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### Identification of the reasons behind students' lack of participation in classroom activities using a Delphi technique

**Background:** Participation is considered as a pivotal concept in understanding classroom instruction and development of critical thinking skills that are necessary for students. Students who actively participate in classroom settings will perform more efficiently than those who do not. Therefore, it is important to establish a consensus about the underlying reasons for students' lack of participation in classroom activities as interpreted by faculty members.

**Methods:** A Delphi technique was used in three rounds to obtain the viewpoints of faculty members of Kerman University of Medical Sciences (KMU) concerning students' lack of participation in class activities in 2014. A total of 13 expert panelists from diverse disciplines were invited to the study using purposive sampling. Content analysis ensured consensus on the identified reasons.

**Results:** In the first round, 78 reasons were identified by the panelists. After removing duplicates and similarities 52 reasons were obtained and categorized into 14 condensed units. In the second round, preliminary consensus was obtained and the included 14 factors were scored on a Likert scale from 1 to 5 to rank the orders. In the third round, final consensus was granted from all participants. Data were analyzed using content analysis and by obtaining the sum of answers, seven factors were highlighted as the most important reasons. These included factors related to motivation (4.80), grading system (4.72), meaningful teaching (4.50), major influence (4.27), peers influence (4.13), challenging assignment (4.03), and environmental influence (4.00).

**Conclusion:** Students' learning to a large extent is dependent upon their participation in the classroom. The identification of the reasons concerning students' lack of participation in this study may help teachers arrange an environment to enrich dynamic learning for every learner to enthusiastically take part in classroom activities.

**Keywords:** Class participation; Teaching; Learning; Delphi technique

شناسایی دلایل عدم مشارکت دانشجویان در فعالیت های کلاسی:

یک تکنیک دلفی

**زمینه و هدف:** مشارکت به عنوان یک مفهوم محوری در درک آموزش های کلاس درس و توسعه مهارت های تفکر انتقادی برای فراگیران محسوب می شود. فراگیرانی که به طور فعال در کلاس درس مشارکت می کنند، به مراتب بیشتر از کسانی که مشارکتی ندارند، یاد می گیرند. بنابراین، لازم است که دیدگاه اعضای هیات علمی در مورد دلایل اساسی عدم مشارکت دانشجویان در فعالیت های کلاسی بررسی شود.

**روش:** از تکنیک دلفی در سه مرحله برای به دست آوردن دیدگاه اعضای هیات علمی دانشگاه علوم پزشکی کرمان در مورد دلایل عدم حضور دانشجویان در فعالیت های کلاسی در سال ۲۰۱۴ استفاده شد. در مجموع ۱۳ متخصص از رشته های مختلف با استفاده از نمونه گیری هدفمند به مطالعه دعوت شدند. آنالیز داده ها با استفاده از روش تحلیل محتوا انجام شد.

**یافته ها:** در اولین راند، ۷۸ دلیل شناسایی شد. بعد از حذف موارد تکراری و مشابهت ها، ۵۲ دلیل شناسایی شد که در ۱۴ طبقه فرعی قرار گرفتند. در راند دوم، موافقت اولیه در رابطه با طبقات استخراجی کسب شد و ۱۴ عامل شناسایی شده با استفاده از مقیاس لیکرت ۵ درجه ای نمره گذاری شدند. در راند سوم، موافقت نهایی از مشارکت کنندگان کسب گردید. داده ها با استفاده از روش تحلیل محتوا آنالیز شدند. میانگین داده ها، فاکتور اصلی مرتبط با دلایل عدم مشارکت دانشجویان در فعالیت های کلاسی را مشخص ساخت. این فاکتورها عبارت بودند از: انگیزش (۴/۸۰)، سیستم نمره دهی (۴/۷۲)، یاددهی معنادار (۴/۵۰)، تأثیر رشته تحصیلی (۴/۲۷)، تأثیر همکلاسی ها (۴/۱۳)، تکالیف چالش انگیز (۴/۰۳) و تأثیر جو آموزشی (۴/۰۰).

**نتیجه گیری:** یادگیری فراگیران به میزان زیادی وابسته به مشارکت آنها در کلاس درس است. شناسایی دلایل عدم مشارکت دانشجویان در کلاس می تواند به مدرسین کمک کند که محیطی را فراهم آورند تا یادگیری پویا برای هر فرد بوجود آید و فراگیران با اشتیاق در فعالیت های کلاسی شرکت کنند.

**واژه های کلیدی:** مشارکت در کلاس، یاددهی، یادگیری، تکنیک دلفی

تعیین دلایل عدم مشارکت دانشجویان در فعالیت های کلاسی (الفصلیه): تکنیک دلفی

**الخلفية والأهداف:** تعتبر المشاركة مفهوم محوري في التعلم في الحصص الدراسية وتطوير مهارة التفكير الناقد للمتعلمين. لذلك فإن المشاركين في الحصص الدراسية يتعلمون ويستفيدون أكثر من غير المشاركين. لذلك، من الضروري النظر في وجهات نظر أعضاء هيئة التدريس حول مسألة عدم مشاركة بعض الطلاب في الحصص الدراسية.

**الطريقة:** تم استخدام تقنية دلفي في ثلاث مراحل للحصول على وجهات نظر أعضاء الهيئة التدريسية في جامعة كerman للعلوم الطبية في دليل عدم مشاركة الطلاب في الفعاليات الدراسية في المحاضرات والحصص الدراسية في عام ۲۰۱۴. تمت دعوة ما مجموعه ۱۳ من المتخصصين من مختلف التخصصات للمشاركة في الدراسة باستخدام طريقة أخذ العينة الهدف. تم إجراء تحليل البيانات باستخدام طريقة تحليل المحتوى.

**النتائج:** في الجولة الأولى، تم تحديد ۷۸ سبب. بعد إزالة التكرارات والتشابه، تم تحديد ۵۲ سبباً تم تصنيفها في ۱۴ فئة فرعية. في الجولة الثانية، تم التوصل إلى اتفاق مبدئي على الفئات المستخرجة، وسجلت العوامل الـ ۱۴ المحددة باستخدام مقياس ليكرت من ۵ درجات. تم أخذ الموافقة النهائية من المشاركين. تم تحليل البيانات باستخدام طريقة تحليل المحتوى. حدد متوسط البيانات ۷ عوامل رئيسية مرتبطة بأسباب عدم مشاركة الطلاب في أنشطة الفصل. وتشمل هذه العوامل: الدافع (۴/۸۰)، ونظام الدرجات (۴/۲۴)، والتدريس الهادف (۴/۵۰)، وتأثير مجال الدراسة (۴/۲۷)، وتأثير زملاء الدراسة (۴/۱۳)، المهام الصعبة (۴/۰۳) وتأثير الجو التعليمي (۴/۰۰).

**الخلاصة:** يعتمد تعلم الطلاب في الصف على مشاركتهم بالأنشطة الصفية، معرفة أسباب عدم مشاركة بعض الطلاب في هذه الأنشطة يساعد الأساتذة على تأمين جو مساعد لكل منهم حتى يشارك بفعالية وحماس أكثر.

**الكلمات المفتاحية:** المشاركة الصفية، التدريس، التعلم، تقنية دلفي

طلباً کلاس کی سرگرمیوں میں کیوں حصہ نہیں لیتے، وجوہات کیا ہیں، ڈلفی

تکنیک سے اس کا جائزہ

**بیک گراؤنڈ:** طلباء کے لئے کلاس میں شرکت کرنا اور کلاس میں تعلیم حاصل کرنا ایک بنیادی امر ہے جس سے طلباء کی فکری توانائیوں میں اضافہ ہوتا ہے۔ وہ طلباء جو فعال طریقے سے کلاس میں حصہ لیتے ہیں وہ ان طلباء سے بہر حال تعلیمی اور مہارتی لحاظ سے بہتر ہوتے ہیں جو کلاسوں میں نہیں جاتے۔ اس امر کے پیش نظر اساتذہ یہ معلوم کرنے کی ضرورت ہے کہ آخر کس وجہ سے طلباء کلاس میں جانے سے کتراتے ہیں، اس تحقیق میں اسی سوال کا جواب دینے کی کوشش کی گئی ہے۔

**روش:** اس تحقیق میں ڈلفی تکنیک سے تین مرحلوں میں کام لیا گیا ہے۔ اس میں کرمان کی میڈیکل یونیورسٹی کے اساتذہ نے شرکت کی۔ دو ہزار چودہ میں ہونے والی اس تحقیق اساتذہ نے بعض طلباء کے کلاس میں عدم شرکت کی وجوہات بتائی ہیں۔ مجموعی طور پر مختلف ڈیپارٹمنٹس کے تیرہ ماہرین نے شرکت کی۔ دینا کا تجزیہ کنٹنٹ اینالائزر کے ذریعے انجام پایا۔

**نتیجے:** پہلے راونڈ میں اہمتر وجوہات معلوم ہوئیں، مکرر اور مشابہ امور کو حذف کرنے کے بعد باون وجوہات حاصل ہوئیں۔ ان کو چودہ ذیلی طبقوں میں بانٹا گیا، دوسرے راونڈ میں چودہ وجوہات کو لائیکرٹ اسکیل رینکنگ کے لئے جانچا گیا، تیسرے راونڈ میں شرکاء تحقیق کے حتمی نظریات معلوم کئے گئے اور اس ڈیٹا کا کنٹنٹ اینالائزر کے ذریعے تجزیہ کیا گیا۔ اوسط طور پر سات بنیادی عوامل پائے گئے جن کی وجہ سے طلباء کلاس میں شرکت نہیں کرتے ہیں یہ عوامل تعلیم سے کتراتا، نمر دینے کا سسٹم، باہدف تعلیم دینا، منتخب شدہ موضوع کے اثرات، کلاس کے دیگر طلباء کے اثرات اور سخت پراجیکٹس، نیز یونیورسٹی یا کالج کا ماحول ہیں۔

**سفارش:** طلباء کی تعلیم بنیادی طور پر کلاس میں ہی امکان پذیر ہے۔ کلاسوں میں شرکت نہ کرنے کی وجوہات کو جاننے سے اساتذہ نقصان دور کر کے بہتر تعلیم دینے پر مائل ہونگے اور اس کے نتیجے میں طلباء بھی شوق سے شرکت کریں گے۔

**کلیدی الفاظ:** طلباء، تعلیمی روش، ڈلفی تکنیک

## INTRODUCTION

One of the most pivotal factors in education is the teaching-learning process. The teaching-learning process is the main pattern for both teachers and learners to accomplish specific goals. Evidence highlights that the success of this process requires using some methods that involve students as much as possible in the classroom learning environment and this inclusive participation is one of the main active learning strategies (1).

Participation in class activities facilitates learning and offers students and teachers enormous advantages. Concerning students, participation gives rooms to them, so that they can find opportunities to learn and practice new knowledge. In addition, students can explain their reasoning and examine their thinking processes. By the same token, teachers can identify learning problems and evaluate progression of students. In a similar vein, it provides opportunities for teachers to consider cognitive and affective supports for students' understanding (2).

Students' participation in classroom activities is very important in order to learn and develop critical thinking skills (3). Applying teaching methods with the active participation is one of the effective methods to motivate students and increase their level of learning. This will also turn students from passive learners to active learners in the classroom environment (4,5). The results of several studies showed that those learners who actively participate in classroom activities, have a better performance compared to passive learners (3,6,7). Studies also showed that several factors such as learning environment, teacher-student relationship and sense of belonging to the university would have an influence on learners' motivation (8). Also, active classroom participation plays an important role in the success of education and students' personal development in the future (9). Different studies have been conducted to highlight the factors influencing students' participation in classroom, proposing age (10), gender (11), students' willingness to talk (12), and course level (13) as identified issues. Hosseinzadeh et al. conducted a review article entitled "students' participation in teaching and its improvement methods" and their findings highlighted the advantages of students' participation in teaching strategies to increase students' participation, as well as the reasons for the lack of class participation (14). These studies have been conducted to identify the influential factors for students' involvement but there is no evidence on exploring the perspective of teachers regarding students' participation using a Delphi technique in our context.

The Delphi technique is a widely used and accepted method for achieving consensus of opinions concerning real-world knowledge solicited from experts within certain topic areas (15). By using this technique, researchers can obtain a convergence of perspectives and opinions of an often diverse group of experts from a long distance without establishing a face to face contact regarding a problem or a defined difficulty (16).

As students will become the future guardians of society's health, thus, we decided to gain direct information on the

reasons for the lack of students' participation in classroom activities from the standpoint of faculty members of Kerman University of Medical Sciences using a Delphi technique. As faculties are directly involved with students on a regular basis in every day contacts, exploring their perspectives without imposing preconceived tools could be more authentic and defensible.

## METHODS

The present study used a Delphi technique in a series of sequential "rounds" in order to gather data and conduct this research. This study pursued consensus on the reason "why don't students participate in classroom activities?" among selected faculty members. The Delphi process extended to three rounds in an iterative manner; i.e. stimulus of the second round was premised upon anonymous responses of the first round and so on.

This qualitative study was conducted in May 2014 at Kerman University of Medical Sciences (KMU). The present researchers tried to include a diversity of participants from both genders in this study. The faculty members included in this study were from the field of medicine with experiences of teaching, as well as non-medicine faculty members were included to represent a wide spectrum of background for sampling. These faculty members had the specialties including: medical education, health management, surgery, pediatrics, epidemiology, health policy, parasitology, librarianship and emergency medicine. All the invited participants had enough experience in teaching students and were oriented concerning the topic under investigation. As the inclusion criteria, we only included the participants who had: a) at least 6 years of teaching experience and (b) were medical professionals in clinical and non-clinical disciplines from KMU, (c) full-time geography faculty members, and (d) willingness to participate in the study. The demography of the faculty members participated in the Delphi panel is shown in Table 1.

**Table 1. The Demography of experts participated in the Delphi technique**

No	Gender	Profession	Specialty
1	Male	Non-medicine	Medical Education
2	Female	Non-medicine	Health Management
3	Female	Medicine	Surgery
4	Female	Medicine	Pediatrics
5	Male	Non-medicine	Epidemiology
6	Female	Non-medicine	Health Policy
7	Male	Medicine	Pediatrics
8	Female	Non-medicine	Health Management
9	Male	Non-medicine	Parasitology
10	Female	Non-medicine	Librarianship
11	Male	Medicine	Surgery
12	Male	Medicine	Emergency
13	Female	Medicine	Pediatrics

In order to gather data, an invitation was sent via e-mail as a Blind carbon copy (Bcc) to all potential members of the panel along with the explanation of the study objectives and their expected role. This study deliberately used Bcc in its correspondence to avert any direct communication between experts on the study subject and none of them were aware about the list of participants. As the number of rounds in a Delphi technique cannot be planned in advance, we took any necessary number of rounds in consideration based on the answers derived from responses and in each round all participants were required to express their opinions and confirm their inputs to reach an agreement.

### Round 1

The first round was started with an open-ended question. It was recommended to commence this round with open-ended questions for motivation purposes in order to elicit responses and let participants elaborate on the proposed topic. This increases the richness of the data collected (16). We asked this open-ended question as the cornerstone of soliciting specific information from the expert panel: "why don't students participate in classroom activities?" The participants had the freedom to provide as many reasons as possible upon their interest in order to gather all potential reasons and not to miss any answers concerning the lack of students' participation in classroom activities. In this round, each faculty member's responses were recorded in a Microsoft word file. After aggregating all the responses, two of the authors independently pursued the responses many times to eliminate any duplicates and similarities and put the same suggestions into one category. In case of any disagreement concerning the obtained responses, another member of the research team was negotiated. This gave room to establishing a list of items and themes for lack of class participation to be used for subsequent rounds.

### Round 2

In the second round, after converting the collected information from round 1 into a well-established format of reasons for lack of class participation, all participants (13 experts) who responded to round 1 were contacted again. They were provided with the results and they were asked to review the items summarized by the researchers based on the information provided in the first round. Accordingly, the experts were required to express their opinions concerning the results obtained and modified from round 1 and rank order items for priority setting purposes. In this regard, areas of disagreement and agreement could be identified. Concerning the rank ordering in order to select the top reasons for students' lack of participation, the present researchers asked the participants to choose a score from 1 (not very important) to 5 (very important) for each reason. The sum of votes was calculated and the most important reasons were sorted in a higher-order list.

### Round 3

In this round, the researchers provided the ratings to all respondents from round 2 and asked them to review and confirm their selection. In this round, experts had an

opportunity to make further clarifications of both the information and their judgments of the relative importance of the items.

**Data analysis:** As the answers were recorded in a Microsoft word file, the present researchers were able to treat data in a form of content analysis approach. Thus, respondents' direct answers were considered for further processing without imposing any categories or perspectives. Each response, a word or a complete sentence, was treated as a unit for analysis. The similarities were omitted, and the sentences (reasons) revolving around a unified theme were put together. Then, all meaning units with the same concept were condensed into more tangible units and each group of meaning units was assigned a name. For credibility purposes, the present researchers independently reviewed the sentences (reasons) and in case of any disagreement a third party was negotiated. This debriefing and review of the content ensured the authenticity of the research to the researchers of this study (17).

## RESULTS

### Round 1

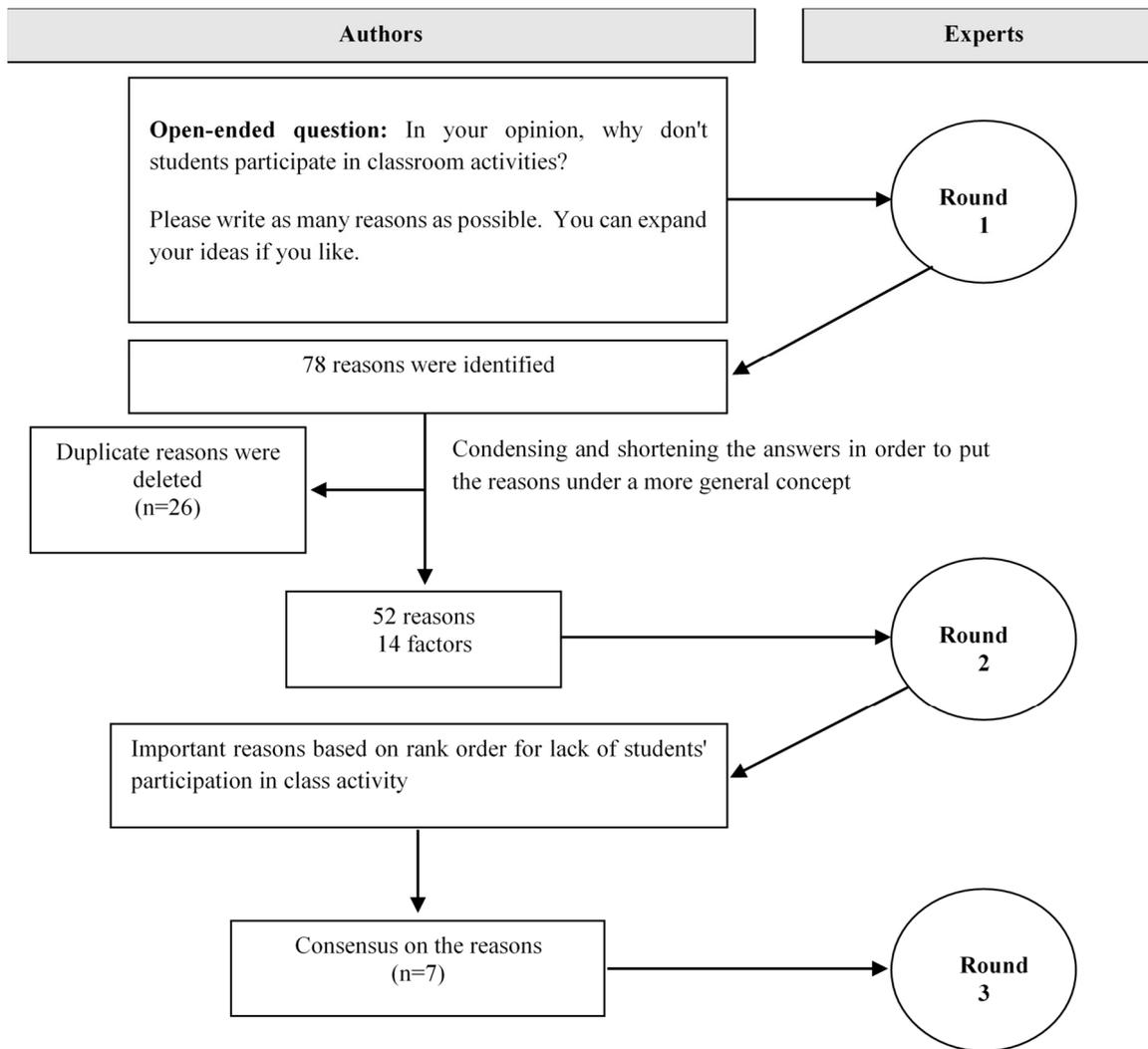
From the 20 invited faculty members, 13 responded (6 males; 46.1% and 7 females; 53.9%) to round 1 and sent their answers to the given open-ended question (Figure 1). Each participant was asked to write as many answers as possible for the open-ended question. Based on the results of the first round, participants wrote more than 5 reasons on average and expanded their ideas. The sentences or phrases reached 78 in total and after removing the duplicates and similarities (26 were removed), 52 remained and they were condensed, shortened, merged and sorted into 14 higher order categories to portray the reasons for the lack of participation in classroom activities. The list of reasons was decided by the present authors and sent back to faculty members for evaluation.

### Round 2

Faculty members were asked to rank order all the reasons from 1 to 5 which were perceived as the most important causes for students' lack of participation in class activities. These 14 items based on rank order included: motivation factors (4.80), grading system (4.72), meaningful teaching based on real-life situations (4.50), major influence (4.27), peers influence (4.13), challenging assignment (4.03), environmental influence (4.00), high volume of homework assignment (3.65), lack of aptitude for learning (3.38), shyness and fear of participation (3.27), having a vague sense of professional career (3.11), teaching methods as no cooperative (3.08), lack of preparation for the classroom (3.05), and different learning styles (3).

### Round 3

Participants agreed that the identified reasons were relevant and the seven ranked order reasons represented the most important factors for lack of students' participation from the poll of answers derived from data.



**Figure 1. The Map of the Delphi technique showing the flow of communication between authors and experts over the three rounds**

## DISCUSSION

Active participation not only motivates students to take attendance in class and participate in its activities, but also helps students to become cognizant of their strengths and weaknesses on the premise of their involvement in learning. Evidence shows that the active learning methods (5,18), the use of teaching models (19), and the use of games (20) are some of the ways to engage students in the learning process, and teachers can apply them in the teaching and learning process.

The aim of this study was to identify the reasons for non-participation of students in classroom activities from the standpoint of faculty members of Kerman University of Medical Sciences. In a Delphi process, we reached an agreement to list seven principal reasons for students' lack of participation in classroom activities which some of them are similar to other studies conducted in this regard (2,21,22). In the present study the perspective of teachers concerning students' lack of participation in classroom activities was only

sought. It should be highlighted that faculty members are the main pillar of the teaching and learning process and they spend most of their time teaching students in the classroom. In this regard, they can provide better insights due to their prolonged engagement and experience with students in the classroom. In addition, they are more familiar with the processes of students' learning, so in comparison to students, their opinions can better help the researchers to elicit the data. It is important to mention that with the number of teachers invited to this study and their diverse backgrounds, this study could obtain the relevant data concerning the topic under investigation. Evidence also shows that in a Delphi technique, there is no need for the expert panels to be representative samples for statistical purposes, but the qualities of the expert panel rather than its numbers play a pivotal role regarding its representativeness (16). The selection of participants for a Delphi study should not necessarily be random, but may be purposive to include relevant groups (23). Using the Delphi technique, the present researchers could find the top 7 reasons for the

**Table 2. The Example of meaning units and condensed meaning units for the 7 most important factors elicited from the faculty members of Kerman University of Medical Sciences, May 2014**

Meaning unit	Condensed meaning unit
<ul style="list-style-type: none"> <li>- Students do not take heed of what they are asked to do</li> <li>- Students disclaim any responsibilities from their teachers</li> <li>- Students have concern for their future career</li> <li>- Internalization of a state of being passive not active</li> <li>- Procrastination habits of students</li> </ul>	Motivation factors
<ul style="list-style-type: none"> <li>- Teachers do not consider any points for those students who participate</li> <li>- Teachers do not have on spot evaluations to assign marks to students</li> <li>- Teachers' indifference towards students' engagement</li> <li>- Unfair grading due to the teachers' inconsistency in observation and evaluation of the learners</li> </ul>	Grading system
<ul style="list-style-type: none"> <li>- There is a gap between theory and practical knowledge in teaching</li> <li>- Teachers only teach and guide students to rote learning instead of meaningful and associative learning</li> <li>- Teachers only teach based on their own experience</li> <li>- Teachers are not up to date in regard to the teaching resource and materials</li> </ul>	Meaningful teaching
<ul style="list-style-type: none"> <li>- Students feel that their major is not preparing them for a specific career</li> <li>- The materials presented in the classroom are not related to the major and will not make the learners marketable after graduation</li> <li>- Teachers only teach the materials provided by the authorities and do not put more emphasis on transferrable skills (Aptitude and knowledge developed through personal experiences)</li> </ul>	Major influence
<ul style="list-style-type: none"> <li>- Students do not receive enough peer group's approval in the classroom environment</li> <li>- Teachers believe that students adopt some dangerous and inappropriate habits from their peers</li> <li>- Various economic backgrounds of a student's peer groups which may make them feel either ashamed or proud and this may influence their learning process in a negative way</li> </ul>	Peers influence
<ul style="list-style-type: none"> <li>- Students believe that the assigned homework and projects are way beyond their level of understanding</li> <li>- Students do not attend the classes regularly and this results in a lack of subject knowledge</li> <li>- Lack of confidence in completing an assignment as students are not well prepared and up to the required marking criteria</li> </ul>	Challenging assignment
<ul style="list-style-type: none"> <li>- The learning environment is not supportive and comfortable</li> <li>- Lack of facilities and accommodations to promote learning</li> <li>- Teachers do not provide an interactive and lively learning environment</li> <li>- The layout of the physical classroom acts as an inhibitor to learning</li> </ul>	Environmental influence

purpose of the current investigation. These principal reasons included motivation factors, grading system, meaningful teaching based on real-life situations, major influence, peers influence, challenging assignment, and environmental influence.

One of the most important reasons highlighted by the faculty members in this study was the strength of motivation for students' participation. Evidence shows that along with heredity, conducive learning environment, and teaching methods, motivation is one of the factors having influence on students' participation in class activities (24). Motivation is the driving force of any human activity and is considered as a prerequisite for learning and its effect on learning is indisputable (25). Even the best organized training programs will not be useful in case of lack of motivation. Numerous studies showed that students' performance and achievement was directly related to motivation and the presence of motivation would result in many educational outcomes (26,27). Learners' motivation to contribute and succeed in the classroom environment is dependent on external factors (extrinsic motivation) such as score, awards and verbal encouragement. These external factors are a good source of

inspiration for students in the class and their participation in the learning process. The faculty members in the present context believe that in order to augment students' participation, their involvement in the class activities should be graded. The graded participation should be built into the course structure. In this run, students are more encouraged to participate with faculty and classmates in classroom activities (28). This sort of participation can vary from simply mentioning that participation is necessary in the syllabus to an actual list of activities for which the student is responsible. When students know that their grade will benefit, they are more likely to contribute to classroom discussions (29). Thus, the encouragement of the teacher or the way he scores their performance is a key factor in the future participation of the learners in other tasks and activities. Therefore, it is necessary that learners are reinforced by appropriate external motivating factors. Research showed that forcing students to participate and also to score them in order to increase their participation in classroom activities is a common way to motivate them and this is usually regarded as a planned activity (28). When learners become aware of the fact that a part of their scores is directly related to their

classroom activities, they are more likely to participate in classroom activities (29). To achieve such a goal, teachers, at the beginning of every semester, can elucidate the evaluation and assessment procedures for the learners so the learners would recognize that evaluation will be based on classroom activities and participation rather than the final exams. When learners lack the necessary information about the results of their learning activities, or when they are exposed to have negative expectations for what they should have done, they may finally have lower levels of motivation in their participations (30).

It seems that teachers, in order to enhance the participation of learners in the classroom activities, need to provide the learners with meaningful and authentic (relevant to real life) situations. If meaningful classroom tasks and activities are provided, students are motivated to learn and participate in classroom activities; otherwise, there would be no motivation and interest for them to participate. Results of the study conducted by Soleimani et al. on 151 medical students of Tehran University of Medical Sciences revealed that the inappropriate content taught in classroom was chosen as factor for not attending class by 77% of participants (31). Research findings also indicate that medical educators are required to apply teaching strategies that facilitate deep learning rather than teaching students to memorize by rote. In this regard, concept maps as a teaching and learning strategy supporting meaningful learning are well known. Concept maps can be used to bridge the gap between what students already know and what they do not know which leads to critical thinking and problem solving in a variety of clinical practice settings (32). The present researchers believe that teachers, alongside providing the theoretical content, should apply these theories in practical and novel situations. Using novel and authentic situations in the classroom activities would reduce the tediousness of learning and result in a better use of the materials to be learned. Hence, teachers should teach the materials in a way that a meaningful and personal learning will happen for every student.

We could also identify that major plays a part in students' involvement in class activities. Research shows that if the major chosen by the student is useful for him, this will motivate the learner to follow his education with great interest and participate in classroom activities as much as possible. For such students assigning different learning activities would play the role of an incentive to improve their learning (33). Based on the cognitive approach, thought processes, such as having motivation to do a specific task, would be considered as a source of inspiration. In fact, motivation is regarded as a response to the internal needs and drives the learners to follow their own interests in terms of learning and education. Intrinsic motivation, such as the satisfaction of learning, knowledge and achieving results is an important way for the learners (34). So, teachers, as far as they can, should create a sense of interest in their students, in relation to their field of study, to increase the participation of the students in the classroom activities. Several studies reveal that teachers are considered as role models for students and they play a pivotal role in their learning (35-37).

In this regard, participation can be augmented by teachers in classroom.

Students are also affected by their classmates in terms of class participation. In a classroom environment, the amount of each student's participation is carefully scrutinized by his/her classmates. Students' interaction with each other (though to be quiet) plays a key role in reducing the level of participation in the class. For example, looking in the eye, scowls and other non-verbal signals from passive learners towards active learners give them the message that others are not happy with their behaviors (38,39). This sort of negative reaction from classmates has a discouraging effect on class participation. As a result, the teachers should deliver a comfortable learning environment away from any concerns in which the learners can easily ask questions and respond to them. If the learning environment is not supportive and comfortable enough, the learners would be reluctant to participate in classroom activities. The teacher is expected to create a more interactive learning environment rather than a competitive one. Learners are motivated to learn if they are a part of the classroom or school which appreciates learning (40). When there is no sense of cooperation or the desires to establish a friendly relation with others are low, the learners prefer not to interact and work alone (41). Studies show that a prerequisite for development of critical thinking in students is participating in classroom activities. Changing from a passive learner to an active one requires a learning environment that is free of fear and concern for the active participation of students (3).

Our experts also highlighted that challenging tasks put forward by the teacher increases students chances of participation. Evidence also indicates that learners prefer to face such tasks that are slightly challenging to them (33). If students are faced with complex tasks that require a lot of time, this will spoil their interest and motivation to participate in classroom activities. In contrast, if the task involves little risk and the learner is able to do that, this would result in a better sense of self confidence and motivation. On the other hand, it should provide the students with enough challenging tasks at the same time. Evidence shows that learners' motivation to learn is amplified when the challenging level of each task is moderate (42). Research in this area shows that successful and experienced teachers design such tasks that provide the success rate of 80 to 90 percent for most students (43).

The last but not least, the physical environment of the classroom also plays a significant role in whether students feel capable of participation or not. It is highly important for students to see what is going on in front of the class. So, if they become able to hear and see all the things happening in the classroom, their level of interaction increases. Evidence shows that students are less willing to participate in a larger classroom setting (21). They prefer to sit in front of the class, in the middle, or the back of the classroom based on personal reasons. This comfort zone helps them in the way they prefer to participate. Those who typically choose to sit in the back of the classroom admit to verbally participating less frequently than those who sit in other areas. Students feel "invisible" when they sit in the back of the room (21).

One limitation of this study could be related to the reluctance of some faculty members who refused to take part in the Delphi technique. Second, the information obtained in this study was limited to one medical University and it relied on a convenience sample of teachers from KMU. Thus, we suggest more research concerning this topic in order to obtain more relevant findings from other medical universities. By the same token, other stakeholders such as students and their parents could be investigated for more comprehensive data.

Planning organized classroom activities and discussion with tact and thoughtfulness in order to increase participation is vital. But there are a couple of reasons which must preoccupy teachers in their teaching. Students must be motivated to take part in classroom activities. The graded participation is very crucial for more student involvement. Teachers should also bear in mind that real life situations and challenging tasks can augment class participation as well. In line with these important matters, the influence of major, peers, and environment are undeniable factors for a more active classroom. Taking these into consideration, then teachers

can arrange an environment to enrich dynamic learning for each and every learner to enthusiastically take part in the classroom activities.

#### Ethical considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

#### ACKNOWLEDGEMENT

The present authors gratefully acknowledge the valuable participation of faculty members of Kerman University of Medical Sciences who took part in this research. In addition, we would like to thank the reviewers of this paper for their insightful comments.

**Financial Support:** The present study was financially supported by the Vice Chancellor of Research at Kerman University of Medical Sciences with code number: 950171.

**Conflict of interest:** None declared.

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