An Outdoor Educational Experience in Health Professions Education: Beyond a Focus Group Study

Mandana Shirazi[1,2], Maryam Karbasi Motlagh[1,2,3], Nazila Zarghi[4,5,6,7], Jonas Nordquist[8,9]

[1] *Department of Medical Education, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran*

[2] *Education Development Centre, Tehran University of Medical Sciences, Tehran, Iran*

[3] *Exceptional Talent Development Centre (ETDC), Tehran University of Medical Sciences, Tehran, Iran*

[4] *Nursing and Midwifery Care Research Centre, Mashhad University of Medical Sciences, Mashhad, Iran*

[5] *Medical Sciences Education Research Center, Mashhad University of Medical Sciences, Mashhad, Iran*

[6] *Head of Research in Medical Education Unit, Education Development Centre, Mashhad University of Medical Sciences, Mashhad, Iran*

[7] *Students' Scientific Research Centre (SSRC), Tehran University of Medical Sciences, Tehran, Iran*

[8] *Department of Research and Education, Karolinska University Hospital, Stockholm, Sweden*

[9] *Department of Medicine (Huddinge), Karolinska Institute, Stockholm, Sweden*

Received: 04 Jan. 2024; Accepted: 21 Feb. 2024

Abstract- Outdoor learning can relate students with environment, community, society and themselves. It can benefit students of all ages and successful in a variety of settings. Furthermore, it can enrich the curriculum and improve educational attainment. So, the present study has tried to explore experience of PhD candidates in Medical Education through a focus group. Data were collected from PhD students in medical education after participating in an outdoor session through a focus group which is frequently used as a qualitative approach to gain an in-depth understanding of social issues. Data were analyzed through conventional content analysis approach. Fifteen PhD candidates participated in focus group. Most of them aged above 35. The majority of them were working at Education Development Center (EDC), the rest were clinical practitioner, faculty member and people involved with educational activities. As to conventional content analysis of data, two main categories of instructional and inspirational sides of outdoor learning had emerged with three (Different physical space, Environmental distractors, and Innovative teaching method) and four subcategories (Informal communication, Attractive learning environment, inducing reflection, and making a new viewpoint) respectively. It is recommended to include the outdoor learning experience to provide situations for research and practice. It should be noted that curriculum reform might be necessary for planning the Outdoor learning environments and associated teaching learning methods.

Acta Med Iran 2024;62(March-April):80-87.

Keywords: Focus group; Medical education; Outdoor learning; Conventional content analysis; Qualitative

Introduction

Outdoor and adventurous activities facilitate authentic or experiential learning (engagement of learners with the world as they actually experience it) and give them much better access to the main routes to learning (Visual, Auditory and Kinaesthetic). When outdoor programs are implemented well, the opportunities could contribute significantly to raise standards and improving students' personal, social and emotional development. There is evidence that links the natural environment with better physical health and psychological wellbeing. It indicates that nature can have positive contributions to health, help students recover from pre-existing stresses or problems, have an 'immunizing' effect by protecting from future stresses, and help them concentrate and think more clearly (1-3).

As a result, it is expected to find benefits/outcomes,

Corresponding Author: N. Zarghi
Nursing and Midwifery Care Research Centre, Mashhad University of Medical Sciences, Mashhad, Iran
Tel: +98 9155186904, E-mail address: zarghi.nazila@gmail.com

as identified in the High-Quality Outdoor Education, published by the English Outdoor Council as: enjoyment, confidence, social awareness, environmental awareness, activity skills, personal qualities, key skills, health and fitness, increased motivation and broadened horizons (4).

Clear evidence indicated that Outdoor learning can promote "confidence and self-esteem, positive relationships among students and reduced discipline and behaviour problems", learners could develop their cooperation, leadership, and relation with peers and motivation to learn (5-7). Outdoor learning can also relate students with environment, community, society and themselves (8-10). It can benefit students of all ages and successful in a variety of settings. Furthermore, it can enrich the curriculum and improve educational attainment (11).

On the other hand, outdoor learning can influence positively on long-term memory-there can be reinforcement between the affective and the cognitive, with each influencing the other to bridge higher order learning. There is substantial evidence that outdoor learning has the potential to improve engagement, achievement and motivation to learn. Outdoor learning is able to improve the development of responsible citizens with greater sense of belonging and responsibility as well as positively impact on interpersonal and social skills such as effectiveness, communication skills, group cohesion and teamwork (3).

As outdoor learning experiences are often remembered for a lifetime, integrating learning and outdoor experiences provides relevance and depth to the curriculum in ways that are difficult to achieve indoors (12).

Of the important aspects of personal and professional development (PPD) to be taught within medical students' program are Leadership and teamwork which could be enhanced their abilities through outdoor campus (13). Benefits of outdoor skills education contributions to health, learning, and lifestyle have been emphasized by a systematic review as well (14).

Outdoor learning has played the important role in policy-making and practice across European countries. Whereas several studies focused on boosting learning and mental health outcomes through outdoor experiences, some researches have also indicated to some barriers to offer some kinds of outdoor experiences. Of the most common barriers associated with teachers' confidence to provide effective outdoor learning experiences for learners (15).

It is also important to consider that many countries, i.e. North Europe or Canada as well as parts of the US, have a climate that sometimes makes the development of outdoor learning environments somewhat difficult. Furthermore, to have such an experience, in a context with no previous background for outdoor education, it is necessary to choose proper group, graduate programs who experienced higher order of learning in different domains. In this study, it was decided to select the candidates of PhD program of Medical Education as pioneers of educations in universities to have their experience not just from the learner viewpoints but the teachers. Thus, it was crucial to involve them in a scrutinized plan of enjoyable, creative, challenging educational activities.

Outdoor learning activities span social divisions and can help build stronger communities. Frequent and regular outdoor learning provides excellent opportunities to use a wide range of skills and abilities not always visible in the classroom. Becoming aware of such skills can fundamentally change personal, peer and staff perceptions and lead to deep changes in life expectations and success (16).

As the learning atmosphere highly influences on learning experience. It seems, it can develop learning through making a new version of context where the students refresh both themselves and their previous experience as well as reflect on the whole body of education. It could be more obvious when the postgraduate students are involved especially while graduate students of medical education spend their time of learning for very strict lessons such as theories on a different space. Thus, the authors decide to run an outdoor session in medical education field and explore their experience about this session.

Materials and Methods

The present qualitative study using conventional content analysis explored experience of PhD student in medical education at Tehran University of Medical Sciences who stated their PhD program from 2014-2018. The present outdoor session was planned for fifteen participants, 6 students started their PhD program in 2014, 5 in 2015 and 4 in 2018; they were passing their second year of their academic study. All Participants were selected, because all of them were attending their Continuing medical education (CME) course. One session of the lessons including "Principles of CME", i.e. "theory at a glance" including an introduction of theories and their application in medical education. Previous sessions were done in classrooms by running group discussions and presenting related papers by students.

In order to run such an outdoor experience, at first, students were asked if they had taken any classes held in nature; their answer was negative, and it was decided to plan beforehand. For this purpose, a park, near the university was selected; it had many leafy, shady recess formed by tree branches, shrubs, etc. One of these arbours was selected for holding the class. We decided to make the appointment in the university to have a word before class and walk to the park in order for the students to gain a new experience. On the way, they talked informally about the session and its objectives as well as their previous experience of outdoor scientific sessions.

They walked and talked; the ice was fully broken, and they were ready to begin the class after a 10-minute morning refreshing session. The class took around 4 hours with two breaks in between. They switched the lesson with a difficult analytic topic, and then they had a late breakfast, reviewed the content, and gave some feedback during the first break. Next sessions were run similarly; however, the final break included a walk around the park visiting wonderful, eye-catching spots and taking photos during the final review. Afterwards, all sessions were reviewed by students and exemplified in educational context. Eventually, feedbacks were given to students and they got their take-home message. They were assigned to find a paper which could apply the thought theories in real settings.

At the end of this journey, students were asked to describe their experience in a focus group. All participants accepted to interview and talk about their experience in focus group run immediately after the session. Because of access to maximum variation of data, participants were selected from different academic program. It should be noted that some participants were faculty members, while the others were either student involved with educational activities or were working in clinical setting. Some participants were working in educational development centres of their own universities as well. This also helps to have data variation.

Focus group frequently used as a qualitative approach to gain an in-depth understanding of social issues. It aims to obtain data from a purposely selected group of individuals rather than from a statistically representative sample of a broader population.

The focus group using unstructured interview was recorded, transcribed and analysed as soon as possible just before going to the next one. The next focus group was set based on previous one, thus, data gathering was continued until data saturation, in which no additional dimension added to the concepts (17).

Each focus group took around 70 min. Following the outdoor session, participants attended in an appropriate location, aims and objectives of study were described, and the informed consent was taken verbally. They were assured that all data would be kept anonymously and confidential and just the results would be reported. Following ethical consideration, the study was switched.

The main question was: "How do you find this outdoor session?" Then based on the answer, exploratory and probing questions were asked to get more and deeper answer or clarify the ambiguity. They were also asked to give some similar experience if they had as well. Member check was done by reflecting participants' responses to them in order to ensure right understanding of his/her saying. The conventional content analysis was done for all focus groups using coding paradigm. As to Granheim and Lundmann’s content analysis approach, the interviews firstly transcribed, and read several times, then they were divided into semantic units, consequently initial codes were determined. Based on similarities and differences, they were then classified into categories and subcategories. finally, the theme might be emerged (18) Meaning units were extracted from participants' quotations in the form of initial codes. Memos of researchers were written in order to help analysis process. The similar codes formed subcategories and categories. All data were reviewed several times for ensuring validity of subcategories and categories resulted from codes. Researcher tried to be bracketed through analysis process.

Four criteria for credibility, dependability, confirmability, and transferability were used to increase trustworthiness of findings in qualitative research. In this study, validity and credibility, were achieved through prolonged engagement with data, enough time for data collection and analysis, triangulation of data collection using field note photography of activities as well as interview through focus group, member check and expert check. These experts selected from people who were familiar with both qualitative methods as well as medical education.

Transferability was confirmed by providing clear and deep explanation about context, participants, and setting. Dependability was attained using external evaluator to review the data, memos and results. Some university professors confirmed the analysis by review the documents, some interviews, codes and emerged subcategories and categories. Consequently, confirmability was obtained.

Results

Conventional content analysis was performed on 15

participants' interview using 3 focus group discussions. Table 1 demonstrates their characteristics.

Interviews were analysed using constant comparison strategy in which analysis simultaneously continued during the study. Data emersion was achieved through continuous back and forth returning to data and prolonged engagement with them. Researchers tried to be bracketed during data analysis process.

Following analysing three focus groups, two main categories had emerged as instructive side and inspiring aspect resulting from three and four subcategories respectively as a consequence of 87 codes. The results have been demonstrated in Table 2.

Table 1. characteristics of participants

Variables		Number
Professional status	Faculty member	3
	Not faculty member but involved with educational activity	2
	EDC member	7
	Clinical practitioner	3
Age	25-35	4
	35-45	8
	45-55	3
Gender	Male	5
	Female	10

Table 2. Results of the focus group analysis

Subcategory	Category
Different physical space	**Instructive sides**
Environmental distractors	
Innovative teaching method	
Informal communication	**Inspiring aspects**
Attractive learning environment	
Inducing reflection	
Making a new viewpoint	

Instructive sides

Different physical space. Participants talked about physical space of formal classes: "I think more attention should be paid on the physical space of the classes by which learning process could be developed. We spend our academic time at undergrounds with low ventilation and light as well as other necessary facilities".

Environmental distractors. Some students complained of distractor during the outdoor session: "It was different; however, the distractors were high, and I needed to concentrate on the content much more. Generally speaking, I enjoyed a lot".

Innovative new teaching method: Participants especially those involved with educational activities found outdoor session more effective compared to current teaching-learning activities: "nowadays all teaching activities occurred either in classroom formally or via internet electronically. In fact, my experience was too different to compare the current ones. I found it completely different in terms of instructional methodology".

Inspiring aspects

Making informal communication: PhD students also mentioned to the effect of communication on learning: "Now, I understand why some workshop leaders try to make the informal atmosphere for their participants. I realized that better communication could be effective on better learning. I had no informal session of learning before".

Attractive learning environment**:** Participants noted to the nature of lesson and compatibility between nature of lesson and type of running class and presentation: "It was full of everything, not only I understood the difficult theories much better, but also I tried to enjoy fresh air, walking, beautiful flowers and closer communication with my teacher and peers".

Inducing reflection: Participants mentioned to reflection and planning too. It seems she was surprised: "Interestingly, I studied a lot. I should reflect…umm. I think, any innovative session needs to plan, if not it'll fail easily. I found it effective. Thank you".

Making a new viewpoint: The session was both instructive and inspiring for students as well: "Sometimes, I thought how I can teach differently in the future, now I am inspired".

Discussion

The present study aimed to explore experience of PhD students in medical education at Tehran University of Medical Sciences after attending in an outdoor session of learning.

As to the results, the present out-door learning sessions were found innovative, lovely and effective on learning. Other research presents similar conclusions in line with the present study. A study conducted by the State Education and Environmental Roundtable indicated that students participating in nature-based learning programs did better than their peers in their academic achievement, and their attendance was better than the control group (19). Cornell University environmental psychologist Nancy Wells likewise found that being close to nature can boost students' attention (20).

There are currently significant challenges in the learning environment (21). The importance of the setting is not a new theme in outdoor education research. A number of more recent studies have emphasized the importance of the location as a factor affecting students' outdoor learning. There is, however, clearly a balance to be struck between novelty and familiarity (22). In current study, a familiar location close to the university and a representative place for community was selected.

The relationship between outdoor learning and motivation has been reported by Julie Athman and Martha Monroe (2004) in which they compared 400 students learning in environment-based education programs to students studying in conventional classrooms, they showed that environment-based education could significantly raise levels of students' motivation. The results provided evidence for capability of environment-based education to improve students' near-peer teaching is used or both teachers' and learners' motivation and support its application for reform efforts (23). This finding is in line with current study in which PhD candidates reported the effect of outdoor sessions on their motivation. The main difference of these two studies were methodology, however, the same issue, motivation was addressed.

Bester *et al.,* conducted a study aimed to highlight the possibilities of applying near-peer teaching pedagogies in outdoor and environmental higher education contexts by the use of reviewing its use in the higher education focusing on health and medical education; then a qualitative methodology was applied to examine the initial experience of near-peer teaching, in which third-year university undergraduate students thought first-year students in the field during a higher education outdoor environmental education program in Australia. Both sets of students (teachers and learners) reported valuing the experience for its authentic preparation for future outdoor environmental education, explicit outdoor environmental education curriculum and pedagogy content, and role in inducting first-year students into the community of professional practice within the program. They also highlighted distinct elements of the program that contribute to the success of this unique near-peer teaching and learning experience and further discuss the limitations as a useful signpost for extending near-peer experiences across outdoor environmental education, and higher education more broadly (24).

It seems, the findings of their study are similar to current study in some extents. Both studies applied qualitative approach for exploring experience, on the other side, participants of both studies reported community professional experience, however, in current study participants did not experience near-peer teaching; the PhD candidates' methodology of teaching, mainly focused on discussion and fostering deep learning in order to apply the content in real settings for making change in behaviour.

Thomas (2018) conducted a study aimed to contribute to ongoing discussion about the teaching and learning strategies used in effective outdoor education programs. A naturalistic inquiry was conducted with two schools that participated in 28-day outdoor education programs facilitated by the same outdoor provider in Australia. Data were collected through five semi-structured interviews with the school teachers and program leaders and five focus groups conducted with the students. The Life Effectiveness Questionnaire was also administered to 261 students pre- and post-program and results confirmed that the outdoor education program was producing desired improvements in the students' perceptions of their general life skills. The findings of the qualitative analysis confirmed the importance of carefully sequenced activities, a facilitative teaching style, and active engagement as teaching and learning strategies. More research is needed to confirm the teaching and learning strategies that should be prioritized in the education of future outdoor education leaders (25).

It is thought that the results of teaching some of the subjects in science through outdoor education will be more positive. Erol TAS conducted a study to find out the effects of activities done through outdoor education on students' academic achievement, students' thoughts about the activities and the permanence of information. He applied mixed-method research design. Data were collected using academic achievement test for

quantitative phase while a test consisting of open-ended questions in fully structured interview form was prepared for qualitative data. The results of the qualitative analysis showed that the students liked these activities, and the activities were effective in understanding the subject and learning the concepts. In addition, it was found that the activities influenced the friendship between students positively. It was suggested for outdoor activities to be used in science teaching (26). Their findings confirmed the results of current study in which both instructional and inspirational aspects were addressed by participants.

A systematic review conducted by Povilitis *et al*., assessed the state of the literature regarding the impacts of outdoor education instructors' behaviours and traits on participant outcomes. They reviewed Twenty-seven articles in detail, and student outcomes in relation to instructor behaviours and traits and to programmatic elements are identified. A range of participant outcomes including social and emotional skills development, group cohesion, and identity development are discussed. They identified twelve distinct outdoor education instructor behaviours and discussed five most significant issues. Instructor traits such as interpersonal qualities were focused. Programmatic elements applied by instructors that influenced on participant outcomes include incorporating elements of experiential learning, debriefing and feedback, and participant reflection (27).

Some findings of this systematic review agreed with some instructional and inspirational issues which emerged through qualitative analysis of current study. It seems as to this review, high order learning needs to experiential learning, feedback and debriefing and reflection as necessary elements which have been reported by PhD candidate in current study.

In November 2006 the manifesto learning outside the classroom was published which leads the statement: "We believe that every young person should experience the world beyond the classroom as an essential part of learning and personal development, whatever their age, ability or circumstances." Such experiences "help us to make sense of the world around us by making links between feelings and learning. They stay with us into adulthood and affect our behaviour, lifestyle and work. They influence our values and the decisions we make. They allow us to transfer learning experienced outside to the classroom and vice versa" (28). This experience is in line with the results of present study. Running the outdoor sessions seems to be integrated to different experience both in real life and academic education either in teaching or learning aspect.

Finally, the current study results are also in line with the office for standards in education (OFSTED) report which believe that the benefits of effectively integrating outdoor learning into educational and development programs for young people are now well established: "When planned and implemented well, learning outside the classroom contributed significantly to raising standards and improving pupils' personal, social an emotional development" (29).

The last but not the least point is that based on our study, as currently there is almost no outdoor space (apart from many spaces in Australia), it is not either indoor or outdoor, but a mixed and blended form is suggested. On the minus side, what this study focuses on, is formal outdoor learning environments. While there is a whole set of informal learning environment that might invite peer-to-peer learning or just self-study. They could be applied based on the potentials of different universities.

As an essence, we found our out-door concert of learning innovative, lovely and effective on learning. It seems, it could be more outstanding, when the target group is the future academic team for training teachers. According to the participants' experience, the session made them reflected and inspired to plan such sessions with more innovative approaches. As they had lived experience, it seems they will be more successful than people who rely just on books. The importance of informal atmosphere of the class and communication styles seems to be interesting. Therefore, integrating formal and informal approaches, reinforce hidden curriculum and reflection sound more effective. It is recommended to teachers for integrating some outdoor sessions in their course plans in order to engage their students in learning process effectively. It seems to be necessary to assess the outdoor efficacy through more quantitative research as well.

As Outdoor learning environments might also drive curriculum change; it is recommended to study on the methods of teaching and learning could be aligned with outdoor spaces (30). On the other side, except for teaching and learning methods, other elements and constituents of the indoor curriculum should be either realigned or modified based on the necessities of outdoor spaces. Thus, the authors, strongly recommend performing the further research on optimizing curricula, implemented in outdoor space for different programs in medical sciences fields.

Limitations

Of the main barriers was the financial issue. Although both teachers and learners were enthusiastic about

participating outdoor learning activities, administrative affairs and familiarity with this method and its implementation were considered as the other issues for planners. Running such sessions as well as balancing between activities and passing exams could be the other challenge. On the other side, special conditions such as Covid-19 lockdown could influence on running outdoor sessions. Although our study was conducted before the pandemic, organizing outdoor activities seemed to be unfeasible during the coronavirus outbreak.

Acknowledgements

Authors offer their special thanks to the participants for sharing their valuable experience in the focus group.

References

1. Asfeldt M, Purc-Stephenson R, Rawleigh M, Thackeray S. Outdoor education in Canada: a qualitative investigation. J Adventure Education and Outdoor Learning. 2020;21:1-13.
2. Pretty J, Griffin M, Peacock J, Hine R, Sellens M, South N. "A Countryside for Health and Wellbeing: The Physical and Mental Health Benefits of Green Exercise"-Executive Summary. Countryside Recreation Network; 2005.
3. Rickinson M, Dillon J, Teamey K, Morris M, Choi MY, Sanders D, et al. A review of research on outdoor learning. National foundation for educational research and King's college London. Field studies council; 2004.
4. What are the benefits? 2018. English outdoor council. (Accessed at https://www.englishoutdoorcouncil.org/outdoor-learning/what-are-the-benefits-of-outdoor-learning.)
5. Parrish D, Phillips G, Levine R, Hikawa H, Gaertner M, Agosta N, et al. Effects of outdoor education programs for children in California. American Institute For Research; 2005.
6. Konopacki JR. Outdoor education: the effects of outdoor learning on student success; 2016.
7. Ghazal N, Akl IB, Aoun R, Ziadeh N, Houranieh R, Khalil PB. An Internal Medicine Intern Retreat to Facilitate Transition to PGME and Promote Peer Interaction. J Grad Med Educ 2019;11:165-8.
8. Fuller IC. Taking students outdoors to learn in high places. Area 2012;44:7-13.
9. Beames S, Atencio M, Ross H. Taking excellence outdoors. Scottish Educ Rev 2009;41:32-45.
10. Nicol R, Higgins P, Ross H, Mannion G. Outdoor education in Scotland: A summary of recent research: Scottish Natural Heritage; 2008.
11. Committee S. House of Commons Education and skills Committee. Secondary Education: Schools Admission 4th Report, Session; 2004.
12. Taking learning outdoors partnerships for excellence; 2007.
13. Marchant E, Todd C, Cooksey R, Dredge S, Jones H, Reynolds D, et al. Curriculum-based outdoor learning for children aged 9-11: A qualitative analysis of pupils' and teachers' views. PloS one 2019;14:e0212242.
14. Cottrell JR, Cottrell SP. Outdoor skills education: what are the benefits for health, learning and lifestyle? World Leisure J 2020;62:219-41.
15. Barrable A, Touloumakos A, Lapere L. Exploring student teachers' motivations and sources of confidence: The case of outdoor learning. European J Teach Educ 2022;45:356-72.
16. Education HIo. Improving Scottish education: a report by HMIE on inspection and review 2005-2008: HM Inspectorate of Education Livingston; 2009.
17. Mandal PC. Saturation in qualitative research: Considerations and limitations. Int J Acad Res Dev 2018;3:624-8.
18. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today 2004;24:105-12.
19. López Alcarria A. Evaluación de la calidad de la ambientalización curricular en centros educativos andaluces: estudio de casos en la provincia de Granada ; 2016.
20. Wells NM, Evans GW, Cheek KA. Environmental psychology. Environmental health: From global to local. 2016;203.
21. Nordquist J, Hall J, Caverzagie K, Snell L, Chan MK, Thoma B, et al. The clinical learning environment. Med Teach 2019;41:366-72.
22. Dillon J, Rickinson M, Teamey K. The value of outdoor learning: evidence from research in the UK and elsewhere. Towards a Convergence Between Science and Environmental Education: Routledge; 2016:193-200.
23. Athman J, Monroe MC. The effects of environment-based education on students' achievement motivation. J Interpretation Res 2004;9:9-25.
24. Bester L, Muller G, Munge B, Morse M, Meyers N. Those who teach learn: Near-peer teaching as outdoor environmental education curriculum and pedagogy. J Outdoor Environ Educ 2017;20:35-46.
25. Thomas GJ. Effective teaching and learning strategies in outdoor education: findings from two residential programmes based in Australia. J Adventure Educ Outdoor Learn 2019;19:242-55.

26. Erol T, GÜLEN S. Analysis of the influence of outdoor education activities on seventh grade students. Particip Educ Res 2019;6:122-43.
27. Povilaitis V, Riley M, DeLange R, Verkouw A, Macklin K, Hodge CJ. Instructor impacts on outdoor education participant outcomes: A systematic review. J Outdoor Recreation Educ Leadersh 2019;11:222-38
28. Ahoec. Benefits of outdoor learning; 2020. (Accessed at https://ahoec.org/benefits-of-outdoor-learning/.)
29. Britain G. Learning outside the classroom: How far should you go?: Ofsted; 2008.
30. Nordquist J, Sundberg K, Laing A. Aligning physical learning spaces with the curriculum: AMEE Guide No. 107. Med Teach 2016;38:755-68..