

Designing Curriculum Elements of Study and Learning Skills in Higher Education System in Iran

Taliya Torabi^{1*}

¹ Azad University of Gorgan, Gorgan, Iran

Email Address

taliya.torabi@yahoo.com (Taliya Torabi)

*Correspondence: taliya.torabi@yahoo.com

Received: 6 June 2023; **Accepted:** 22 August 2023; **Published:** 10 November 2023

Abstract:

The purpose of this study was to explain the elements of the study and learning skills curriculum for in the Iranian higher education system. The participants were 15 experts in educational psychology and educational sciences and Furthermore, 18 written documents related to study and learning skills were used in the present research in the year (98-99). Purposive sampling method was adopted to gather the data using semi-structured interview until theoretical data saturation. The collected data were analyzed using MAXQDA10 software. The validity of the findings was confirmed by considering the opinions of experts and professors; their reliability was also confirmed using matching method. The research findings were presented including 15 subcategories and 9 main categories. The main categories obtained for the purpose of “improving the level of individual ability, educational quality”, content “training of organizing mental forces, teaching method”, evaluation “quantitative evaluation, qualitative observation”. The findings of the current study can be a constructive aid for the advancement and development of the country’s students.

Keywords:

Design, Curriculum Elements, Study and Learning Skills

1. Introduction

Universities and higher education centers are a very vital factor in the education and training of people and the specialist force needed by the society, which cause the progress and development of the society. Of course, one of the factors that causes the development and promotion of higher education is the quality of education [13]. Higher education as one of the most important and constructive social institutions that should be used to enhance creativity, empowerment and all-round development of society. Think about it, it has faced many changes in recent decades. In order to maintain its dynamics, this institution needs strategic planning, improving processes and adopting appropriate methods [10]. Curriculum design is considered to be one of the most basic subjects of the curriculum, which refers to the determination of resources, the identification of the constituent elements of the program and the type of

decisions that are made about each of them. Curriculum design should be such that by creating a dynamic learning environment, the growth and prosperity of students and the formation of their real identity is possible [5]. The first step in realizing the goals of the curriculum is to choose the appropriate and desirable educational content [22]. One of the challenges that learners face during their studies is the lack or weakness of study skills. Study skills are one of the topics that have been considered in educational research since the 1970s. In Iran, this is one of the most important current problems of the education system, which wastes tens of billions of the country's budget every year, and the potential forces and capital of the society, which is the human force, remains fruitless [12]. Study skills, are tools that learners use for better learning and are considered essential abilities for effective learning. Creating good study habits among students in university and their lifelong learning is crucial [27]. In addition to predicting progress and academic performance, study methods and skills have an impact on students' exam performance. Students with poor reading and learning skills have fundamental defects in various information processing processes, including encoding and storing materials, which weakens their learning and poor performance in the exam [16]. Study skills can have a significant impact on the academic progress of students and there is a need to make changes in the current educational program. It is necessary for the professors to use this skill to increase students' motivation and this is for the university as a be targeted [29].

Theoretical foundations and research background Based on the results of Fai et al.'s (2017) research, using study skills and habits leads to the academic progress of learners. On the other hand, in scientific theories, learning has an important role, in general, this concept is defined as relatively stable changes in a person's potential behavior obtained as a result of experience. Student learning is a very important issue that can be influenced by many factors and bring various consequences at different levels [34]. Learning how to think or learning how to learn should become an important principle in the educational system [33]. The individual findings of students depend to some extent on the use of strategies and techniques that they apply to study, and there is no study method that is effective for all people, and its secret lies in the ability and identification of personal study, and the study method of each Someone is unique in different environments and conditions, and it is necessary for each person to know in what conditions and what different and appropriate strategies to use for good and effective study [2]. Kashtkaran et al. (2012) showed in a research; There is a direct relationship between thinking styles and students' preferred learning methods in many dimensions. Encouraging students to develop their study habits and having a plan for studying, taking into account the recreational program, dividing time, choosing the right time, dividing the study time by hours and considering the right place to study and using the right resources are effective factors. It is in facilitating learning [31]. Research results in this field show that teaching new study and learning techniques through holding educational workshops for students who have just entered the university is very effective. Thus, it strengthens the fields of attitude, information processing, anxiety and time management in students after workshop training. Holding training courses on study skills can improve the academic performance of learners [6]. The findings showed; One of the most important skills needed by students, which effectively helps to increase their self-efficacy, is study skills [2]. Study skills are the extent to which a student knows how to deal with his academic problems in a systematic and effective manner. In another research, the results showed; Learning strategies increase learners' motivation [36]. Also, the findings in another research entitled "Motivation styles and academic progress, the mediating role

of academic self-concept” indicate that; Although the motivation of academic progress includes all fields related to education, but a major part of it is related to the motivation of progress in learning, which plays a significant role [20]. Also, research results under The title “The effect of two teaching methods, workshop and classroom, of study and learning skills on the study and learning strategies of nursing and midwifery students” showed; Classroom and workshop training courses on study and learning skills have had a significant impact on students and it was found that the workshop training course before and after the training in the fields of attitude, information processing, anxiety and time management increases after the workshop training [1].

Teaching the organization of mental powers in the content of the curriculum of study and learning skills means teaching the skill of storing and organizing materials in memory. Researches show that the learner learns new material when the new concepts are consistent with his previous cognitive structure. Cognitive structures are learning strategies that improve the academic performance of learners by facilitating the learning process [30]. Research indicates that; Critical thinking skills develop one's creativity. In this regard, the purpose of critical reading is to reach a reasoned judgment and engage deeper with the content through the analysis of meanings [7]. In another research, the findings indicate that; Teaching study skills improves the academic status of students and is very effective in the quality of education (Malek Ahmadi and Bahrampour, 2018). Time management is one of the skills that affects the ineffectiveness of learning if implemented incompletely and incorrectly. The time to do daily tasks and responsibilities should be scheduled [11]. Researches have shown; Teaching time management skills in the content of the study skills curriculum will reduce fatigue, anxiety, save time and increase students' motivation and will lead to better learning and academic progress for them [30]. The use of different teaching methods by monitoring the diverse needs of learners and the use of diversity in teaching methods and styles during the teaching-learning process can, in addition to increasing the amount and depth of learning, encourage long-term learning throughout the life of the learners. The findings showed; Collaborative learning increases trust and mutual respect, reduces anxiety, increases metacognitive knowledge, and increases self-respect and motivation to learn [17]. Also, in another research, the findings showed; The electronic teaching method also increases the quality of learning. In fact, electronic learning is accepted as the major and main method in the teaching-learning process [3]. On the other hand, the research shows that the problem-oriented teaching method is a student-oriented learning method that focuses on confronting students with problems and motivates and stimulates students to learn. Learning based on problem solving is based on cognitive psychology and it is accepted that learners are not only passive receivers of knowledge but active processors of information [26]. Another method that is very useful and effective in teaching study skills is the note-taking method, and in many researches, the note-taking method is considered a useful method in reviewing materials and empowering learners [39]. Educational evaluation deals with the systematic collection and analysis of information needed for decision-making [24]. Quantitative evaluation includes oral and written tests, which have a favorable effect on the teaching and learning process of people and are very effective in improving the academic performance of learners [18]. On the other hand, it has been stated in the researches that the qualitative (descriptive) evaluation of the functional test and the test of the direct observation method causes self-confidence and self-esteem and increases the motivation in the individual and is more effective in learning and memorizing the subject matter. According to the mentioned materials, in

the educational system of our country, students do not have enough knowledge of study and learning skills, and with all the time they spend studying and studying, their learning does not have enough depth. It is obvious that not choosing the right study method not only causes them to lose their energy and time, but also leads to bad study habits, but it can also be one of the important causes of academic failure. Therefore, this study was conducted by designing the curriculum model of study and learning skills in Iran's higher education system, so that by examining study and learning skills and identifying the influencing factors, a step can be taken to advance the educational goals of the country's universities and educational centers.

The purpose of the research The purpose of this qualitative research is to design a study and learning skills curriculum model in Iran's higher education system. The central question of the research How to design the study and learning skills curriculum model in Iran's higher education system? research method The current research was carried out in the framework of qualitative approach and using the method of content analysis. Content analysis method can be used to check the obvious content of the messages in a text. Content analysis is a suitable method to answer questions about the content of a message [32]. The data was collected through semi-structured interviews with experts until theoretical saturation. The interview questions and their validity were confirmed based on the opinion of experts. The participants in this research are 15 members of the academic staff, specialized doctorates in the fields of educational sciences (curriculum planning and educational management) and educational psychology; Universities and higher education centers of Golestan province were formed in the academic year (98-99); whose specifications are given in Table 1-. also; (18 Latin written documents related to the topic were also used in the period of 2004-2019). The sampling method in this research was purposeful. The criteria for selecting people in this research was based on having at least a specialized doctorate in the field of curriculum planning, educational management and educational psychology, and their mastery of the research topic and having at least 5 scientific research articles. Conventional content analysis method was used for data analysis. This method is used as a systematic method for the deep description of the phenomenon and it is suitable for examining the experiences of people regarding a specific issue [3]. In the conventional content analysis method, the codes and categories were directly and inductively extracted from the raw data [35]. The working method was as follows: The checklist of research questions was prepared in advance and provided to the interviewees; Then, with the necessary arrangements, the interviews lasted 45 to 60 minutes. The data obtained from the interviews were converted into textual data. The data were examined line by line in the initial coding and a code was assigned to each sentence related to the event and the codes were identified. After coding the whole text, the consistency in coding was checked again. In the next step, the primary codes were classified and similar codes were placed under the classes and the classes were extracted from the raw data with an inductive approach. They were coded with the content analysis method and using MAXQDA10 software. In order to ensure the validity of qualitative findings, the criteria of qualitative research were used [17], including validity, transferability and appropriateness, verifiability and reliability and auditability [38]. Participant reviews were used to ensure the accuracy of data and extracted concepts; That is, the concepts that did not express the participants' point of view were modified. 5 of the participants reviewed the report of the first stage, the analysis process or the obtained categories and expressed their opinion about it (adjustment by the members). In order to ensure the accuracy of the extracted concepts, it was checked and confirmed by experts and

professors who had enough experience in the field of qualitative work. The trust and audit of the research stages were accurately recorded and reported so that it would be possible for others to follow the research, and some of the interviews were coded separately and the degree of similarity of the codes was examined and a general result was obtained. And the full description of the work steps was discussed [37]. The validity of the findings was confirmed by receiving the opinions of experts and professors about the correctness of the research. Also, 5 professors confirmed the pattern obtained from the research findings.

Table 1. Demographic characteristics of participants.

Teaching experience	Academic rank	Field of study	Gender	Code	Teaching experience	Academic rank	Field of study	Gender	Code
10	Assistant Professor	Education Management	Man	9	17	Assistant Professor	Curriculum	Man	1
14	Associate Professor	Education Management	Female	10	7	Assistant Professor	Educational Psychology	Man	2
8	Assistant Professor	Educational Psychology	Female	11	12	Assistant Professor	Curriculum	Man	3
9	Assistant Professor	Curriculum	Man	12	15	Assistant Professor	Educational Psychology	Man	4
13	Assistant Professor	Educational Psychology	Man	13	8	Associate Professor	Education Management	Female	5
5	Assistant Professor	Education Management	Female	14	11	Assistant Professor	Educational Psychology	Man	6
14	Assistant Professor	Educational Psychology	Man	15	16	Assistant Professor	Education Management	Man	7
					10	Assistant Professor	Educational Psychology	Female	8

2. Research Findings

The findings from the analysis of the data obtained in this research included 585 initial codes. Finally, by merging the initial codes, 363 final codes, 15 subcategories and 9 main categories were extracted from the interviews with the participants and the review of valid documents. The main classes obtained are as follows: “Improving the level of individual ability, educational quality”, “Teaching to organize mental powers, teaching learning strategies and techniques, teaching time management skills”,

“Interactive teaching method, non-interactive teaching method”, “Quantitative evaluation, qualitative observation”. The first research question: What are the goals of the study and learning skills curriculum in the higher education system?

1) Improving the level of individual ability, 2) Educational quality

Table 2. The main classes and sub-classes extracted from the point of view of experts and document review.

Evidence and documents	under the floors	Main floors
Studying with a critical point of view makes learning more stable and fruitful, and by reading with a critical point of view, we understand the strengths and weaknesses of a text well. It increases student self-confidence in study skills (code 6). In documents (1, 8, 4, 2) it is mentioned that effective study methods increase self-confidence and increase academic skills and self-regulation skills and improve self-efficacy skills and self-regulation study and learning skills. Improves general students.	Raising the level of introspection and self-efficiency	Improving the level of individual ability
Study skills are effective in the better academic performance of students, and familiarity with study skills techniques and learning methods and time management increases student learning and academic progress, and students' concentration in studying increases and makes students hopeful and motivated to learn more. It has course materials. Better academic performance does not only include academic progress, but also affects people's psychological system. (Code 8) In the review of documents (1, 4, 11, 14), there was a consensus that knowledge of study methods increases the level of interest and motivation in students. Students will be more willing to study the material and learning will be more effective. Increasing interest helps to understand more.	Creating enthusiasm and motivation in learning	
The failure of the methodical and scientific methods of various study and learning patterns, the rational and logical examination of study and learning methods makes it easier to achieve the goals of education and training.. (Code 7) In the analysis of the book (3): if the students are familiar with the way and methods of studying and have read books about the skills of studying, their ability to concentrate in studying increases and it has a positive effect on their learning process. In the review of documents (2, 4, 14, 12, 11), it was mentioned that teaching new study methods and familiarizing with new study attitudes and methods and using successful learning techniques to support students' learning and academic success	Acquaintance with new study methods successful	
Teaching study skills improves the academic status of students, and in-person learning and deep understanding of scientific material occurs on the part of students, and it leads to an increase in students' academic performance. (Code 3) In the review of documents (12, 11), it refers to the development of students' skills and improving their performance and providing study skills to strengthen learning and increase students' scientific ability.	Improving educational quality in higher education	Educational quality

The second research question: What is the content of the study and learning skills curriculum in the higher education system?

- 1) training to organize mental powers, 2) training strategies and learning techniques,
- 3) training time management skills.

Table 3. The main classes and sub-classes extracted from the point of view of experts and document review.

The content that is supposed to be taught to the students in this course is reading skills, which means that a person can learn all kinds of reading methods, for example, analytical readings, readings for evaluation, and readings to learn course material through careful reading and investigation in reading. It should be taught and how to entrust information to long-term memory. (Code 2) In the review of the book (2) and documents (11,5,3,2) to strategies related to long-term storage of materials in memory and techniques of storage of materials in memory and storing information for a long time and acquiring new knowledge and skills and The mental storage of the student is mentione	Maintenance skill training and Organizing content in memory	Training to organize mental power
The skill of self-regulation, metacognition and critical thinking should also be considered in the content. A book that is prepared and adjusted for students should be self-learning, and some of the content should be so simple and fluent, and its application should be explained to the students. The student himself can learn the material without the need of a professor. First, we explain the material and how to present it and how to use it for the students. (Code 11) In the review of documents (2, 8, 14), it has been pointed out to teach students critical thinking and to cultivate creativity and to teach them how to read through critical thinking and creativity	Hart, critical thinking and cultivating creativity	
∩ In the content, there is less attention to the correct method of studying. I believe that learners should discover the correct methods of studying and learning in order to acquire the necessary skills for academic success and introduce students to new methods of studying and one of the methods New study methods, thinking methods and problem solving methods and how to search for information sources in the content should be learned. (code 1) Document (6) mentions the teaching of effective study techniques for undergraduate students	Teaching new study methods	Teaching learning strategies and techniques
Sstudying skills training improves students' academic status and in-person learning and deep understanding of scientific material is created by students and creates creativity in students through correct understanding of material and saving time (time management) and saving energy. creates the study (code 2) In the review of documents (2, 3, 4, 6, 9, 12, 13, 14) of book (2), teaching time budgeting skills and the ability to manage time and save time are mentioned in the study skills for students.	Time management skills while studying	Time management skill training

The third research question: What are the teaching-learning methods of the study and learning skills curriculum in the higher education system?

- 1) interactive teaching method, 2) non-interactive teaching method.

Table 4. The main classes and sub-classes extracted from the point of view of experts and document review.

The useful use of educational equipment or technology in the classroom, the active participation of students in the classrooms, and the use of students' views on how to present the lessons are effective in students' learning (code 15). In the review of document (15), the student-centered active learning method is mentioned.	Collaborative teaching method	Interactive teaching method
Llearning and teaching methods in both traditional and virtual	Pproblem	

ways, in the traditional way of studying methods have moved away from the lecture method and from modern teaching methods such as problem solving method, learning to the level of mastery has increased the ability and power of learning in people and get a better result (code 2) In the review of documents (15, 7), it is mentioned that the method of using problem solving is effective for improving the learning and academic progress of students.	solving teaching method	
If a person has a general picture of the contents, he can understand a book of two hundred pages much more easily. If they know the whole of a subject, they will learn better and visualize the main items in their mind and then summarize the details. Finally, deep learning takes place and the use of multimedia methods is effective in the learning process of students. (Code 9) In the review of document (15), the use of multimedia and multi-model teaching strategies that can increase academic progress is mentioned.	Eelectronic teaching method	Nnon-interactive teaching method

The fourth research question: How to evaluate the study and learning skills curriculum in the higher education system?

1) Quantitative evaluation, 2) Qualitative observation

Table 5. The main classes and sub-classes extracted from the point of view of experts and document review.

Since the teaching method must be theoretical and practical, the evaluation of this lesson must be theoretical and practical. One of the theory sections is a paper-pencil test, which can be a multiple-choice test of true and false or descriptive and in the form of essay answers. (Code 2). Of course, in the review of the book (1) and documents (4, 13), the use of pen and paper evaluation for the academic progress of students is mentioned.	Writing test	quantitative evaluation)
People must be continuously evaluated, the evaluation must be done in three stages: initial assessment or process or continuous assessment, and finally final or cumulative assessment. The current situation (before implementation), during the implementation, follow-up tests should be done at the end. Conventional evaluation patterns and reaching a suitable evaluation pattern are also necessary. (Code 4)	Oral exam (comprehensive evaluation)	
Evaluation of the academic performance of the students during the semester can be obtained from the learners. (Code 11)	Functional test	Qualitative observation
Regarding the direct observation of performance, he commented as follows: observing the process of students' academic performance and doing individual projects and group projects is very effective for evaluation. (Code 12)	Direct performance observation method test	

Table 6. Designing the model of study and learning skills curriculum elements in Iran's higher education system.

Assessment	Method	Content	Aim
Quantitative evaluation Qualitative observation	Interactive teaching method Non-interactive teaching method	Training to organize mental powers Teaching learning strategies and techniques Time management skill training	Improving the level of individual ability Educational quality

3. Conclusion and Discussion

The purpose of this qualitative research was to design the curriculum elements of study and learning skills in Iran's higher education system. In this regard, the results of interviews and document review included 9 sub-categories. In the field of goals, one of the main classes was “increasing the level of individual ability”. Raising the level of self-esteem and self-efficacy is considered to be one of the important factors of improving the level of individual ability. Teaching self-regulation and self-efficacy in a person increases self-confidence, which is effective in raising the level of memory ability and effective learning. Studies have shown that self-concept and academic progress improve the level of individual ability, and these two variables have a two-way relationship with each other, and the strengthening of one leads to the strengthening of the other, which is in line with the research [2]. Another factor that is very effective in improving the level of individual ability is creating enthusiasm and motivation in learning. Raising the level of interest and motivation to learn in students prevents anxiety and academic failure and makes the student to be attracted to the course material and have a more stable and deeper learning. The motivation factor increases the level of improvement of a person's ability to learn. Study skills, research tendencies and motivation to study have a direct relationship with students' academic performance and this relationship is almost very strong. Study skills and motivation play a vital and fundamental role in the academic performance of students and make learning easier and more enjoyable, which is in line with the results of the researches [20,36]). One of the factors that causes the development and promotion of higher education is the quality of education. Among the other classes obtained in this research is educational quality. Learning and teaching strategies are very important as one of the practical solutions in order to improve the quality of education and academic success of students. Teaching study skills has improved the academic status of students and is very effective in the quality of education, which is in line with studies [11]. In the content area of the study skills curriculum, one of the main classes was “teaching the organization of mental powers”, which implies the training of the skill of storing and organizing the material in memory, which was in line with the research [1]. Of course, teaching critical thinking skills to students in the higher education system makes learning more stable and fruitful, and information remains in the mind for a longer period of time. By studying from a critical point of view, we can understand the strengths and weaknesses of a text well. The skill of critical thinking plays a significant role in cultivating one's creativity. On the other hand; The skill of metacognition, critical thinking and self-regulation should be considered in the content because self-regulation training in study and learning skills leads to the academic progress of students, and the results of this research are in line with the findings of Drossis et al., [7]. Another main class in the content area of the study skills curriculum is “teaching learning strategies and techniques”. An effective study method is the most important factor in the success of a student. A student must be able to read effectively and study beyond textbooks, understand the material he reads clearly and choose the basic information needed for his assignments and research. and slow preparation, as a result, the use of study skills increases the ability of students to learn and they can develop this skill through practice and repetition. This view is in line with the research results of Balent, Hakan and Aydin [6]. It is necessary to teach the skills of time management and regulation in the content of the study skills curriculum. By reducing fatigue, anxiety, saving time and increasing students' motivation, study skills lead to better learning and academic progress, which is in line

with the results of the research [30]. In the field of learning and teaching study skills, interactive teaching methods or interaction-based teaching methods are measured and regular activities about a specific subject or problem, in a completely social and free atmosphere in terms of expressing thoughts and making decisions. Collaborative teaching method is one of the interactive teaching methods for study skills. The research showed that one of the new approaches in teaching and learning is the group work approach, considering that teaching and learning are still one of the most important concerns of higher education centers and members. It is an academic faculty and it should be updated and new strategies and methods should be used in teaching [17]. The problem-oriented teaching method was one of the subcategories of the interactive teaching method. This method is a type of student-centered learning that focuses on confronting students with problems. Researches showed; Problem-oriented teaching method is effective in motivating and motivating students to learn. Learning based on problem solving is accepted based on cognitive psychology. In this method, learners are not only passive receivers of knowledge, but active processors of information, which is consistent with research [26]. Another main class obtained in this research in the field of teaching-learning methods of the curriculum is the non-interactive teaching method. The electronic teaching method was also one of the subclasses obtained in the non-interactive teaching method. Computer-based learning, information technology-based learning, virtual class have paved the way for the emergence of new methods in education. In fact, electronic learning has been accepted as the major and main method in the teaching-learning process. In this regard, educational institutions have started to move towards the use of the Internet to provide academic courses and distance learning, and in order to design their courses well, they have to determine the needs of learners and their level of specialized knowledge.

The findings of this research are in line with the research [3]. In the field of study skills curriculum evaluation, quantitative evaluation and qualitative evaluation can be mentioned. Among the main classes obtained in this research, quantitative evaluation included oral tests and written tests, which have a favorable effect on the teaching and learning process of people and on improving academic performance. It is very effective for learners, which is in line with the results of research [18] and in the field of qualitative (descriptive) evaluation, functional test and direct observation method test, which causes self-confidence and self-esteem and increases motivation in the individual. And it is more effective in learning and memorizing course materials. Researches have shown that if descriptive evaluation is done correctly, it has a very favorable effect on learning and education, and it increases people's motivation and has a significant effect on improving the process of education and sustainable learning. is aligned The results of this research showed; Designing study and learning skills curriculum elements in Iran's higher education system seems essential. Because the way students study was not of good quality. By improving the level of individual ability and educational quality, it is possible to prevent students' academic failure and by creating interest and motivation in cognitive empowerment and promoting self-belief and self-confidence in students. All these factors are very effective in the career future of students. Therefore, it is necessary to provide a lesson under the title of study and learning skills for students. The limitations of this research can be pointed out that the qualitative method is not very precise and objective and its results were dependent on the opinions of the participants in this research. In this research, data collection and analysis was very time-consuming. It is also suggested to hold workshops of several hours to increase study skills in the first semester. An optional unit can be chosen for

all students in the first semester of each academic year, and study areas in the field of learning techniques and encouraging students to have a scientific attitude to study methods are provided.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

References

- [1] Ahrari, K.; Alizadeh, S.A.; Alizadeh, M. In a research study, the effect of two teaching methods, workshop and classroom, of study and learning skills on the study and learning strategies of nursing and midwifery students of Arak Islamic Azad University. *Journal of the Center for Studies and Development of Medical Sciences Education, Hakan*, 2012, 3(11), 23-32 .
- [2] Altunsoy, S.; Cimen, O.; Ekici, G.; Atik, A.D.; Gokmen, A. An assessment of the factors that influence biology teacher candidates levels of academic self-efficacy. *Procedia Social and Behavioral Sciences*, 2010, 2(2), 2377-2382.
- [3] Anderson, T.R.; Scho.N. Bridging the educational research teaching practice gap. *The International Union of Biochemistry and Molecular Biology*, 2008, 36(4), 309-315.
- [4] Anney, V.N. Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 2014, 5(2), 272-281.
- [5] Branch, W.T. Teaching professional and humanistic values: Suggestion for a practical and theoretical model. *Patient education and counseling*, 2015, 98(2), 162-167.
- [6] Bulenta, A.; Hakana K.; Aydin B. An analysis of Undergraduates' Study Skills. *Procedia - Social and Behavioral Sciences*, 2015, 197, 1355-1362.
- [7] Derossis, A.M.; Rosa. D.D.; Schwartz. A.; Hauge. L.S.; Bordage, G. Study habits of surgery residents and performance on American Board of Surgery In-Training examinations. *The American Journal of Surgery*, 2004, 188(3), 230-6.
- [8] Deserter, Ismail. Educational psychology: psychology of education and learning. Tehran: Ed. 2017.
- [9] Elo, S.; Kyngas, H. The qualitative content analysis process. *Journal Advanced Nursing*, 2008, 62(1), 107-15.
- [10] Enders, J. Higher Education Management. *International Encyclopedia of the Social & Behavioral Sciences*, 2nd edition, 2015, 10, 845-849.
- [11] Faye, D.; Reynaldo, F.; Cruz, J.; Bigley, L.; Adams, K. Baccalaureate Student Nurses' Study Habits Prior to Admission to Nursing Program: A Descriptive Qualitative Study. *Nurse Education Today*, 2015, 53, 61-66.

- [12] Gulshan, F.; Mohammad, R. *Sociology of Education*. Tehran: Doran Publishing House. 2016.
- [13] Hadi, R.; Rezapour, Y.; Salmanpour, S. Quality measurement indicators of higher education based on the Kano model in Urmia University. *Scientific-Research Journal of Education and Evaluation*, 2015, 9(34), 132-141.
- [14] Hohn, R.L. *Classroom learning & teaching*. Boston, MI: Longman Publishers USA. 2016.
- [15] Kashkaran, A.; Kafashi, S.; Sadeghifar, J. Investigating the relationship between thinking styles and learning styles of medical students in Shiraz. *Journal of Education Development in Medical Sciences*, 2018, 6(10), 50-55.
- [16] Khalil, M.K.; Hawkins, H.G.; Crespo, L.M.; Buggy, J. The Relationship Between Learning and Study Strategies Inventory (LASSI) and Academic Performance in Medical Schools. *Medical Science Educator*, 2017, 27 (2), 315-320.
- [17] Khaliq, K.A.; Rezaei, S.A.; Zahid, B.A.; Hashemi, Z. Investigating the effectiveness of jigsaw-type collaborative learning training on self-regulation and academic motivation of elementary school students. *Journal of Education and Learning Studies*, 2014, 1(69), 154-182.
- [18] Khodabandeh, S. Comparison of the effectiveness of descriptive and quantitative evaluation on the level of learning, anxiety and interest in learning of elementary school students in Kurd city, Master's Thesis. Allameh Tabatabayi University. 2015.
- [19] Kourken, M. The information effect : constructive memory , testimony and epistemic luck. *Journal of synthese*, 2013, 10, 1-19.
- [20] Lotfi, A.L.; Ebrahimi, Q.S. Motivational styles and academic achievement: the mediating role of academic self-concept. *Transformational psychology: Iranian psychology*, 2013, 43, 247-257.
- [21] Malek, A.P.; Bahrampur, S. Investigating the effect of teaching study skills on study strategies in library science and medical information students of Isfahan University of Medical Sciences. *Information research and public library. Scientific Research Quarterly*, 2013, 18(1), 155-164.
- [22] Maleki, H. *Curriculum planning (practice guide)*. Tehran: Payam Andisheh. 2015.
- [23] Mutsotso, S.N.E.; Abenga, S.B. Study methods for improving quality learning and performance in higher education. *Educational Research and Review*, 2010, 5(12), 808-813.
- [24] Nasr, A.R. An analysis on the quality of students' evaluation of teaching. *Isfahan University Humanities Research Journal*, 2012, 1(13), 285-310.
- [25] Ornstein, A.; Hunkins, F. *Curriculum: foundations, principles, and issues*. Seventh edition. Harlow, England: Pearson Education Limited. 2018.
- [26] Ozturk, C.; Musulu, G.A. A comparison of problem-based learning and traditional education on nursing students critical thinking. *Nurse Education Today of examination failure: a network approach*. Kluwer Academic Publishers. Printed in the Netherlands. *Social Psychology of Education*, 2007, 6, 159-170.
- [27] Papa, E.A.; Castro, J.L.; Emralino, J.; Rey, M.; Baygan, A.V.; M. & Cayeb, B. Study Habits and Skills of Freshman Students in Polytechnic University of the

- Philippines Paranaque City Campus. *European Academic Research*, 2016, 1(3), 2605- 2642.
- [28] Rahimimand, M.; Abbaspour, A. The relationship between teaching methods (group discussion, question and answer, scientific demonstration and lecture) with students' motivation to progress. *Educational Psychology Quarterly*, 2016, 12(39), 1-24.
- [29] Renes, E.; Prieto, B.; Lopez, M.; Fresno, J.M.; Gonzalez-Raurich, M.; Tornadijo, M.E.; Prieto, M.; Alvarez-Ordóñez, A. Identification of study habits and skills associated with the academic performance of Bachelor's degree Food Science and Technology students at the University of Leon (Spain). *Research In Food Science Education*, 2020, 19, 250-262.
- [30] Saif, A.A. Learning and study methods. Tehran: Doran Publishing House. 2020.
- [31] Santelices, L.; Avila, M.; Soto, M.; Dougnac, A. The impact of a self-directed teaching approach on academic performance of medical students. *Revista medica de Chile*, 2017, 145(5), 595-602.
- [32] Sarmad, V.; Bazargan, A.; Hijazi, E. Research methods in behavioral sciences, Tehran: Age. 2013.
- [33] Shabani, H. Educational and educational skills, teaching methods and techniques. Tehran: Samt Publications. 2015.
- [34] Sothan, S. The determinants of academic performance: evidence from a Cambodian University. *Studies in Higher Education*, 2019, 44(11), 2096-2111.
- [35] Tesch, R. Qualitative research: Analysis types and software: Routledge. 2013.
- [36] Vafari, J.; Karamati, H. The effect of teaching study methods with emphasis on cognitive and metacognitive strategies on academic progress and motivation of students. *Psychological Quarterly*, 2016, 5(2), 31-40.
- [37] Vaismoradi, M.; Turunen, H.; Bondas, T. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing Health Sciences*, 2013, 15, 398-405.
- [38] Waltz, C.F.; Ora, L.S.; Lenz, E.R. Measurement in nursing and health research. Springer Publishing Company. *Developmental Education*, 2010, 37(3), 14-23.
- [39] Williams, J.; Fardon, M.F. Lecture recordings: extending access for students with disabilities, ALT-C: Beyond control, England, The Association for Learning Technology Proceedings ascilite Singapore.; 2007, 139-148.



© 2023 by the author(s); licensee International Technology and Science Publications (ITS), this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (<http://creativecommons.org/licenses/by/4.0/>)