

### Nursing Students and Teachers' Knowledge, Application, Interest and Views towards the Use of New Active Teaching Methods in Nursing Education

**Background:** Students' active participation in teaching-learning process is one of the basic issues in education.

New teaching methods in nursing education have not been adequately investigated in Iran. This study was conducted to evaluate the knowledge, apply, interests and views of nursing students and teachers regarding new active learning methods.

**Methods:** This descriptive study has been performed in Mashhad University of Medical Sciences (MUMS). The questionnaire was designed by researcher, then its content validity and reliability were approved by experts ( $\alpha=0.86$ ). 202 nursing students and 19 teachers completed the questionnaire. Data was analyzed by SPSS version 16.

**Results:** Among nursing students, the lowest level of knowledge about teaching methods was observed to be the problem-based learning (PBL, 76.2%), and the highest was speech (57.9%) while teachers showed the minimal in conceptual map (31.6%), and the maximal in group discussion (94.7%).

In the nursing students' idea, conceptual map and problem-based learning were used least (66.3%) while speech used mostly (75.7%). Teachers stated the minimal application rate of teaching methods for conceptual map (57.9%) and the maximal for discussion group (94.7%). Both students and teachers showed the least interest in the conceptual map (40.1% and 21.1% respectively) and the highest for group discussion (63.4% and 89.5% respectively). Nursing students selected the group discussion as their first priority of educational method (23.8%) while teachers put their top priority on the simulation method (21.1%).

**Conclusions:** Since problem based learning was least acknowledged by MUMS nursing students, and regarding the least rate of usage for PBL and the conceptual map in MUMS, more attempts seems necessary to be made in learning these two methods besides other new methods of nursing education by nursing teachers of MUMS.

**Keywords:** Active Learning Methods, Knowledge, Application, Interest, Nursing Students and Teachers

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### تحليل مستوى المعرفة، استعمال و رؤية الطلاب و القيمين في مجال التمريض في مقارنه الأساليب الجديده في التعليم التمريض

**التصميم و الهدف:** إن من الأمور الأساسية المشاركة الفعالة للطلاب في مجال التعليم و التمريض. نرى أن لم يكن هناك عناية كافية في استخدام أساليب جديده و متطورة في مجال التدريس التمريض.

إن هذه الدراسة تفتني بتحليل مستوى المعرفة و استعمال المعلومات، الرغبة و نظرة الطلاب و القيمين على المسائل التعليمية و ارتباط هذه الأمور بأساليب التعليم الفعالة.

**الأسلوب:** إن هذه الدراسة من النوع الوصفي. لقد تم توزيع استمارات على المعايير الإحصائية. بين 202 تخص من الطلاب و 19 تخص من القيمين على التعليم التمريض. تم تحليل النتائج بواسطة برنامج SPSS.

**النتائج:** أقل مستوى من المعرفة بالنسبة إلى الطلاب كان الأسلوب المتمحور حول مشكلة خاصة (76.2%) و أعلى مستوى أسلوب المحاضرة (57.9%) واما نسبة إلى القيمين، أقل مستوى كان في أسلوب الخريطة المفاهيمية (66.3%) و أعلى مستوى كانت في أسلوب البحث و أعلى مستوى إن أقل نسبة في مجال استخدام الأساليب التعليمية كانت من رؤية الطالب هو أسلوب الخريطة المفاهيمية و الأسلوب المتمحور حول مشكلة خاصة (66.3%) و أعلى نسبة كانت تجاه أسلوب المحاضرة (57.9%) أقل أسلوب استعمال من رؤية القيمين كان الأسلوب المنحور حول مشكلة خاصة و (57%) و أعلى نسبة كانت لدى أسلوب البحث الجماعي (94.7%) و أقل نسبة علاقة عند الطلاب كانت تجاه الأسلوب المنحور حول مشكلة خاصة (40.1%) و أكثر نسبة كانت تجاه البحث الجماعي (89.5%) و أقل نسبة علاقة عند القيمين كانت تجاه أسلوب الخريطة المفاهيمية (63.4%) و أعلى نسبة تجاه أسلوب البحث الجماعي (94.7%).

و أكثر أسلوب أتمت من قبل الاساتذة كان أسلوب المحاضرة (75.7%).  
**الاستنتاج:** نظر إلى النتائج الحاصلة في هذه الدراسة نوصي القيمين في مجال التمريض إلى اجراء دراسات و دورات و مؤتمرات التعليم الحديث. لأجل رفع المستوى الكيفي و الكمي في المطالب التعليمية عند طلاب التمريض.  
**الكلمات الرئيسية:** الطرق الفعالة في التعلم المعرفة، استعمال، العلاقة، الطلاب و القيمين في مجال التمريض.

### بررسی میزان شناخت، بکارگیری، علاقه و دیدگاه دانشجویان و مربیان پرستاری در خصوص روش‌های نوین یادگیری فعال در آموزش پرستاری

**زمینه و هدف:** مشارکت فعال دانشجویان در فرآیند یاددهی - یادگیری یکی از مباحث اساسی در امر آموزش است. در کشور ما روش‌های نوین تدریس در پرستاری کمتر مورد توجه قرار گرفته است. این مطالعه به منظور بررسی میزان شناخت، بکارگیری، علاقه و دیدگاه دانشجویان و مربیان پرستاری در ارتباط با روش‌های یادگیری فعال انجام شده است.

**روش:** پژوهش حاضر مطالعه‌ای توصیفی می‌باشد. پرسشنامه طراحی شده پس از تأیید روایی (محتوا) و پایایی ( $\alpha=0.86$ )، پرسشنامه در میان 202 نفر از دانشجویان و 19 نفر از مربیان پرستاری توزیع و تکمیل گردید. اطلاعات به دست آمده بوسیله نرم افزار SPSS نسخه 16 آنالیز گردید.

**یافته ها:** کمترین میزان آگاهی از روش‌های تدریس در دانشجویان، یادگیری مشکل مدار ( $76/2\%$ )، بیشترین سخنرانی ( $57/9\%$ ) و مربیان، کمترین نقشه مفهومی ( $66/3\%$ ) و بیشترین بحث گروهی ( $94/7\%$ ) بود. کمترین میزان بکارگیری روش‌های تدریس از نظر دانشجویان نقشه مفهومی و یادگیری مشکل مدار ( $66/3\%$ ) و بیشترین سخنرانی ( $57/9\%$ ) بود. کمترین میزان بکارگیری از نظر مربیان، نقشه مفهومی ( $66/3\%$ ) و بیشترین گروهی ( $94/7\%$ ) بود. کمترین میزان علاقه دانشجویان نقشه مفهومی ( $40/1\%$ ) و بیشترین بحث گروهی ( $89/5\%$ ) و کمترین میزان علاقه مربیان نقشه مفهومی ( $63/4\%$ ) و بیشترین بحث گروهی ( $94/7\%$ ) بود. اولویت اول تدریس در رشته پرستاری از دیدگاه دانشجویان روش بحث گروهی ( $23/8\%$ ) و از دیدگاه مربیان روش شبیه سازی ( $21/1\%$ ) بود.

**نتیجه گیری:** از آنجا که دانشجویان پرستاری کمترین میزان آگاهی را در زمینه یادگیری مشکل مدار داشتند و از دید آنان این روش و نقشه مفهومی در دانشکده پرستاری مشهد کمترین میزان بکارگیری را داشته است؛ و نظر به اندک بودن آگاهی مربیان این دانشکده از روش نقشه مفهومی از دیدگاه خود آنان، بهتر است مربیان پرستاری دانشکده پرستاری مشهد برای افزایش آگاهی و مهارت خود در خصوص دو روش مذکور و سایر روش‌های نوین آموزش پرستاری تلاش کنند.

**واژه های کلیدی:** روش‌های یادگیری فعال، شناخت، بکارگیری، علاقه، دانشجویان و مربیان پرستاری

### نرسنگ میں جدید تدریسی روشوں سے طلباء اور ٹیچروں کی آشنائی، ان روشوں کا استعمال، دلچسپی اور نقطہ ہائے نظر

**بیک گراؤنڈ:** تدریسی اور تعلیمی روشوں میں طلباء کی فعال سرگرمی تعلیمی دوران کا ایک اہم حصہ ہے۔ ایران میں نرسنگ کے شعبے میں نئی روشوں پر زیادہ توجہ نہیں دی جاتی۔ یہ تحقیق نرسنگ میں جدید تدریسی روشوں سے طلباء اور ٹیچروں کی شناخت، ان کے استعمال اور ان کی دلچسپی اور ان کے نقطہ ہائے نظر جاننے کے لئے انجام دی گئی ہے۔

**روش:** اس تحقیق میں نرسنگ کے دو سو دو طلباء اور انیس ٹیچروں نے حصہ لیا، ٹیچروں اور طلباء کو سوالنامے دیے گئے۔ جوابوں کا تجزیہ ایس پی ایس سافٹ ویئر سے کیا گیا۔ سوالنامے کو برطرح سے معتبر بنا کر ہی طلباء اور ٹیچروں کو دیا گیا۔

**نتیجے:** زیادہ تر طلباء پرابلم بیسڈ لرننگ کے طریقے سے آشنا نہیں تھے یعنی چہتر اعشاریہ دو فیصد۔ بیشتر طلباء لکچر کی روش سے آشنا تھے یعنی ستاون اعشاریہ نو فیصد۔ اکتیس اعشاریہ چھ فیصد ٹیچر نقشوں کے سہارے تعلیمی روش سے ناآشنا تھے۔ بلکہ گروہی بحث و مباحثہ سے چوانو اعشاریہ سات فیصد ٹیچر آشنا تھے۔ طلباء کی نظر میں جس روش سے بہت کم استفادہ کیاجاتا تھا وہ نقشوں سے تعلیم کی روش تھی، جبکہ سب سے زیادہ استعمال ہونے والی روش لکچر کی تھی۔ ٹیچروں کی نظر میں سب سے کم استعمال ہونے والی روش بھی نقشوں سے تعلیم تھی اور ان کی نظر میں سب سے زیادہ استعمال ہونے والی تعلیمی روش گروہی تدریس و تعلیم تھی۔ اکتیس فیصد ٹیچر نقشوں میں دلچسپی نہیں رکھتے تھے، اور چالیس فیصد طلباء نقشوں کو اہمیت نہیں دیتے تھے۔ نواسی فیصد ٹیچر گروہی بحث و مباحثہ کو ترجیح دیتے تھے۔ ٹیچروں کی اولین ترجیح سی مویشن طریق سے تعلیم تھی اور طلباء کی ترجیح گروہی بحث و مباحثہ تھا۔

**سفارشات:** ان نتائج کے پیش نظر یہ سفارش کی جاتی ہے کہ نرسنگ ٹیچروں کو سیمیناروں اور ورک شاپوں میں شرکت کر کے نرسنگ کی تدریسی کی نئی روشوں سے آگاہی حاصل کرنا چاہیے تاکہ وہ طلباء کو اچھی طرح سے پڑھا سکیں اور انہیں معاشرے کی خدمت کے لئے آمادہ کرسکیں۔

**کلیدی الفاظ:** نرسنگ، نئی روشیں، استعمال

## INTRODUCTION

Education is one of the most fundamental needs of human societies and one of the sustainable development axes. Using various methods of teaching is obviously evident in today complex world and teaching methods selection is important in each stage of learning (1).

Education is a complex process so that any superficial thought could lead to lose forces and properties, and any attempt would fail; therefore, education development needs to have knowledge of its process and new methods (2).

It is more important in medical education, because the main goal is training capable and worthy individuals whom have knowledge, attitudes, and skills necessary for maintaining and improving the health of society. Since teaching and learning play a major role in skill development of medical students and providing services correctly, teachers and students must learn how to act professionally in a teaching environment.

Whatever professors' and students' perception is more about teaching and learning, their actions are more purposeful and consistent with each other (3).

The education process is made of two interrelated components; teaching and learning. Hence, teaching and learning should be studied as two categories of education and training processes together (4).

Effective teachers must be proficient to each kind of education styles. Professors' proficiency in different teaching and learning styles is necessary for the development of education (5).

Increasing knowledge about structure of education shows that traditional teacher-centered methods couldn't lead to spread learning among students. Student's active participation is the learning main key in structuralist theory of education. Also increasing the student diversity and teacher perception due to meeting student learning needs, can support learning different styles. Furthermore, it is believed that using various styles may cause learner development and educational standard achievement (6).

In recent years the emphasis has been on active learning and creative thinking in nursing education. This has led to the development of new training strategies in teaching theoretical and clinical courses in nursing. Active learning involves applying the methods in training in which the student is involved in the learning process and feels him/herself as an active factor in the learning process.

In active learning process, student-centered learning is situated in contrast with teacher-centered education. Education based on student-centered learning promotes active learning among students. Active learning includes strategies in education that involve students in their learning. In active learning, data will remain longer in the minds of students (7).

Using traditional and non-active strategies in teaching medical disciplines, including nursing may lead to fatigue, lack of attention, cut, lack of motivation and lower levels of student learning. The necessity of learning and applying new methods and training the teachers and professors of nursing is felt as an important and dynamic field.

Rising costs of education, increase in the number of nursing students in the classes, the type and nature of the study and

advancement of nursing science and technology, need greater understanding and application of new methods and being active in teaching and learning of nursing courses more than ever. In nursing, the relationship between nursing education and services is constantly growing. Nursing education when kept in a dynamic status to break the time and place limits, stimulates innovation and develops the use of modern methods of teaching and learning (8).

Based on theoretical methods, it could be said that active teaching is a kind of teaching technique in which educational events are occurred in a scientific, social, emotional, and interactional form.

In active and interactive teaching, in addition to the information and skills, the process of thinking and social goals of education is emphasized (3).

Real learning process, is changing new perceptions due to consistency with current cognitive structures on one hand and changing cognitive structures to fit the new conceptions on the other hand (6).

Active learning method is very effective in raising students' confidence. In active methods of teaching, learning is more stable. Most students are involved in higher cognitive domain of learning and learner's acquired tips penetrate in the depth of emotional and behavioral aspects (7).

In active teaching methods, the learning method is more important than its matter. In these active methods, the students' activities result in learning. The learner achieves progress as a result of his own impact on the environment and the active reaction in response to environment (3).

The importance of active learning in nursing education includes learning large volume of information in limited time, facing with numerous and diverse sources, filling the gap between theoretical and practical potency of nursing students.

Other benefits of Active Learning include enabling students to identify their learning needs, student access to an active role in the learning process, strengthening the ability of critical thinking, increased ability to make decisions in different clinical situations, enhancement of problem-solving skills.

Administrative barriers in active learning consists of barriers related to students (most common), barriers related to teachers, lack of time, stagnation in the traditional educational system, barriers related to classroom.

Points of interest in active learning include the need to restructure the educational system, the emphasis on cooperation and preparation of students before classroom, the ability of professor to perform active learning, using specific strategies in busy classes, attention to limitations and resources (7).

Within three years, a comprehensive review on various internal training courses showed that an effective speech should have characteristics such as clarity and legibility of slides to be associated between lecture topics and students, provider's ability to identify key issues, making participants involved, and representing subjects with images(9).

According to the weaknesses of speech method, a category was introduced under new active learning to force students to do series of activities that encouraged them for using

their comments and thoughts, that was including group discussion, conceptual map, problem-based learning, simulations, case studies, role playing, question by student, online learning, and interactive education(10).

The first written report on active teaching and learning is referred to Hippocrates style in ancient Greece. Socrates method relies on students' interaction with each other and also with the teacher. Socrates didn't speech to students, he worked with them to help them discover a part of their education.

The principle of active learning is practical learning(11). Active learning is an important element in all aspects of general education, totally good teaching and active learning, encourages and motivates the students and also increases remembering concepts (12).

Roziter's study showed that when the lesson was presented with lecture and group discussion, transition was provided higher and quicker to students' visions(13).

In Hill's study, speech and discussion techniques were compared together and it was observed that in discussion method, mental abilities (skills), change in values, attitudes and students' interests were much higher than speech technique(14).

Tistart's study showed presenting any course in any form wasn't very important, majority was next follow-up by teacher that might caused discussion, question and change in attitudes by asking students(15).

In Trinziti's study, it was found that group discussion method with new teaching tools was more efficient compared to traditional training methods(16).

This study also was performed due to the assessment of knowledge, usage, interest and views of students and educators of Midwifery and Nursing Faculty of Mashhad at 1389 in relation to new approaches in nursing education.

## METHODS

The present study is a descriptive study conducted in 2011 in Mashhad Faculty of Nursing and Midwifery. Samples included 202 nursing students and 19 faculty members. The sampling method was simple non probability.

Inclusion criteria consisted of being a nursing student or faculty member of Mashhad Mashhad Faculty of Nursing and Midwifery, consent and tendency to participate in the study. The exclusion criterion was failure to complete study questionnaire.

The moral codes of Mashhad University of Medical Sciences were considered such as receiving official authorization from the Deputy for Education and getting the informed consent, preparing anonymous and confidential questionnaires, and giving the results of the study to research units.

In the beginning, the researcher performed a large library study on modern methods of teaching and active learning in the field of nursing. Then a questionnaire was made by the researcher to assess the knowledge, use, interest, and views of students and nursing educators in relation to innovative approaches of nursing education.

After the educational affairs permit, the researcher attended in course classrooms of bachelor and master of nursing students and

students and started to complete the questionnaire with the coordination of the class teacher. In order to complete the nursing educators' part of the questionnaire, the researcher attended the trainers' room and started to explain the purpose and methods of study. Aims, application and using study results were explained to all units of research. The questionnaires were collected after completing by research units.

### Material of the study

The research instrument was a researcher-made questionnaire in this study. The purposes of this questionnaire design was to identify applies, and the views of interested students and nursing educators in relation to new approaches in nursing education.

The first part of the questionnaire included demographic information of research units.

The second part of it, evaluated the assessment of knowledge, application, and the views of interested students and nursing educators in relation to innovative approaches to nursing education. Demographic information of the Research Unit consisted 5 separate sections (4 parts belonged to students and part 5 related to educators only).

The aim of the first section of the second part of the questionnaire was assessing the research units knowledge (students and educators), to explore new ways of nursing education by designing 10 learning methods and with three part Likert scale range (I don't know, I almost know, I fully know).

The second part of questionnaire was evaluating the assessment of new methods application in nursing education by planning 10 learning techniques with three part Likert scale range (no, low, high).

The third section of questionnaire included the assessment of interest in new methods of education and training in nursing with planning 10 methods and three part Likert scale range (no, low, high).

The fourth part of the questionnaire was evaluating the most appropriate training methods in nursing from students' and educators' perspective with the priority of 1 to 10.

The fifth section of the questionnaire was designed exclusively for nurse educators due to examine and determine the best method of trainers' teaching in their education, with priority of 1 to 10.

In order to determine its validity of the questionnaire, it was given to 10 experienced teachers and educators at Nursing and Midwifery faculty of Mashhad, and its validity was confirmed after collecting the opinions and actions of teachers. Cronbach's alpha was used to determine the reliability of the questionnaire. The reliability of the first part of questionnaire was ( $\alpha=0.76$ ), the second part was ( $\alpha=0.78$ ), and third part was ( $\alpha=0.80$ ) which were approved by using SPSS software. Also the reliability of the correlation between different parts of the questionnaire was approved ( $r=0.92$ ).

## RESULTS

Findings are presented in two major parts, demographic information and the main findings of study.

**Demographic characteristics**

In this study, 202 nursing students (91.4%) and 19 nursing educators (8.6%) participated. The total sample size was 221. The average age of nursing students participated in this study was  $22.2 \pm 3.7$  and the mean age of nursing educators was  $40.4 \pm 8.6$ . In research units, 63.2% of the nurse educators were female and 36.8% male. Among nursing students, female frequency was 62.2% and the frequency of males was 37.1%. 76.9% of subjects had BS and 23.1% MS degree. Among students The level of education was BSc degree in 84.2% of students, and MSc in 15.8% of students and 100% of instructors. From the point of experience in teaching and learning activities in student group, the average duration of training activities was  $0.06 \pm 44.0$  years and the mean duration of nursing educators in educational activities was  $14.8 \pm 9.9$  years. In the student group, the average duration of clinical experience was  $2.5 \pm 0.77$  years and the mean duration of nursing educators' clinical practice was  $4.6 \pm 4.05$  years.

**Table 1. Knowledge of nursing students and educators about new teaching methods in nursing (n=221)**

Teaching Method		I fully know	I know a little	I don't know
Speech	student	57.9%	38.6%	3.5%
	educator	89.4%	5.3%	5.3%
Conceptual Map	student	4.0%	24.7%	71.3%
	educator	26.3%	42.1%	31.6%
Group Discussion	student	43.1%	53.4%	3.5%
	educator	94.7%	0.0%	5.3%
Problem-based Learning	student	4.0%	19.8%	76.2%
	educator	68.4%	26.3%	5.3%
Simulation	student	13.8%	42.6%	43.6%
	educator	68.4%	26.3%	5.3%
Case Study	student	13.4%	48.0%	38.6%
	educator	78.9%	15.8%	5.3%
Role Playing	student	19.8%	42.6%	37.6%
	educator	78.9%	15.8%	5.3%
Question making by student	student	34.2%	53.4%	12.4%
	educator	47.4%	36.8%	15.8%
Online learning	student	24.8%	55.0%	20.2%
	educator	52.6%	26.3%	21.1%
Collabrative	student	9.4%	35.6%	55.0%
	educator	36.8%	47.4%	15.8%

**Main findings of the study**

Table 1 shows the knowledge Frequency of nursing students and educators about modern teaching methods in

nursing. Based on table, the lowest amount of students' knowledge about new educational methods was in the case of problem-based learning (76.2%) and conceptual map (71.3%) and the highest was about speech (57.9%). The teachers' lowest understanding rate in relation to new methods of teaching was in the case of conceptual map (31.6%) and the highest amount was in the case of group discussion (94%).

Table 2 exhibits the frequency of using modern methods of nursing teaching based on nursing students' and educators' comments.

Based on table 2, the lowest use of modern teaching methods in nursing was about problem-based learning (66.3%) and the conceptual map and most of them was about speech (75.7%).

**Table 2. The rate of application of active learning methods in nursing education based on the educators' and students' opinions (n=221)**

Teaching method		High	Low	None
Speech	student	75.7%	21.8%	2.5%
	educator	94.7%	5.3%	0.0%
Conceptual Map	student	5.9%	27.8%	66.3%
	educator	10.5%	31.6%	57.9%
Group Discussion	student	16.4%	66.8%	16.8%
	educator	42.1%	47.4%	10.5%
Problem-Based Learning	student	3.0%	30.7%	66.3%
	educator	31.6%	26.3%	42.1%
Simulation	student	14.3%	34.7%	51.0%
	educator	36.8%	31.6%	31.6%
Case Study	student	12.4%	43.5%	44.1%
	educator	26.3%	47.4%	26.3%
Role Playing	student	10.4%	33.7%	55.9%
	educator	26.4%	36.8%	36.8%
Question making by student	student	19.3%	51.0%	29.7%
	educator	21.1%	47.4%	31.5%
Online Learning	student	12.9%	55.5%	35.6%
	educator	5.3%	84.2%	10.5%
Interactive	student	10.4%	28.7%	60.9%
	educator	15.8%	52.4%	31.6%

The lowest use of modern teaching methods in nursing based on educators in relation to teaching new methods was in the case of conceptual map (57.9%) and the highest rate was in speech (94.7%).

Table 3 shows the frequency of nursing educators and students interested in applying new methods in nursing education.

Based on table 3, the lowest interest rate in relation to new methods for teaching nursing students was about conceptual map (40.1%) and the highest of was about



group discussion (63.4%).

**Table 3. Nursing students and instructors' interest in applying new methods in nursing education(n=221)**

Teaching Method		High	Low	None
Speech	Students	28.7%	53.5%	17.8%
	Teachers	47.4%	52.6%	0.0%
Concept Map	Students	22.8%	37.1%	40.1%
	Teachers	31.5%	47.4%	21.1%
Group Discussion	Students	63.4%	28.7%	7.9%
	Teachers	89.5%	10.5%	0.0%
Problem Based Learning	Students	32.7%	35.6%	31.7%
	Teachers	47.4%	47.4%	5.2%
Simulation	Students	41.1%	36.1%	22.8%
	Teachers	68.4%	31.6%	0.0%
Case Study	Students	36.1%	41.1%	22.8%
	Teachers	47.4%	52.6%	0.0%
Role Playing	Students	35.1%	39.2%	25.7%
	Teachers	47.4%	42.1%	10.5%
Question making by student	Students	58.9%	27.2%	13.9%
	Teachers	36.2%	57.9%	5.3%
Online Learning	Students	35.1%	41.6%	33.3%
	Teachers	36.8%	47.4%	15.8%
Collaborative	Students	33.2%	33.7%	32.2%
	Teachers	52.6%	36.8%	10.6%

The lowest interest of nursing educators in relation to new teaching ways was to conceptual map (21.1%) and the highest was in discussion group (89.5%).

The first priority for nursing teaching based on students' perspective was group discussion (23.8%) and from educators' was simulation method (21.1%). The second priority was question project for students (14.4%), and group discussion for teachers (21.1%).

The highest teaching technique in nursing by educators based on first method priority used, was presentation method (73.7%), the second priority was group discussion (42.1%).

**DISCUSSION**

Challenging with problems of new information age requires learning process to be changed and methods be used to put learner at the center of learning process and the teacher's role must change from pre-defined enforcer to a facilitator of learning(17).

Based on this study,it has been showed that the most knowledge about teaching was speech method among nursing students and educators. Even, the educators used speech method. Speech is still a traditional and useful method in education.

Roziter showed that when the presentation is combined with other new learning methods such as group discussion, students' perspectives would be changed more and faster(13).

Therefore it is recommended to nursing educators to learn other methods of active teaching and learning for educating nursing courses to students better and successfully.

Lak Dizaji et al (1384) also compared effect of speech and discussion teaching methods and showed significantly, they concluded that the learning rate increased in group discussion technique more than speech method students(17).

One of the active teaching methods was group discussion, unfortunately, despite nursing students' interest in this method, nursing educators had lack of knowledge about it, and even amount of interest and use of this method wasn't high among them.

Research recommends that educators must increase their interest and knowledge about this method due to group discussion method, making students active and dynamic and courses attractive,. However, some problems should be considered such as the number of students, learning environment, headings of the lesson level, and students' interest in the subject and teaching methods.

Safari et al (1384) studied the effect of training nurses by group discussion on the quality of nursing care of patients with myocardial infarction and they showed learning increased significantly after discussion group more than before(18).

In Bafgh, Fattahi's study (1386), average final exams and a month after that showed statistically significant differences in both control groups and also indicated attitude changing more quickly and more compact in learning, values and the attitudes of students vigorously in the classroom, increasing student expectations and beliefs, the participation of students in the class, referring to other texts, increase retention and reduce absenteeism the teaching methods discussed in the classroom in discussion method was higher than speech(19).

This study showed that levels of knowledge, interest and using the interactive method weren't at an acceptable level between students and educators.

As the interactive teaching methods in the field of nursing was very helpful and efficient and nurses exposed with fewer problems due to communicate and interact with patients, attention to be felt to this new method in nursing education from the current situation.

In this regard, Mortazavi et al (1383) studied effectiveness of teaching and learning in interactive learning processes and concluded this method caused to class vigorously, believe and expect of student ,increase student participation in the class, referring to other texts highly, increased retention and reduced absenteeism from the classroom(20).

Special status of patients, complication in diagnosis and treatment and patient's several issues at once showed clearly importance of understanding problem solving methods and techniques to solve various problems by nurses .

Based on study findings, the lowest rate of knowledge and applying nursing teaching methods was about problem-based learning and based on education.

As the problem-based learning was situated in third priority of teaching educators, but practically interest rate and use

of this new method didn't specify its proper place. Ganji (1385) in a comparative study of quality training courses in epidemiology and learning method based on speech in Medical University of Shahr'e Kord showed that the learning method was based on increased student participation in learning and their education rate(21). Asgari (1386) determined that the precipitation of brain training methods, research skills, creative study, active teaching (problem solving and group discussion), increased use of guidelines and self-expression, familiarize teachers with the creativity and its importance value, and using of flexible in-class training programs, had positive effects on the creation of students of fourth grade primary school(22). Heravi (1383) was performed his study on 49 student nurses, it was determined that the rate of learning were significantly increased in both teaching groups by research and speech methods but the rate of learning was significantly higher in Focus Group than teaching group using speech method. Finally the researchers concluded that Focus Group method due to enable students to learn, develop social skills and learn to communicate with others, could be replaced instead of speech mode in teaching method. It is suggested to teachers and education planners to use it in students training, and studies could be conducted to identify it's strengths and weaknesses(23). According to rapid communication era and learning method of virtual approaches , online method is one of the most interested and available techniques. In this study, the understanding rate and application of this method in teaching nursing courses was low, whereas the students's interest was high for understanding and applying this method. From educators' perspective, according to appropriate level of understanding and applying this method, practically interest and apply of this method was not suitable unfortunately. Also the online learning method was situated in the seventh priority of nursing teaching methods. Abbasnejad et al. studied on 61 nurses and showed that the electronic method of education as a comprehensive educational approach centered, caused increase knowledge, attitude, performance and general competence of nurses report writing equivalent with lectures, so online method was recommended due to lower cost, comprehensive and rapid electronic learning approach than speech method, in other various fields of nursing courses(24). Finally, due to use traditional and non-active in teaching medical sciences courses, including nursing could lead to fatigue, lack of attention, cut, lack of motivation and reduced student learning, it is needed learning and applying new methods by nursing educators and experts as an important and dynamic field.

Since problem based learning was least acknowledged by QUMS nursing students according to this research results, and regarding the least rate of usage for PBL and the conceptual map in QUMS, more attempts seems necessary to be made in learning these two methods besides other new methods of nursing education by nursing teachers of QUMS. Therefore, nursing educators should gradually increase their knowledge about active learning methods and use more of these methods to increase the quantity and quality of student learning.

Also need for setting up workshops is recommended due to learn more students (especially graduate students) and nursing professors with active and innovative methods in field of nursing.

Modifying exam form of teachers and evaluation of teaching methods and its quality by students could be helpful to promote the use of these teaching methods.

#### **Limits of Study**

Interest rates and the psychological states of subjects in response to questionnaire, and individual's differences and interactions which have always existed in all societies could also affect the results of the study.

#### **Suggestions for future research**

Researcher recommended such studies in larger sample size, between other medical students and also offered experimental studies on various methods of active learning as comparing form together with the control group (commonly teaching methods).

#### **Suggestions for use of results**

Nursing teachers and educators are requested to perform carefully considering the context of understanding and applying new methods of teaching and active learning, to provide a dynamic field of nursing students' learning.

Experts of Medical education and training are requested to set up workshops and seminars with a focus on introduction of new methods of teaching and learning of knowledge and to provide applying these methods more than before by the professors.

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