

Development of Teaching Plan in the Curriculum of Medical Sciences

(To promote social capital)

Forouzan Tonkaboni (Corresponding author) and Masumeh Masumi
Department of Educational Science,
Payame Noor University (PNU),
Tehran, Iran

Abstract: In today's world, social capital is one of the most important factors in development of countries. The aim of this study was to develop a teaching plan in the educational curriculum for medical sciences students to strengthen social capital among them. To answer the question of "what is the teaching plan that can be developed for the promotion of social capital among students of Medical Sciences?" a study based on qualitative grounded theory was conducted in 2014 in which 14 professors in the field of medical science curricula were interviewed. Sampling was purposive and coding method was used to analyze the data. Teaching plan was identified as the main subject for research and teaching obstacles, strategies, and outcomes were identified for it. After drawing a paradigmatic model, the final plan was obtained. For the plan of curriculum for medical students, teaching plans must be designed based on factors affecting the development of social capital elements.

Keywords: Medical sciences students; social capital; teaching plan; curriculum

Introduction

Light (sociologist) used the term social capital at the 1970s and Laurie (economist) also used it to describe the problem of urban economy. In the 1980s, this term was used in a wider sense by Coleman the sociologist, and political scientist Putnam was the second person that raised an ethnic passionate debate about the role of social capital and civil society in Italy and the United States. Their research led to the formal formation of *social capital* and its application in many interdisciplinary sciences (Tahghighi, 2005).

Social Capital as a form of capital has a large impact on the success of the society. Many functions have been attributed to social capital by experts. Social capital employs the similarities of people from different directions, creating a spirit of mutual trust and functions at the service of economic interests; it creates the space which reduces the cost of human resources, and increases interaction between them (Woolcock, 2008)

According to Putnam (2005) social capital is composed of elements of social life by which people can achieve their goals effectively. He believes that this form of capital has equal importance to the other forms of capital.

Fukuyama (2006) defines social capital as a set of norms in social systems that promote cooperation among members of the community and reduces the exchange and communication costs.

Experts believe that increased social capital include faith, trust, hope for the future, relying on the community and its solidarity, social justice, prosperity, tolerance, patience, forgiveness and unity are the main strategies to achieve sustainable development in a society. The benefits resulting from membership in a group creates solidarity that makes it possible to obtain benefits. Hence, social capital is a means of access to economic and cultural resources through social communication (Saifollahi, 2005).

In a society with high social capital, the union and solidarity among members of society and their group spirit makes them to flow their economic capital for themselves and their society so that everyone can use its benefits (Kavianpour, 2007).

The social capital enhances the quality of life and promotes the positive social values in order to have a good life (Hamdan et al,2014).

According to the above, it can be said that the concept of social capital means that the participation in community and group can have positive interests and functions for the individual. There are many organizations that the government helps them to develop values that support civic engagement. The educational system is one of these organizations. In recent years, education is considered as one of the most powerful producers of social capital.

University as one of the main sources for the formation of social groups can be of consideration. The Scientific, cultural and religious, and professional organizations as well as other groups can find an opportunity to emerge in university where some networks may be formed, which can be bases for the establishment of key and influential institutions (Dingaa,2014).

In universities the scientific spirit, criticism, creativity, ability to communicate scientifically, reproduction ability, and also the ability to combine and integrate the ideas should be formed in the students and at the same time, prudence, participation, and proving one's identity in interaction with others be strengthened in university environment. So universities are not only functioning in education area and indeed where higher education and social capital relate to

each other the university should have the ability to develop social capital (Zakersalehi, 2008).

In a study entitled "The Relationship between the Curriculum of Higher Education and Social Capital ", it was concluded that there is a significant relationship between educational, economic, social goals and needs assessment with the elements of participation and trust in the social capital (Tonkaboni et al, 2014).

Theoretical Background

According to Putnam (2005) social capital refers to those features of social life, networks, norms and trust that enable participants to pursue their common objectives in a more effective way. In his idea, social capital is the means to achieve social and political development in diverse political systems and the trust between people, governors, and political elite results in political development.

The set of norms which exist in social systems promote the level of cooperation among society members and also reduces the level of exchange and communication costs. In this definition, concepts such as civil society and social institutions are associated closely with the concept of social capital (Schiff, 2004).

Eisenstadt believes that the most important issue in shaping a community with good social capital is attention to the trust, cohesion, solidarity and social participation and without social cohesion and participation under the shade of confidence establishing the new order is impossible (Chalabi, 2007).

From the viewpoint of Mevish, some of the most important prerequisites of a functional society must be emphasized when determining the aim, content and method of education in the curriculum. Learners in the educational system must know as members of the society in which they live how they can best play their social role. In case of lack of knowledge and awareness of these issues among teachers and curriculum planners, curriculum content and objectives may conflict with the needs and social problems which might reduce the success of programs (Yarmohammadian, 2012).

Klein introduces nine elements of objectives, content, learning activities, teaching methods, materials and resource evaluation, time, space and grouping as the elements of the curriculum. The most common approach in this regard, considers for a curriculum or a particular syllabus and curriculum decisions involving these four elements: objectives, content, methodology and evaluation (Mehrmohammadi, 2009).

Tonkaboni et al (2013), in an article titled " Description and Recognition the Concept of Social Capital in Higher Education System " concluded that for the promotion of social capital, the curriculum in higher education should be based on development of social capital components and needs of society.

Jiroux considers educators as transformational thinkers. Selecting and implementing appropriate teaching-learning methods as a key component of the

curriculum, is very important in the formation and strengthening of valuable concepts in mind. In the process of teaching, methods and materials that teachers select should help students in their learning content (Ornstein, 2011).

Teaching is an activity, but not every type of activity, but something which is done consciously and on the basis of a specific purpose that makes changes. Teaching is not easy. Teachers deals with different variables in teaching and through manipulation of different variables and results, tries to create a situation in which learning takes place. (Shabani, 2006)

The authority teachers have to make changes in teaching conditions and make the factors useful for teaching a lesson are teaching models that include problem solution patterns, pre-organizers, individual tutoring, social patterns and so on. These patterns act as plans (Joyce, 2008).

In a research entitled as "Designing a Model for Development of Social Capital in Universities", the researcher showed that the development of social capital can be achieved in two objective and subjective aspects, five components: individuals, groups, organizations, structures, and management and 28 indicators (Mostafazadeh et al,2015).

Previous researches in Iran indicate that higher education despite its great quantitative development in the last decades, has not been successful in self-actualization and development of social capital. This is also true about teaching practices that are considered an important part of the curriculum.

The purpose of this study is to provide a teaching plan with an emphasis on identifying teaching barriers, methods, and strategies to develop social capital among students of medical sciences. For this purpose, the research question is as follows:

What kind of teaching plan enhance social capital can be developed among students of Medical Sciences?

Methodology

The present study is qualitative and based on Grounded Theory approach which is an exploratory research method that allows researchers to develop the theory of him/her. The material used in this study was the collected comments from people during interviews. In addition, these data were highly fragmented and contained many concepts and categories. For this reason, analysis of data required a plan which is comprehensive as well as highly resilient and encompassing. As a result, grounded or fundamental method was used.

The population consisted of teachers with at least 10 years experience in the field of curriculum planning, teaching and writing textbooks in the field of medical sciences at the university and higher education institutions across the country in 2014. In qualitative method the number of interviews should be 10 at most, but in this study science the interviewees were at different disciplines from different universities, all data were collected through semi-structured interviews with 14 cases and after assuring saturation in the material obtained, the interview process was stopped since no new information was obtained. In the interview,

eight instructors of public universities of medical sciences and six from Islamic Azad universities across the country participated from various medical fields. Purposive sampling method was used for the type of favorable cases; which means that for selecting the samples the number of academic articles and publications were examined and it was tried to select people who are dominant on the subject and have the experience of developing curricula.

After carrying out preliminary coordination with individuals and setting a date, meetings were held at the researcher's office or at workplace of respondent. Ten minutes before the start of the meeting a complete description about the purpose of the study and drawing conclusions of it was explained. For having full information, by the permission of the interviewee, all sessions were recorded and transcribed. First, two general question of "how do you see social capital components of trust or partnership among students?" and "how universities can expand social capital among students?" then researcher entered the subject of discussion and using responses given by the interviewee the next questions were asked. During the meetings it was tried to prevent diversion of the subject without sensitivity and to direct the interview just in the framework of the preset direction. Interviews were held on an individual basis and each interview was between one to two hours.

To analyze the data, open, axial and selective data coding were used.

In the open coding using comparison technique and asking the data related to the phenomenon under study, data were named and categorized with scrutiny. After removing unrelated speeches to the subject, data were classified into tens of paragraphs and similar paragraphs were put next to each other and concepts were drawn out.

In axial coding, the analyzed data using open coding joined each other by new methods. At this stage the link was made among a category and its subcategories. This was done by implementing a paradigmatic plan of "obstacles, strategies, and results" and putting together the similar concepts.

In selective coding the core category was selected and its relation with other categories was found. The relations were validated by finding confirming instances. After determining the main category, the sub-categories were related to the main categories according to the paradigmatic plan. Then, the final research plan was developed in which the core relationship with other concepts was shown.

To determine the accuracy of the information obtained, four factors were used: credibility, transferability, dependability and verifiability (Burns, 2007).

Validation was done by sharing the findings with participants to review them. For the transferability, it was tried to consider the diversity in sampling and different fields are used. Also, in connection with the verifiability process, it was attempted to make teachers agree on the perceptions. And finally, in reliability, interviews were continued until data saturation. Also for the reliability of the study, Kirk and Miller note taking methods were used.

The aim of the research, study procedures, risks and benefits of the research, the voluntary nature of participating in the study, were told to the participants. The right to quit research at any time was considered for the participants. After providing the necessary information they were assured that the information obtained will be kept confidential and results will be published without naming them. During the interview process, a short break was given for the interviewee fatigue and they were not forced to continue the interview.

Findings

In open coding 98 concept codes were obtained from all the comments of respondents. In the axial coding, second level concepts were obtained. In this stage the number of concepts had a sharp decline. In the end, the main category was identified in selective coding, that is teaching plans.

To draw a paradigmatic plan 98 codes were divided to three parts: obstacles, solutions and results.

1. Obstacles

The number of first-level concepts about the obstacles contained 40 items that at the secondary level reduced to 5 codes including "Ease of classical and traditional teaching practices, poor participation of students in the class, too much emphasis on introduced resources, teacher's lack of skill in using technology, and students focus on content expressed by the teacher". In the following, each of the sub-themes with a sample of interviewees' statements is presented.

1.1 Ease of classical and traditional teaching methods

Leaving the old standard format of instruction is usually faced with resistance from students. We must change this mentality and a new spirit is blown in the university system. (Interviewee No. 12)

1.2. The weak participation of students in class

Current teaching practices do not help much to strengthen the tendency of people to do activities together. The curriculum should be designed in such a way that the person finds morals and attitudes necessary to work in a group. (Interviewee No. 1)

1.3. Strong emphasis on introduced resources

Introduced resources are very effective on way of teaching. Currently, the resources that instructors introduce are not diverse and logical. Although a number of books are published each year for the courses at curriculum but they introduce references of 10 to 30 years old and they are reprinted (Interviewee No. 6)

1.4. Teachers' lack of skill to use technology

The use of audiovisual aids in universities despite technological progress and the significant percentage of students' access to the technology such as computers and the Internet is very low. (Interviewee No. 2)

1.5. Students focus on content expressed by instructor

There is a belief among students that teachers focus on the topics set for each session and their repetition is the easiest and best practice for teaching. This view must be changed. (Interviewee No. 8)

2. Solutions

The number of first-level concepts in the context of the proposed strategies in teaching were 30 items that were reduced to 6 codes of "delegating responsibility to the students, Introduction of efficient curriculum resources, the use of active teaching methods, teaching along with modern science, evaluation of student activities and the use of new media".

2.1. Delegation of responsibility to students

Using group teaching practices or even teaching by students and conducting conferences and seminars greatly amend the curriculum's impact on social capital. (Interviewee No. 4)

2.2 The introduction of curriculum resources

Some teachers exclude training and evaluation based on limited old school resources that have been introduced. However, if the teacher selects updated sources for teaching and asks the students to be prepared for them at the end of course, s/he will need more participation of the students (Interviewee No. 6)

2.3 The use of active teaching methods

The students tend toward traditional teaching methods while group method of teaching and students' participation in seminar or teachers' emphasis on scientific practices involving the realities directly affect social capital. (Interviewee No. 5)

2.4. Teaching along with the modern science of the world

The teaching method should be new and does not repeat the old practices. It is also important to note that teaching method should be selected along with the latest science of the world (interviewee No. 2)

2.5. Evaluation of students' activities

Students should have a significant role in the process of teaching. Instructors should pay attention to their class activities, participation in the teaching and discussions (interviewee No. 3)

2.6. Using new media

Book is very expensive in Iran and the students are not supported to buy books. Therefore, one cannot expect multiple sources to be presented by teacher in such circumstances. Instructors should move towards introducing new electronic sources which are cost-effective and the intended diversity can be achieved. (Interviewee No. 8)

3. Results

The number of concepts which were obtained at the first level coding was 18 that were reduced to 5 items including strengthening team spirit, shaping public space, strengthening the spirit of questioning and criticism, promoting accountability in the students, and activating the students in the teaching process.

3.1 Strengthening team spirit

If the teacher works in a manner in which individual action is not acceptable and people have to do group work, teamwork is promoted. (Interviewee No. 11)

3.2 Shaping public space

If a student is involved in class exercises, s/he will practice taking responsibility and action in groups as most important aspects of social capital. (Interviewee No. 14)

3.3 Strengthening the spirit of questioning and criticism

The class atmosphere on time teaching should be established in such a way that students are not afraid of criticism and ask their questions. (Interviewee No. 2)

3.4 Promoting accountability in the students

When a student takes responsibility in the class during a course and cooperates with his classmates in his course projects, he will tend to maintain group activities. (Interviewee No. 4)

3.5 Student participation in group activities

Instructor's trust to the student and entrust some responsibilities, such as teaching or troubleshoot classes can have a good influence on social capital. Responsibility Practice in the classroom can boost the morale for factors such as participation and solidarity among people. (Interviewee No. 6)

Finally the plan of study which is the combination and integration of the main category, its obstacles, strategies, and consequences was formulated as Figure1:

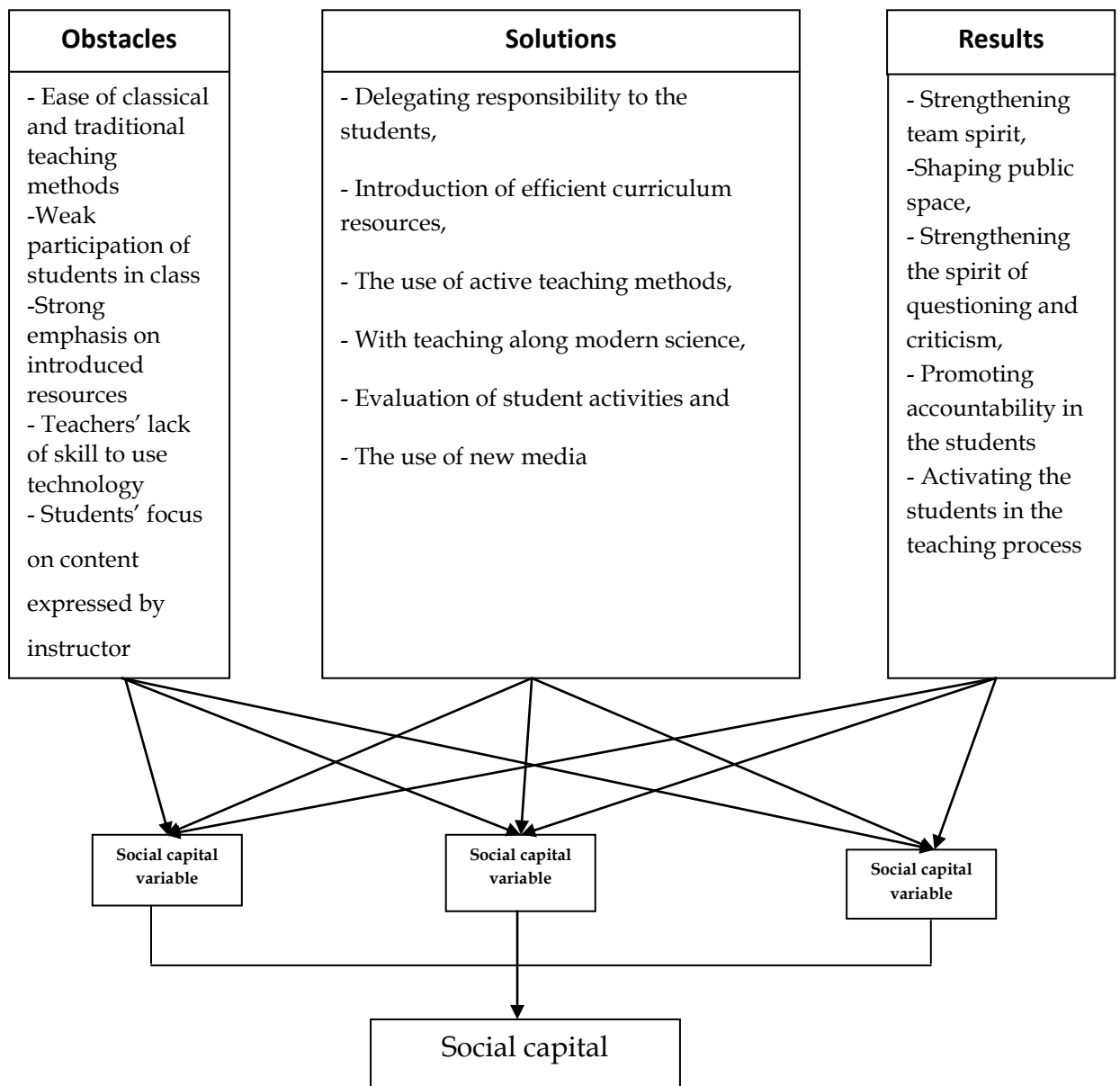


Figure1: Teaching plan based on social capital

Discussion

Teaching method is of the things that directly affect social capital. Changes in teaching methods can have a substantial impact on social capital of students. Of all the elements of the curriculum teaching methods has the highest communication with the students and is close to the concept of social capital more than any other component.

Tonkaboni et al (2014), designed a model of teaching in Iran's Higher Education that confirms the findings of this research in medical sciences.

Teaching plans should be more oriented towards learning and active teaching. Active learning, is a learning that occurs with minimal interference of external factors. In this method of learning, the instructor is at the same level of other factors such as the learning environment and educational resources and only acts as a facilitator of learning. This method is considered effective on social capital when the student is involved actively in the process of learning and learning occurs under his/ her control. Solati et al conducted a study on the medical sciences students and found that the more students engage in the teaching process, it provides more utility for the students (Solati et al., 2010)

The findings suggest that current teaching plans not only does not encourage people to attend and participate actively in class, but also damage the relationship between society and universities and change the mutual trust between the university and society.

Flick & Williamson (2005), research concluded that diversity in teaching methods promote social capital among students such as group learning and learning services.

After changing in teaching practices and student engagement is the institutionalization of the collective spirit among students that puts them in touch with other groups and social institutions and practices socialization of the individual's consciously and unconsciously.

A study on the satisfaction of students of dentistry in Shiraz from two methods of instruction based and participation based found that students are more satisfied with the latter and their level of knowledge has increased (Momeni Danaie et al., 2011).

Predicted changes for curriculum give this opportunity to the planners to use other leverages to affect the socialization process of the student and accelerate it.

University can be a good platform for many activities that potentially increase social capital. Thus, curriculum planners should not look at it apart from the curriculum. It is better that teaching practices that promote social capital in the form of a clear curriculum be included in syllabus to avoid personal taste in the teaching classes.

Marjaee (2004) in a study titled as "social capital among students of universities" examined social capital differences between people with different educational experiences. The results showed that in many of the components there was a significant relationship between education and social capital. In other words, by transition from undergraduate to PhD, a significant decrease was observed in many of the components of social capital. In addition, students' social capital has an inverse relationship with their academic experience.

Current practices in curriculum implementation, more than anything suffers from stagnation and recession. Necessary reforms in this area should be designed and implemented. To make positive changes in curriculum implementation, it is recommended that active teaching approach is used. In this procedure, instead of providing a set of concepts and facts that are sometimes

unrelated, attempt to provide students with learning activities that involve them in real problem solving situations. Merghati Khoei et al.(2013) in a study at Tehran University of Medical Sciences concluded that educational programs should be revised to use modern methods which enhance learning and student satisfaction .

Moein et al(2014), in a study among medical students at dermatology course found that, group discussion is a valuable strategy for teaching and learning with active participation of students which results in independent learning and deep understanding of the course material, more attention to the key points and creating a joyful learning environment .

So when designing curriculum, teachers should be given the freedom to act according to the knowledge and the passion and perseverance of students in class, and to be able to instantaneously change the complete teaching program. In addition to helping to educate people, this gives them the opportunity to play a role in the learning process depending on their learning experiences. In this method, the learner should be considered independent and the learning process alternatively changes from the students to the teacher, and vice versa.

In active learning approaches based on the student's participation, if the aim is promoting social capital group membership should have a key role. Actual activity as a group and individual responsibility of each member about the outcome of group will allow group members to practice the key components of social capital such as trust, partnership and solidarity and prepare for real life.

Conclusion

hence, instructors and curriculum planners should consider the components of social capital in the curriculum of medical sciences. The proposed plan can be used as a map for designing teaching method based on social development for the medical sciences universities. Teachers can carry out similar studies in other sections for various disciplines to provide the possibility to complete this plan.

Research limitations

Addressing teaching methods on a large scale exceeded the concepts and categories of this study. This was particularly problematic in the coding of concepts.

Requests for interviews were very time consuming and a lot of requests were left unanswered because of instructors' occupation.

The number of concepts discussed in the interview was too much and sorting them was time consuming. Due to the involvement of interviewees in the process of teaching at the university, refining the answers to remove the biased items required scrutiny and attention.

References

- Burns, N. & Grove, K. C.(2007), *Understanding Nursing Research*. 4th edition, Philadelphia. W.B. Saunders. 124-130
- Chalabi M.(2007), *Sociology of Order*. Tehran: Nei Press {in Persian}
- Dingaa, E. (2014). "Social capital and social justice". *Procedia Economics and Finance*, 8, 246-253
- Flick B & Williamson K.(2005), *Frontiers in Education, FIE Apos, Proceedings35th Annual conference*, 19-22 oct
- Fukuyama F.(2006), *the end of order*, Translated: Tavassoli, G. H. Iranian society press {in Persian}
- Joyce B .*Models of teaching*.(2008) Translated: Behrangi, MR. Tehran: Kamal-e-Tarbiat {in Persian}
- Hamdan, H.; Yusof, F.; Azziyati Marzukhi, M. (2014). "Social Capital and Quality of Life in Urban Neighborhoods High Density Housing". *Procedia - Social and Behavioral Sciences*, 153, 169-179.
- Kavianpour J.(2007), *urban management and social capitals*, *Kayhan Journal*,18777, 7. {in Persian}
- Marjaee S.(2004), H. *Social capital among students*, the Institute of Research and Planning {in Persian}
- Mehrmohammadi M.(2009) *curriculum Theories Approaches and erspectives*. Tehran: samt& Behnashr press {in Persian}
- Merghati-Khoei E. Zareie F. Bayat A. Dastoorpour M. Rimaz S. (2013), *Exploring The Teaching and Learning Approaches from the viewpoint of Postgraduate Students and their Lecturers* *Journal of Hygiene Education and Promotion of Health*. 1, 3
- Moein A. Heydari Seraj M.(2014) *Comparison of viewpoints of dermatology medical students involved in teaching-learning process about two methods of learning: group discussion versus lecture* *Journal Dermatology and Cosmetic*; 5 (2): 82-88
- Momeni Danaie, S. Zarshenas L. Oshagh M. Omidekhoda M.(2011), *Which method of teaching would be better; cooperative or lecture?*<http://journals.mui.ac.ir> *Journal of Medical Education*.11, 1, 24-31
- Mostafazadeh, M. Sadeghi MR.(2015), *Designing a model to develop social capital in higher education* *Journal of management of social capital*.1, 2, 161-182{ in Persian}
- Ornstein C.(2011), *Curriculum foundation principles and issues* London: Mc Cutahan Publishing.
- Putnam R.(2005), *Social Capital: Measurement and Consequences*. Kennedy School of Government, Harvard University.

- Putnam R.(2005), Democracy and Civic traditions. Translated: M. T., Delforooz, Tehran: Salam Journal Press {in Persian}
- Saifollahi S.(2005), Sociology in social problems in Iran. Collection of articles and ideas Tehran: Jamee Pajoochan - e- Sina press {in Persian}
- Schiff M. (2004),Labor mobility, Trade and Social capital. Review of International Economics, 12, 4, 630-642
- Shabani H.(2006), Skills education. Tehran: Samt Company10-11{in Persian}
- Solati M. Javadi R. Hoseini Tashnizi S. Asghari, N.(2010),Desirability of two participatory methods of teaching, based on students' viewpoint, Hormozgan Medical sciences Journal. 2010;14, 3, 191-197
- Tahghighi A.(2005) Social capital of governments and organization in Iran, Andisheye sadegh Journal. 11,12{in Persian}
- Tonkaboni, F., Yousefy, A., & Keshtiaray, N. (2013). Description and Recognition the Concept of Social Capital in Higher Education System.International Education Studies, 6(9), 40.
- Tonkaboni, F., Yousefy, A., & Keshtiaray, N. (2013). The Relationship Between the Curriculum of Higher Education and Social Capital. Journal of Education and Training, 1(1), 39-47.
- Tonkaboni, F., Yousefy, A., & Keshtiaray, N. (2014). Designing Teaching Methods in Curriculum of Iran's Higher Education based on Development of Social Capital. International Journal of Learning, Teaching and Educational Research, 3(1).
- Woolcock M.(2008), Social capital and economic development toward a theoretical synthesis and policy framework. Theory and Society: 27
- Yarmohammadian Mh.(2012), Curriculum Planning Principles. Tehran:Yadvar-e-ketab press {in Persian}
- Zaker Salehi G. R.(2008), The Paradox of Social Capital of Iranian Educated People: Survey and Study on the Relationship Between Higher Education and Social Capital in Iran. Journal of Engineering Education, Agah press; 40(1), 25-51{in Persian}