

Study of Student Success Indicators based on the Viewpoints of the Students of Mazandaran University of Medical Sciences

Farzaneh Afkhaminia¹,
Hasan Siamian², Naser
Behnampour³, Adib
Moghimi¹, Shiva Karimpour⁴

¹Student research Committee, School of Health, Mazandaran University of Medical Sciences, Sari, Iran

²Department of Medical Records and Health Information Technology, School of Allied Medical Sciences, Mazandaran University of Medical Sciences, Health Sciences Research Center Sari, Iran

³Department of Biostatistics, Golestan University of Medical Sciences, Gorgan, Iran

⁴Student Research Committee, Department of Health Information Technology, Amol Faculty of Allied Medical Sciences, Mazandaran University of Medical Sciences, Amol, Mazandaran, Iran

Corresponding author: Hasan Siamian, Department of Medical Records and Health Information Technology, Faculty of Allied Medical Sciences, Mazandaran University of Medical Sciences, Health Sciences Research Center, Sari, Iran. ORCID ID: <https://orcid.org/0000-0002-3542-5995>. E-mail: siamian46@gmail.com

doi: 10.5455/aim.2018.26.175-179

ACTA INFORM MED. 2018 SEPT; 26(3): 175-179

Received: May 20, 2018 • Accepted: Jul 10, 2018

© 2018 Farzaneh Afkhaminia, Hasan Siamian, Naser Behnampour, Adib Moghimi, Shiva Karimpour

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: One of the performance measures of any educational system is the degree to which students learn their education. Academic achievement includes the acquisition of a set of skills and abilities that are acquired during the course and in decision making and the various issues of leadership of individuals. A variety of factors affect the academic success of students. The present study aims to investigate the successful student's point of view from students of Mazandaran University of Medical Sciences in 2016-2017. **Materials and methods:** This cross-sectional study was conducted with an analytical approach. 595 students from all faculties of Mazandaran University of Medical Sciences and Health Services who were studying in the second semester of 2016-2017. To collect data, a researcher-made questionnaire made 144 questions, "Student Success Index" with 18 areas of reading, writing, speaking skills, listening skills, learning styles, memory, reading skills, critical thinking skills, motivation, self-esteem, personal relationships, conflict resolution, health, time management, Financial Management, Personal Purposes, Work Planning and Support Resources, each of which includes 8 fields. The Mann-Whitney U test and Kruskal-Wallis test used for analysis. **Results:** There is a meaningful relationship between auditory skills, reading, creative thinking and critique, motivation, personal relationships, conflict resolution, time management, personal goals, work planning, sources of support and School. $P < 0.05$. Also, there is a significant relationship between the dimension of personal goals and educational level ($P < 0.05$). In terms of personal dimensions, PhD students had lower levels than the average. **Conclusion:** Empowering human resources through education is possible. Obviously, with the increase in the efficiency of universities and higher education institutions, one can take a major step in the development of the country. It is suggested that in order to improve the quality of these skills among students, the teaching strategies for learning these skills should be included in the student's curriculum, or by conducting workshops on the use of these strategies during the study period for students for improving and developing it.

Keywords: academic success, academic performance, students, comment, scale, Mazandaran.

1. INTRODUCTION

Educational effectiveness has always been an important attention of attention in higher education research and policy (1). With the increasing range of students attending university, there is a growing interest in the factors forecasting academic performance (2). Literature distinguishes three complexes of factors that affect university achievement. Firstly, factors related to characteristics of the education system and study financing. Secondly, Factors related to how institutions organize their education. Finally, these concern student characteristics. The effects on achievement were examined. Dutch first-year university students filled in a

self-report questionnaire on motivation and deep information processing. Further, student ratings provided information on quality of courses. Finally, information on quantity of courses, in terms of number of contact hours was obtained through study guides. Multilevel analyses showed that ability, motivation, quality of assessment and the numbers of self-study hours, active hours and passive hours, affected achievement (3). The factors that influence achievement can be divided into three complexes of factors (4). Since human resources are the most valuable investment of each nation, the advancement and development of each country's social, economic and cultural

background depends on the training of specialist forces and, ultimately, on the growth of science and the increase in the level of publicity of the people of that community (5, 6). The question why certain students decide to failure while others decide to continue has been a starting-point for many studies in higher education (4, 7-12). Whatever the proportion of people educated in a society is higher than the total workforce, the productivity level in that society will generally increase, and the supply of skilled and expert human resources is one of the factors of the progress of each society (13). The main mission of the educational systems is to train the human resources necessary for this progress and the university plays a very important role as the most important scientific base for the development of expert, well-informed and experienced specialists (5, 6, 14). Students' academic achievement is of great importance in their future success, and the lack of attention to this essential category and consequently the academic failure will reduce the level of scientific knowledge and efficiency of students in the current society. Success is said to be the answer or the action in which the person reaches the goal, or, success is a definitive step towards the goal, but in terms of education and educational situations, success is defined as the degree to which the individual In recognition of his abilities, he deserves satisfaction in his advancements (15). Academic achievement includes the acquisition of a set of skills and abilities that are acquired during the course of study and in decision making and various issues of guidance of individuals (16). In education and in educational settings, success is a degree of efficiency that a person justifies satisfaction due to his abilities in his progress (17). Various factors affect students' academic achievement. Some of these factors include family background, interest in the field of study, socioeconomic status, intelligence, ethnicity and race, social capital within the family, self-control and family support, self-efficacy beliefs, mental health, study strategies, parenting education, Features professor, educational background and age (18). Also, having objective, appropriate emotional conditions, motivation, interest and satisfaction is effective on academic achievement (19). Factors in the application of individual skill in time management are also important factors for academic and non-academic success (16). One of the other important variables that affects academic achievement is public health, which has a significant impact on all aspects of human personality and how its various behaviors are manifested (20). Evidence shows that mental health is effective on students' academic status (19). Providing mental health can also increase the level of creativity and academic ability of learners (19, 21). What strategies do students use when they study for their classes? Some of the study strategies, such as the retrieval of text content and accelerated learning for exams, have been approved jointly by students (22, 23). Even so, they may not always have effective learning. When students report their strategies, other strategies, such as self-assessment, are shown to be fully effective (24). Of course, not all students reported using the same strategies; there are individual differences between them, according to their study habits.

Bjork (2001) concluded that students will follow the tips, such as finding out the type of exam at the end of the term, note taking, summarizing the notes and adding new examples to it, spacing between the intended hours for study, the

shift of study, study over the semester and so on. They can have better performance at the university (25).

Academic success shows that students are successful after graduation and during employment, which in addition to their positive individual role, will be beneficial to the social dimension (26). Conversely, failing to study leads to numerous personal and social problems and diverts from achieving the goals of the educational system (27). Success is a way, not an objective, and in this way many effective factors are involved (26).

According to the preface, the present study aims to investigate the successful student's point of view from the students of Mazandaran University of Medical Sciences in of 2016-2017. It is hoped that the results obtained could be used to measure successful student indicators and provide them with educational resources.

2. MATERIALS AND METHODS

This cross-sectional study was conducted with an analytical approach. 595 students from all faculties of Mazandaran University of Medical Sciences and Health Services who were studying in the second semester of 2016-2017. To collect data, a researcher-made questionnaire made 144 questions, "Student Success Index" with 18 areas of reading, writing, speaking skills, listening skills, learning styles, memory, reading skills, critical thinking skills, motivation, self-esteem, personal relationships, conflict resolution, health, time management, Financial Management, Personal Purposes, Work Planning and Support Resources, each of which includes 8 fields. The Mann-Whitney U test and Kruskal-Wallis test used for analysis.

Results for reliability using Cronbach's alpha coefficient, respectively, in the 18 areas of reading 0.74, writing 0.75, speaking skills 0.80, listening skills 0.74, learning styles 0.80, memory 0.82, reading skills 0.76, critical thinking skills 0.83, motivation 0.83, self-esteem 0.81, personal relationships 0.81, conflict resolution 0.82, health 0.65, time management 0.80, Financial Management 0.78, Personal Purposes 0.80, Work Planning 0.79 and Support Resources 0.79 and a total of 0.97, which has had a satisfactory level of reliability.

In determining the students' opinion about the successful student index, the criteria for measuring and rating the data were "very high, high, moderate, very low", which was considered to be 5-10 in the Likert Attitude Scale, respectively. The response scores of each person to the interval questionnaire range from 144 to 720. Regarding the absence of assumption of normalization of data, the comparison of the mean score in the two groups was performed using the U Mann-Whitney test and in some groups with Kruskal-Wallis test at a significant level of 5% and the application of SPSS version 18 was used.

3. RESULTS

Of the 595 students studied, 66.3% were female, 41% were from Allied Medical Sciences and 62.5% were BSc degree. The average student age was 21.5 ± 4.07 . The mean scores of successful student score in the field of personal goals with the highest score 3.96 ± 0.58 and in the time management environment had the lowest score 3.43 ± 0.68 obtained by the

Area	Mean± SD of female students	Mean± SD of male students	α
Reading skills	28.17 ± 4.96	28.70 ± 4.88	NS
Writing skills	27.97 ± 5.60	28.54 ± 4.94	NS
Speaking skills	30.72 ± 5.14	31.11 ± 4.80	NS
listening skills	30.35 ± 4.33	30.17 ± 4.96	NS
learning styles	29.43 ± 4.99	29.84 ± 4.61	NS
Memory	29.25 ± 5.47	29.79 ± 4.82	NS
Studying skills	28.92 ± 5.16	30.21 ± 4.45	0.006
critical thinking skills	28.48 ± 5.14	30.01 ± 4.45	0.000
Motivation	28.85 ± 5.99	29.58 ± 5.17	NS
self-esteem	31.05 ± 5.29	30.69 ± 5.006	NS
personal relationships	30.53 ± 5.06	30.82 ± 4.52	NS
conflict resolution	29.25 ± 5.0003	30.17 ± 4.51	0.006
Health	30.01 ± 4.73	30.69 ± 4.38	NS
Time management	26.97 ± 5.74	27.93 ± 5.27	NS
Financial management	28.96 ± 5.65	29.84 ± 4.83	NS
Personal Purposes	31.06 ± 5.26	31.56 ± 5.13	NS
Work planning	29.98 ± 5.31	30.71 ± 4.52	NS
Support Resources	28.72 ± 5.33	29.38 ± 4.87	NS
Total	524.93 ± 73.64	535.78 ± 63.73	NS

Table 1. Comparison of the score of successful student score divided by 18 areas studied in male and female students

students. Spearman correlation coefficient showed a significant positive correlation between student's mean score and reading areas ($r = 0.21$, $p < 0.005$), auditory skills ($r = 0.108$, $p < 0.05$), motivation ($r = 0.17$, $p < 0.005$), management Time ($r = 0.11$, $p < 0.05$) and financial management ($r = 0.11$, $p < 0.05$). The results showed that the average score of successful student index in the level of variables of academic level (BS and MA, General Ph.D.) was significant only in the dimension of personal goals ($P = 0.029$). The comparison of the score of the successful student indexes in 18 areas studied in male and female students is reported in Table 1. It should be noted that in this study, the mean comparison was carried out at the 7th level of the world, and given the high degree of results, only the two colleges with the lowest and the highest average were reported in Table 2.

4. DISCUSSION

In this research, the students' viewpoints regarding the student's success rate have been studied. The successful student index had a positive and significant correlation with reading, auditory skills, motivation, time management and financial management with student's average. This finding was consistent with the study of Firouznia et al. (2009) which showed that there was a significant correlation between motivation and students (28). Several studies have studied and emphasized the relationship between academic motivation and academic achievement (29). The study of Hejazi et al shows that there is a positive and significant relationship between academic achievement and variables such as motivation (30).

The results of this study showed that there was no significant correlation between creative thinking with the mean score and this finding was consistent with Yadollahi et al (15).

Dimensions	levels of studied variable		Mean ± SD	α
Reading	The most	Medical groups	31.28 ± 5.32	NS
	The least	Allied Medical Sciences	27.90 ± 4.99	
Writing	The most	Medical groups	30.14 ± 6.54	NS
	The least	Allied Medical Sciences	27.70 ± 5.33	
Speaking skills	The most	Medical groups	33.07 ± 4.32	NS
	The least	Allied Medical Sciences	30.35 ± 5.19	
Listening skills	The most	Medical groups	33.07 ± 4.37	0.046
	The least	Nursing and midwifery	29.55 ± 4.55	
Learning styles	The most	Medical groups	33.57 ± 5.44	NS
	The least	Allied Medical Sciences	29.05 ± 4.84	
Memory	The most	Medical groups	32.07 ± 4.89	NS
	The least	Medical	28.90 ± 5.93	
Studying skills	The most	Medical groups	33.64 ± 5.24	0.001
	The least	Allied Medical Sciences	28.76 ± 5.005	
Critical thinking skills	The most	Medical groups	30.64 ± 5.66	0.025
	The least	Allied Medical Sciences	28.23 ± 5.21	
Motivation	The most	Medical groups	32.85 ± 6.24	0.001
	The least	Allied Medical Sciences	28.24 ± 5.68	
Self-esteem	The most	Medical groups	33.50 ± 5.36	NS
	The least	Nursing and midwifery	30.22 ± 4.71	
personal relationships	The most	Medical groups	34.57 ± 3.27	0.004
	The least	Allied Medical Sciences	30.01 ± 5.11	
conflict resolution	The most	Medical groups	33.07 ± 4.49	0.000
	The least	Allied Medical Sciences	28.84 ± 5.12	
Health	The most	Medical groups	32.64 ± 2.61	NS
	The least	Dentistry	29.60 ± 4.79	
Time management	The most	Nursing and Midwifery	30.58 ± 6.15	0.006
	The least	Health	26.18 ± 5.42	
Financial management	The most	Dentistry	30.20 ± 5.59	NS
	The least	Medical groups	28.14 ± 3.57	
Personal purposes	The most	Medical groups	33 ± 6.46	0.013
	The least	Allied Medical Sciences	30.64 ± 4.90	
Work planning	The most	Nursing and Midwifery	31.81 ± 4.99	0.026
	The least	Allied Medical Sciences	29.47 ± 5.33	
Support Resources	The most	Nursing and Midwifery	31.35 ± 4.56	0.002
	The least	Health	28.06 ± 5.55	
Total	The most	Medical groups	576.28 ± 64.19	0.006
	The least	Allied Medical Sciences	519.77 ± 71.13	

Table 2. Comparison of the mean score of the successful student index in the variables of the Faculty

Also, findings showed that there was no meaningful relationship between reading skills and mean score. The results of the study of Hosseini et al. (31) and Shiva et al. (32) showed that there is a significant relationship between the mean score and the reading skills, which are not consistent with the results of this study (32).

In this study, the average of reading skills, critical thinking and creative thinking as well as conflict resolution in male students was higher than female students, which was statistically significant. This finding was not consistent with the study of Badeleh in the dimension of study (33). In Abdokho-

daie and Ghaffari's study, female students' study skills were better than male students (34). In this study, there was no significant difference between the learning style with gender and faculty, this finding was consistent with a small study (35). Theoretical study of Salehi et al. also did not show a significant relationship in this finding (36). The results showed no meaningful relationship between self-esteem and gender. In Tamannaifar et al. self-esteem in female students was significantly higher than male students (37). Educational systems are seeking to increase their efficiency and quality, which is important in this regard to the academic achievement. Academic progress is the ability to prove academic achievement in the acquisition of the outcome for which it is planned (38). Students' academic achievement is affected by several factors (39-48). Researchers say that high school students usually have enough motivation to study, and lack of interest in the field of study can lead to academic failure (39). A study on Indian American students showed that inadequate study skills were effective in student dropout (40). Generally, each person with higher self-esteem evaluates his ability to deal with problems and perform duties assigned at a desirable and high level. Also, the research emphasizes the relationship between time management and stress reduction and, consequently, an increase in academic achievement (41).

On the other hand, reading skills will lead to a better understanding of the content. The more the student is able to use the writing skills, the more he writes the article will be more coherent and the first message will be clearer for himself. In the same way, verbal and speaking skills are also effective in summarizing, critically speaking and addressing the main issue in academic achievement. Dickson et al. (1994) believed that interpersonal interactions, listening and listening skills are very important (42). In addition, the attention of instructors and educational planners to the learning styles in different levels of education will facilitate learning and learning processes (43). The learning styles that the habits of processing information received by individuals is one of the factors influencing learning and, consequently, the student's academic achievement (44). Educational thinkers agreed that critical thinking is not another factor in success. It should only be one of the basic goals of education, but it should be an integral part of education Every level of study is critical because critical thinking is the thought that analyzes, evaluates, selects, and applies the best solution to humans, and this is the very core that the world needs today (45). Absolutely, capital students The main focus of the educational system is the importance of giving this human capital a special priority that must be strengthened. Human resource development through education is possible. Evidently, with the increase of the returns of universities and higher education institutions, development can The country has taken a major step. Also, all models and concepts of education, especially of medical education must be followed by recommendations of strategies and contents of education given by appropriate scientific associations in the world, including concept of Bologna system of medical education. This model of education prefer using ICT for better quality of education and also evaluation and quality assessment of teaching process and student's examinations (39, 40, 45-48).

5. CONCLUSION

It is suggested that in order to improve the quality of these skills in students, the teaching strategies for learning these skills should be included in the student's curriculum, or by conducting workshops on the use of these strategies during the study period for students to improve and develop it. It is suggested that in order to improve the quality of these skills among students, the teaching strategies for learning these skills should be included in the student's curriculum, or by conducting workshops on the use of these strategies during the study period for students to improve and develop it.

- **Acknowledgment:** This article is the result of a research project approved by Mazandaran University of Medical Sciences (95-400). we would like to thank Vice Chancellor for Research and Technology of this university and the Student Research Committee of the University and the School of Health and Allied Medical Sciences which helped us in doing this research and all the students who participated in this research with the informed consent and completed the questionnaire.
- **Conflict of interest:** none declared.
- **Author's contributions:** Farzaneh Afkhaminia, Hasan Siamian, Adib Moghimi, Naser Behnampour and Shiva Karimpour substantial contribution to conception and design (acquisition of data, analysis and interpretation of data). Hasan Siamian Translated from Persian Language to English language. Hasan Siamian revised it critically. Hasan Siamian made Endnote and final edition. All the authors approved the final version to be published.

REFERENCES

1. Jansen EPWA, Bruinsma M. Explaining Achievement in Higher Education. *Educational Research and Evaluation*. 2005; 11(3): 235-252.
2. McKenzie K, Schweitzer R. Who succeeds at university? Factors predicting academic performance in first year Australian university students. *Higher education research & development*. 2001; 20(1): 21-33.
3. Bruinsma M, Jansen E. Who succeeds at university? factors predicting academic achievement of first-year Dutch students. *REICE Revista Electrónica Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*. 2005; 3(1): 204-205.
4. Prins J. Studieuitval in het wetenschappelijk onderwijs. Studentkenmerken en opleidingskenmerken als verklaring voor studieuitval [Drop out in university education. Student characteristics and educational characteristics as explanatory factors]. D. Nijmegen, The Netherlands: University Press, 1997.
5. Mohammadi M, Mirzaei M, Tavakoli Hosseini A, Tabatabaee SH, Aghili H, Bidbozorg H, et al. The Survey on the Effects of Educational and Occupational Status of Parents in the Academic Achievement of Dentistry Students at University of Medical Sciences of Yazd in Academic Year 2014-2015. *Paramedical Sciences and Military Health*. 2016; 11(1): 38-43.
6. Pouratashi M, Shabanali FH, Movahed MH. Analysis of Factors Influencing Academic Achievement: A Reflection On Views Of Students In Tehran University's Agricultural Courses. *Iranian Of Higher Education*. 2010; 2(3): 1-14.
7. Masic I, Novo A, Deljkovic S, Omerhodzic I, Piralic A. How to assess and improve quality of medical education: Lessons learned from Faculty of medicine in Sarajevo. *Bosn J Basic Med. Sci*. 2007; 71: 74-78.
8. Masic I, Begic E. Efficiency of Implementation of the Bologna Process at Medical Faculty, University of Sarajevo. *Mater Sociomed*. 2015; 27: 67-70.
9. Masic I. Quality assessment of medical education at Faculty of medicine of Sarajevo University. *Med Arch*. 2012; 66 (3 Suppl 1): 6-10.
10. Masic I, Begic E. The Actual (Un)usefulness of the Bologna System

- sem in Medical Education. *Med Arch.* 2016; 70: 158-163.
11. Bean JP, Metzner BS. A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research.* 1985; 55(4): 485-540.
 12. Bijleveld R. Numeriek rendement en studiestaking [Numerical returns and dropout]: Doctoral dissertation, University of Twente. Utrecht: Lemma, 1993.
 13. Sabbaghian Z, Poorkazemi MH. The comparison of university students who had consecution in their field of study at MS Level, with those who had not in terms of their educational success. *Journal of Management And Planning In Educational Systems.* 2009; 1(2): 7-21.
 14. Haghdoost AA, Sadeghirad B, Shams AA, Nafisi Y, Dehghani MR, Ayat EMS. Academic Achievement and its Indicators Among Students Awarded Scholarship in Medical Fields. *Hakim.* 2010; 13(1): 1-10.
 15. Yadollahi A, Mirzazadeh A, Fata L. Predicting Academic Achievement Through Emotional Intelligence and Sociodemographic Variables. *Razi Journal of Medical Sciences.* 2014; 21(118): 73-80.
 16. Saketi P, Taheri A. The Relationship Between Time Management and Academic Achievements Among Bachelor And Master Students Of Shiraz University And Shiraz University Of Medical Sciences. *Iran J Med Educ.* 2010; 10(3): 293-300.
 17. Orujlu S, KHalkhali H. The Effect of Problem Solving Education in Fourth-Year Nursing Students' views of Success. *Journal of Urmia Nursing & Midwifery Faculty.* 2013; 11(3): 212-217.
 18. Haerizadeh SA, Asgharpour A, Noghani M, Miranvari A. Investigating The Impact Of Student-Faculty Member Interactions On Students' educational Achievement. *Journal of Social Sciences.* 2009; 6(1): 27-51.
 19. Sadeghi H, Abedini Z, Norouzi M. Assessment of Relationship Between Mental Health And Educational Success in the Students of Qom University of Medical Sciences. *Qom Univ Med Sci J.* 2013; 7(2): 17-22.
 20. Movlazzadeh AR, Hamaieli Mehrabani H, Gholami MS, Mortazavi AR, Dovlatkhah HR, Ghodsi R. Relationship of General Health and Improvement Motivation With Educational Success Among The Students of Fasa University of Medical Sciences in 2013. *J Neyshabur Univ Med Sci.* 2014; 2(4): 54-61.
 21. Ghamari F, Mohammad BA, Mohammad SN. The Association Between Mental Health and Demographic Factors With Educational Success in the Students of Arak Universities. *Journal of Babol University of Medical Sciences (Jbums).* 2010; 12(1): 118-124.
 22. Karpicke JD, Butler AC, Roediger III HL. Metacognitive strategies in student learning: do students practise retrieval when they study on their own? *Memory.* 2009; 17(4): 471-479.
 23. Taraban R, Maki WS, Rynearson K. Measuring study time distributions: Implications for designing computer-based courses. *Behavior Research Methods, Instruments, & Computers.* 1999; 31(2):263-9.
 24. Roediger HL, Butler AC. The critical role of retrieval practice in long-term retention. *Trends in cognitive sciences.* 2011; 15(1): 20-7.
 25. Bjork RA. How to succeed in college: Learn how to learn. *APS Observer.* 2001; 14(9).
 26. Dehghani MR, Talebian E, Zareshahi R, Pourkhandani E, Pourkhandani A, Sasani P, et al. The Concept of Educational Achievement and its Effective Factors according to the Overseas Graduates' Point of View: a Qualitative Study. *Strides Dev Med Educ.* 2010; 6(2): 99-109 [Persian].
 27. Saravani S, Dehghan Haghghi J, Abed-Saeedi Z, Homayouni Zand R. An Examination of Effective Factors on Academic Success of Students of Zahedan Medical University. *Future of Medical Education Journal.* 2013; 3(3): 35-40.
 28. Firouznia S, Yousefi A, Ghassemi G. The relationship between academic motivation and academic achievement in medical students of Isfahan University of Medical Sciences. *Iranian Journal of Medical Education.* 2009; 9(1): 79-84.
 29. Onete U, Edet P, Udey F, Ogor BP. Academic performance: A function of achievement motivation among education students of cross River University of Technology, Calabar. *Review of Higher Education in Africa.* 2012; 4.
 30. Hejazi Y, Omidi NM. Factors Affecting Educational Achievement of Agricultural Students In Tehran University. *Iranian Journal of Agricultural Sciences (Journal of Agriculture).* 2006; 37-2(1): 19-25.
 31. Hosseini SA, Jafari SY, Charkazi R, Bakhsha F. The relationship between students' study skills and academic achievement. *Iranian Journal of Medical Education.* 2013; 13(1): 66-71.
 32. Shiva S, Mansourian A, Vatanpour M, Tirgar F. The relationship between study skill and academic achievement in dental students of Tehran University of Medical Sciences. *J Dent Med Tehran Univ Med Sci.* 2015; 28(3): 239-246.
 33. Badeleh MT, Hesam M, Charkazi A, Asghari SZ, Khorsha H. Study skills in nursing and midwifery students of Golestan University of Medical Sciences. *Journal of Research Development in Nursing & Midwifery* 2012; 9(1): 34-40 [Persian].
 34. Abdekhodaie MS, Ghaffari A. The Relationship Between Students' usage of Study and Learning Strategies and Their Academic Achievement. *Studies in Education & Psychology.* 2011; 11: 211-226.
 35. Koochaki GM, Kord B, Sotoodeh S, Tatari M. Comparing learning styles among students of Para medicine and Health faculties in Golestan University of medical sciences. *Hakim Jorjani J.* 2016; 4(1): 95-10 [Persian].
 36. Salehi S, Aein F, Alaei N. Learning Styles of Operating Room and Nursing Students of Shahrekord University of Medical Sciences. *Research in Medical Education.* 2015; 7(3): 57-63.
 37. Tamannaifar M, Sedighi Arfai F, Salami Mohammadabadi F. Correlation between emotional intelligence, self-concept and self-esteem with academic achievement. *Strides Dev Med Educ.* 2010; 3(3): 121-126.
 38. Zimmerman B, Schunk D. Selfregulated learning and academic achievement: Theoretical perspective. Mahwah, NJ: Lawrence Erlbaum Associates. 2001.
 39. Reynolds AJ, Temple JA, Ou SR, Robertson DL, Mersky JP, Topitzes JW, et al. Effects of a school-based, early childhood intervention on adult health and well-being: A 19-year follow-up of low-income families. *Arch Pediatr Adolesc Med.* 2007; 161(8): 730-739.
 40. Masic I, Ciric D, Pulja A, Kulasin I, Pandza H. Quality Assessment of Medical Education and Use of Information Technology. *Stud Health Technol Inform.* 2009; 150: 898-902.
 41. Masic I. Quality assessment of medical education at faculty of medicine of Sarajevo university—comparison of assessment between students in Bologna process and old system of studying. *Acta Inform Med.* 2013; 21: 76-82.
 42. Dickson D, Hargie O, Saunders C. Social skills in interpersonal communication. 1994.
 43. Bastable SB. Nurse as educator: Principles of teaching and learning for nursing practice: Jones & Bartlett Learning; 2003.
 44. Frost PJ. Building bridges between critical theory and management education. *Journal of Management Education.* 1997; 21(3): 361-367.
 45. Pandza H, Masic I. Distance learning perspectives. *Acta Inform Med.* 2010; 18: 229-232.
 46. Masic Z, Novo A, Masic I, Kudumovic M, Toromanovic S, Rama A, et al. Distance Learning at Biomedical Faculties in B&H. *Stud Health Technol Inform.* 2005; 116: 267-72.
 47. Masic I. E-learning as new method of medical education. *Acta Inform Med.* 2008; 16: 91-100. Masic I, Pandza H, Kulasin I, Masic Z, Valjevac S. Teleeducation as method of medical education. *Med Arh.* 2009; 63: 350-353.
 48. Masic I, Sivic S, Pandza H. Social networks in medical education in Bosnia and Herzegovina. *Mater Sociomed.* 2012; 24: 162-164.