. G. Elliot, & C. Terlouw, & A. Pilot, Neocolonialism in education: cooperative learning in an Asian context. Comparative education, Vol 45, 109-130.2009.

[5] W. Jolliffe, the implementation of cooperative learning in the classroom. Paper presented at the British educational research association annual conference. University of hull.2005.

[6] K. Sand-Jecklin, the impact of active/cooperative instruction on beginning nursing student learning strategy performance. Nurse education today. Vol 27, 274-280.2007.

[7] U-M. Krause, &R. Stark, & H. Mandle, the effects of cooperative learning and feedback on e-learning statistic. Learning and instruction, Vol 19,158-170.2009.

[8] M. B. Ortwijn, & M. Boekaerts, & P. Vedder, the effect of stimulation immigrant and national pupils helping behaviour during cooperative learning in classroom. Educational study, Vol 34. No 4: 333-342.2008.

[9] M. Aghazadeh, "Guide to the New Methods of Teaching ", Tehran, Abij, second edition.2006.

[10] I. Esmond, Mathematics learning in groups: analyzing in the cooperative activity structure. The journal of the learning science, no 18,247-284.2009.

[11] B. Joris, and E. Kalhun, and J. Hopkins, "Aided by the organized research based on cooperation" Translated by Dr. Mahmoud Mehr Mohammadi, Samt Publication, First Edition.2005.

[12] K. S. Hwang, & L. Chia-Ju, & L. chia-Yue, Cooperative learning by policy-sharing in multiple agent. Cybernetics and systems: and international journal. Vol 40: 286-309. 2009.

[13] S. Veenman, & N. Benthum, & B. BoSotsma, & J. Dieren, Cooperative learning and teacher education. Teaching and teacher education, Vol 18: 87-103. 2002.

[14] M. S. Ahmadiyya, "Learning to assist intelligent and normal students", Tehran, publishing company, First Edition. 2006.

[15] L. S. J. Farmer, Cooperative learning activity in media center, teacher ideas press, second edition, Englewood Colrado.1999.

[16] S. Ellis, and S. Wallen, "Understanding Cooperative learning", translated by T. Rastegar and Majid Malekan, Tehran, Ney Publication, Sixth Edition.2003.

[17] D. Orleach,"Strategies for teaching, general teaching methods and techniques," translated by Siamak Mahjour, and P. Ghiasi, Saman Publication, First Edition.2000.

[18] C. Siegel, an ethnographic inquiry of cooperative learning implementation. Journal of school psychology, Vol 43.219-239.2005.

[19] R. Weidman, & M. J. bishop, Using the jigsaw model to facilitate cooperative learning in an online course .the quarterly review of distance education, Vol 10 (1): 21-64.2009.

[20] M. R. Keramati, cooperative learning through Cooperation, Fara Angizesh Publications, Mashhad, Second Edition.2005.

Predicting the academic achievement of students through Spirituality and Self-regulated Learning Strategies

Ali Akbar Ajam

Department of Educational Sciences, Payame noor University(PNU), IR of Iran
Aliakbarajam1387@gmail.cim

Abstract—Considering the importance of spirituality in human growth and excellence and its influence on most aspects of people's lives and an emphasis on self-regulated learning strategies in education, the aim of this study is to evaluate the role of spirituality and self-regulated learning strategies on students' academic achievement. the research was conducted in descriptive – comparative method. The statistical population was all students in Mashhad PNU among which 392 were randomly selected using Cochran formula. Data were analyzed applying statistical tests such as multivariate analysis of variance (MANOVA) and multiple regression analysis. Research results have shown that, a significant difference was generally observed among the different dimensions of spirituality in male and female students. A significant difference was generally observed among the different dimensions of spirituality in single and married students. No significant difference was observed among the different dimensions of self-regulated learning strategies in male and female students. Variables of spiritual beliefs, self-consciousness and cognitive strategies were among those predicting student achievements, thus it can be said that adding self-awareness and cognitive strategies variables to the variable of the importance of spiritual beliefs in the lives of students, the explanatory power of model has increased and all the explanations mentioned were statistically significant. Considering that the amount of student spirituality and self-regulated learning strategies can affect the academic achievement of students, those involved in higher education system are recommended to take steps to develop and strengthen spirituality and to hold workshops and training courses in this field.

Keywords— Spirituality - Self-Regulated Learning Strategies - Academic Achievement.

I. Introduction

The scope and speed of changes in this world and the variety of modern experiences can lead to superficiality,

Dr. Ali Akbar ajam is The assistant professor, department of Educational Sciences, Payame noor University, Iran (corresponding author to provide phone: 915-934-1880; e-mail: aliakbarajam1387@gmail.com).

frustration and failure, so paying attention to spirituality can give meaning and purpose to life and the individual's surrounding world. Consistency of spiritual growth and human development is considered as the central focus of individuals' lives. Since they are engaged in their daily lives but they should go beyond the routines, therefore, considering spirituality as an essential and critical issue in the development and training and education of individuals is considered comprehensive [1]. The need for a comprehensive restructuring of education is felt and the education system should seek spirituality and areas related to meditation and contemplation in the core of different disciplines. The meaning of spirituality is the spiritual dimension that gives meaning and purpose to life and should be considered as the heart and center of education [2]. Spirituality is a way of being and living that includes the human ability to see beyond his senses of wonder and awe the mysterious world, and experience the wonders of the world in marvelous moments [3]. Spirituality should be in the center of the education system and the goal of education must be that human perceives ability and talent to see and understand various aspects of consciousness related to himself and others' [4]. In Islam, the purpose of spirituality is to enjoy the highest human values such as believing in God, respecting others, accepting others, virtue, duty, universal optimism and openness. Spirituality in Iranian society is based on religion, which means that the Islam's teachings and educations are to shape spirituality. The Origins of Islamic spirituality, are the Holy Quran and the teachings of the Prophet Muhammad (pbuh) and the Imams (AS) [5].

Various researches has been done in the field of spirituality, including the research by Takar [6], with the aim of evaluating teachers' viewpoint about teaching spirituality to the learners, the results of which have shown that spirituality helps learners to understand their position themselves in the universe as a human being; it also helps them to understand the true meaning of their lives. Another research by Cecero and others

[7], with the aim of measuring the Faculty member's spirituality and its relevance to their teaching style is done. Research results have shown that the Faculty member's spirituality has a major impact on positive psychology and their teaching styles. Buckey [8], examines the social content of the spirituality of students the results of which has revealed that considering the content of the courses that supports students' self-awareness in the field of spirituality and guides them towards spirituality seems necessary. Sloan-Power [9], explored the role of group-based thinking about spirituality the results of which showed that when the thinking groups are formed to discuss spirituality, the students of social sciences experience less anxiety and their self – efficacy increases simultaneously. Brown et al [10], investigated the relationship between spirituality and mental health of individuals, the results of their study showed that people who have a higher level of spirituality experience less anxiety and depression and are less affected by mental and psychological illnesses. Another variable that may impact academic achievement of students that is examined in this study is self-regulated learning strategies. Self-regulated learning is the learner's ability to understand and manage their learning which is crucial for the success in learning materials which makes them effective and efficient learners. So self-regulated learning strategies is to teach the learners that behavior is a learned material and they can learn to examine their behavioral effects and their learning environment can be organized so that the behaviors and efforts become more efficient [11]. Self-regulation is so important in learning, academic and career success and… that the different authors have presented various models of it. One of these models is Pintrich model(1986). This model contains three major categories of learning including: Cognitive learning strategies, cognitive strategies, meta cognitive and resource management strategies [12]. Cognitive strategies are referred to any behavior, thought, or action that aims to help acquire, organize and store knowledge, skills, and ease of operation in the future [13]. Meta cognitive strategies are business knowledge and understanding of the strengths and weaknesses of one's own cognitive activity leading the individual during cognitive tasks, leads and are considered as regulatory strategies and used in monitoring and guiding the cognitive strategies [14]. Resource management indicates that the learner make use of the time devoted to the study optimally and use them to control and adjust settings such as time management, the type of attempt, to choose the study environment and to get other's peoples help such as teachers, peers, and resources. In fact, the learner can control his life through time management and

they understand the influence of environmental factors on their focus on study and have the ability to modify them [15].

Since the issues of spirituality and self-regulated learning strategies have great importance in the education system, they are the focus of attention in recent studies. In this respect, examining the prediction of students' educational progress through spirituality and self-regulated learning strategies is essential. Therefore, this study was conducted to answer the following questions:

1. Is there any difference in the dimensions of spirituality between male and female students?
2. Is there any difference in the dimensions of spirituality between married or single students?
3. Is there any difference in the self-regulated learning strategies of male and female students?
4. How is the prediction of the academic achievement of students through spirituality and self regulated learning?

II. METHOD

The nature of the study is quantitative based on the purpose it is applies research. And based on the method this is a survey type of research.

The population and sample: The population of this study consisted of all 18,500 students of Payam Noor University of Mashhad. The number of samples using Cochran formula was 392 which were selected through simple randomization method.

Tools: Two tolls were used in this study, which are discussed briefly. a. The first tool is a questionnaire of spirituality, the questionnaire, was developed by the Parsian & Dunning [16], to evaluate the importance of spirituality in the lives of individuals and measure its dimensions. This scale is a self-reporting tool and the subjects should specify their degrees or agreement or disagreement in 4 scales of Likert score with the related statements. The reliability of the instrument has been reported as follows: based on overall alpha coefficient 0.94, alpha coefficients for self-awareness subscale 0.91, the importance of spiritual beliefs in life 0.91, spiritual activities 0.80, and spiritual needs 89/0. Retest results in a distance of 10 weeks indicated no significant difference between the scores of the first and second order which shows the reliability of the questionnaire. The developers of the questionnaire to ensure the validity studied the existing literature in this field and gained a good framework. Then, based on this framework a questionnaire containing 35 statements was designed. The researchers asked 8 skilled individuals in the field of nursing, designing the

questionnaires, and spirituality asked to determine the relevance of each item based on 4 degrees of the Likert scale based on the theoretical frameworks and according to their ideas some of the statements were removed. To assess face validity of spirituality questionnaire, the questionnaire was completed by 25 diabetic young people. 95% of the respondents stated that they have understood phrases and have responded them easily, also 90% of the respondents believed that the layout and appearance of the test is appropriate. To assess construct validity, the factor analysis of the questionnaire also indicated 4 separate operating factors of spiritual self-consciousness, the importance of spiritual beliefs in life, spiritual activities and spiritual needs which implies the validity of this tool.

b. The second tool was the self-regulated learning questionnaire developed by Pintrich & DeGroot [17], which was a part of students' achievement goal orientations & - motivated strategies for learning questionnaire (MALQ) containing 22 questions based on Likert scale. In this questionnaire self-regulation had two subscales of the use of cognitive strategies with 13 questions and the management of resources and metacognitive consisting of 9 items. In the main reference the internal consistency coefficient for this scale has been reported 0.83. Reliability and validity of this instrument was calculated by Alborz and Saif [18], in Iran. About the validity of the questionnaire, the results have shown that the correlation of components had a significant positive relationship with the total score of the questionnaire which has been in line with findings of Pintrich et al[17], about the validity of questionnaire. Also Self-regulation questionnaire has demonstrated the considerable reliability of 0.72. In another study Karshky [19], has reported the overall reliability of 0.95 for the final implementation of the self-regulated learning questionnaire. As a whole, the indices of Cronbach Alpha and Confirmatory factor analysis show the validity of the tools. In the study conducted by Ajam et al [20], the reliability was calculated by SPSS using Cronbach's alpha which was 0.85. In the present study the students' educational progress is the GPA of the courses which is asked at the beginning of the questionnaire.

Data analysis: to analyze the results of the questionnaire the SPSS v16 statistical software was used. Based on the research questions, the test of multivariate analysis of variance (MANOVA) and hierarchical multiple regression test was used to assess the research question..

III. FINDING

IS THERE ANY DIFFERENCE IN THE DIMENSIONS OF SPIRITUALITY BETWEEN MALE AND FEMALE STUDENTS?

To examine differences in various aspects of spirituality in terms of students' gender, the multivariate analysis of variance (MANOVA) was used. The results of Bux test was not

significant for Equality of homogeneity of variances (sig=0.32, f=0.83) so the variances of the groups were not the same.

Table 1. The results of MANOVA test to analyze the aspects of spirituality in terms of students' gender

effect	Value	f	Df	Level of significance	Partial eta
Pillai"s trace for gender	0.103	11.14	4	0.000	0.103
Wilks" Lambda	0.897	11.14	4	0.000	0.103

The results of the table 1 indicated that Pillai"s trace and Wilks" Lambda test were significant, therefore there is a significant difference between the aspects of spirituality in male and female students.

Table 2. The post hoc test results to assess differences between male and female students with respect to various aspects of spirituality

Source	factors	Sum of squares	Mean of squares	f	Level of significance
Gender	Self-awareness	389.63	389.63	17.29	0.00
	The importance of spiritual beliefs in life	0.127	0.127	0.031	0.86
	Spiritual activities	75.38	75.38	8.006	0.005
	Spiritual needs	214.44	214.44	21.03	0.00
Error	Self-awareness	8990.87	23.05		
	The importance of spiritual beliefs in life	1577.13	4.04		
	Spiritual activities	3672.53	9.41		
	Spiritual needs	3975.42	10.19		

Using post hoc test the analysis of each of the dependent variables was done through the modified Bonferroni Alpha

(0.0125). The results of Table 2 shows there is a significant difference between the dependent discriminatory variables of male and female students' self-awareness factor (f=17.29, sig=0.000) and the mean of self awareness factor in male students (32.55) is more than female students (30.28). There is no significant difference between the importance of spiritual beliefs in life factor of male and female students (f=0.031 sig= 0.860). There is a significant difference between the Spiritual activities factor of male (19.31) and female students (18.33). There is a significant difference between Spiritual needs factor of male and female students (f=21.03 sig= 0.000) and the mean score of the men's' Spiritual needs (32.43) is more than women (30.77).

IS THERE ANY DIFFERENCE IN THE DIMENSIONS OF SPIRITUALITY BETWEEN MARRIED OR SINGLE STUDENTS?

To examine differences in various aspects of spirituality in terms of students' marital situation, the multivariate analysis of variance (MANOVA) was used. The results of Bux test was not significant for Equality of homogeneity of variances (sig=0.42, f=0.98) so the variances of the groups were not the same.

Table 3. The results of MANOVA test to analyze the aspects of spirituality in terms of students' marital situation

effect	Value	f	Df	Level of significance	Partial eta
Pillai"s trace for marital situation	0.14	16.23	4	0.00	0.14
Wilks" Lambda	0.85	16.23	4	0.00	0.14

The results of the table 3 indicated that Pillai"s trace and Wilks" Lambda test were significant, therefore there is a significant difference between the aspects of spirituality in single and married students.

Table 4. The post hoc test results to assess differences between married and single students with respect to various aspects of spirituality

Source	factors	Sum of squares	Mean of squares	f	Level of significance
Gender	Self-awareness	51.90	51.90	2.16	0.142
	The importance of spiritual beliefs in life	152.36	152.36	41.70	0.000
	Spiritual activities	6.36	6.36	0.664	0.416
	Spiritual needs	180.43	180.43	17.55	0.000
Error	Self-awareness	9337.59	23.94		
	The importance of spiritual beliefs in life	1424.90	3.65		
	Spiritual activities	3741.55	9.59		
	Spiritual needs	4009.43	10.28		

Using post hoc test the analysis of each of the dependent variables was done through the modified Bonferroni Alpha (0.0125). The results of Table 4 shows there is no significant difference between the dependent discriminatory variables of married and single students' self-awareness factor (f=2.16, sig=0.142) and the mean of self awareness factor in male students (32.55) is more than female students (30.28). There is significant difference between the importance of spiritual beliefs in life factor of married and single students (f=41.70 sig= 0.000) and the mean score of the married students' spiritual belief factor (12.81) is less than single students (14.07). There is no significant difference between the Spiritual activities factor of married and single students (f=0.664, sig=0.416). There is a significant difference between Spiritual needs factor of married and single students (f=17.55 sig= 0.000) and the mean score of the married students' Spiritual needs (30.43) is less than single students (31.81).

IS THERE ANY DIFFERENCE IN THE SELF-REGULATED LEARNING STRATEGIES OF MALE AND FEMALE STUDENTS?

To examine differences in various aspects of self-regulated learning strategies of male and female students, the multivariate analysis of variance (MANOVA) was used. The results of Bux test was not significant for Equality of homogeneity of variances (sig=0.69, f=0.87) so the variances of the groups were not the same.

Table 5. The results of MANOVA test to analyze the aspects of self-regulated learning strategies in terms of students' gender

effect	Value	f	Degree of freedom	Level of significance	Partial eta
Pillai"s trace for gender	0.003	0.674	4	0.51	0.003
Wilks" Lambda	0.997	0.674	4	0.51	0.003

The results of the table 3 indicated that Pillai"s trace and Wilks" Lambda test were not significant, therefore there is no significant difference between the aspects of self-regulated learning strategies of male and female students.

HOW IS THE PREDICTION OF THE ACADEMIC ACHIEVEMENT OF STUDENTS THROUGH SPIRITUALITY AND SELF REGULATED LEARNING?

To examine the relationship between spirituality and self-regulated learning strategies on the the academic achievement of students, the Pearson correlation coefficient was used and in order to predict the academic achievement of students through spirituality and self-regulated learning strategies hierarchical multiple regression test was used.

Result showe that there is a positive significant relationship between different aspects of Self-awareness, The importance of spiritual beliefs in life, Spiritual activities and Spiritual needs with the academic achievement of students. There is a positive significant relationship between the factors of self regulated learning strategies of cognitive strategies and meta cognitive and resource management with the academic achievement of students. There is no positive significant relationship between the factors of The importance of spiritual beliefs in life and meta cognitive and resource management among students. But there is a positive relationship between the rest of the factors.

In order to understand the effect of the spirituality and self-regulated learning strategies on the academic achievement of students hierarchical multiple regression test was used. The analysis indicated that the Durbin-Watson coefficient is 1.64 and less than 4 so the errors are independent from each other. Also the VIF of all situations was 1.901 max and less than 10 so there is no problem of linearity and directionality of the changes and the assumptions of multiple regression are established. In multiple regression method, the variables that had a significant relationship with academic achievement were entered into the equation and the degree of their effectiveness was established the results of which is presented in the following table.

Table 6. Descriptive statistics of variables in the regression model to predict the academic achievement of students through spirituality and self-regulated learning strategies

Stage	Predictors	Coefficient of determination	F	Statistical significance	Standardized beta	t	Statistical significance
1	Spiritual beliefs	0.081	34.55	0.000	0.285	5.87	0.00
2	Self-awareness	0.105	10.04	0.002	0.183	3.17	0.00
3	Spiritual activities	0.107	1.26	0.262	0.063	1.12	0.26
4	Spiritual needs	0.108	0.311	0.577	0.035	0.558	0.57
5	cognitive strategies	0.130	9.76	0.002	0.194	3.12	0.00
6	meta cognitive and resource management	0.132	1.008	0.316	0.053	1.004	0.31

According to table.6 the variables of Spiritual beliefs, Self-awareness and cognitive strategies predict the academic achievement of students. The cognitive strategies factor of variable of spirituality alone explains 0.081 percent of the variance in the academic achievement of students. The second factor related to the variable of spirituality was Self-awareness the existence of which raised the coefficient of determination about 0.024 percent. The Spiritual beliefs and Self-awareness factor of variable of spirituality explain 0.105 percent of the variance in the academic achievement of students. The Spiritual activities and Spiritual needs of spirituality variable are not significant in the academic achievement of students. The next factor related to the variable of spirituality was cognitive strategies the existence of which raised the coefficient of determination about 0.025 percent and the Spiritual beliefs, Self-awareness and cognitive strategies explain 0.130 percent of the variance in the academic achievement of students. All of the three stages that predict the academic achievement of students through Spiritual beliefs, Self-awareness and cognitive strategies are statistically significant and it can be said that adding self-awareness and cognitive variables in to the model has increased its explanatory power. The meta cognitive and resource management of spirituality variable is not significant in the academic achievement of students.

IV. CONCLUSION

The main objective of this study was to investigate the role of spirituality and self-regulated learning strategies on the

academic achievement of students. In the field of analyzing the difference between male and female students' spiritual levels, the results showed that there is a significant difference between different aspects of male and female spirituality and the mean scores of self-awareness, spiritual activities and spiritual needs in male students are more than females. Besides The results of differences in the level of spirituality between single and married students the study showed that there is a significant difference between different aspects of spirituality in married and single students. The mean scores of spiritual beliefs and spiritual needs in married students are less than single students. In recognition of this fact it can be said that when a person needs a counselor to help him to deal with the pressures of life, spirituality can help him to find a meaning in a stressful situation.

In the field of analyzing the difference between the difference in self-regulated strategies between males and females the results of this study showed that there is no significant difference in self-regulated strategies of male and female students. These findings are in line with Pintrich & DeGroot [17], Anderman & Young [21], and Kajbaf, Molavi and Shirazi Tehrani[22].

Also the results indicated that self-awareness, the importance of spiritual beliefs in life, spiritual activities and spiritual needs are in a relationship with the academic achievement of students which is in line with Boher[23] and Wood et al [24]. Also the results showed that the cognitive strategies and meta cognitive and resource management are in a relationship with educational progress. The importance of spiritual life, self-awareness and cognitive strategies explain 13% of variance in the academic achievement of students.

Spirituality is an active process that empowers the individuals and helps them to seek purposeful and healthy activities and it is In the light of faith that man feels peace, happiness, and hope. In fact spirituality is considered as an optimistic effort. Spiritual activities include a sense of connection with others or the world and spirituality causes the advance of human being [25]. Therefore, based on the findings of this study can be stated that identifying and focusing on aspects of physical, mental, emotional, social and spiritual students is necessary and the first aspects are considered in the curriculum and instruction but the spiritual aspects is the area that is frequently overlooked. But in the Muslim Iranian community, the Islamic educations manifested as a Islam religion can be the strategic document to guide mankind towards true happiness and give a complete instruction for all the areas of human life. The Spiritual levels of students can have a strong relationship with their mental, physical health health and increase the students' motivation and engagement in education and increase their self-esteem through institutionalizing spiritual and religious beliefs. That is because the level of student's spirituality and self-regulated strategies can lead to their educational progress. This important is to extent accomplished through the establishment of cultural departments in the universities and this department should use proper material and non-material motivations to increase the student's spirituality and accelerate this process through holding training classes and formation of spiritual support groups. Therefore the university directors must pay enough attention to help students' spiritual growth, strengthening their spiritual beliefs and teaching self-regulated strategies through accurate and long-term programs.

REFERENCES

[1] M. de Souza, Promoting wholeness and wellbeing in education: Exploring aspects of the spiritual dimension. In M. de Souza, L. J. Francis, J. O'Higgins & D. Scott (Eds.), *International handbook of education for spirituality*, care and wellbeing (pp. 677-692). Netherlands: Springer. 2009.

[2] A. Zajonc, Spirituality in higher education. *Liberal Education*, 89(1), 50-58, 2003.

[3] F. Schoonmaker, Only those who see take off their shoes: Seeing the classroom as a spiritual space. *Teachers College Record*, 111, 2713-2731, 2009.

[4] A. W. Astin, Why spirituality deserves a central place in liberal education. *Liberal Education*, 90(2), 34-41, 2004.

[5] N. Naderi and S. Rajaeipor, Management with spiritual approach (indicators to assess achievement of the organization's management), *Islamic Studies in the Humanities*, the first year the first issue, pp. 119-138, 2010.

[6] A. S. Thakkar, A Study of the Views of Teacher Educators about Education of Spirituality among B.Ed. Trainees, Online International, Refereed (Reviewed) & Indexed Monthly Journal www.raijmr.com RET *Academy for International Journals of Multidisciplinary Research (RAIJMR)*, Vol. 2, Issue:5.P: 18-20, 2013.

[7] J. J. Cecero, & T. A. Prout, Measuring Faculty Spirituality and Its Relationship to Teaching Style, *Religion & Education*, Volume 38, Issue 2, PP: 128-140, 2011.

[8] J. W. Buckey, Empirically Based Spirituality Education: Implications for Social Work Research and Practice, *Journal of Social Service Research*, Volume 38, Issue 2, PP: 260-271, 2012.

[9] E. Sloan-Power, Diversity Education and Spirituality: An Empirical Reflecting Approach for MSW Students, Journal of Religion & Spirituality in Social Work: Social Thought Volume 32, Issue 4, PP: 330-348, 2013.

[10] D. R. Brown, & J. S. Carney, & M. S. Parrish, & J. L. Klem, Assessing Spirituality: The Relationship Between Spirituality and Mental Health, *Journal of Spirituality in Mental Health*, Volume 15, Issue 2, PP: 107-122, 2013.

[11] B. J. Zimmerman, Self-regulated academic learning and achievement: the emergence of a social cognitive perspective, *educational psychology review*, 2, pp:120-173, 2003.

[12] P. R. Pintrich, The role of motivation in promoting and sustaining self regulated learning, *international journal of educational research*, 31, pp:459-470, 1999.

[13] A. A. Saif, *Educational Psychology*, Tehran: Agah Pub, 2000.

[14] B. J. Zimmerman, Investigating self-regulation and motivation: Historical background, methodological developments and future prospecs, *American educational research journal*, vol. 45, no. 1, pp: 166-183, 2008.

[15] M .H. Dembo & M. J. Eaton , Self-regulation of academic learning in middle-level schools. *The Elementary School Journal*.100, pp: 473-490, 2000.

[16] N. Parsian, & T. dunning, Developing and validating a questionaire to measure spirituality: a psychometric process. *Global journal of health science*, vol. 1 , no.1, 2009.

[17] P. R. Pintrich, & E. V. DeGroot, Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology,* 82(1), 33-40, 1990.

[18] S. H. Alborz, and D. Saif, Investigating the relationship between motivational beliefs, learning strategies and some demographic factors on academic achievement in the humanities group of students studying Statistics, *Journal of Humanities and Social Sciences*, Shiraz University, Vol XIX, No. I, pp. 73-82, 2002.

[19] H. Karshky, *Patterns of motivation, and environmental perception in self-regulated learning of third grade high school students in Tehran*. Educational Psychology doctoral dissertation. Alinaqi S. Kharrazi guidance and advice of Dr. Seyed Mahmoud Ghazi Tabatabaei Dr. Javad Aegean , Faculty of Psychology and Educational Sciences at Tehran University , 2008.

[20] A. A. Ajam, and H. Jafari Sani, and B. Mahram, and M. R. Ahanchian, The role of self-regulated learning strategies, computer skills and students' progress toward the vision of synchronous and asynchronous interactions hybrid learning approach; *Journal of Research in Curriculum Development of Khorasgan Esfahan*, No. 7, pp. 1-17, 2012.

[21] E. M. Anderman, & A. J. Young, Motivation strategy use in science : individual differences and classroom effects. *Journal of research in science teaching*, vol.31, pp: 811-831, 1994.

[22] M, Kajbaf. and H. Molvi . and A. R. Shirazi Tehrani, The relationship between motivational beliefs and self-regulated learning strategies and academic performance of high school students, *Cognitive Science*, Year 5, No. 1, pp. 27-33, 2003.

[23] D. W. Bohr, *Spirituality and Academic Achievement: A Study of Fifth and Eighth Grade Students in Selected Appalachian Grade Schools,* unpublished dissertation in Spalding University, 2007.

[24] J. L. Wood, and A. A. Hilton, Spirituality and Academic Success: Perceptions of African American Males in the Community College, *Religion & Education*, 39:28–47, 2012.

[25] M. Wills, Connection, action and hope, an invasion to relation the spiritual in health care. *Relig Health*.8 (18):1-15, 2007.

The Role of Spiritual Intelligence in Life Orientation and Resilience of Allameh Tabataba'i University Students

Hossein Eqbalinasab A, Seyed Mohammad Kalantarkousheh B, Mojtaba Salmabadi C, Farajollah Rahmani D

Abstract— Introduction: The present research was performed to survey the role of spiritual intelligence in optimistic or pessimistic life orientation and resilience of students in coping with the stress.Materials and Methods: The population of this research, were the male and female students of Allameh Tabataba'i University. 253 people (137 male and 116 female) as accessible samples were studied. The required information was gathered using Spiritual Intelligence Self-Report Inventory (SISRI), Connor-Davidson Resilience Scale and life orientation test . For statistical analysis, SPSS18 software, Pearson's correlation and synchronic regression were used.Findings: The statistical analysis of the gathered information, showed that Spiritual Intelligence is interrelated with Life Orientation and resilience of students and Life Orientation can predict the resilience. Conclusion: We can conclude from the research findings that the development and nurturing of Spiritual Intelligence can promote the optimistic life orientation and increased resilience.

Keywords— Life Orientation, Resilience, Spiritual Intelligence

I. Introduction

The importance of spirituality and human spiritual development , in the past decades have ever increasingly drawn the attention of psychologists and psychological health experts. It seems that people , nowadays, are oriented towards the spirituality and spiritual issues more than old days and years. This consideration and universal tendency to spiritual issues have caused the health organizations such as World Health Organization (Hill & Hood, 1999; West,1383) to revise the present definitions about human and human nature, and in describing the existential dimensions of human in addition to physical , psychological and social dimensions, to take into considerations the fourth dimension , which is the spiritual aspect in the development and evolution of human.

The spiritual intelligence construct is one of the concepts that in the light of universal attention and interest of the psychologist in the religion and spirituality domain has been discussed and developed. Today, it is said that the General Intelligence and Emotional Intelligence are not effective in all human psychological issues. He needs a third factor in coping with internal and external issues , which is called spiritual intelligence(Cherian, 2004).

The concept of spiritual intelligence in psychological academic literature was first introduced in 1996 by Stevens and then by Amons in 1999. Amons (2000) believes that the spiritual intelligence is the adaptive application of spiritual information with the aim of routine problems solving facilitation and achieving the objective. From then on, a group of authors and researchers decided to define and determine the elements of the spiritual intelligence concept with different theoretical basis (Zohar & Marshall, 2004 ٬Sisk, 2002٬aughan, 2002٬Nasel, 2004٬King, 2008) .

The preliminary studies showed that spiritual intelligence is the rational application of spiritual skills in solving the problems of everyday life and achieving human prominent goals. Spiritual intelligence is also the basis of beliefs, values, deeds and meaningful life structure.Spiritual intelligence requires abilities that utilize spiritual subjects such as sacred elements, meaning, culminated and exalted awareness for accordance and efficient action, manufacturing of products and valuable consequences (Emmons, 2000). According to present definitions, spiritual intelligence may be a cognitive motivational issue that introduces a collection of adjustments skills, problem solving references and goal achievement and facilitates their application in life special situations (Wolman, 2001٬Sisk, 2002٬Nasel, 2004).

One of the features that seems to be predicted by spiritual intelligence, is life orientation. Orientation towards life can be optimistic, that is to have positive expectations for results and consequences; or pessimistic meaning to have negative expectations for the results and consequences (Scheier & Carver, 1985)and show the adults expectations for the life's events. (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000)state in this regard that if the regular perceptions of human are associated with a positive concept of self and self control and an optimistic viewpoint even unrealistic about future; it helps individuals not only in management of everyday life's ups and downs, but also in coping with the stressful and threatening life events. Researches show that achieving high score in life orientation test (optimistic orientation) has positive correlation with perseverance,

general reputation, academic ,athletic, military, occupational , political and family success, health, and even with longevity and lack of emotional shock(Peterson, 2000).

Another factor besides the optimistic orientation that can help individuals in coping with the stressful and threatening life events , is resilience. Resilience is one of the concepts and constructs, considered by the positive psychology. Resilience is referred as the dynamic process of conformity with bitter and unpleasant experiences (Luthar, Cicchetti, & Becker, 2003؛Masten, 2001) Resilience which is named as "stress resistance "(Garmezy, 1991)"post-traumatic growth"(Calhoun & Tedeschi, 1998), stands along one continuum with deferent degrees against the psychological traumas (Ingram & Price, 2001). Based on this definition, resilience is more than just narrowly escaping from the life's stresses and hardships (Bonanno, 2005), and is compatible with the positive development, adaptability and achieving a level of equilibrium after experiencing a disorder in the previous equilibrating situation (Richardson, 2002). Therefore resilience is referred to a successful conformity which is manifested in confronting with disasters and paralyzing stresses. This definition of resilience, explains the activity and dynamism of a construct that requires the complex interaction between the endangering and preservative factors (Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003؛Luthar, et al., 2003).

Primary theories about resilience, emphasized the traits associated with the positive consequences in coping with calamities and hardships of life (Rutter, 2002؛Werner, 1984) The present theories regard resilience as a multidimensional construct , consisting of constitutional variables such as temperament and personality, accompanied by special skills, like problem solving skill(Campbell-Sills, Cohan, & Stein, 2006)

Although in preliminary studies, the resilience was supposed to be the trait of extraordinary individuals; but the recent researches showed that the resilience is not the monopoly of extraordinary individuals and is observed among different people and different development levels including childhood, adolescence, and elderliness(Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995؛Campbell-Sills, et al., 2006؛Masten, 2001).

Recently, psychologists, have studied models of resilience under the situation of bereavement, calamity, depression, and pain (Bonanno,2005؛Charney, 2004؛Zautra, Johnson, & Davis, 2005؛Southwick, Vythilingam, & Charney, 2005).The unisonant results of these researches confirm the positive, constructive and preservative effects of resilience in resistance, successful coping and developed conformity with the said stressful situations. On the contrary, low level and weak resilience is associated with vulnerability and psychological disorders (Bonanno, 2005؛Campbell-Sills, et al., 2006).This is indicative of the importance of study in the field of efficient factors on resilience.

The study of spiritual intelligence shows that the spiritual intelligence in interrelated with psychological health, happiness, satisfaction of life, personality traits and sexual restraint (Hamid, Keikhosravani, Babamiri, & Dehqani, 2012؛Bonyanian, 1390؛Moallemi & Raghibi, 2010)and shows negative relation with inefficient thought (Moallemi & Raghibi, 2010). Furthermore, the training of spiritual intelligence components can increase general health (Mirzaee, 1387) promote self esteem, satisfaction of life, and create purposivism feeling(de Souza, Cartwright, & Mcgilp, 2004).

Several researches showed that positive orientation and self control have positive relations with each other and reverse relation with depression(Carver & Gaines, 1987).This kind of orientation has also desired effect on health and adaptive behavior which help individuals in coping with the stressful situations (Scheier & Carver, 1992).Psychological and physical health have a direct relation with optimistic orientation and neurosis has negative connection with it (Brebner, Donaldson, Kirby, & Ward, 1995). Resilience has also positive connection with optimistic orientation (Nasir, 1389) and sexuality has no role in optimistic orientation (Khodabakhshi, 1385).

With due attention to previous researches, it seems that spiritual intelligence can predict the resilience of individuals in severe and stressful incidences and situations. This means that we expect individuals with high level of spiritual intelligence to show more resilience in painful situations. Meanwhile orientation of these individuals seem more optimistic. In this manner optimistic individuals seem more stable in coping with stressful situations. On this very basis, in present research, we proceeded a survey on the role of spiritual intelligence in orientation of life and resilience among a group of students.

II. RESEARCH METHODS

The present research is of correlation type and samples were selected through accessible method from the Allameh Tabataba'i university students. In this research, 253 people (137 male and 116 female) aged from 18 to 30, from three academic levels, B.A (%22.9), M.A (%74.3), Ph.D (%2.8) were studied. For statistical analysis of data, Pearson's correlation and synchronic regression were used.

III. MEASUREMENT TOOLS

A.Spiritual Intelligence Self-Report Inventory (SISRI): This inventory was developed by David B. King and has 24 items that measures in five degrees Likert scale and its scores are varied between 0 to 96. It has four subscales of Critical Existential Thinking (CET), Personal Meaning Production(PMP), Transcendental Awareness(TA), and Conscious State Expansion(CSE). The reliability of scale through Cronbach's alpha valued 0.92 and reliability through split-half method was assessed 0.91. In studying the validity of each subscales through the same manner, Cronbach's alpha values of 0.78 for Critical Existential Thinking (CET) subscale, 0.78 for Personal Meaning Production(PMP) , 0.87

for Transcendental Awareness(TA), and 0.91 for Critical Existential Thinking (CET), were obtained(King, 2008). Also in the study of Raqibi et. al. the Cronbach's alpha coefficient of this questionnaire valued 0.89 and its validity coefficient through retest in a sample of 70 people in two week interval was assessed 0.67(Moallemi & Raghibi, 2010) In the present research, the Cronbach's alpha of 0.89 for this scale was obtained.

B. life orientation test (LOT- R): This questionnaire was developed by Schier & Carver (1985). This test includes 6 items, 3 of which explains the optimistic temperament and the other 3 signifies pessimistic temperament, and the testees declare the rate of their agreement or disagreement with the sentences using Likert's scale.LOT-R enjoys a desired internal consistency, Schier and Carver(1985) have reported a Cronbach's alpha coefficient of 0.76 and retest coefficient of 0.79(four week interval) for one group of students(Scheier & Carver, 1993). The convergent and differential validity of this questionnaire is confirmed by Locus of Control Scale and Rosenberg Self Esteem Scale (Puskar, Sereika, Lamb, Tusaie-Mumford, & McGuinness, 1999).This test was standardized by Khodabakhshi in Iran , in 1383. The results obtained on the basis of retest and Cronbach's alpha, represents the high reliability of LOT-R scale. The concurrent validity coefficients between this scale and depression and self control were obtained 0.649 and 0.725 respectfully.

C. Connor-Davidson Resilience Scale (CD- RISC): This scale has 25 items which measures the resilience construct in five degree Likert scale. Each statement is scored on the basis of one Likert scale between 0(completely wrong) to 4 (always true), and the range of scoring is 0-100. The preliminary study results about the psychometric features of this scale in the normal and abnormal samples, have confirmed the reliability and validity of it(Connor, Davidson, & Lee, 2003). performed the said scale on 248 people and its reliability through internal consistency of Cronbach's alpha valued 0.89 and its validity through the factor analysis method was obtained at 0.87, and adapted it for using in Iran. Reliability of this questionnaire besides the preliminary standardization, was calculated again by (Kordmyrzanykvzadh, 1387)with the total alpha coefficient of 0.90. In the present research, reliability of this scale through Cronbach's alpha method was obtained at 0.9.

IV. DESCRIPTIVE STATISTICS

Table 1 shows the statistical features, mean and standard deviation of spiritual intelligence scores, orientation and resilience of testees and the features of each scales.

Table – 1 Mean and standard deviation of spiritual intelligence scores, orientation and resilience of students

Variable	Sexuality	M±SD	Cronbach's Alpha
Spiritual Intelligence Skewness 0/079 Kurtosis 0/531	Boys	57.66 ± 14.56	0.89
	Girls	54.95 ± 13.73	0.89
	Whole	56.35 ± 14.08	0.89
Life Orientation Skewness 0/123 Kurtosis 0/127	Boys	10.50 ± 2.57	0.54
	Girls	10.93 ± 2.91	0.70
	Whole	15.06 ± 3.36	0.62
Resilience Skewness 0/432 Kurtosis 0/506	Boys	62.66 ± 16.12	0.90
	Girls	62.66 ± 13.37	0.90
	Whole	62.43 ± 16.12	

Inferential Statistics
Pearsonian correlation was calculated to study the relation between the variables . The results are shown in Table 2.

Table 2 – Correlation Matrix between spiritual intelligence, life orientation, and resilience scores of students

Index Variable	Girls (n= 116)		Boys (n = 137)		Total (n= 253)	
	r	p	r	p	r	p
Spiritual Intelligence / Life Orientation	0.405	0.00	0.168	0.048	0.268	0.00
Spiritual Intelligence / Resilience	0.497	0.00	0.433	0.00	0.459	0.00
Life Orientation/ Resilience	0.480	0.00	0.426	0.00	0.518	0.00

The findings written in Table 2 show that the correlation coefficient of spiritual intelligence and life orientation is meaningful among all students; (pearson's r = 0/268, p ≤ 0/001) therefore this hypothesis is confirmed that there is meaningful relation between spiritual intelligence and life orientation. Also the correlation coefficient of spiritual intelligence and life orientation is meaningful among boys; (pearson's r = 0/168, p ≤ 0/05). therefore this hypothesis is confirmed that there is meaningful relation between spiritual

intelligence and life orientation among boys. In girls group also there is meaningful relation between spiritual intelligence and life orientation; (pearson's r = 0/405, p ≤ 0/001). Therefore this hypothesis is also confirmed that there is meaningful relation between spiritual intelligence and life orientation among girls.

Correlation coefficient between spiritual intelligence and resilience also shows that the relation of these two variables among all students is meaningful; (pearson's r 0/459 , p ≤ 0/001). In girls group (pearson's r = 0/497, p ≤ 0/001) also the correlation coefficient between spiritual intelligence and resilience is meaningful. Further, there is a meaningful relation between spiritual intelligence and resilience among boys; (Pearson's r = 0/433, p ≤ 0/001). The correlation coefficient of life orientation and resilience scores among all students is also meaningful and therefore it is confirmed that there is a meaningful relation between spiritual intelligence and resilience; (Pearson's r = 0/518, p ≤ 0/001). With due

attention to the meaningfulness of correlation of life orientation and resilience among girls, the hypothesis number eight is also confirmed saying that there is a meaningful relation between spiritual intelligence and resilience among girls; (Pearson's r = 0/480, p ≤ 0/001). In boys group , this coefficient is also meaningful; (Pearson's r = 0/426, p ≤ 0/001) , and therefore the meaningfulness of relation between spiritual intelligence and resilience among girls is confirmed.

Afterwards, the state of relation between spiritual intelligence with life orientation and resilience was studied simultaneously through regression. Life orientation as predictor variable and resilience as criterion variable were analyzed again in regression equation.

Table 3: Summary of Life Orientation and Resilience regression model on Spiritual Intelligence and Resilience regression on Life Orientation

Variable	t*	β	SE	R^2	F
Life Orientation/Model : Spiritual Intelligence/Regression					
Girls	4.705	0.405	0.018	0.164	22.133
Boys	1.986**	0.168	0.015	0.028	3.943**
Total	8.184	0.459	0.059	0.211	66.983
Index: ** p≤ 0.05 p≤ 0.001					
Resilience/Model : Spiritual Intelligence /Regression					
Girls	6.094	0.497	0.079	0.247	37.135
Boys	5.583	0.433	0.088	0.188	31.173
Total	4.403	0.268	0.015	0.072	19.389
Index: *p≤ 0.001					

Resilience/Model : Life Orientation/Regression				
Girls	5.818	0.48	0.379	0.230	33.844
Boys	5.474	0.426	0.487	0.182	29.969
Total	9.595	0.518	0.239	0.268	92.07
Index: *$p \leq 0.001$				

The findings Table 3 showed (F=66/983, p ≤0/001) that spiritual intelligence is predictor of life orientation among all students and can predict %21 of its variations (r^2 =0.211). Therefore it is confirmed that spiritual intelligence is predictor of resilience. Spiritual intelligence is also predictor of life orientation among girls; (F = 22.133 , p ≤ 0.001) and can predicts %16 of its variations(r^2 =0.168). Therefore it is confirmed that spiritual intelligence is

predictor of resilience among girls. The twelfth hypothesis based on this fact that spiritual intelligence is predictor of life orientation among boys is confirmed and (F = 3.943, p ≤ 0.05) showed that it can predict %2 of variations(r^2 = 0.028).

Regression coefficient of all students' spiritual intelligence and resilience scores showed that the spiritual intelligence is predictor of resilience; (F = 19.389, p ≤ 0.001) and can predict %7 of its variation(r^2 = 0.072). In girls group (F = 37.135, p ≤ 0.001) , the spiritual intelligence is also predictor of resilience and can predict %24 of its variations(r^2 = 0.247). Meanwhile, spiritual intelligence is predictor of boys' resilience; (F = 31.173, p ≤ 0.001) and can predict %18 of its variations (r^2 = 0.247).

Concerning life orientation and resilience, the findings show that orientation is predictor of resilience; (F=92.07, p ≤ 0.001) and can predict %26 of its variations(r^2 = 0.286). Life orientation is also predictor of resilience among girls(F=33.844, p≤ 0.001) and can predict %23 of its variations(r^2 =0.230). Life orientation in boys' group is also predictor of resilience; (F = 29.969, p ≤ 0.001) and can predict %18 of its variations(r^2 = 0.182).

V. DISCUSSION AND CONCLUSION

The aim of the present research was to study the role of spiritual intelligence in resilience and life orientation among students. The findings showed that spiritual intelligence has positive correlation with life orientation and resilience and can predict the variations of resilience and life orientation. The course of correlation represents that the individuals who enjoy more spiritual intelligence, have more optimistic orientation towards life and show more resilience against calamities and hardships. These individuals are also more resilient against

stresses. The results that confirm the hypotheses of the present research are explained as follows:

In the comparison that Mike (2006) has performed among high spiritually intelligent individuals and other people, it is said that individuals who have high spiritual intelligence, like to see life as a game or a chance, and try to achieve a meaning and goal in life. They are not disorganized with each change in life, and are realistic and control these changes (Mike, 2006). Thus in fact with due attention to this classification we can say that these individuals have optimistic look towards life, which is consistent with the results of the present research.

Resilience is referred to as the dynamic conformity with bitter and unpleasant experiences (Luthar, et al., 2003؛Masten, 2001). American Psychological Association has recommended a couple of ways to establish resilience, one of which is to refrain from looking to the stressful and critical events as unbearable problems and having hopeful look, being optimistic and desirous (Lamond, 2008). The findings of the present research concerning the relation of life orientation with resilience, confirms this subject. The results of the present research is also homolateral with the result of research done by (Scheier & Carver, 1992)which showed that optimism has desired effect on health and compromising behavior that helps people in coping with stressful situations . It is also in line with the research of (Nasir, 1389), showing the positive relation between resilience and optimism.

Spiritual intelligence also deals with the state of our behavior and practical decision making and what we do in today's stressful world ,interacting with people and troublesome situations. Spiritual intelligence is required in cases including the discovering and applying of our intrinsic deep resources which generates the observation capability, tolerance and adjustment ability (Amram, 2007). Thus higher spiritual intelligence is accompanied by more resilience in difficult situations. Certainly one particular factor can not determine the resilience or weak performance of an individual. It is the interaction of many factors that ultimately determines whether an individual can be resilient in coping with the difficult and unpleasant circumstance or not? (Dermid, Wadsworth, Riggs, & Edz, 2010) Researchers have proposed different classifications for these factors. Spirituality and religious beliefs (active participation in religious rituals of the

community and believing in God), are among the important factors in individual's resilience(Morales, 2007). It seems that the results of present research based on the more resilience of individuals having higher spiritual intelligence, is in line with the viewpoint of Morales. On the other hand, spiritual intelligence is necessary for understanding the meaning of events and circumstances and making the tasks meaningful. Meaning is one of the important concepts in spiritual intelligence, that is, sense of having goal and evoking it in coping with pain and suffering(Amram,2007). In addition to conformity of the results of this research with this concept, the present findings is also compatible with the results of research performed by Dehqani (1391) showing spiritual intelligence is the predictor of resilience.

Limitation, Suggestion , and Conclusion : The statistical population of the present research were students of Allameh Tabataba'i University who are studying in Humanities and probably this issue will restrict the generalization of the results of research. It is recommended that a similar research be performed on the students of other universities from different courses and also different groups of people to assess the uniformity of results.

Finally, reviewing the findings of the present research and previous researches we conclude that placing the students in an atmosphere of provoking existential questions and seeking meaning which cause the development of their spiritual intelligence, it can help optimistic orientation towards life and increasing their resilience in stressful situations. Meanwhile, promotion of optimistic viewpoint towards life,reinforces the tolerating ability and adjustment of students.

REFERENCES

1. Hill, P. C., & Hood, R. W. (1999). Measures of religiosity: Religious Education Pr.
2. West, W. (1383). Psychotherapy and Spirituality (S. Shirafkan & S. Shahidi, Trans.). Tehran: Publication of Roshd.
3. Cherian, P. (2004). Now its SQ, Retrieved from internet:www.life and work meaning and purpose.
4. Emmons, R. A. (2000). Is spirituality an intelligence? Motivation, cognition, and the psychology of ultimate concern. The International Journal for the Psychology of Religion, 10(1), 3-26.
5. King, D. B. (2008). Rethinking claims of spiritual intelligence: A definition, model, and measure: Trent University (Canada).
6. Nasel, D. (2004). Spiritual orientation in relation to spiritual intelligence: A consideration of traditional Christianity and New Age/individualistic spirituality. University of South Australia.
7. Sisk, D. (2002). Spiritual intelligence: The tenth intelligence that integrates all other intelligences. Gifted Education International, 16(3), 208-213.
8. Vaughan, F. (2002). What is spiritual intelligence? Journal of Humanistic Psychology, 42(2), 16-33.
9. Zohar, D., & Marshall, I. (2004). Spiritual capital: Wealth we can live by: Berrett-Koehler Publishers.
10. Wolman, R. (2001). Thinking with your soul: Spiritual intelligence and why it matters: Harmony.
11. Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. Health psychology, 4(3), 219.
12. Taylor, S. E., Kemeny, M. E., Reed, G. M., Bower, J. E., & Gruenewald, T. L. (2000). Psychological resources, positive illusions, and health. American Psychologist, 55(1), 99.
13. Peterson, C. (2000). The future of optimism. American Psychologist, 55(1), 44.
14. Luthar, S. S., Cicchetti, D., & Becker, B. (2003). The construct of resilience: A critical evaluation and guidelines for future work. Child Development, 71(3), 543-562.
15. Masten, A. S. (2001). Ordinary magic: Resilience processes in development. American Psychologist, 56(3), 227.
16. Garmezy, N. (1991). Resilience and vulnerability to adverse developmental outcomes associated with poverty. American Behavioral Scientist.
17. Calhoun, L. G., & Tedeschi, R. G. (1998). Beyond recovery from trauma: Implications for clinical practice and research. Journal of Social Issues, 54(2), 357-371.
18. Ingram, R. E., & Price, J. M. (2001). The role of vulnerability in understanding psychopathology.
19. Bonanno, G. A. (2005). Clarifying and Extending the Construct of Adult Resilience.
20. Richardson, G. E. (2002). The metatheory of resilience and resiliency. Journal of clinical psychology, 58(3), 307-321.
21. Olsson, C. A., Bond, L., Burns, J. M., Vella-Brodrick, D. A., & Sawyer, S. M. (2003). Adolescent resilience: A concept analysis. Journal of adolescence, 26(1), 1-11.
22. Rutter, M. (2002). Resilience concepts and findings: implications for family therapy. Journal of family therapy, 21(2), 119-144.
23. Werner, E. E. (1984). Young Children, 40(1), 68.
24. Campbell-Sills, L., Cohan, S. L., & Stein, M. B. (2006). Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. Behaviour research and therapy, 44(4), 585-599.
25. Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. Archives of general psychiatry, 52(12), 1048.
26. Charney, D. S. (2004). Psychobiological mechanisms of resilience and vulnerability: implications for successful adaptation to extreme stress. Focus, 2(3), 368.
27. Southwick, S. M., Vythilingam, M., & Charney, D. S. (2005). The Psychobiology of Depression and Resilience to Stress: Implications for Prevention and Treatment*. Annu. Rev. Clin. Psychol., 1, 255-291.
28. Zautra, A. J., Johnson, L. M., & Davis, M. C. (2005). Positive affect as a source of resilience for women in chronic pain. Journal of Consulting and Clinical Psychology, 73(2), 212.
29. Bonyanian, L. (1390). Surveying the Relation of Spiritual Intelligence with Resilience and Satisfaction of Life among the Third Grade High school Girl Pupils in Region 5 of Tehran. Unpublished counseling, Alzahra University, Tehran.
30. Hamid, N., Keikhosravani, M., Babamiri, M., & Dehqani, M. (2012). The study of the relation between mental health , spiritual intelligence and resilience among students of Kermanshah medical science university. Jentashapir student scientific quarterly, 3(2), 115-115.
31. Moallemi, S., & Raghibi, M. (2010). The comparison of spiritual intelligence and mental health in addicts and non-addicts. Yazd Shahid Sadooqi medical science and health care university magazine., 18, 1-2.
32. Mirzaee, A. (1387). The effectiveness of public health education component of spiritual intelligence third female students in Tehran 16. Unpublished counseling, Allameh University, Tehran.
33. De Souza, M., Cartwright, P., & Mcgilp, E. J. (2004). The perceptions of young people who live in a regional city in Australia of their spiritual well being: implications for education. Journal of Youth Studies, 7(2), 155-172.
34. Carver, C. S., & Gaines, J. G. (1987). Optimism, pessimism, and postpartum depression. Cognitive therapy and Research, 11(4), 449-462.
35. Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. Cognitive therapy and Research, 16(2), 201-228.
36. Brebner, J., Donaldson, J., Kirby, N., & Ward, L. (1995). Relationships between happiness and personality. Personality and Individual Differences, 19(2), 251-258.

37. Nasir, M. (1389). Relation of Strategies of Coping with Stress and Resilience with Optimism in High School Students of Dezful City. New Findings in Psychology, 5(16), 57.

38. Khodabakhshi, M. (1385). Standardization, Reliability, and Validity of Optimism, Self Regulation, Depression Scale in the city of Esfahan. Psychological Studies, 2(5), 68.

39. Scheier, M. F., & Carver, C. S. (1993). On the power of positive thinking: The benefits of being optimistic. Current Directions in Psychological Science, 2(1), 26-30.

40. Puskar, K. R., Sereika, S. M., Lamb, J., Tusaie-Mumford, K., & McGuinness, T. (1999). Optimism and its relationship to depression, coping, anger, and life events in rural adolescents. Issues in Mental Health Nursing, 20(2), 115-130.

41. Connor, K. M., Davidson, J. R. T., & Lee, L. C. (2003). Spirituality, resilience, and anger in survivors of violent trauma: A community survey. Journal of traumatic stress, 16(5), 487-494.

42. Kordmyrzanykvzadh, E. (1387). Algvyaby bio - psycho - spiritual substance dependent people and evaluating interventions to promote resilience ¬ narrative based on cognitive psychology and other Msbtn. Allameh Tabatabai University., Tehran.

43. Mike, G. (2006). How intelligent are you realy?From IQ to SQ to EQ with a little intuit. Training & Management Development Methods, 20(4), 4-25.

44. Lamond, C. A. (2008). Measurment and predictors of resilience among community- dowelling older women. Journal of psychiatric research, 43(20), 148-154.

45. Amram, Y. (2007). The seven dimensions of spiritual intelligence: An ecumenical grounded theory. Paper presented at the 115th Annual Conference of the American Psychological Association, San Francisco, CA.

46. Dermid, M., Wadsworth, S. M., Riggs, R. D., & Edz. (2010). Risk and resilience in U.S military families New York. Springer.

47. Morales, M. (2007). Approaches based on resilience. Dossier de Synthese Documentaire. Centre National de la Recherche Scientifique

Assessment of male and female university students' learning styles and academic performance

Maryam. Najafi moghadamnejhad, Rahmatollah. Kharazmi rahimabadi, Fahime. Aryan

Abstract—One of the factors affecting learning among students and their learning styles. People proportion to their individual differences, learning styles and methods as other skills, of through experience and learning gain. Objective: Therefore, in this study, students' learning styles and academic performance of male and female university students who were using these styles.

Methods: The study included 1800 male and female students of different fields of Sistan and Baluchestan. The stratified proportional sampling were chosen cognitive style Kolb, Rogers self concept test, Raven's Progressive Matrices and Motivation Strategies for Learning Questionnaire completed. In the present study, the chi-square test to analyze the data - both are used.

Results: ANOVA showed that there is a relationship between students' learning styles and academic disciplines. The test results show that there is a significant difference between male and female students' learning styles.

Results are said to be factors in the academic achievement of students learning styles.Important results can be used to study and learn better how students learn better and deeper in the contract and they helped build.

Keywords—learning styles, motivational strategies, different academic disciplines.

I. INTRODUCTION

Compliance with these criteria for the important fact that it is all exciting developments in the world born of human learning. Human

More your merits acquired through of learning. Intellectual growth through of learning and mental abilities he will actualize. So it can be concluded that all human progress is achieved as a result of learning (Bahram Zadeh, 1994).Kolb and Fry's and Piaget's theories of learning styles is rooted in Guilford. Guilford convergent and divergent thinking in general is divided into two categories. Piaget also ponder how the mind works in two ways to absorb and adapt classification. Kolb and Fry, inspired by the theory of the four of learning styles diverging, converging, assimilating and accommodating set (Seif, 1997).

Huvehn (1995) has called learning styles, beliefs, preferences, and behaviors that are used by individuals to assist their learning in a particular situation, it is said (Quoting Seif, 1999).

In general, learning style is:

The set of properties in which the whole is greater than its parts,Learning style is a gestalt of the internal and external operations of the biology of the nervous differentiation and development of the individual personality combine together and form reflects behavior (Kief and Ferrell 1990.)Therefore learning styles, the pervasive trend is related to the specific learning methods.

Learning style as a factor influencing learning is assumed that it refers to the way students learn. Pierce's learning style as the way that students learn their course material definition is preferred over other methods (Seif, 2000).

In dealing with different learners must accept that every one of them possible with a particular style of learning assignments and learning to paying different issues. So that it may help some learners may need to learn when reading a text, it is better to pay attention to important points. Ignore less important details and in some situations, an organization may be undetected, they learn to feel better and clearer guidelines and step-need (Ahmadi, 1376).

Various researches have been done about learning styles, including Dunn, Beaudry and Klaus's own research has shown that students learn better when they are studied in situ and through the Psndshan (quoting Rezaei, 1999).

Turnz (1986) in their study showed that most intelligent students in learning content, learning styles, use absorbent. They are very strong in devising theoretical models and mathematical sciences and abstract concepts are often attracted to these people prefer to learn alone and in silence (Amamypur, 2001).

On the one hand Corey says that there are three types of views on style. Visions that relate to methods for simulating the perception of environmental information are visions that relate to methods for simulating the perception of information are independent of the rest of the views that are related to teaching methods (Curie , 1 990).

People also differ in capabilities and strategies. Abilities, or competencies are variables while enabling style or trend variables in addition to the functional capabilities of a polar orientation are worth. This means that high levels of ability are preferred over lower amounts and a Antbaqyand. Some cognitive control, as well as conceptual distinction unipolar or limited control to the control value orientation are flexible (vali nejad, 2000).

Strategies Cognitive Styles or mental behaviors that are regularly used by the person to solve the problem. On the one hand quirks, which are continuous potential changes from person to person. For example, IQ, and working memory (Aghdam, 2003).

The results indicate that individuals differ in how close to the experimental tasks, but this variability is a reflection of intelligence or abilities, spatial structures are (Vylrmn, 1979, and quoted Wole Folk 1995).

Styles also have different capabilities and strategies. Abilities, or competencies are variables while enabling Styles or trend variables in addition to the functional capabilities of a polar orientation are worth. This means that large quantities ability are preferred over lower amounts and are highly adaptive. Some cognitive control, as well as conceptual distinction unipolar or value orientation have limited control to the control flexibility.

Kornbakh and Snow (1997) argue that cognitive styles can not logically (or whether they are meant to methodology) was distinctive character or ability.

The differences two sexes in academic achievement can be said women are superior to continuous achievement of boys. Usually girls are superior to boys in education and social science courses in subjects such as mathematics lead boys, more than girls, although the difference is not large (Ghafuri, 1997, Shahryari quoted).

Cognitive styles between mental abilities and personality traits are often indicates the thinking styles are also affected and, in turn, affect other cognitive abilities. Cognitive styles in the organization and control attention, impulses, thoughts and behavior, and the bridge between dimensions revealing cognitive, emotional and social functions they use to (vali nejad, 2000).

Therefore, this research study was to identify the impact of student learning styles on academic progress students make use of these styles are discussed.

Methods:

Participants: The study sample included 1800 male and female students in different fields of the province were selected using proportional stratified sampling. The questionnaires were fully completed.

Research Tools:

In the present study four types of measuring tools to gather data Kolb, Rodgers, Raven and motivational components were used.

1 - Cognitive Style Questionnaire (convergence, divergence, assimilation and accommodation) Kolb:

Cognitive Style Questionnaire ,This questionnaire consists of 12 questions in the context of the questionnaire. Scoring method, the method of calculating the learning styles questionnaire should be noted that each of the four modes of learning namely, a combination of concrete experience (CE) and reflective observation (AE) abstract conceptualization (RO) and active experimentation (AC). Thus, they are useful for determining the type of learning style. The sum of these four twelve questions, which come in four grades four and four represent the individual's learning style and learning style highlights. Kolb (1985), Cognitive Styles Questionnaire LSI reliability coefficient is reported as follows.

Cronbach's alpha coefficient: 0/82 (CE) concrete experience, 0/73 (RO) reflective observation, 0/83 (AC) abstract conceptualization, 0/78 (AE) active experimentation, 0/88 AC-CE concrete experience - conceptualizing abstract Ms. Husseini Lorgany (1998) cognitive style Questionnaire coefficient translated form Kolb has been reported as follows:

68/0 (CE)64/0 (RO) 76/0 (AC) 73/0 (AE)
2) Rogers self concept test:

Rogers test was used to assess students' self-concept variables. This test is composed of 50 adjectives that participants should be based on the terms of their characteristic How does each of grades 7-1 to their numeric order, and finally Total is the self-concept, which represent the rate individual. In Iran test standardization and validity of this test va0/ 80 and /068 is reported. In the present study, Cronbach's alpha reliability test using 0/73 respectively.

3) Raven's Progressive Matrices test:

Raven intelligence test, Raven's IQ test to measure students' IQ variables were used. This is a test of basic secondary education in the schools has been implemented. Therefore, in this research this test was performed only in grade I and II schools. Levels of reliability and validity of this test,0/ 85 and 0/76 has been reported. The rate of this test in the present study using Cronbach's alpha to 0/78 respectively.

4) Motivation Strategies for Learning Questionnaire:

Motivational Strategies for Learning Questionnaire for the evaluation of students' motivation and learning strategies and cognitive methods. Various provisions of the scale by Aklz (1983), Harter 's (1981) and Aynstayn, Shalt and Palmer (1987) Adaptation and built. Motivational Strategies for Learning scale contains 44 articles and is composed of five subscales. Scoring, this index includes descriptive phrases that the Likert scoring 25 and 37 of the Articles 41 and 42 are reverse scored and the remaining items are scored directly.

Reliability: Aklz (1983) and Shank (1981) self-efficacy, internal consistency for the 89/0 were reported.

In research Rafieian(2000) Self-Efficacy subscale reliability through Cronbach's alpha and split half methods were 0/81 and 0/80is achieved. Aklz (1983) and Harter 's (1981) alpha coefficient values of the endogenous 0/87have reported. In research Rafieian

(2000) for the subscales using Cronbach's alpha values of endogenous and split half reliability coefficients were/0 77and 0/74, respectively. The Liberty and Morris (1967) study, internal consistency, test anxiety scale 0/75have reported. In the research M (1379) Test Anxiety subscale reliability obtained by Cronbach's alpha and split half methods were 0/72 and 0/56.

Rating: In research Rafieian(2000) Motivation Strategies for Learning Questionnaire correlated with other variables in research. Between test anxiety and anxiety subscales (Abolqasemi et al, 1996) between 0/64 has been reported. Between self-efficacy subscale of the Self-Efficacy Scale Scherrer et al (1982) Correlation 46/0 is obtained (Kyamrsy, 2003).

- There is a significant relationship between students' learning styles of different students.

Table 1 - Testing the relationship between learning styles of different students' academic

Learning Styles				Field of Study
accommodator	Conver gent	assimilatio n	divergent	
27	34	53	273	Educational Sciences
33	40	202	78	Medical of Nursing
29	173	51	45	Basic Sciences
90	117	51	28	Engineerin g and Technology
136	64	87	48	The associate Dabiri
315	428	444	472	Total

000

x^2=878/42   df=12   Sig =0/

- There is a significant difference between male and female students' learning styles.

Table 2 - Summary of t-test results for male and female students

Significant	F	Mean square	Degre es of freedom	Square	Source of variation
0/04	7 /7 2	17/07	3	51/22	Betwe en-group
		6/15	1655	10190/87	Interna l group
			1658	10242/09	Total

F-test results indicate that there is a significant difference in students' learning styles and academic achievement(P< 0/005 and F=2/77).

II. CONCLUSION

The aim of the present study to evaluate the students' learning styles and academic performance of male and female university students. According to the results of this research it was observed that there is a significant relationship between students' learning styles of different students. These findings correlated with the findings of other researchers that are aligned with academic learning styles of different students (Lorgany, 1998, Rezaei, 1999).

The results of this study showed that there is a significant difference between male and female students' learning styles. These findings with the findings of other researchers that there is a significant difference between male and female students' learning styles, are aligned (Research Hykson et al, 1996, Lorgany, 1998).

The results of this study showed that there is a significant difference in students' learning styles and disciplines. The results indicate that educational science, there is a significant correlation between students' learning styles of boys and girls. As most students of educational science are divergent learning styles. Degree in Engineering and is a significant difference between learning styles of students, such that most boys are converging learning style.

Therefore, we conclude that the factors influencing the academic achievement of students learning styles Important results can be used to study and learn better how students learn better and deeper in the contract and they helped build.

REFERENCES

[1] Ali Aghdam, A.. (2000,2003). Evaluate the impact of cognitive strategies (elements of personal constructs - by - Target) on perceived competence and academic performance in school. MA thesis. Faculty of Psychology and Educational Sciences, University of Tabriz.
[2] Ahmadi, S. A. (1997). Young adolescent psychology, Tehran, Press torch, Sixth Edition.
[3] Amamypur, SA. (2001). Developments in thinking styles and its relationship to students' creativity and achievement. PhD thesis, Islamic Azad University, Science and Research Branch of Tehran.
[4] B. M., awesome God. (1994). Family relationships and academic performance in KAZERUN. MA thesis. Faculty of Psychology and Educational Sciences at Tehran University.
[5] Hosseini Lorgany, Mary. (1998). Comparing learning styles of master and doctoral students, male and female, strong and weak three courses Education, Medical and Technical - Engineering at Tehran University. MA thesis. Allameh Tabatabai University.
[6] Rezaei, A.. (1999). Comparison of learning style (field-dependent and field Nabsth) education and educational science and math students at Tehran University. MA thesis. Allameh Tabatabai University.
[7] Saif, AA. (1999, 2000). Educational psychology (Psychology of Learning and Teaching). Tehran. Informed Publishing.
[8] Ghafoory, M.. (1997). The relationship between achievement motivation, locus of control, creativity and achievement in junior high school students in Tabriz new system. MA thesis. Faculty of Psychology and Educational Sciences, University of Tabriz.
[9] Hickson , J. and Baltimore, M. (1996). Gender, related learning styles putterns of middle school pupils, school psychology. International, 20, 59-70.

[10] Hohn, R. L. (1995). Classroom learning and teaching, Boston - Longman.

[11] Keefe, J. W. & Ferrell, B. G. (1990). Developing a defensible learning style paradigm. Educational leadership, Vol. 2. P. 57 - 61.

[12] valy nejad, Y.. (2000). The relationship between cognitive style and learning strategies, self-context and context Nabsth - given order and third-year students' math performance Chayparh region. (Master's thesis). Faculty of Psychology and Educational Sciences, University of Tabriz.

The study of sustainability indicators in the countries of the polluted cities of the world compared to countries with high per capita income

Leyla Meshkani
MSC in Geography and Urban Planning
University of martyr Beheshti

Abstract

Due to increase in the economic activities , cities have ended up in evacuating the environmental resources and the increased pollution of the earth which is the most crucial factor to affect environmental imbalances . Of these most important pollutions which has a main role in the rise of the earth temperature is air pollution . What matters is the relationship between pollution and the economic , social , and environmental development . The present paper deals with the study of the substantial indicators in the countries having the most polluted cities in the world. Three basic indicators , namely economic , social , and environmental developments taken from the variables within reach are studied. This survey is taken in comparison with the countries that contain .the highest national gross income per capita . The population under study includes countries with 50 world polluted cities marked by the World Health Organization as first rank in pollution in 2014 and countries which have high national income. To this organization , the pollution index is the appearance of 10 micrometers or less particles suspended in the air. The data is gathered through library study and the updated in formations are from the sites of Word Health Organizations , the International Agency of Environmental Protection , World Bank , and the Guinness Book of Records. The results indicate a substantial deep gap between countries containing the polluted cities and countries with the highest word income per capita. The negative correlation between the amount of pollution and sustainability rate in the polluted. countries of the world is indicative of lacking a smart development compatible with the countries environmental conditions.

Keywords— economic development**,** national income, pollution , substantial development

Introduction:

Environmental change as a result of increasing development of peoples living environments of which city and urbanism are the most preeminent is an inevitable thing. What has worried human societies is to develop and   demolish synonymously . Therefore , in   the environmental planning researchers view something that matters is not only keeping the environment intact to protect it but also minimizing the resulting harm of development . Anomalous development of urban areas regardless of substantial development factors and reasonable use technology corresponding physical environment is a phenomenon which has made the environmental balances unstable and provided a path for the balance to take a step in retrograde. Of the most important environmental harms caused by the imbalanced development of societies is the world ecosystem pollution and its most important one is air pollution which traces back to the early activities of human being when fuel and fire became known . However , industry and industrial age are undoubtedly the major causes that intensify this pollution.

Different aspects of pollution have been considered important in different periods of time . In small - scale , the local pollutions which have the impacts of simple harassments to dangerous and chronic diseases and in global – scale , issues like damage to ozone layer , acid rains and the earth warming are discussed . The cause of air pollution in the early of industrial revolution has mainly been industries and coal fuel and intra city transportation is responsible for the air pollution in the cities in twentieth and twenty first centuries (Ghiyasedin,2006) . In 1661 , John Uleen offered solutions for reducing air pollution in a 1772 published brochure named Fumi Fujum. Many of these solution are still utilized . The pollution issues and problems in periods of industrial revolution , the beginning of twentieth century until 1925 and from 1925 on have been different .

In the time of 1925 on , the world has noticed some main incidents of air pollution . Like the incidents of Muze Valley of Belgium and October 31st 1948 in Dotora , Penn Sylvania , U.S.A , the event of December 5th to 9th 1952 in London is one of the most famous and deplorable event of air pollution during when over 4000 people death of air pollution has

been reported. These incidents and the like in New York , Los Angeles , Puzarika in Mexico et cetera led to enacting some laws , regulations and
Standards . (Ghiyasedin,2006)

With the study of 2014 statistics of world Health Organization about the world polluted cities , the most polluted cities of the World particularly the first 50 polluted cities of the world are all in developing countries with the weak sustainability indicators. Regarding population , over 3 billions of the world population are In this geographical area. (The countries of the world polluted cities). Geographical bounds of these areas include Middle East and Southeast Asia .

What researchers have in their minds is the correlation between unplanned development with the environmental pollutions including air pollution . The present research also focuses on the polluted societies and their sustainability indicators. The pertinent results reveal high correlation between the lack of development especially inaccessibility of substantial development with the rate of pollution .

Literature Review
Sustainability
Since the middle of 1980s and following Brunt Lend report , the term " substantial development " is raised as a new approach of development in different communities (Bake.susan& et al ,2005)The rest of this process linked with Rio conference in 1992 which was focused on the environmental problems caused by the close relationships with the economic and social conditions of the countries. In the conference , three main topics in substantial development were discussed and the same priority were given to three dimensions i.e. environment , economy , and society. (BRANDO & Lombardi,2005)

According to Rio announcement , human is in the focus and in coordination with nature s/he deserves a life linked with health and productivity. Development is a right that must equally cover the present and future generations and environmental protection is an integral part of development. (un,1999)

Of the most important major strategies of substantial development theory one can mention the following :

1. The optimal use of natural resources and increasing the efficiency of their use
2. Recycling the manufactured wastes and reducing pollutants
3. Keeping priority in meeting the early needs of people and local societies.
4. Ensuring the establishment of intergenerational justice. (Sharze& & Majed,2012)

Mean while , one of the most crucial issues which policy makers are faced with is to clarify and set the relation of development with assets and natural resources. Nature on one hand provides the necessary energy and resources for production ,consumption ,and consequently achieving desirability and on the other hand by absorbing , purifying or storing pollution and residues saves human from the undesirable consequences resulting from rise in pollution. Although at least some policy makers may still have such attitude to nature , in fact after planning the idea of growth limitation , the impressive change have been taken place in this
area. In reality (Sharze& Mohaghegh,2012) , the belief is that the growing population needs are the destructive cause of environment ;the major purpose to design such hypothesis is the limitation of absorption capability of environment . (Asafo& Ajayee,2006)

Thus , based on the given definitions of substantial development , ne can catch two main concepts of substantial development .
a)"need" , particularly the basic needs of the poor in society who must be given more priority .

b)"limitation " , it in the form of using compatible technology , is for keeping environmental resources for future generations. (Purvis& Graingerm,2004)
The thing which is taken from the experiences of developed countries is irresponsible emphasis on industry section which endangers the substantial development seriously. Therefore , a kind of interrelationship is seen particularly at the outset of the industrialization of societies through destroying their environment . Following the rise in the present correlation between industrialization and pollution especially the unleashed industrial activity for filling up the void of societies regarding development, recently some serious studies have been taken up on finding the cause of environment ruin. The issue is debated in the article on air pollution and its effective elements written by Zahra Nasr- Allahi and Marzieh Ghaffari Goolak (1389) . Besides studying pollution and its causes , the aforesaid article concludes that pollution is a positive function of energy consumption , the amount of industrial activities , and the bulk of physical assets and also a negative function of labor force exploitation , labor cost , fossil fuel price , and the intensity of manpower skill. In the paper under the heading of " the impact of economic growth on air pollution " (1386) by Dr. Jamshid Pajooyan and Niloofar Morad Hasel , the same results were achieved in a way that the article of economic growth impact has verified the effect of city population , environmental laws , cars number and degree of economic openness on the amount of pollution in air . The findings confirm setting up Kuzentes environmental curve in the countries under study .

One of the urban sustainibility needs is the city sufficient financial resources. The major distinctive feature of these resources is their capability to stand and continue with no danger to substantial development of the city . Such view has been put forward in a paper by Gholam Ali Sharze'I and

Vahid Majed (1390) with the heading of " how to provide financial resources for substantial development of the city". In this article , besides dealing with the causes of city halls inability in giving public civil services , the authors have touched on the concepts of urban substantial development and constant incomes. Then the municipalities sources of income have been studied from the view of sustainibility. The posed results in this article describe the provision of municipalities income of the impermanent sources. In fact, the focus on impermanent incomes such as density sale taxes , constructive violations taxes , and the crimes of hundredth article have raised their share in total incomes . This can escalate the city impermanence.

Air Pollution

1. According to World Health Organization (WHO) definition , air pollution is attributed to indoor or outdoor pollution of the environment which is occurred through one of the chemical , physical, or biological factors that are caused by things like home combustion engine , motorized means of transportation , industrial equipments , and forest fire. These are the common sources of air pollution and change the natural characteristics of atmosphere. The most worrisome pollutants of WHO include suspended particles , carbon mono oxide, ozone , nitrogen dioxide , and sulfur dioxide.(www.who.int)

The first air pollutants have probably been of the natural origin. Soot , malodorous fume , ashes , rising gases of volcanoes , forests fire , resulting dust of storms in dry areas , and the pollutions due to natural resources do not usually make serious problems for animals life or human belongings whereas the human activities cause such difficulties in pollution regard that apprehensively make some parts of earth atmosphere a harmful environment for human health. Air pollution is the fourth cause of mortality. Concerning air pollution in April 2014 , Dr. Hu , the director general of Family , Child , and Women Health in WHO said that many of the city centers in the world are excessively surrounded in polluted , dirty air in a way that their skies are not visible (Bakhshi Khaniki,2012). This air is dangerous to breathe. Hence many cities and their communities are trying to improve meeting their own residents needs especially children and the elderly. Mr. Hu considers air pollution in charge of 36 million deaths under the age of 60 in 2012. (www.who.int)

WHO estimates air pollution with PM10 index (the existence of 10 microns or more suspended particles) . Based on this , it annually offers the data of air pollution of the world cities . With regard to the data of 2011 to 2012 , Mediterranean east cities with low income compose the most air pollution producers. Southeast Asia is on the second rank of pollution. Table 1 represents the amount of air pollution among countries of the world.
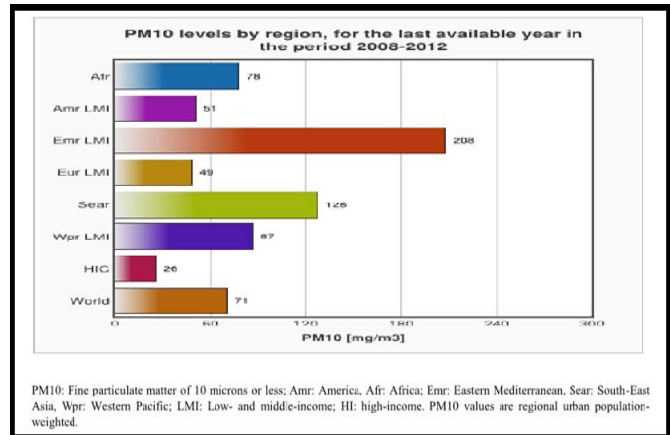

Figure 1 shows the average PM10 from urban areas in the world in 1600 and 91 countries in 2011 and 2012 based ug / m3 71's. (World Health Organization)

Geographical Location of World Polluted Cities

Through figuring the amount of air pollution in 1600 cities of the world , WHO has specified the most polluted and the cleanest cities of the world in 2014. It is not possible to study all polluted cities of the world in this paper. Thus , 50 cities have been chosen , those which take higher ranks in the pollution ranking of WHO. Geographical location of the cities are shown in table 1.

Since considering the development indicators in the cities of the world is a very hard work , the countries in which these cities are located are studied and the statistics of countries of these cities are noted. To see the development indexes in these areas , their indicators are compared with the countries which have high substantial development in the World Bank illustration .
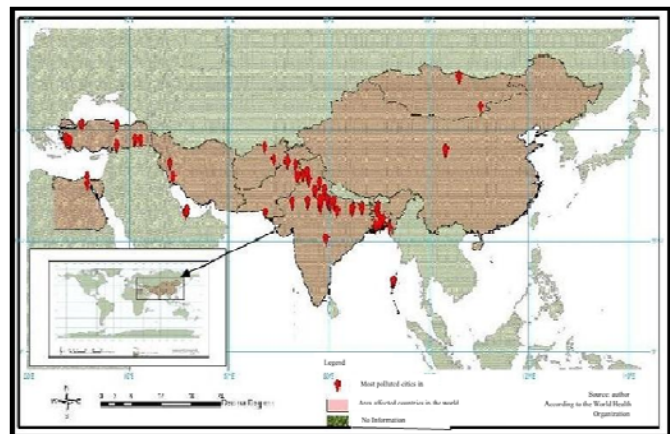
Map No. 1 geographic area polluted cities in the world (Source: author)

Methodology

The current study is descriptive – analytical. The relative data is gathered in the form of document and library studies and by internet tools. It needs to be said that the data on communities development and their indexes was so much that sounded impossible to study in this short paper. Therefore, the paper is limited to some accessible indicators of societies development and the other indexes and variables are overlooked. Because the data was unlike , the effort is made by different criteria to do development ranking in each of societies by hierarchical analyses. This matter became feasible by EXPERT CHOISE software . The population consists of the countries in that 50 first polluted cities of the world are located and countries which own high national income per capita.

Findings

A binary comparative method by Thomas Al Sa'ati (1980) is offered in terms of the analytic hierarchical Process (ahp). The method includes binary comparison to make a proportional matrix which has an input in form of binary comparison and produces the proportional values as an output.(Ghodsipor,2003)

The process of analytic hierarchy begins with determining and prioritizing the decision making elements. These elements consist of the goals , criterions or features , and possible alternatives which are applied in prioritizing. The process of determining elements and the relationship between them that leads to creation of a hierarchical structure is called Hierarchical Construction (Zebardast,2001). The present paper aims at studying the sustainable development based on extracting economic, social, and environmental indexes out of at hand variables from the chosen countries with regard to the report of the World Bank , WHO , and the Guinness Book. Table 2 illustrates the conceptual model of sustainable development between chosen countries.

Fig 2 Conceptual model of sustainable development in selected countries (source: author)
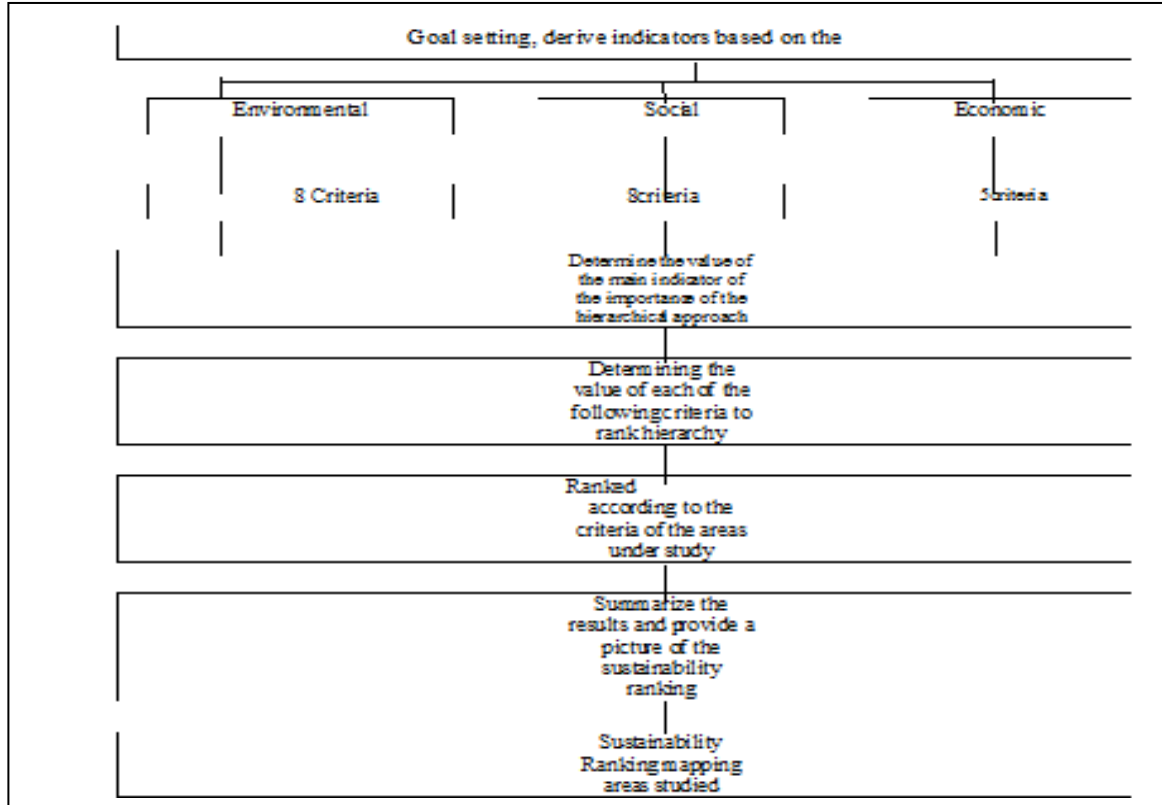

Table 1 Comparison of test variables and options

	Northern Europe	Western Europe	North America	Australia	Contaminated countries in the world	Russia
Population	0.256	0.120	0.057	0.4	0.028	0.139
Life Expectancy	0.178	0.247	0.198	0.313	0.032	0.032
Population growth rate	0.255	0.219	0.111	0.045	0.067	0.304
Using the Internet	0.294	0.199	0.255	0.182	0.024	0.045
Gender equality	0.266	0.139	0.173	0.263	0.023	0.136
Urbanization	0.103	0.163	0.227	0.355	0.020	0.133
Literacy	0.213	0.197	0.188	0.135	0.034	0.233
Reproduction	0.185	0.233	0.184	0.107	0.071	0.221
The average gross national income	0.222	0.302	0.194	0.183	0.049	0.05
Unemployment	0.087	0.264	0.212	0.236	0.094	0.0108
Labor productivity	0.190	0.226	0.266	0.229	0.040	0.05
Inflation	0.111	0.285	0.246	0.095	0.036	0.227
Economic growth	0.095	0.149	0.169	0.090	0.264	0.233
Greenhouse Gases	0.260	0.181	0.118	0.297	0.062	0.082
Energy generated in urban	0.252	0.241	0.136	0.183	0.117	0.071
Water Quality	0.198	0.288	0.156	0.288	0.039	0.031
Endangered Species	0.312	0.248	0.070	0.066	0.145	0.159
Environmental Protection	0.168	0.231	0.161	0.314	0.045	0.081

Source: author

Following the determination of conceptual framework , the most important part of the analysis of hierarchical structure is to turn the subject into an understandable structure to the human brain namely , making the hierarchical tree of goal , criterions , sub criterions , and alternatives. In this study , three purpose levels (substantial development) are introduced with the economic , social , and environmental criteria , each is made of variables. The entry condition of variables is their availability regarding the countries under investigation.

To set the significance of indexes , criteria and sub criteria are compared two by two. Setting the value of each criterion and sub criterion in comparison with each other is carried out based on the purpose and by the group of experts. For binary comparison of criterions and quantities , Sa'ati's quantity is usually used for comparing. The said prioritizing is carried out by the use of research purpose.

The significance index of data is estimated based on the table of Sa'ati's quantity . For this end , EXPERT CHOICE software is used. At first , regarding the purpose the criteria were set in twos and the proportional value of each criterion was measured. In the next step , the alternatives were compared in twos and proportional value of each alternative was defined

The finding results are given in Table 1. Looking at Table 1 and according to Chart 3 , the substantial development of Western Europe is with the ratio of 0.230 , Northern Europe , 0.206 , Australia , 0.203 , United States , 0.164 , Russia , 0. 126 , and the world polluted countries with proportion of 0.072. The adaptation percentage is 0.04. As a result , the adaptation of alternatives with purpose of substantial development is acceptable.
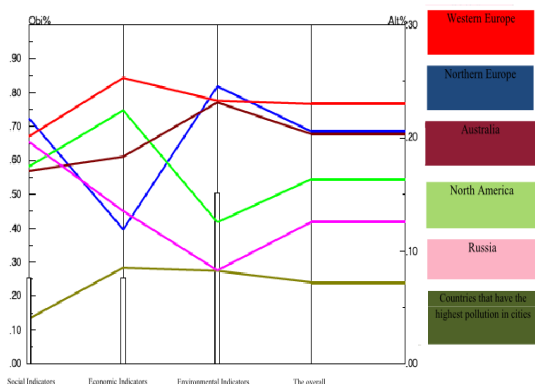

Figure 3 Stability in selected countries (source: author)

Results

In reality , time has not been passed a lot since the report of earth conference in Rio de Janeiro. The conference made nations follow the principles known as substantial development so that environment protection finds its own

place in the power structures. Disruption of substantial , mutual relations between human and nature due to human special socialization , leaning toward consumption , and human growing industrial production have attracted the nations and societies to the needs of upcoming generation. Meanwhile, countries have taken some steps toward improving the operation of their own environmental conditions along with industrial development. Despite such global attentions to the development joined with keeping the reciprocal relationship between nature and human , some countries still have not found any way to fill up their void of development except to develop industry in its unleashed way. Having this viewpoint, this research studies substantial dimensions among chosen countries. The results demonstrate an increasing gap of sustainability between the polluted countries of the world which are all in the limits of countries that have newly stepped in the path economic development with countries that after passing the industrial period have set foot in the new step of development. Countries having high economic per capita income as compared with polluted countries of the world have higher ranks in the criteria of development whether economic, social , or environmental. Such phenomenon is indicative of high correlation between poverty and pollution with lack of development. In the current paper, Western Europe has set aside the highest amount of sustainability for itself. This area has the highest rank in the economic development and second rank in environmental development. Regarding the attention to social indexes , Northern Europe and Australia also set in the later ranks of the substantial ranking. Amid these, North America allocated the fourth rank of development to itself. This ranking is because of inattention to the environmental indexes in North America. As a matter of fact , this geographical area has the second rank of economic development among chosen countries. However, not following the environmental indexes has led to fall in the place of sustainability in this area. Between the cities of the polluted countries of the world , the lowest amount of development is related to social development. This area owns a high growth in its indexes of economic development in comparing with other sustainability indicators and it is because this area has set foot in the path of economic development. Phenomenon like this justifies the carelessness of these societies to the environment conditions.

References
[1]   Asafo,John and Ajayee,2006, Environmental Economy for Non economists , translated by Siyavash Dehghaniyan & Zakariya Faraj Zadeh , Mashhad University Publications , 2nd ed.
[2]   Bake.susan , (2005),The politics of sustainable development,Routlege,London-New York.
[3]   Bakhshi Khaniki , Gholam Reza , 2012, Environment Pollution ; Payam – e – Noor University Publications.
[4]   BRANDO,P.Sand Lombardi,p(2005),Evnluating sutainable Development in the Buit Environment. Blackwell Science Oxford.

[5] Ghiyasedin,Mansor , 2006, Master of Public Health, Ministry of Health and Medical Education, Deputy of Research and Technology, Vol I, Chapter 4, article 5, 2nd ed.

[6] Ghodsipor,hasan, 2003, The analytic hierarchy process (ahp), Amirkabir University Press, 4th ed.

[7] Purvis,M.,Graingerm.A , 2004,Exploring Sustainable Development,Geographical Perspectives,Earthscan Publications Limited First Published by Earthscan in the UK and USA.

[8] Sharze'I , Gholam Ali and Majed ,Vahid , 2012, Urban Substantial Financial Provision ; How to Provide Money for the Substantial Development of the City , Urban Management Magazine, No 27 , spring & summer , pp 299 – 316.

[9] Sharze'I , Gholam Ali and Mohaghegh,Mohsen, Winter 2012, The theory of weak and strong environmental sustainability in the context of sustainable development concept, Environmental Science Magazine, No. 2, , pp 13-34.

[10] UN(1999)(RIO DECLAATION) REPORT OF THE UNITED NATIONS CONFERENCE ON Environment Available: www.who.int

[11] Zebardast , Esfandiyar ; 2001, The Operation of Hierarchical Process in Urban and Regional Planning, Fine Arts Quarterly , No 10 , pp 13-21.

Look at the situation in Iran for Migration With an emphasis on the city of Ardabil

1 Youssef Darvishi:

PhD in Geography and Urban Planning

Member of Faculty, Payam-e-Noor University, Ardabil, Iran

phddarvishi@yahoo.com

Abstract

Rural Studies have long attracted the attention of several researchers , including sociologists, geographers lawyers were brutally executed by the criteria of the rural economy issues are viewed.

Migration from rural areas to cities in the more developed and less developed parts of the special problems created in many countries[11] Yet the question arises as to whether to provide better services and facilities to the villagers attention to the origin (rural) migration will decline or not?

After the land reform , one of the consequences of this social phenomenon Political villagers migrate to the cities , which can damage both rural and urban aspects of the physical , economic and social.This phenomenon did not affect the outcome of Ardebil Province After the Islamic Revolution , many efforts to improve rural living conditions and prevent their migration has had, in this respect, one of Ardabil city Activities out by the Office of Agriculture . Similar effects on migration trends have varied activities such as the construction of the industrial park to the immigration of a number of villages in Ardabil has helped managers who had received a license renewal would result in job creation , family . In addition, a comparison of recent trends in migration and implementation plans of villages in Ardabil The conclusion was that the village had been implemented many schemes in which they are more open immigration and villages where the project was implemented at the lower of their origin was higher .

The mean net migration to this conclusion that in all rural villages in Ardabil province has a negative net migration are Origin, that despite migration from rural agricultural employment activities , and these activities are not held to benefit the villages of all returns.

The research described in this paper is an analysis of field data collection , library , internet and questionnaires were used Methods for the analysis of data using SPSS statistical analysis and inference and reasoning has been applied

Keywords: migration , village, city , Ardabil
.

I. INTRODUCTION

Webster's first human settlements in rural agricultural activities Over time, and with the expansion of cities and rural areas since there are work opportunities in the cities , there

were drawn to the cities . On the grounds that nature is a period of declining rural , rural origin , while in turn distort the age pyramid - erotic rural population And thereby reduce the natural growth of population decline , resulting in reduced demand for services due to rural . The end result of migration from rural to urban destruction and loss of national prosperity is freedom Why the decline of the village as the decline of civilization, a civilization which guarantees citizenship law and protect the sanctity of human freedom [4] In developing countries , including Iran , migration from rural to urban areas is considered among the most important social and economic issues The migrants in origin and destination of the problems such as the occurrence of multiple disorders caused by pressure on the limited resources of urban communities , unemployment and underemployment , lack of education and living space , and environmental pollution , aging and wear .

According to the theory of selective migration, at the earliest opportunity , some people migrate and some stay on the ballot , it is not by accident

Usually immigrant background features that makes it go or stay compared with those who are different from evaluation.

Internal and external investigations about the migration from rural to urban migration is done , agree that the desire and decision to migrate depends on the age , sex and education. According to the 2006 census , the largest immigrant men and women aged 24-20 years (1,320,766 persons) , and after a number of age groups in the proportion of the age group decreased Also mentioned in the census sex ratio sex ratio of 103 immigrants from 123 countries have been reported (Statistical Center of Iran , 2006) , which shows that most migrants are males. Migration of young people from rural areas to reduce population growth , aging, and increase the dependency ratio in rural areas is increased. According to the survey by the Ministry of Economy in villages and small towns , the population growth rate is below the natural rate [8].

II. NEED FOR RESEARCH STUDY

This study is important in two respects considerable attention . 1) No choice but to fight resistance to immigration and the development of rural economy and agriculture, and is therefore not subject Study village is of utmost importance.

.1 Address :Ardabil city Hir- Member of Faculty, Payam-e-Noor University phddarvishi @ yahoo.com T: 09145985783

2) Rural migration and its complications in the convention that urbanization is a serious challenge Gallery.

III. QUESTIONS AND HYPOTHESIS

 1)whether natural factors had the greatest impact on rural migration to the city of ardabil ?
2) Is economic activities in the rural migration to urban areas is an important factor Based on the research questions based on the assumption that :
 * Natural forces in the countryside , causing them to migrate to the city of Ardabil .
 * Economic activities and development services for the city of Ardabil Infrastructure caused rural migration to the city.

IV. THEORETICAL FOUNDATIONS

IV.1 TRANSFORMATION THEORY AND DEVELOPMENT

The theory is based on the idea that rural migration evolution of the fundamental structural changes in the society. A bunch of factors that led to changes within the major changes and transformations to create the second set of factors that are deeply out of external factors lead to changes in society and change are. Scholars believe the view Controlled in developed countries due to the development of social communication , industry, media , promotion of health , education , population growth , political development , social awareness , people are looking to move in the social and political revolution. Following the developments of the global capitalist system to another stage in the development of ideas to influence the strategy of domination of the ancient techniques (military occupation) New style (Colonize economical) the thought of the third world countries investment Issued Capital parts profitable And partly through the influence of politics , economics and culture of these countries to transfer part of the surplus value of their labor exploitation of their countries These two aspects of social change comes from within as a reflection of Internal transformations imposed from outside the country , while the second is related to the development of the interests and demands of the colonial countries , the changes in the Third World more or less led profound [5]

IV.2 BENEFIT - COST THEORY

This is due to the migration of rural people benefit assessment considers migration cost This could benefit the economic , social, cultural Economic benefits could be higher income, better jobs , and so forth. Non-economic benefits could be like to live in a better place prefer , enjoy the facilities, housing facilities , and so is the other .
The benefits of immigration in that might be a major factor in the migration decision also affects the migration cost effective Transportation costs can cost The cost of travel economic opportunities for revenue lost during migration to new work Psychological costs costs such as crack houses , etc. Login entry is a strange place.
A few basic points of the theory on the impact of rural development programs on rural migration makes clear. According to this theory, the monetary costs of migration through development projects such as roads rural - urban migration rate increases Developing transport facilities. In addition to the psychological cost of such programs is to develop communication reduces migration. Rural migration increased benefits may also be And enhance the skills of rural people by providing opportunities for education, there will be the possibility that rural urban migration Simply to operate in urban occupations [3].

IV.3 Theory of expected income

The migration theory of income differences between rural town knows. If immigration authorities the view that rural villagers to reduce the income gap between rural towns to reduce In the event that a proposal to increase rural income gap between urban rural villages have a negative effect immigration.
According to this theory , the terms of the contract , the decision to migrate depends on the perception of expected income in the destination location Expected income for a rural village in the countryside is based on the rate prevailing in expected income on the probability of obtaining legal minimum wage jobs in the urban sector Based on the theory of migration from rural to urban areas will continue so long as the expected profit is the same rural town [8]

V. REVIEW AND ANALYSIS

V.1 Earth and Immigration

Economic factors, economic factors driving uptake in both studies highlight that rural unemployment , low income , low employment land or land without adequate and effective rural push factor in rural migration is seen by Land reforms in Algeria during the third stage of the third phase of land reform was carried out in the long term objective of this program was implemented in order to improve the rural environment , worthy of wasteland deal with soil erosion Promotion of livestock development, rural natural environment and ultimately achieving a socialist pattern of thousands of villages and prevent the migration of the rural agricultural (selected socio-economic issues 1983)
The largest segment of the rural landless rural migrants constitute , farmers do not have enough land available to migrate their actions [3].

V.2 History and process of rural to urban migration in Iran

Major immigration as a significant event in recorded history , and in some cases also be problematic This type of migration is largely a political , social and cultural unexpectedly suddenly attracted the attention of the mind remain .The lord and vassal (land reform in Iran before Decade 60) if the

migration was often a dozen master plans usually from village to village to village facilities and the number is increasing imbalance between rural populations established [5].

The assembly of the importable industries in most cities , especially in big cities such as Tehran , Isfahan , Tabriz, Shiraz established .Business services have grown in urban areas. The migration of rural labor in the agrarian reform and the separation of agricultural land intensified , While the first move in a little time away from the extreme poverty prevailing in the rural land reform had begun to fire and promotion of urban fueled.

While the threshold of 1 million rural land reform in 1961 had migrated to cities intervals In the first stage, the second phase of land reforms, many of the villagers had to migrate. While there are more than 55% of rural landowners have less than 2 hectares of land in the first round in 1962 before receiving Since Certainly not meet their needs over the land or sell it brief the money obtained by way cities, .

Between years (2006 to 2011), 8,718,770 people in the province to country and in this province have been displaced Previous residence (33/72%) and immigrants from other provinces (26/46 %) Census and other cities (36/58 %) had entered the city. Compared to the previous location where immigrants have census shows that over the 10 years prior to the census Persian date Aban 2006 (21/68 %) from rural to urban areas (46/%) from town to town (10/82%). [9]

Table 1 shows the percentage of immigrants and non- immigrants, people living in the home or outside in Iran

	Other cities of the province			City of residence		
Years	2011	1996	1986	2011	1375	1986
The whole country	34/3	24/46	12/1	39/39	36/57	77/8
Urban areas	37/3	27/13	21/1	40	33/33	70
Rural areas	34/4	24/89	2/5	21/61	44/22	87/5

Source : Bureau of Statistics 1365 Ayran1390

In any case it is certain that despite the campaign to keep people in the villages of rural migration continues and will continue.

VI. FINDINGS
VI -1 RURAL MIGRATION PATTERNS IN ARDABIL PROVINCE
- PERMANENT IMMIGRATION

Rural Azmhajrt refers to those who leave their rural villages and for good reasons and their families who live in cities that are And Margins In census enumeration are also among the citizens of the town deserted village in the state of agricultural activity associated with permanent leave

- Seasonal migration

Seasonal or temporary migration alongside permanent immigration can be noted that on the basis of geographic location , especially climate change, agricultural activities , usually in autumn and winter closure of rural to urban poured. And earn some income, then starts again at the beginning of the hot season agricultural activities refer to his village. In many cases, as soon as suitable jobs and higher profits these rural migrants are always in the cities will be deployed. Seasonal migrants until they become permanent immigrants and temporary displacement of rural towns will have many benefits to provide for the required human resources in rural towns of the continue to disappear.

VI -2 Motivation rural-urban migration in Ardabil

Motivation of migration from rural to urban areas in most developing countries is almost universal phenomenon , but some factors are essential. No doubt the motives of migration from rural to urban areas , especially in the province has different needs and individual interviews to examine the questionnaire in each province And observed .Such information will help to identify important factors that causes the migration The planning and implementation of development programs for the prevention of migration from rural to urban areas in the province and from one province to another province with more success is.

Some of the causes of rural-urban migration are:

A : increasing price pressure and shortage of farmland in the village of unequal distribution of land.

B : lack of employment or suitable employment in rural areas, especially for educated.

C) adverse effects of natural factors such as drought and flood in crop pests , and so on.

D: lack of income for life, and other factors.

And one of the main causes of rural -urban migration is a social factor , this factor plays an essential role in the migration of villagers.

E. Stand traditional system of village community , especially for youth social causes that may lead to migration to urban centers (The same source)

VII. DATA ANALYSIS QUESTIONNAIRE

Questionnaire designed to achieve concrete results in Ardabil and factors such as immigration agent 1) Economic factors and prosperity of .2) unemployment in rural areas 3) the relative 4) environmental factors in rural areas (such as drought and…..) The results of the questionnaire (Likert) between the three groups (scholars , rural and urban) were randomly distributed , so we consider them to be evaluated in this regard The results of the data analysis are given in the table below. According to the questionnaire data , it seemed that most migration for economic reasons , and most of the data into account. Thus, according to these figures, the data

we know that one of the challenges of rural-urban migration and economic factors (Table 2)

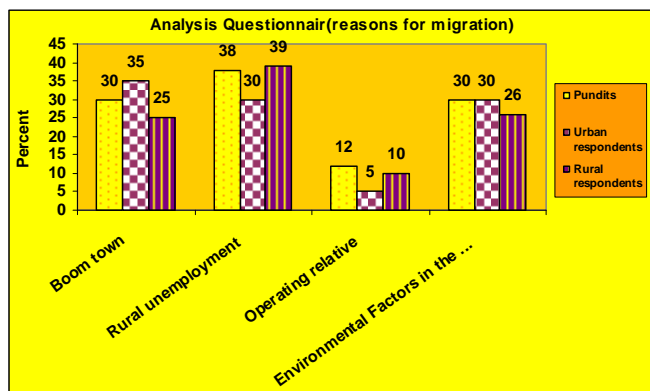Table 2 Analysis Questionnaire (Reasons for migration)

Figure 1 Analysis of data from the Likert Scale

Irregular migration village in Ardabil adverse effects of origin (rural) and immigration had left the city of Ardabil.

Negative effects of labor migration on the rural areas of Ardabil are Az 1) Of labor in the countryside. 2) Increase in rural wages 3) Agricultural depression of 4) quality workforce (through migration of educated ones) causes a migration of people from rural areas that could modernize agriculture and new procedures apply

in the Negative effects of immigration on the city of Ardabil are:1) Increased demand for facilities. 2) increasing price of land and rent. 3) reduction of wages by increasing labor supply.4)Unemployment,.5)Openmarginalization.6)Environm ental pollution

VIII. RESULTS

The objective of rural development strategies in slowing the rate of rural to urban migration Since most villagers lack adequate income And jobs or migrate, to increase employment opportunities in agriculture and non-agricultural income And increase can be expected to reduce migration from rural areas.

Ardabil province can be useful and productive service to rural areas , in addition to increasing the efficiency of human resources , Broad background to create employment opportunities and the economic status of the rural population in macroeconomic strength gave

Rural services and hence electricity , water , road , roads , rural housing , Imran is reinforced by the development of these services in some villages in rural areas of the country, of course, this service will be to reduce immigration – Rural.

This is due to rural migration in different cities in four factors: economic, employment , social and natural brush it through these four factors , economic factors and most of it has the highest rate of unemployment, rural migration in explaining. It can be said that the provision of facilities for rural areas , especially with regard to the expectations of the young generation and job creation in rural areas. May be uncontrolled influx of immigrants to the city prevented Social and cultural factors in the frequency domain representation of the migration of rural - urban are.

Although it is very difficult to categorize social and cultural factors , but certainly a lack of university centers in rural and low levels of school education , particularly in secondary schools in rural areas migrate to urban areas .

Reasons for migration	Pundits	Urban respondents	Rural respondents
Boom town	3o	35	25
Rural unemployment	38	30	39
Operating relative	12	5	10
Environmental Factors in the village (drought , etc.)	20	30	26

Among the social factors that reduce irregular migration from rural to urban areas that can be prevented, local disputes in rural areas. The aforementioned factors can even cause mass migration of the villagers , So, one way to prevent the migration of farmers to urban communities,chronic provide adequate water for the rural population.

In general we can say that the push factors of migration of rural villages - most of the other factors , especially the city 's attractions ,Contrary to popular perception that urban glamor factor in rural -urban migration sees the present study , the role of rural repulsion is known to be more decisive. It seems that the repulsion effect of rural migrants in rural towns that are attracted to urban communities rather than urban communities is impressive in itself.

Due to the above , to prevent uncontrolled migration of villagers to cities in Iran following options are available:

1) Create jobs in rural communities through non-agricultural sideline.

2) Raising educational facilities in rural communities.

 3) Provide more facilities to the villagers for the use of the arid.

 4) Reduce the false attractions of urban jobs.

  5 Constraints in urban communities to resettle people on the periphery of cities

 6) Institutions for the organization of migration flows

References

[1] .Ehtmad, Giti , migration in recent decades, Publications of the Islamic Revolution and Education,1999.

[2]   Irvani Mohamadjavad Analyze the full extent of the activities of Jihad institutionalism , Tehran , Ministry of Construction , 2006.

[3]   Jan Piteh Rural migration , Translated by Mohammad Momeni tile, Tehran : Islamic Revolution Organization and Training Publications 1390.

[4] Tgavi Nematola, Migration of rural - urban , Tabriz, publisher of Praise , First Edition , 1991.

[5] Rmzaniyan moohamad, Iran's aging population is employed in agriculture , because the consequences,Journal of Agricultural and Development Economics , 2001, No. 36 , pp 235-207

[6] Zenddel Hoseniyan, Methodology for Migration Research, Plan and Budget Organization , Deputy for Planning and Evaluation , 1981.

[7] Shadi talab , jale , Mrvrybr migration from rural to urban , Population and Human Resources Office of Planning and Budget 1988.

[8] Shfig, Masood, Seminar on development of rural infrastructure 1999.

[9]   Abdolalikhan Rural hundred years , Tehran Amir Kabir Publications , 1966.

[10] Detailed results and statistics of population and housing census , 2006.

[11]   Department of Economics, Some of the causes of labor migration in, Tehran : Ministry of Finance , Office of the Press and Information 1996.

[12]   Stephenson , R.et al. , "The impact of rural- urban migration on under-two mortality in India." Journal of Biosociology Science،2003،Vol .35,pp.15-31.

[13]   Todaro, P.M"Income expectations , ruban migration and employment in Africa." International Labour Review،1971, . Vol . 104, No.5

The Relationship between Religious Orientation, Intimacy and Marital Satisfaction

Case study: married students of Payam Noor University - Ghaemshahr

Khatun Vakili, Sahar Siahchord

1 - Faculty Member, Department of Education,Educational scinces, PayamNoor University،
Mailbox:19355-3697,Tehran,iran
2 - BA in curriculum planning
Vakili_pnu@yahoo.com

Abstract - The present study examined the relationship between religious orientation, intimacy and marital satisfaction in married male and female students of Ghaemshahr PayamNoor University. In this study, the statistical population was 2936 and for statistical sample, 300 students were selected through random sampling method. In this study, three self-assessment questionnaires were used: Allport's 45-question questionnaire for religious orientation, Exis J. Walker and Linda Thompson's 17-question Questionnaire for intimacy and Enrich's 47-question questionnaire for marital satisfaction. This survey is correlation and gathered data were analyzed by Pearson correlation and multiple regression. Findings showed no significant relationship between religious orientation and intimacy and marital satisfaction. There is a significant relationship between intimacy and marital satisfaction.

Keywords- religion, religious orientation, intimacy, marital satisfaction

I. INTRODUCTION

The family as a social system is a group of individuals who live together through marriage, reproduction and upbringing children. This social system and organization has played a vital role all over the history in order to growth, development, and socialization of mankind. Certainly, the family is the most significant organization for physical, mental and social growth of a child and the factor to achieve physical, mental and social interactions (Wood, 1996; Jafari, 1386).

Hughes and Style, among the controlled variables of quality, believe that the quality of marriage is the most powerful predictive factor for mental health in married people. Marital quality is not only important for mental health in couples but also for mental health of children and their social roles.

Even, in most of damaging psychological disorders originated from genetic factors, some traces have proved the impact of inappropriate families. Therefore, investigation of effective factors in marital satisfaction has a major role in the concept of prevention (Mollazadeh, 1372).

II. DEFINITION OF VARIABLES

A. Religious orientation: it is defined as an orientation toward religion which has two dimensions:
- *Intrinsic religious orientation*: It is a kind of religion orientation in which a believer looks at faith as a supreme value. Faith is the adhering factor to his/her religious beliefs. For such believers, it is no matter how important is non-religious needs; they are less significance than transcendental goals. As far as possible, they try to internalize religious values and follow it completely. People with such motivations live with religion (Karimifar, 1390.)
- *Extrinsic religious orientation*: those with an extrinsic religious orientation have such religious beliefs that are just going to achieve worldly goals. These kinds of people are profiteer and they use religion as a tool to meet other needs, personal safety, social welfare and social attraction. In other words, they use their religion to go toward God without forgetting themselves (Park et al., 1993).

B. Marital satisfaction: it is a state of satisfaction in marriage which as a personal aspect is a pleasant subjective experience and as an interpersonal aspect is the coordination of one's expectations with other, in the context of sex, relationship, income, decision making, leisure, and friends (Spamiz and Lewis, 1980; Abbasi korsoroudi, 1376).

C. Intimacy: intimacy establishes through bilateral relationships (with partners) where disclosure would occur. Intimate person would be described by self-awareness, true affections to others, and not being defensive in interactions with others (Gaya, 2002).

Hypothesis 1: there is a significant relationship between religious orientation and intimacy in married students.

Table 1: Pearson Correlation - The relationship between religious orientation and intimacy in students

Intimacy					variable	
N	Df	sig	CR	r		
300	298	0/097	0/195	-0/096	**extrinsic**	**Religious orientation**
	298	0/188	0/195	0/076	**intrinsic**	

The results in Table 1 shows that because the calculated correlation coefficient (r=-0/096) at 95% confidence level (degree of freedom=298), is smaller than critical correlation coefficient (0/195), so at 95% confidence level, H0 is confirmed and researcher hypothesis is rejected. Thus it can be concluded that there is no significant relationship between extrinsic religious orientation and intimacy among married students.
In investigation of the relationship between intrinsic religious orientation and intimacy, because the calculated correlation coefficient (r=0/076) at 95% confidence level

(degree of freedom=298), is smaller than critical correlation coefficient (0/195), so at 95% confidence level, H0 is confirmed and researcher hypothesis is rejected. Therefore, it can be concluded that there is no significant relationship between intrinsic religious orientation and intimacy among married students.

Hypothesis 2: there is a significant relationship between religious orientation and marital satisfaction in married students.

Table 2: Pearson Correlation - The relationship between religious orientation and marital satisfaction in students

marital satisfaction					variable	
N	Df	sig	CR	r		
300	298	0/472	0/195	0/042	**extrinsic**	**Religious orientation**
	298	0/672	0/195	0/025	**intrinsic**	

Regarding to the results in Table 2, in investigation of extrinsic religious orientation and marital satisfaction, because the calculated correlation coefficient (r=-0/42) at 95% confidence level (degree of freedom=298), is smaller than critical correlation coefficient (0/195), so at 95% confidence level, H0 is confirmed and researcher hypothesis is rejected. Thus, it can be concluded that there is no significant relationship between extrinsic religious orientation and marital satisfaction among married students.
In investigation of intrinsic religious orientation and marital satisfaction, because the calculated correlation coefficient

(r=0/025) at 95% confidence level (degree of freedom=298), is smaller than critical correlation coefficient (0/195), so at 95% confidence level, H0 is confirmed and researcher hypothesis is rejected. Thus, it can be concluded that there is no significant relationship between intrinsic religious orientation and marital satisfaction among married students.

Hypothesis3: There is a significant relationship between intimacy and marital satisfaction in married students.

Table 3: Pearson correlation - The relationship between intimacy and marital satisfaction in students

n	Df	sig	CR	R	variable
300	298	000	0/195	0/203	**intimacy**
					marital satisfaction

Regarding to the results in Table 2, in investigation of intimacy and marital satisfaction, because the calculated correlation coefficient (r=0/203) at 95% confidence level (degree of freedom=298), is smaller than critical correlation coefficient (0/195), so at 95% confidence level, H0 is rejected and researcher hypothesis is confirmed. Thus, it can be concluded that there is a significant relationship between intimacy and marital satisfaction among married students.

Hypothesis4: There is a significant relationship between religious orientation, marital satisfaction and intimacy in married students.

Table 4: analysis indexes of one-way variance (ANOVA) for investigating the significance of the regression model

R^2	R	sig	F	DF	Mean of squares (MS)	Sum of squares (SS)	The change sources	model
0/002	0/047	0/721	0/328	2	/519 300	/038 601	regression	**religious orientation**
				297	917/55	/89 272512	remained	**marital satisfaction**
				299		/93 273113	total	

*Predictor variables: intrinsic and extrinsic religious orientation; dependent variable: marital satisfaction

The results of regression analysis are presented in Table 4. These results indicate that the intrinsic and extrinsic religious orientation for marital satisfaction were not significantly different ($F_{3/02}$= 0/328; p>0/05).

Hypothesis 5: Religious orientation, intimacy and marital satisfaction among married men and women are different.

Table 5: Differences in religious orientation, intimacy and marital satisfaction for men and women

sig	Critical T	T	Standard deviation		Mean		Variable
			man	woman	man	woman	
* 0/006	/98 1	/75 2	6/89	9/59	/91 31	/60 34	**extrinsic religious orientation**
* 000	/98 1	/63 6	5/59	5/66	/68 26	/00 31	**intrinsic religious orientation**
* 000	/98 1	/38 4	12/10	/73 19	/73 103	/44 95	**intimacy**
* -0/010	/98 1	/57 -2	28/27	/51 31	/32 181	/41 172	**marital satisfaction**

DF=298, *p<0/05

According to Table 4-12, in investigation of extrinsic religious orientation and its differences in men and women, it can be expressed that as calculated "T" (T=2/75) at a confidence level of 95% (a=0/05) and with degrees of freedom (Df=298) is much more than T in critical table (T=1/98), therefore H0 is rejected and the researcher hypothesis is confirmed. So it can be stated that the extrinsic religious orientation variable is significantly different between men and women.

In investigation of intrinsic religious orientation and its differences in men and women, it can be expressed that as calculated "T" (T=6/63) at a confidence level of 95% (a=0/05) and with degrees of freedom (Df=298) is much more than T in critical table (T=1/98), therefore H0 is rejected and the researcher hypothesis is confirmed. So it can be stated that the intrinsic religious orientation variable is significantly different between men and women.

In investigation of intimacy and its differences in men and women, it can be expressed that as calculated "T" (T=4/38) at a confidence level of 95% (a=0/05) and with degrees of freedom (Df=298) is much more than T in critical table (T=1/98), therefore H0 is rejected and the researcher hypothesis is confirmed. So it can be stated that the intimacy variable is significantly different between men and women.

In investigation of marital satisfaction and its differences in men and women, it can be expressed that as calculated "T" (T=2/57) at a confidence level of 95% (a=0/05) and with degrees of freedom (DF=298) is much more than T in critical table (T=1/98), therefore H0 is rejected and the researcher hypothesis is confirmed. So it can be stated that the marital satisfaction variable is significantly different between men and women.

III. *CONCLUSION*:

The results of the hypotheses analysis show that there is no significant relationship between intrinsic and extrinsic religious orientation and marital satisfaction among married students. Also it can be concluded that there is no significant relationship between religious orientation (intrinsic and extrinsic) and intimacy among students.

Regarding to the second hypothesis, the results show that there is no significant relationship between intrinsic and extrinsic religious orientation and intimacy among married students. But there is significant relationship between marital satisfaction and intimacy among married students.

Also, there is significant relationship between intrinsic and extrinsic religious orientation, marital satisfaction and intimacy among married students.

But there is no meaningful relationship between intrinsic and extrinsic religious orientation on marital satisfaction and intimacy among married students.

Moreover, religious orientation, intimacy and marital satisfaction between married men and women are different. Results indicate that religious orientation, marital satisfaction and intimacy are significantly different between men and women.

IV. *REFERENCES*:

1. Abazari, M.; relationship between emotional attachment style, marital satisfaction and depression, Sary islamic azad university, Master dissertation, 1390

2. Ahmadi, Noodeh;, Fathi, Khodabakhsh; Ashtiani, Ali; Arab-Nia, Alireza, The relationship between religious imitation and marital compatibility, Journal of Family Studies, No. 2, Spring 1385, pp. 55-67

3. Arbaban Esfahani, Marziyeh, Ghafelekosh Kermani, Mina; the relationship between marital satisfaction in men and women in Isfahan, abstracts of Family pathology congress in Tehran, Iran, No.2, Volume 2, 1385, page 36.

4. Amiri, Robabeh; relationship between practice and religious beliefs and the level of intimacy of female students with their husbands in Tehran, Psychology Master's dissertation, University of Al-Zahra, 1384

5. Einghart, Ronald; cultural evolution in advanced industrial society, Tehran: Kavir, 1374.

6. Azerbaijani, Masoud; preparation and construction of religious orientation tests relying on Islam, Qom, Institute of Howze and university, 1384

7. Bagaruzy, Dennis; increased intimacy in marriage, translated by Hamid Atashpour and Ozra Etemadi, Isfahan, Islamic Azad University Press-Khourasgan (original publication 2000), 1384

8. Bakhshayesh, Alireza; Mortazavi, Mahnaz; The relationship between sexual satisfaction, general health and marital satisfaction, Quarterly Journal of Applied Psychology, Years 3, No. 4, 112, Winter 1387, pp. 85-73.

9. Haj Ali Akbar, Mohamadjavad (1383), Levels of love, Tehran: Islamic culture press.

10. Hoseinian, Simin; Khamseh, Akram (1387). Examine gender differences in various aspects of intimacy between married students. Quarterly journal of Women's Studies, Year 6, Number 1, Spring and Summer 1387.

11. Khodapanahi, Mohammad Karim, et al (1389). Structural relationships between social support and hope in cancer patients, Journal of Psychology, Fourth Year, No.3, pp. 298-284.

12. Rowhani, Abbas; Manavipour, Davoud (1387), the relationship between religious beliefs in practice, happiness and marital satisfaction, Knowledge and research in psychology, No. 35-36.

13. Roshani, Fatemeh (1390) Relationship between social support and intimacy in Ali Abad University, General psychology master's dissertation

14. Zamani Monfares, Afshin (1389) examine the relationship between marital needs and the ability to express oneself in a group of couples, master's dissertation, Allameh Tabatabaei University, Tehran

15. Shoari Nejad, Aliakbar (1374) Growth Psychology, Tehran: information Publication.

16. Shaghroun, Mohammad (1970) Religion in Western societies, religious Phenomenon: a subject for research.

17. Amery, Farideh (1382). Examine the impact of interventions of strategic family therapy in marital problems, PhD Psychology Thesis, Tehran University

18. Goldenberg and Ireneh (1372) Family Therapy, Translated by Siamak Naghshbandi and Hamidreza Hoseinshah Baravati, Tehran: Ravan Publication

19. Hashemi Nosrat Abad, T.ouraj (1385). Increased intimacy in marriage, translated by Hamid Atashpour and Ozra Etemadi, Isfahan, Islamic Azad University Press-Khourasgan (original publication 2000), 1384

The effect of training problem solving skill on public health and the student's self esteem

F. Rahaei, A.Bidokhti* (Corresponding Author), F. DanshZadeh, F.Namiranian

Abstract— The goal of this research is to examine the effect of training problem solving skill on public health and the students' self-esteem in which 100 people are chosen as samples from amongst the whole female students under cover by Imam Khomeini relief (aid) committee who were studying during 1390-1391 educational year. In this research Eysenck 's inventory of public health and self-esteem has been used to gather information and it has been analyzed by t-test and unilateral co-variance analysis and the result showed that training problem solving skill affects the female students' public health and self-esteem.

Keywords— problem solving skill, public health and self-esteem

I. INTRODUCTION

Today we live in a period that if the life complexities come along with living in big cities, accordingly urges specific occasions and problems that these occasions have had an accumulative effect on teens and the youths' psyche health and has increased the problems related to the psyche health between them. Fast communication, cultural phenomena, freedom and internet have increased experiences and attitudes and of course oppositions. (Proser,Mc Ardle-1992, Smear ether-1995)

Life skill training (LST) and problem solving is also a multi-component interference that which is to increase mental health and also a specific prevention which has been recognized as one of the most effective events by several scientific and research institutes such as the United States psychology council, disease prevention control center, the United States' medicine council, prevention of drug ill-usage center, and prevention of the teens' crimes.

F. R. Researcher, Semnan University of Medical Sciences, Semnan, Iran (phone: 09191325204; e-mail: rahaei.pnu@gmail.com).

A. B. PhD Student in Educational Psychology, Science and Research. (corresponding author to provide phone: 09104616753- mail: atefeh_beydokhti@yahoo.com).

F. D. Islamic Azad University psychology graduate student, (e-mail: atefeh_beydokhti@yahoo.com).

F.N. PhD Student in Educational Psychology, Science and Research (phone: 09127947392; e-mail: Faranak.namiranian@yahoo.com).

(Botvin,G.j.&.Griffin,k.w-2004)

The plans which were to improve self-esteem, assertiveness, and social consistency have made way to change behavior towards positive impacts and to create better opportunities in the process of learning new skills. The names of these plans are different from our social growth, life skills, social and emotional knowledge. The common target amongst these plans is to increase the level of social and emotional capacities of the children and not specifically for revised trainings of the children who are vulnerable; rather as a set of skills which are necessary for every child, will be taught to all the children. (Baumeister-1996)

Self-esteem theories which Maslow adds self-respect or self-esteem in the third level of hierarchy of needs which includes tendency towards sufficiency, proficiency, progress, potency, efficiency, certainty, and individual independence. Every individual feels sufficient, potent and certain when their needs are satisfied and if theirs needs aren't satisfied, they will feel runt, weak, despondent and despair.(Aghajani-1381)

Rogers has defined self-esteem as constant evaluation of an individual's nobility of himself or a kind of judgment of your existence nobility of the self. He believes that this characteristic is something general and isn't limited and temporary, based on Roger's idea, self-esteem comes to existence

because of the need of positive care by others. The need of positive care of others includes feedbacks, warm and kind greeting, intimacy, acceptance, kindness and the environment, especially their parents. (ShafiAbadi and Naseri-1386)

Based on Alice's that man tends towards love, amour, care, lookout, and reaching wishes and stays away from being hated, inattention, and failure, based on Alice's idea self-esteem and trust is created based on personal progresses and accomplishments of an individual. Freud believes a normal person is one that has completely been grown both mentally and sexually and hasn't been stabilized more than normal. (Khosravi-1386).

Educational self-esteem is a strong forecaster for the teens' idea about importance and class lessons' advantage, the teens' tendency towards trying, their progress and the final choice is their job. The students who have desirable self-esteem, are completely compatible, social and loyal.

Oppositely, low self-esteem is in touch with all fields of compatibility problems.(harter-1983).

Fairly high or very low self-esteem may be accepted by the coevals. The children who think they are extraordinary may be assigned arrogant and alienate others.(Cook,Goldman & Olczak-1978)

In a study, the children's evaluation of themselves was compared by the teachers and coevals' evaluation. Many of the children's evaluations were the same as others' evaluations of themselves, but almost one third of the children who were called impotent by the teachers and their coevals evaluated themselves potent.(Kagan,Hans, Markowitz,Lopez-1982)

Many social scientists believe that lack of high self-esteem or having low self-esteem is the root to many social diseases such as drug ill-usage, weak performance at school, depression and different forms of violence such as terrorism.(Baumeister, smart&boden-1996)

People tend to have a positive feeling aboutthemselvesand they often try to show themselves congenial. (Alicke&Associates-2001)

People show self-biases while telling their personal outcomes. Information that may show us responsible for the negative outcomes, is evaluated by criticism and our capability in cancelling such reasoning seems noticeable. (Grynvald-2002, Pyzynsky and Greenberg-1987)

Even when the negative social outcomes which are in conflict with our own optimistic approaches are offered to us, we show evidence of forgetting those cases and insist on the information that confirms our positive and congenial understanding. (Snytyvz&vldarsky- 2004)

Botvin and colleagues (2004) did ten independence papers about the effect of life skill training on reduction of smoking cigar, drinking alcohols in the United States high schools, and the results showed that applying this plan reduced their usage by 40 to 80 percent.

Since the results of the past surveys show that training problem solving can be effective on improvement and reducing the teens' depression and their private depression signs and cause increase in the amount of their personal sufficiency and their capabilities in relationships with their coevals.

1-Training problem solving skill is effective on reduction of female students' stress.

2- Training problem solving skill is effective on reduction of female students' physical signs.

3- Training problem solving skill is effective on reduction of female students' depression.

4- Training problem solving skill is effective on increasing female students' self-esteem.

II. METHOD

In this research, Training problem solving skill, during several regular and coherent sessions were applied on the test group:

Eysenck's self-esteem inventory in (1976) has tried a lot to investigate personality. Eysenck has tried one of the major components of the overall shape of the character that corresponds to the type of firm consistency check against the emotionally unstable.

30 questions of firm consistency and emotional instability is related to self-esteem which stands against feeling humility that the examiner against each question must try to answer with yes or no. while it isn't possible for him, chooses the medial choice and the question mark. The answers which include self-esteem measurement against feeling humility have 1 point; whereas the opposite answers have no point. The choices with the question mark have 2/1 point. It is obvious that the highest mark of the examiner is 30 and the test's reliability has been 84 percent by Cronbach's alpha. The inventory test of GHQ has been codified by Goldberg in 1973. The questions of this inventory deals with the mental status of an individual in the current society.(Goldberg, 1976 quoted Otady)

This inventory consists of four scales and each one has seven questions.

A – Questions 1 to 7 are related to physical signs' scale

B – Questions 8 to 14 are related to stress scale

C – Questions 15 to 22 are related to social function disorder scale

D – Questions 22 to 28 are related to depression scale

And the examiners answer with these answers, no, the usual, too common and a lot more than usual and will be graded 0 and 0 and one and one.Kyysvshk 1984, quoted by Taghavi (1380) Cronbach's alphahas reported them respectively 93 and 88. The studied statistical population in this study includes under cover female students of high school who were studying during 1390-1391 who are 100 and the samples were chosen by simple random sampling. Two statistical methods were used to analyze the data:

A- descriptive statistics including mean chart and the variables' graphs.

B- inferential statistics including single sample t and one way analysis of variance.

III. THE DISCOVERIES

1st hypothesis: training problem solving skill has an effect on reduction of the female students' stress.

Table 1: t-statistics on the results of pre-test and post-test experimental group

Variables	T calculated	T critical	N	df	α
Stress Pre-test and post-test experimental group	5.311	2.093	20	19	.00

Since the calculated t (tm=5/311) at confidence level of 95 percent (0/05= α) and df(df=9) is greater than t in the critical table(tb=2/093), hence the zero hypothesis is rejected and the research's hypothesis is confirmed and conclude that there's a meaningful difference between the test's grades of stress pre-test and post-test experimental group. In other words one can say that training problem solving skill is effective on reduction of female students.

2nd hypothesis: Training problem solving skill is effective on reduction of the female students' physical signs.

Table 2: Summary of t test analysis on the results of pre-test and post-test experimental group

Variables	T calculated	T critical	n	df	α
Physical signs' pre-test and post-test experimental group	4.56	2.093	20	19	.05

Since the calculated t (tm=4/56) at confidence level of 95 percent (0/05= α) and df(df=9) is greater than t in the critical table(tb=2/093), hence the zero

hypothesis is rejected and the research's hypothesis is confirmed and conclude that there's a meaningful difference between the test's grades of physical signs of pre-test and post-test experimental group. In other words one can say that training problem solving skill causes reduction of the physical signs.

3rd hypothesis: training problem solving skill has an effect on reduction of the female students' social function disorder.

Table 3: Pre-test and post-test of the experimental group

groups	N	The average for social function disorder	The grade's standard deviation
Pre-test	20	3.9	1.165
Post-test	20	2.5	0.946

Table 4: Paired t-test statistics for the pre-test and post-test results of the experimental group

Variables	T calculated	T critical	n	df	α
Social function disorder of pre-test and post-test experimental group	4.499	2.093	20	19	.00

Since the calculated t (tm = 4/499) at confidence level of 95 percent (α=0/05) and df (df=9) is greater than t in the critical table (tb=2/093), hence the zero hypothesis is rejected and the hypothesis is confirmed and conclude that there's a meaningful difference between the Social function disorder grades of pre-test and post-test experimental group. In other words one can say that training problem solving skill reduces Social function disorder.

4th Hypothesis: training problem solving skills to reduce depression affects female students.

Table 5: the statistics' Pre-test and post-test of the experimental group

Groups	N	The mean depression score	Standard deviation
Pre-test	20	3.6	0.94
Post-test	20	2.8	1.11

Table 6: Paired t-test statistics for the pre-test and post-test results of the experimental group

Variables	T calculated	T critical	n	df	α
Depression of the pre-test and post-test experimental group	3.76	2.093	20	19	.00

Since the calculated t (tm=3/76) at confidence level of 95 percent (α = 05/0) and df (df=9) is greater than the critical t table (tb=2/093), hence the zero hypothesis is rejected and the

hypothesis is confirmed and conclude that there's a meaningful difference between the depression grades of pre-test and post-test experimental group. In other words one can say that training problem solving skill increases the self-esteem.

5th hypothesis: training problem solving skills has an effect on increasing the female students' self-esteem.

Table 7: Pre-test and post-test of the experimental group

groups	N	Self-esteem average grade	Standard deviation grade
Pre-test	20	25.05	4.22
Post-test	20	42.35	5.78

Table 8: Paired t-test statistics for the pre-test and post-test results of the experimental group

Variables	T calculated	T critical	n	df	α
Self-esteem's pre-test and post-test experimental group	23.042	2.093	20	19	.00

Since the calculated t (tm=23/042) at confidence level of 95 percent (α = 05/0) and df (9 = df) is greater than the critical t table (tb=2/093), hence the zero hypothesis is rejected and the survey's hypothesis is confirmed. And we conclude that there's a meaningful difference between the grades of pre-test and post-test self-esteem. In other words we can say that training problem solving skill increases self-esteem.

IV. COUNCLUSION

Studying the first hypothesis showed that training problem solving has an effect on reduction of female students' stress.Moradi, 1381 concluded during the survey that in the field of life skill training on individual inter-relation, solving problems by controlling anger and efficacy of assertiveness after training the participant students, they were able to show a meaningful reduction in the signs of depression, stress and physical disturbances.

The conclusions of the 2nd hypothesis are that training problem solving skill has an effect on reduction of physical signs of female students. In the survey that was held by FirouzehGhazanfari and EzzatollahGhadampour in 1387 with the topic of studying comparative guidelines and mental health for the residents of KhorramShahr, they concluded that the more the individual uses problem-focused coping guidelines the healthier he will be.

The third specific question survey showed that training problem solving has an effect on reduction of social function disorder of female students. In a violence prevention program, 135 students were taught problem-solving skills. Results showed that participants in the program face fewer social problems compared with control groups and rarely choose the violent solutions and have introduced more negative consequences with violence. (Gynr& Associates- 1993 citing Nory and Mohammad Khani)Explaining the 4th hypothesis of the survey has an effect on reduction of female students.

However, one common response to frustration is active aggression, the reverse behavior meaning abdication is common, the taught prostration theory shows that uncontrollable disturbing events may redound to depression.

The results of Sharifi's survey 1372, shows that training problem solving skill can be effective in reducing and improvement of depression and specific signs of depression on teens, which increases the amount of their private sufficiency and their capabilities of inter-relations with the coevals.

The 5th default results indicated that training problem solving has an impact on self-esteem of female students. Maslow puts self-respect or self-esteem in the hierarchy of needs and the third level which includes the desire to competence, proficiency, progress, sufficiency and independence.

In the survey held by Esmaeili, he reached the results that the average self-esteem grades of those students who passed the life skill course is more than those who haven't passed that course. This finding was consistent with the results of the surveys done by American Psychological Association in 1994 and 1996. Because of problem solving skill's effectiveness on increasing the amount of the female self-esteem, it is suggested to the school advisers to identify the girls with low self-esteem with an interview or mental test and teach them problem solving skill and help them to increase their level of self-esteem, and suggest Imam Khomeini relief committee to create a coherent and dynamic network to study and perform problem solving skill training for patients' families and is necessary for the teachers and educational center authorities to act further than their traditional duties and to take the unique characteristics of students into consideration and move towards their mental health gradation and care for their psychological needs besides caring for their education.

REFERENCES

[1]   - Aqajani, Maryam , examining the impact of life skills education on mental health locus of control teenagers Al Zahra. Master's thesis, martyr Beheshti University (1381)

[2]   Otady, Maryam, the impact of female employment on the mental health of spouses, guidance and counseling master's thesis, University of Al-Zahra (AS), (1380).

[3]   Khosravi, rahmat, pathology and life skills in the curriculum of secondary education from the perspective of theoretical education specialist, master's thesis, martyr Beheshti University, (1386).

[4]   World Health Organization, life skills training program. Translation: Robabe. nory, Parvane., Mohamad. Khani, Tehran, Department of Mental Health and Prevention of Substance Abuse World Health Organization (1379).

[5]   ShafiAbadi, A. and Nazareth, Gholam Reza; theories of counseling and psychotherapy, Thirteenth Edition, Tehran University Publication Centre (1386).

[6]   Sadeghi, Mohammad Reza; Effectiveness of Life Skills Training on effective communication among female students in high school, senior thesis,.AllamehTabatabai University, (1385).

[7]   Ghazanfari, firoze andQadampur, Ezatollah, explore the relationship between coping and mental health of the residents of the city of Khorramabad, Senior Thesis, ShahidBeheshti University, (1387).

[8]   Moradi, Mahnaz., Evaluation of the utility of life skills education on high school female students in Tehran, improve their mood, Senior Thesis, ShahidBeheshti University, (1381).

[9]   Alicke,M.D;vredenburg,D.S;Hiatt ,M;&Govorrun,o.(2001).The better than my self effect.motivation and Emotion,25,7-22.

[10] Baumeister,R; smart,L;&boden,,J.(1996).Relation of threatened ego tism to violence and aggression: the drak side of hige self-esteem.psychological Review ,103,5-33.

[11] Botvin,G.j.&.Griffin,k.w(2004).life skills tininig Empirical findings and future dirction ,journal of prerention,25\211\232.

[12] Cook,T.,Goldman,J., &Olczak,p.(1978).The relationhip between self – esteem and interpersonal attraction in childeran .Journal of Genetic psychology ,132,149-150.

[13] Greenwald.D.P(1977).The behavioral assessment of difference s in social skill and sociale anxiety in female college students behavior therpy ,8.925-937.

[14] Harter,s.(1985).competence as a dimension of self –evaluation: Toward a comprehensive model of self-worth .in R.leathy (Ed.),The development of the self. New York:Academic press.

[15] Kagan,j.,Hans.s.,Markowitz,A,Lopez.D.(1982).Validity of childeransself reports of psychologyical qualities .InB.A.Maher&w.B .Maher In(Eds.)progress Experimental personality research (vol.11).new York :Academic press.

[16] Sanitioso,R.B;&wlodarskki,R.(2004).Inserch of information that confirms a desired self-perception:Motivated processing of socilfeed back and choice of social interactions personality and social psychology Bulleatin,30,412-422.

The Impact of Pedagogical Agents' Gender: On Learning, Motivation toward Science Learning and Facilitation of Learning in Fourth Grade Male Students

Sepide abedi Farizani[1], Khadije Ali Abad[2]i, Mohammad Reza Nili Ahmad Abadi[3]

Abstract— Multimedia learning is one of the very crucial issues in E-learning. To achieve a better and more stable learning, multimedia education can be put into practice and the pedagogical agents can be used in the multimedia learning to simulate the real world classroom environment. This article reports an investigation for the influence of the pedagogical agent on learning and facilitation of learning and learning motivation of fourth grade primary school boys in science lesson. The sample consisted of 30 participants in two separate groups of 15. A multimedia teaching program was used as a treatment in this study. One the groups practiced the multimedia program with a female pedagogical agent and the other group practiced the multimedia program with a male pedagogical agent. In the first step, 2 pretests were given to both groups; one related to the science subject itself and the other one related to the motivation of the learners toward learning science matters. After the treatment three posttests were conducted on both groups, one regarding to the knowledge achievement of the participants, the other one related to the participants motivation toward learning and the last posttest was related to how the learning process was being facilitated for the participants. The results of the study proved that the pedagogical agent of the same gender, with the students, had a bigger impact on the learning, learning motivation and learning facilitation of the targeted groups.

Keywords— Facilitation of learning, Learning motivation, Multimedia, Pedagogical agent.

I. INTRODUCTION

Multimedia learning is employed to achieve a better and a more stable learning and it is to fascinate learners to the learning process and to produce an ongoing learning. In multimedia learning pedagogical agents can be used. These agents are in fact, the characters on the screen who appear in different parts of E-learning program to assist the learning process. These agents' designs may differ from cartoon characters to animation characters [1]. Due to fact that Animated Pedagogical Agents (APAs) simulate the real world classroom environment, they have a big potential to support the learning process [2]. The use of pedagogical agents leads to better results since they play a face to face interaction role in the learning environment [3].

In E-learning environments with pedagogical agents companion a cooperation forms between the learners and the agent which will lead to learning [4]. The most fundamental impact of Pedagogical agent in teaching, multimedia and E-learning environments is its power to engage the learner with learning activities, in other words a more engaged learner in learning activities, is more likely to make progress in learning. In recent years there has been several researches exploring the characteristics of pedagogical agents. Most of these studies have examined the social cooperation between the learners and the pedagogical learners [5]. Pedagogical agents vary in age, gender, cloths, weight and etc. [6]. Yet there have been few investigations on the impacts of pedagogical agents' gender on learning. Researchers used to spend their human and financial sources to create pedagogical agents with great details which were of no significance in computer based learning [7].

The pedagogical agents have been center of attention as facilitators in multimedia learning environments. These agents appear as personified characters on the screen to make the learning process easier. Although some researchers claim that the voice of the pedagogical agent is the only important factor in the design of a pedagogical agent, some still insist on the presence of the pedagogical agent on the screen. The pedagogical agents can be designed in a fixed or animated manner for which the Animated Pedagogical Agent (APA) term has been used.

In this point there is a disagreement among the researchers, some believe that pedagogical agents lead to a positive effect on learning motivation and consequently better achievements

[1] University of Alame tabatabie, Iran

[2] Assistant Professor, University of Alame Tabatabaie, Iran

[3] Associate Professor, University of Alame Tabatabie, Iran

and on the other hand, there are some researchers who claim that the pedagogical agents act only as distracters in learning process. During the 90s studies on the pedagogical agents, only investigated them from a technological view. This is worth mentioning that, while in late 90s, researches on the educational issues had developed significantly, none of these researches answered any questions in regards with the positive influence of pedagogical agents on learning.

In Iran, till the present time, there has been only one related research which compares the influence of the APA, as an instructor and as a supervisor on learning, learning motivation and learning facilitation.

This study works on science subject and the population were 2 classes of 20 participants from the guidance school, who were randomly chosen among 4 classes and randomly undergone different treatments. The two classes took multimedia program with companion of an APA as the treatment. For the analysis of the data obtained from the both classes, independent sample t-tests were used. The result of this study showed that the APA with the role of an instructor can significantly make a positive impact on learning, learning facilitation and learning motivation, rather than the APA in the role of supervisor [8].

II. THEORETICAL DEFINITIONS

Multimedia: it is the combination of text, graphic, sound, animation and video which is delivered by the use of computer or any electronic devises [9].

Multimedia learning: this term refers to the use of computer hardware and software together, to make a learning program by the combination of videos, animations, sounds, graphics and text and make use of it on the computer screen [10].

Animated Pedagogical Agent: Pedagogical agents refer to the characters on the screen who are employed to improve the learning outcome through the E-learning program. These agents can be in the form of cartoons' characters or a video characters who are able to speak or they might be simply avatars [11].

Learning: the term learning refers to the process during which a stable change in behavior happens as the result of experience [12].

Learning motivation: this term defines the factor in the learner which keeps him eager to learn the content of the educational program [13].

Facilitating learning agents: this term is defined as the help given to the learners by the pedagogical agents who will supply the learners with feedback and support during the whole process of learning [14].

III. PARTICIPANTS

The population of the present study is all the fourth grade primary school boys of the Tehran. To have a sample of the population, the students of the 4th area of the Tehran were chosen due to the fact that this area's schools were fairly well equipped with computer facilities. This study also demanded the cooperation of science teacher as well as computer facilities, and considering these two factors Adab primary school was chosen to practice the treatment.

IV. INSTRUMENTATION

As the instruments for this study, achievement pretest, achievement posttest, learning motivation test and learning facilitator test were used.

A. Achievement Pretest

In this study a pretest was administered which examined the level knowledge in the students about the blood circulation in human body, covering a subject of fourth grade science book. The pretest was a multiple choice test and was designed by the researcher herself.

B. Posttest

The posttest was the parallel form of the pretest.

C. Pretest: the students' motivation toward science learning questionnaire

This questionnaire is called The Students Motivation toward Science Learning (SMTSL) questionnaire [15]. This Likert scale questionnaire consists 35 items and involves scales of self efficacy, active leaning strategies, science learning values, performance goal, achievement goal and learning environment motivation. Here all these scales are briefly defined; the self efficacy scale is described as the extent of one's belief in his own ability to complete the learning task. Active learning strategies refer to the students' active role in using various strategies to construct newly achieved knowledge based on their background knowledge. The scale of science learning value is the empowerment of students in problem solving, preparing experimental research activities, stimulation of thought and giving the students' an insight and a better understanding of science lessons and its application in everyday life. If student get to understand the crucial values of science, they will automatically get motivated. The performance goal is the students' goal in learning science. The achievement goal is described as the students' extent of satisfaction with their own ability improvement as the result of learning science. The learning environment motivation refers to the influence of environmental factors such as program's schedule, teaching techniques and cooperation among the students, on the students' motivation toward learning science [8]. As the experts' suggested 24 items of this questionnaire were chosen to go with the participants' age.

D. Posttest: the students' motivation toward science learning questionnaire

This test was equivalent form of pretest.

E. Agent facilitation of learning questionnaire

This questionnaire is a section of Agent Persona Instrument (API) [16]. This instrument focuses on the evaluation of pedagogical agent which is based on 4 factors; first if it facilitates learning, second if it is credible, third if it is human like and last whether it is engaging or not. This questionnaire has 25 items around the pedagogical agent designed in Likert scale. In this research only the first part, which focuses on the facilitation of learning is put into exercise. This section of the questionnaire in fact tries to discover the students' attitude toward how the pedagogical agent has facilitated their learning. This part of the questionnaire has 10 items and after experts' review 8 items were used in this study [8].

V. VALIDITY AND RELIABILITY OF THE INSTRUMENTS

A. Validity and reliability of the achievement test

To grantee the validity and reliability of the achievement test, after preparation (around the blood circulation subject in science book of primary school), the test was examined by some other science teachers to prevent mistakes. To ensure its validity and reliability, two biology high school teachers examined the test and after some corrections the science teacher of the participants agreed the tests to be administered. The prepared test was piloted on some other fourth grade students other than those who participated in the study. By the analysis of the data obtained from the piloted test the logistics of the test was examined. After the study of the calculated coefficients and elimination of the non standard items, the achievement test was considered to be suitable to use. To determine the reliability of the items the Split-half reliability method was used. The half test correction coefficient turned out to be .74 and the full-test reliability was .85.

B. Validity and Reliability of the students' motivation toward science learning questionnaire

This questionnaire was first administered on 1407 participants of 7th and 8th grade Tiwanian high school students from different social classes with different genders and knowledge levels. The population of this study was chosen by stratified random sampling. To determine the validity of this questionnaire, content validity, construct validity and criterion-related validity were examined. These characteristics of the questionnaire were reviewed by 6 experience science teachers, 3 educational psychologists and 5 science teaching specialists. The construct validity was supported by factor analysis, discriminative validity and internal consistency methods. It must also be added that students with different degrees of learning motivation showed differences in their response to the questionnaire. To conclude the criterion-related validity a science attitude test and a students' science achievement test were administered, once in the first half of the school year and one in the second half of the school year (present to the time of the study), and the correlation coefficient was calculated .41, which proved to enjoy enough validity.

To measure the validity of the test in the present study, the content validity was examined. The translated questionnaire by the researcher was given first to 2 English language specialists and then to advisor and reviewer professors. It also worth mentioning that the reliability of the questionnaire was determined by being piloted on the second grade guidance school girls (who were not among the participants). The reliability was then calculated through Cronbach Alpha which turned out to be 0.67.

C. Validity and reliability of the Agent facilitation of learning questionnaire

Gharehbaghi (2010), used Cronbach Alpha method to determine the reliability of this instrument, which turned out to be 0.97 for the whole questionnaire and 0.94 for the section that is used in the present study. To determine the validity of this instrument, Gharebaghi used Content validity strategy. He gave the translated questionnaires to two English translator experts and then the questionnaires were viewed by two associated professors. It should be noted that to investigate the reliability of the questionnaire, it was piloted on a group of 15 school girls, all in second grade of guidance school who were not part of the targeted population. Afterwards the reliability of the questionnaire was calculated through Cronbach Alpha which turned out to be 0.95 [8].

VI. DESIGN AND PROCEDURE

Considering the nature of this study, its aims and hypothesis a quasi experimental design was employed, since the outcomes of this study are used for pedagogical purposes. The researcher had no choice in the organization of the groups and consequently in the design of the pretest and posttest, she had to use random assignment of groups.

In order to practice a multimedia education program, a multimedia learning environment with two different pedagogical agents in sex, were practiced in 2 weeks. Each session was 70 minutes long and each week, 2 sessions were held. As it was mentioned earlier the students were chosen from the Adab School.

The first group practiced a multimedia program with a female pedagogical agent which is shown in Fig. one and the second group practiced the multimedia program with a male pedagogical agent which is shown in Fig. 2. In both groups the content of the content of the lessons were the same and the only difference lied into the gender and the voice of the

pedagogical agent. Before the treatment two pretests were administered on the both groups; one, measuring the knowledge level of the participants and the other one measuring the students' motivation toward learning science. After the treatment, two posttests were conducted on the both groups, one concerting on the knowledge achievement and the other one measuring the amount of facilitation of learning.

Fig. 1: Multimedia Educational Program with Female Pedagogical Agent.

Fig. 2: Multimedia Educational Program with Male Pedagogical Agent.

The administration of pretests proved the homogeneity of the both groups and that there is no significant difference between the two groups. In the next step the groups were randomly assigned to a get one the above mentioned treatments.

VII. DATA ANALYSIS

Before going through any statistical function on the obtained data, the descriptive raw scores of the both groups is brought below.

The Tables 1 and 2 show the pretest and posttest, measuring the participants' knowledge level before and after the treatment. The Tables 3 and 4 belong to the scores of the participants in the pretest and posttest, both measuring their motivation toward learning science. The Table 5 describes the descriptive scores of the participants over agent facilitation

learning test in the posttest phase.

Table 1: Descriptive Statistics of Knowledge Level, Pretest

Groups	N	Min	Max	Mean	Standard deviation	Variance
Male pedagogical agent	15	1	7		1.72	2.97
Female pedagogical agent	15	4	7	4.93	1.53	2.35

As presented in Table 1, in the pretest with the dependent variable of the knowledge level, has a higher mean in the group with female pedagogical agent.

Table 2: Descriptive Statistics of Knowledge Achievement, Posttest

Groups	N	Min	Max	Mean	Standard deviation	Variance
Male pedagogical agent	15	7	10	8.40	.82	.68
Female pedagogical agent	15	7	8	7.66	.48	.23

As described in Table 2, in posttest with dependent variable of knowledge achievement, the mean in the group with male pedagogical agent is higher than the group with female pedagogical agent.

Table 3: descriptive statistics of Students' Motivation toward Learning Science Test, Pretest

Groups	N	Min	Max	Mean	Standard deviation	Variance
Male pedagogical agent	15	46	98	83.86	13.19	174.12
Female pedagogical agent	15	61	103	85.86	12.40	153.83

As Table 3 signifies in the pretest with learning motivation as its dependent variable, the mean of the group with female pedagogical agent is bigger than the group with male pedagogical agent.

Table 4: Descriptive Statistics of Students' Motivation toward Learning Test, Posttest

Groups	N	Min	Max	Mean	Standard deviation	Variance
Male pedagogical agent	15	82	110	92.60	9.82	96.54
Female pedagogical agent	15	71	107	90.06	18.03	325.21

As Table 4 illustrates, in the posttest with dependent variable of motivation toward learning science, the mean in the group with male pedagogical agent is higher than the other group with female pedagogical agent.

Table 5: Descriptive Statistics of Agent Facilitation of Learning Questionnaire, Posttest.

Groups	N	Min	Max	Mean	Standard deviation	Variance
Male pedagogical agent	15	12	40	30.50	7.50	56.40
Female pedagogical agent	15	8	37	27.25	9.03	81.66

The descriptive statistics of the agent facilitation of learning test as a dependent variable, in the posttest is brought in the above Table. As it can be seen the mean of the group with a male pedagogical agent, is higher than the group with female pedagogical agent.

Considering the descriptive statistics above, it can be concluded that the mean scores of the dependent variables (achievement test and motivation toward learning test) in the posttest is higher than the pretest in the group with the same sex with the pedagogical agent rather than the group with opposite sex with the pedagogical agent.

It should be mentioned that during the data analysis due to the fact that the mean scores of the both should be compared, an independent samples t-test was used to compare the mean scores of the groups in achievement test and motivation toward science learning test. Also another independent sample t-test was used to compare the mean scores of the agent facilitation of learning test. For the analysis of the data obtained from the practice of the treatment, first its hypotheses were investigated. For the present study, the following hypotheses were formed, assuming equal variances according to Levin test.

Null hypothesis 1: the pedagogical agent with the same sex with male students influences on learning of the students in fourth grade of primary school.

As Table 6 illustrates, there are some differences between the achievement tests of the both groups. In order to confirm that this difference is significant, in the next step, an independent sample test was used.

In Table 7, the result of Levene's test, p = 0.88, is higher than the criterion which is .05. Accordingly it can be concluded to 90% of certainty that the equal variances assumed is correct, there is a not significant difference between the variances of both groups and therefore the independent t-test is conducted. With further attention to Table 7, the t observed, t = 2.67 with p = 0.05 and df = 28 is higher than 2.04, which signifies the significance of difference between the means of both groups in achievement test.

Considering the results of the independent t-test which is .012, since is stands much lower than .05, the null hypothesis fails to be rejected. So it must be stated that the pedagogical agent with same sex with male students can have a positive influence on their knowledge achievement.

Table 6: Mean difference and Standard Deviations of the Achievement Differences between the Male Students

groups	N	Mean difference	Std. Deviation	Std. error mean
Female pedagogical agent	15	1.80	1.69	.43
Male pedagogical agent	15	3.35	1.84	.47

Table 7: Comparison of the Mean Scores of the Both Groups in the achievement test

Dependent variable	Levene's test for equality of variances		T	df	Sig (p)	Mean Differences	
	F	Sig				max	min
scores	0.02	.88	2.67.	28	.012	3.06	.40

Null Hypothesis 2: the pedagogical agent with the same sex as the male students influences on the motivation of the students toward learning science in fourth grade of primary school.

As it is brought in Table 8, the data obtained from the study shows the difference between the means of the learning of the targeted groups. In order to determine the significance of the difference a t-test is employed. Tale 9 is an illustration of the result of investigating equal variances assumed.

Focusing on Table 9, it can be comprehend that since the result of Leven's test is .33 (p) is higher than the criterion (.05), it can be said, with 90% of certainty, that there not a significance difference between the variances of the both groups and consequently independent t-test can be employed. What is available according to Table 9, is t = 2.67, df = 28.

Considering the significance of independent sample t-test which is .012, obviously less than .05, the null hypothesis enjoys 90% of certainty and fails to be rejected. To sum up, it can be claimed that the pedagogical agent with the same gender as the male students, has a positive impact on the students' motivation toward learning science in fourth grade of primary school.

Table 8: Mean and Standard Deviation of Students' Motivation Learning Science Test

groups	N	Mean	Std. Deviation	Std. Error mean
female pedagogical agent	15	2.20	2.42	.62
Male pedagogical agent	15	7.33	7.02	1.18

Table 9: Comparison between the Mean of the Both Groups in Students' Motivation toward Learning Science Test

Dependent variable	Levene's test for equality of variances		T	df	Sig (p)	Mean Differences	
	F	Sig				max	min
scores	5.04	0.33	2.67	28	.012	9.06	1.20

 Null Hypothesis 3: the pedagogical agent with the same gender as the male students influences the facilitation of learning of school boys of fourth grade in primary school.

As Table 10 illustrates, the data obtained from the study, shows a difference between the mean scores of learning between the 2 groups. To recognize whether this difference is significant a t-test is used.

Table 11 is brought to show that since the result of Levene's test is, p = 0.53, which is higher than the criterion (.53), it can be claimed with 95% of certainty that the equal variances assumed is flawless and there is not a significant difference between the variances of the targeted group. Investigating more on the results of the Table, it can be seen that t = 2.84 and df = 28.

Considering the level of the significance of the independent sample t-test which is .006, barely less that.05, the hypothesis is proved to be correct with 95% of certainty and in conclusion the pedagogical agent with the same gender as the male students, proved to have a positive impact on the facilitation of learning in fourth grade of primary school.

Table 10: Mean and Standard Deviation of facilitation of Learning Test.

groups	N	Mean	Std. Deviation	Std. Error mean
female pedagogical agent	15	28.44	9.06	1.55
Male pedagogical agent	15	34.65	7.34	1.44

Table 9: Comparison between the Mean of the Both Groups in Facilitation of Learning Test

Dependent variable	Levene's test for equality of variances		T	df	Sig (p)	Mean Differences	
	F	Sig				max	min
scores	3.87	.54	2.84	28	.006	10.57	1.84

VIII. CONCLUSION

Due to the fact that in recent years, multimedia education plays a crucial role in the quality of teaching and learning environments, the researches in this area should be broader. This paper tried to investigate whether the pedagogical agent's gender makes an influence on students' learning, their motivation toward learning science and facilitation of learning in fourth grade school boys.

The data analysis proved that the pedagogical agent's gender males an influence on the fourth grade students' learning. The result of this study is opposite to Johnson and his colleagues (2013). They came up with the conclusion that an agent with opposite sex has a positive influence on students' learning.

This research also found that a pedagogical agent of the same sex can make an impact on the school boys of fourth grade motivation toward learning science. The proof to such claim is brought in the data analysis of this paper. This finding of current paper is in the same side with findings of Kim & Baylor (2004). Their research focused on school girls with an agent of the same gender, and they proved that the female students are more motivated with an agent of the same sex, but it should be noted that, the subjects, the school girls were trying to cover were computer sciences. Anyhow another research was conducted by the same researcher in 2007, which agrees with the findings of the present study and that was the positive impact of male pedagogical agents on male students.

The third finding of this research was that a pedagogical agent with the same sex facilitates learning of the male students in fourth grade of primary school. There have been still no researches done around this issue.

Of the reasons why the research has come up with such findings, there are two guesses made by the researcher; the first one is that, since the population of this study has not reached the puberty age, they still have no attraction toward the opposite sex. The second intuition is that, as the students are used to have teachers of the same sex in real world environment, even in multimedia education environment, they are into the habit of having a pedagogical agent of the same gender.

IX. REFERENCES

[1] Clarke, R. C., & Mayer, R. E., *E-Learning and the science of instruction*,2008, San Francisco: Pfeiffer.

[2] Woo, H. L. , *Designing multimedia learning environments using animated pedagogical agents: factors and issues*,2009, Journal of Computer Assisted Learning, 25(3), 203-218.

[3] Domagk, S., & Niegemann, H. M. , *Pedagogical Agents in Multimedia Learning Environments: Do They Facilitate or Hinder Learning?*,2005, In Proceedings of the 2005 conference on Towards Sustainable and Scalable Educational Innovations Informed by the Learning Sciences: Sharing Good Practices of Research, Experimentation and Innovation (pp. 654-657).

[4] Atkinson, R. K., Mayer, R. E., & Merrill, M. M. , *Fostering social agency in multimedia learning: Examining the impact of an animated agent's voice*,2005, Contemporary Educational Psychology, 30(1), 117-139.

[5] Kim, Y., Baylor, A. L., & Shen, E. , *Pedagogical agents as learning companions: The impact of agent emotion and gender*,2007, Journal of Computer Assisted Learning, 23(3), 220-234.

[6] Bendel, C. M. , *Colonization and epithelial adhesion in the pathogenesis of neonatal candidiasis*,2003, In Seminars in perinatology (Vol. 27, No. 5, pp. 357-364). WB Saunders.

[7] Clark, R. E., & Choi, S. , *The questionable benefits of pedagogical agents: Response to Veletsianos*,2007, Journal of Educational Computing Research, 36(4), 379-381.

[8] Ghare baghi, sh. , *Effect of role pedagogical agent animated on learning, Agent facilitation of learning, motivation towards learning*,2010,Dissertation, Allameh Tabatabai University.

[9] Attaran, M., Globalization, *information technology and education*,2001,Tehran: Sun October.

[10] S.A. Razavi, *Modern Issues in Instructional Technology*, 2007, Chamran University publication.

[11] Clark, R. C., & Mayer, R. E. , *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning,2011,* John Wiley & Sons.

[12] A. A. Seyf, *Modern Educational Psychology*, 2010, Doran Publication.

[13] Schmidt, R., & Watanabe, Y. , *Motivation, strategy use, and pedagogical preferences in foreign language learning*,2001, Motivation and second language acquisition, 23, 313-359.

[14] Ryu, J. E. E. H. E. O. N., & Baylor, A. L. , *The psychometric structure of pedagogical agent persona*,2005, TECHNOLOGY INSTRUCTION COGNITION AND LEARNING, 2(4), 291.

[15] Tuan, H.L., Chin, C.C. & Shieh, S.H. , *The development of a questionnaire for assessing students' motivation toward science learning*,2005, International Journal of Science Education, 27, 639–654.

[16] Baylor, A. L., & Kim, Y. , *Pedagogical agent design: The impact of agent realism, gender, ethnicity, and instructional role*,2004, In Intelligent Tutoring Systems (pp. 592-603). Springer Berlin Heidelberg.

[17] Johnson, A. M., DiDonato, M. D., & Reisslein, M. , *Animated agents in K-12 engineering outreach: Preferred agent characteristics across age levels*,2013,Computers in Human Behavior, 29(4), 1807-1815.