

Original Research



# The perspectives of faculty around factors affecting the development and sustainability of educational scholarship: A qualitative content analysis

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## Article info

### Article History:

Received: 17 February 2022

Accepted: 27 April 2022

ePublished: 12 June 2022

### Keywords:

Scholarship  
Medical education  
Development  
Sustainability

## Abstract

**Background:** New horizons have been opened for educational excellence in medical universities by commencing the role of scholarship for medical teachers in recent years. The low rate of faculty reception towards educational scholarship and their low interest in continuing scholarly activities indicated a need for the current study.

**Methods:** In this qualitative research, a non-probability purposive sample of thirteen participants (n = 13) engaged in two focus group discussions (FGDs), consisting of executors, collaborators, consultants, and referees of university or national educational processes in the last ten years. Participants were asked several critical questions concerning factors affecting educational scholarship development and sustainability. Qualitative content analysis with a conventional approach was used to analyze the data obtained from the discussions.

**Results:** Merging the codes extracted from the two FGD sessions and repeated review yielded 101 codes classified into two themes: educational scholarship development and sustainability. In all, 19 categories were identified: personal commitment, educational requirements, financial support, faculty development, team building, information resources, educational leadership and management, institutional motivation, culture building, individual characteristics, outcome evaluation of educational scholarship, material and spiritual support, mentorship, sustained training, supportive learning environments, curriculum development, organizational administration and leadership, application of results, and publication of results.

**Conclusion:** Our findings show that encouraging educational scholarship among faculty members and ensuring the sustainability of innovative educational processes are influenced by factors rooted in both individual and institutional dynamics.

## Introduction

Medical universities have recently been envisaging different roles for medical teachers to transform the teacher into a scholar.<sup>1</sup> Some consider that a faculty member must be a scholar, even if they are not required to do “scholarship of teaching” in their workplace.<sup>2</sup> The latest guide from the Association for Medical Education in Europe (AMEE Guide No. 142) defines scholarship in medical education as “publicly available activities for promoting the knowledge of health professionals and/or educators of health professions”.<sup>3</sup> Scholarship of Teaching and Learning (SoTL) is a central concept for developing suitable teaching methods in higher education and, therefore, for promoting students’ quality of learning. SoTL is a nascent concept, still going through its initial

stages of development. As a result, its perception among faculty and representation in institutions are rather varied.<sup>4</sup>

In Boyer and Glassick’s expanded definition of scholarship in the 1990s, education was credited as a faculty member’s crucial role. In his book, *Scholarship Reconsidered: Priorities of the Professoriate*, Boyer expanded his analysis of scholarship from the small circle of research to other fields, such as the integration and application of knowledge in education.<sup>5</sup> Glassick also provided a good platform for evaluating scholarly activities with six criteria of clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique.<sup>6</sup>

Although the concept of educational scholarship was

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initially included in the regulations for the promotion of faculty members in Iran in 2008, it earned a special status as an essential component of academic growth and promotion in the latest version of the regulations, in which the related scores replaced the scores of the conditional clause for research. Despite its importance, scholarship is often not highly regarded among Iranian academics.<sup>7</sup> Informal evidence suggests that faculty members view educational scholarship as an imposition on a teacher's overall duties and see it as a threat rather than a role to develop and grow. Dadman et al reported that faculty members mostly use scholarship issues in a more straightforward, and less time-consuming structure.<sup>8</sup>

This research seeks to realize the essential and effective determinants of faculty members' acceptance of the educational scholarship. Furthermore, a literature review yielded no studies regarding continuous monitoring of educational scholarship. Therefore, we have endeavored to analyze the viewpoints of academics in this study to answer several critical questions on the development and sustainability of educational scholarship.

## Materials and Methods

### *Study design and participant recruitment*

We used a qualitative research method with a focus group discussion (FGD) approach to collect detailed qualitative data from experts on innovative educational and scholarship processes. A non-probability purposive sample was included in two FGDs: executors, collaborators, consultants, and referees of academic or national educational processes in the last 10 years. Some participants had more than one role. An assorted range of faculty members with different academic degrees and experience in various fields of educational scholarship was used to increase the diversity of information. For instance, those who participated in selected academic educational processes and those with national rankings both participated in these FGDs. Some individuals were also involved in more than one selected scholarship process as both executors and collaborators. Others acted as academic festival referees in addition to planning and executing processes or were members of a scholarship committee at the Mazandaran University of Medical Sciences. One research executor (SM) took on the role of the interviewer or mediator. He briefed the participants on the purpose of the focus group, the session agenda, how questions would be asked, how discussions would be conducted, how the data collected from the session would be used, the confidentiality of the results, how the participants were selected, and why it was necessary to take notes on the discussions and to record the content of the sessions.

### *Designing focus group questions*

Easily understandable, open-ended questions were used to collect varying answers without particular orientation

and without inducing a specific answer. The discussion began with more general questions and continued to more detailed ones. These were the central questions:

- What are the most important reasons a faculty member should design an educational process?
- What are the most critical factors encouraging faculty members to develop an educational process?
- What are the most important factors ensuring the sustainability of the educational process?

### *Conducting the focus group*

Each session lasted two hours, 90 minutes of which was spent by the participants discussing the research topic. For the remaining 30 minutes, the interviewer reviewed and summarized the participants' viewpoints. Both voice recording and note-taking were used to collect data. The first session was held in person with seven participants at a think tank in the university's education development center. Most participants in this session were faculty members in the education development center, executors, collaborators, referees, and advisors to the scholarship project. One panel member participated online due to being infected with COVID-19.

At the end of the first session, the researchers concluded that the data were not saturated. Therefore, ten days after the first session, a second session was held online (both audio and video communication) with another group of six faculty members using Adobe Connect™. One researcher (SM) played the coordinator role in this virtual session. These participants were also purposively selected from members of faculties affiliated with Mazandaran University of Medical Sciences from executors, collaborators, and referees of scholarship projects in the past ten years. The second session ended earlier than the first session due to data saturation. Six participants from both sessions had been placed in the top ranks (ranking 1<sup>st</sup> to 3<sup>rd</sup> and were appreciated) of educational scholarship at the national Shahid Motahari Festival in the past ten years.

### *Analyzing the data*

Qualitative content analysis with a conventional approach was used to analyze data from the FGDs. Qualitative content analysis comprises the following steps: data preparation, determining meaning units, classification, code mapping, testing code mapping in a text sample, coding the whole text, evaluating coding homogeneity, drawing conclusions from coded data, and reporting methods and results.

First, the researcher transcribed and read the interviews several times to completely understand the content and nuances. Then, the whole interview was considered as a unit of analysis, and paragraphs, sentences, and words were considered meaning units. Next, given the concepts embedded in the meaning units, the abstraction conceptualization stage was reached, and concepts were coded. The codes were compared with similarities and

differences and classified under more abstract categories with specific labels. Finally, categories were compared and carefully and deeply reflected on to introduce the study's theme. Content analysis was drawn as graphs using ATLAS-ti software.

The Guba and Lincoln criteria (i.e., credibility, dependability, confirmability, and transferability) were used to confirm the trustworthiness and rigor of the data.<sup>9</sup>

Firstly, peer debriefing was used to evaluate credibility. Secondly, data transferability was confirmed by presenting rich data. Thirdly, data dependability was evaluated by integrating internal processes and proposals of the researcher for changing the existing situation. Ultimately, data confirmability was evaluated by examining the views of other individuals who read the research results.

### **Ethical considerations**

Participants were briefed regarding the objectives of the research, benefits, risks, and expected outcomes to observe the ethical provisions of a qualitative study. The confidentiality of the participants's personal information was also observed. They were reminded that the interviews would be recorded during research implementation. In the data analysis and reporting stages, the accuracy of the participants' contributions and quotes was respected. The final results of the analysis were made available to all stakeholders, including participants in the FGDs. The researchers also provided adequate time for all the participants to participate in the discussions. In addition, the participants were informed that they were not required to express their opinions about all aspects of the discussion.

### **Results**

After merging the extracted codes and through repeated reviews, 101 codes were finally identified. The codes (sub-categories) were then classified into 19 categories. Nine of these, including personal commitment, educational requirements, financial support, faculty development, team building, information resources, educational leadership and management, institutional motivation, and culture-building, were compiled under educational scholarship development's theme (main category). The remaining ten categories, including individual characteristics, outcome evaluation of educational scholarship, material and spiritual support, mentorship, sustained training, supportive learning environment, curriculum development, organizational administration and leadership, application of results, and publication of results, were compiled under the theme (main category) of educational scholarship sustainability. Table 1 shows these delineations.

### **Factors affecting the development of educational scholarship**

#### **Personal commitment**

The creative mind of a responsible faculty member interested in teamwork can culminate in accepting roles other than teaching. Thus, they can become interested in scholarship activities and embrace a role as a scholar. The below quotations from the FGD illustrate this:

*"It is important for a faculty member to feel responsible towards educational topics; their awareness and knowledge is central in planning the scholarship process."*

*"More than knowledge, the insight and perception of faculty members on scholarship must be changed by going to different education departments."*

#### **Educational requirements**

Recognizing educational requirements in an educational environment by any party is undoubtedly effective in planning and implementing measures to implement scholarship. According to a participant:

*"Effective educational requirements will play a key part in planning a sustainable scholarship program."*

#### **Financial support**

As in research programs, scholarship processes also require a budget. This budget can be allocated to scholars at the university and national levels. According to one of the participants:

*"Scholarship processes can be developed if supported by inter- and intra-institutional funding. Establishing ties with outside institutions plays a key part on this path."*

#### **Team building**

Scholarship topics are generally interdisciplinary and are based on educational models. Therefore, it is necessary to have educational and interdisciplinary experts on the scholarship team. What follows are some of the most important quotes by experts in the FGDs:

*"If I wanted to name the most important factor in personally becoming interested in scholarship, I would say it was knowing a person familiar with the subject."*

*"One solution to facilitate writing down educational processes is the setup of a counseling team which can write these in a scientific language for education departments. Departments can manage the implementation, but they have problems planning the process."*

*"Teamwork and the relevant culture building are important issues. The educational scholarship is a type of action research requiring teamwork."*

#### **Information resources**

Although the concept of scholarship is separate from research, a lack of information resources and databases dedicated to scholarship make it difficult in many cases for faculty members to differentiate between these two topics. According to one participant:

*"Educational scholarship is often mistaken for research. Hence, the importance of educational scholarship must be accentuated in workshops, such as the topics it covers,*

**Table 1.** Overview of themes, categories, and codes for educational scholarship

Themes	Categories	Subcategories
Educational scholarship development	Personal commitment	Creativity
		Critical searching
		Personal interest in innovative activities
		Personal interest in scholarship
		Interest in inter-professional activities
		Interest in group activities and team working
		Interest in promoting quality of education
		Professional commitment
		Responsibility
		Accountability
	Educational requirements	Existence of an educational problem
		New and practical educational topics
		Outcome-based educational approach
		Teachers feel the need to improve education quality
		Identifying educational needs based on students' views
		Identifying educational needs based on institutional views
	Financial support	Identifying educational needs based on faculty views
		Adequate funding resources
		Allocating grants by education authorities
	Faculty development	Existence of a financing organization
Familiarity with educational models		
Familiarity of faculty members with medical education glossary		
Mentoring in process writing		
Process coaching		
Existence of an experienced process writing team in the university		
Holding scholarship training courses		
Holding interactive workshops on how to write an innovative process		
Educating newly hired faculty members on educational scholarship		
Empowering development office administrators		
Team building	Presence of experts in the educational environment	
	Mentorship and counseling of medical education graduates	
	Mentorship and advice of experts in education development centers	
	Presence of educational counseling teams in educational centers	
	Developing interaction and sharing of scholarship experiences among faculty members	
	Facilitating the publication of scholarship results	
	Notices through education development centers	
	Having a specialized journal for educational scholarship	
Information resources	Having an educational scholarship database	
	Paying attention to knowledge management	
	Selecting directors with relevant education for development offices	
	Selecting directors with experience in educational activities for development offices	
	Using the change management model	
	Including scholarship activities in the educational accreditation program	
	Improving systemic and developmental thinking by institutional administrators	
Educational leadership and management	Reducing the workload of faculty members in non-educational roles	
	Facilitating the process of drafting the proposal and the final report of the scholarship	
	Earning educational credit	
	An encouraging learning environment	
	Outstanding faculties welcoming the scholarship program	
	Using symbolic approaches such as Scholarship Week	
	Laying the groundwork for introducing top processes at university and national levels	
	Intrinsic motivations of development office staff	
	Extrinsic motivations of development office staff	
	Institutional motivation	Intrinsic motivations of development office directors
Extrinsic motivations of development office directors		
Assigning special privileges to innovative educational processes in upgrading the academic rank of faculties		
Increasing scholarship credits as compared to research credits in the promotion regulations		
Creating a positive attitude by education officials		
Creating motivation by education officials		
Culture building		Creating a culture of scholarship among faculty members
		Creating a culture of innovation in the educational environment

Table 1. Continued

Themes	Categories	Subcategories		
Educational scholarship sustainability	Individual characteristics	The enthusiasm of process owners to continue the implementation of the process Faculty members' views about the education as a process		
	Outcome evaluation of educational scholarship	Rethinking the processes	Mechanism to identify effective educational processes Mechanism to monitor effective educational processes Critical evaluation of educational processes Sustained monitoring of process outcomes	
		Material and spiritual support	Providing financial support for sustained educational processes Strengthening extrinsic motivations Giving more weight to promoting education instead of inventing new educational methods Spiritual valuation of scholarship activities Giving credit to sustained processes in regulations Sustained financial support for changing educational patterns and technological advances Identifying and introducing financing organizations	
			Mentorship	Valuing the role of education experts Creating teacher-student circles Presence of education experts in the scholarship development team
				Sustained educational requirements
	Supportive learning environment			
			Curriculum development	
	Organizational administration and leadership			
		Application of results	Implementing efficient processes in different education departments The will of education policymakers to use the results of top processes to improve the quality of education Educational officials welcoming process results	
			Publication of results	Laying the groundwork to publish the results of educational processes Using virtual platforms to introduce selected processes Mechanism to introduce effective educational processes to educational groups

etc. These must be introduced in pertinent information resources.”

#### *Educational leadership and management*

The complexity of the scholarship process calls for systemic thinking, strong teamwork administration, and leadership in dealing with resistance to change. Employing experienced, supportive administrators in education development centers in universities is one of the most vital issues which can reduce the complexity to a certain extent. As stated by two participants:

*“Even if not credited, administrative support can still be a good motivation and lay the groundwork, which is among the important Glassick criteria.”*

*“When university faculties employ capable people in education to administer the development office, it plays a vital role in motivating faculty members in scholarship.”*

#### *Providing institutional motivation*

Both intrinsic and extrinsic motivations of the faculty towards scholarship activities must be addressed simultaneously. Whether these institutional motivations are material or spiritual, they can be very effective in encouraging the best performance of scholarship activities. Two quotes illustrate the importance of institutional motivation:

*“Generally speaking, the factors impacting scholarship processes can be divided into intrinsic and extrinsic factors. In addition, extrinsic motivational factors such as research grants and academic promotion can also encourage faculty members.”*

*“Symbolic events organized in some universities, such as Scholarship Week, can help promote scholarship.”*

#### *Culture building*



Innovation in education and scholarship must be considered values in an educational institution. In such a case, these activities can grow into an institutional culture, as illustrated by this quote:

*“Accreditation ceremonies as they are currently held in universities do not do justice. It would be terrific to give the individual the opportunity to introduce their work at these ceremonies. This will help expand the culture of educational innovation.”*

### **Factors affecting the sustainability of educational scholarship**

#### **Individual characteristics**

When faculty members look at their own professional educational activities as a process, they can become interested in sustaining such corrective actions as they may take. According to two of our participants:

*“Intrinsic factors such as professionalism, and extrinsic factors such as institutional motivation, are key elements in sustainable scholarship. Even the intrinsic factors of motivation for faculty members are affected by extrinsic factors.”*

*“The extent of involvement by the main executor of a process in the educational topic can ensure sustainability, even when the process has a national ranking.”*

#### **Outcome evaluation of educational scholarship**

The initial and continuous evaluation of the implementation of a scholarship process by educational institutions, regardless of the process's academic or national ranking, will definitely be accompanied by sustained educational corrective action. As quoted by one of the experts, this evaluation can even be planned as educational accreditation:

*“The level of participation in scholarship by universities must be taken into consideration when accrediting education instead of the mere plan to participate in competitive educational festivals.”*

#### **Material and spiritual support**

In the same way that an educational innovation process requires timely material and spiritual support by institution directors, a sustainable scholarship process is also greatly impacted by a support mechanism. The importance of motivation is so great that one expert stated:

*“Motivation impacts sustainability in work carried out by those who write the processes and invest much time and energy.”*

#### **Mentorship**

In addition to the merits of educators' inclusion in the educational process writing team, the role of progressive professors in mentoring others to continue sustained scholarship is crucial. According to one participant:

*“Mentoring is vital. Experienced professors can help*

*newly employed faculty and play a role in suggesting the educational problems and being part of the pedagogical development.”*

#### **Sustained educational requirements**

One of the most important factors influencing the sustainability of scholarship is the nature of the educational problem requiring correction. Three crucial aspects in this regard are noted below.

*“The sustainability of the process depends on the original educational problem. Some problems require sectional solutions. In some cases, developing a process overrides problem-solving and goes no further than obtaining credits.”*

*“The reason for a process ceasing may be the resolution of the problem once and for all.”*

*“Educational processes are usually written for a certain timeframe and are seldom critiqued over time. Educational development offices can play an important part in this, both in the initial planning, sustained reviews, and corrective suggestions.”*

#### **Supportive learning environment**

If we consider faculty members' inclination towards scholarship activities as a change in their educational behavior, sustaining the behavior which developed and encouraging the faculty to sustain their activities in scholarship also requires a supportive learning environment. According to two participants:

*“Quantitative crediting in scholarship requires a precise measuring tool like research activities do, such as where can the achievements of scholarship be placed among the activities of the faculty? And how the quantitative crediting is calculated if presented at the university or national level?”*

*“Scholarship changes the educational behavior of faculty members. Naturally, a supportive learning environment is required to sustain this behavior change.”*

#### **Curriculum development**

A significantly effective factor in sustained scholarship is how the innovation is integrated with the curriculum. One of the participants noted:

*“If the output of an educational process requires a change in the curriculum, it will naturally need the support of the curriculum planning committee at the university level and the department board at the ministry level to sustain.”*

#### **Organizational administration and leadership**

Comprehensive administration and innovative leadership within an educational institution do not limit themselves to designing and implementing an innovative educational process within a specific timeframe. Instead, it will spread its wings to support and sustain scholarship activities.

This can take shape by educational administrators at various levels and range from changes in protocol to changes in the learning environment. Participants noted the importance of this commitment:

*“Sustained scholarship processes may require the support of the top management in the institution and may go beyond the support of education development offices.”*

*“Reviewing the crediting system of educational processes in different regulations should be considered a form of institutional support in macro policies to bring sustainability to the process.”*

### **Application of results**

Efficient, innovative educational processes inevitably ensure their own sustainability when combined with good practical results. One participant stated:

*“Every educational process which is written, whether it deals with solving a quantitative or qualitative problem in education, its applicability will be the first and foremost to ensure its sustainability.”*

### **Publication of results**

Publishing the results of efficient processes in any shape or mechanism will facilitate sustained scholarship activities. This requires special preparations, the most important of which are mentioned in the following quote:

*“If scholarship processes receive a code of ethics as in research projects by the vice chancellor’s office for research or any other entity, their results will be more easily published. Hence, the faculty member will be more willing to conduct scholarship activities because publishing the results has been facilitated.”*

### **Discussion**

The current study results show that with a view of attaining the desired objectives in the educational environment, faculty members’ planning and implementation of innovative educational processes, in terms of scholarship, are impacted by a range of inter- and intra-institutional factors. A wide range of these effective factors depends on individual characteristics of faculty members and the characteristics of the educational institution in which they are employed. Happel and Song examined effective factors that encouraged faculty members to conduct scholarship activities (SoTL) in a similar study. This descriptive study conducted at a state university in the southeastern United States aimed to elucidate the motivation of faculty to engage in SoTL, illuminate the infrastructure supporting such joint measures, examine the perceived impact of SoTL on teaching methods and scholarship and participation of faculties in academic departments, and examine the role of educational institutions in supporting educational groups engaging in SoTL. This study concluded that personal, institutional, professional, and teamwork factors all contributed to participants’ perception of the success and effectiveness of joint research and scholarship activities.

The results of the study present practical mentorship for setting up effective participatory structures for SoTL projects and the development of interdisciplinary research among faculty members.<sup>10</sup>

When a faculty member thinks about excellence in education as a medical teacher, he /she will notice learning requirements in the educational environment and endeavor to form teams to conduct scholarship activities. Achieving excellence in medical education deserves attention, and ranking universities and colleges solely based on research is not an appropriate measure of excellence in medical education.<sup>11</sup> As a form of research-based professional development, SoTL has shown the potential for development policies in educational institutions, particularly for teaching excellence.<sup>12</sup>

The current study found that experienced faculty members are beneficial in mentoring young faculty members around educational scholarship. Scholarship in teaching medical sciences does not consist solely of an original research project but includes studying educational processes and applying new knowledge in practice. Thus, the road to successful scholarship is often not apparent to inexperienced faculty members. Ramani et al explained the strategies required to establish an association of scholars in which experienced senior members mentored younger members in educational scholarship. Their study examined twelve practical points, including a shared vision, an international community of scholars, participation in scholarship, and the development of a professional identity explained in the three main stages of discovery, engagement, and integration.<sup>13</sup> Scholarship is a novel interdisciplinary phenomenon whose understanding requires the acceptance of a diverse spectrum of research methods and interdisciplinary differences from the perspective of worldview. This diversity has created inconsistency and confusion for new scholars concerning its conceptualization and explanation. Therefore, current discourse in the academic community mainly pertains to the methodology and nature of scholarship.<sup>14</sup>

The current research results show that faculty development in educational scholarship is undeniably important from both a philosophical and an epistemological aspect, as well as the skill to conduct scholarship. Miller-Young et al conducted semi-structured interviews with several faculty members with five years of experience in SoTL to examine the impact of the scholarship on teaching methods and challenges along the way. Content analysis revealed the contradiction between the philosophy of scholarship and the epistemological aspects of their disciplines as the most important challenges to scholarship for faculty members. They also mentioned that faculty members’ identities as teachers, researchers, or collaborators must be elucidated on the path to a scholarship. The final points they mentioned were faculty development and the formation of multidisciplinary teams to develop scholarship.<sup>15</sup> The Medical Education Scholars

Program at the University of Michigan Medical School is a program designed for faculty development to train medical education leaders. This program aims to empower faculty members in curriculum planning, improved teaching, research and development in education, and institutional leadership at all levels of medical education. The one-year program uses various educational methods and presents a wide-ranging curriculum in training theories, evaluation, research planning and methodology, developing teaching skills, and educational leadership. The outstanding results of the program (promotion, research and development in education, course leadership, and scholarship) were examined in a pre-post design. The results showed that the program's implementation could significantly increase promotions, educational awards, new educational responsibilities, and new educational programs.<sup>16</sup>

A topic emphasized in the present research is the evaluation of scholarship activities, which can ensure their sustainability to a large extent. According to Trigwell, a movement towards scholarship must culminate in evidence-based activities. He believes the search for evidence proves the impact of scholarship on the quality of SoTL. Evidence shows that when we look at teaching from the scholarship point of view, or, in other words, consider an educator's teaching methods from the perspective and critique of their peers, learners' objectives can be reached.<sup>17</sup>

Finally, educational scholarship by faculty members requires inter- and intra-institutional material and spiritual support. Tierney et al examined communities of practice in supporting scholarship, where communities of practice outside an individual's educational institution can play a role in developing a person's scholarship and educational activities.<sup>18</sup>

### **Strengths and Limitations**

One of the current study's strengths is its methodology, in which the views of a purposive sample of experienced faculty members and experts in scholarship were collected in two sessions of FGDs until data saturation was reached. The trustworthiness and rigor of these results were confirmed by reviewing the codes extracted from the discussions with the participants and by reading the codes by a team of collaborators from an educational development center. A limitation of the study was the format change between FGDs (primarily in person for the first and remote for the second) due to COVID-19 restrictions. This somewhat reduced the effective interaction of the participants in the discussions.

### **Conclusion**

The current research results showed that factors rooted in individual and institutional dynamics can encourage university faculty members to engage in educational scholarship and ensure the sustainability of innovative educational processes. Introducing and explaining these

factors to educational policymakers can lead to excellence in medical education, especially teaching and learning.

### **Acknowledgments**

The current study researchers would like to thank collaborators in the Deputy for Research of the Virtual University of Medical Sciences, who helped us compile the proposal for the study. We would also like to thank our collaborators at the Education Development Center of Mazandaran University of Medical Sciences, who participated in organizing the FGDs and analyzing the results.

### **Authors' contribution**

SM and YZ conceived the original idea. S.M carried out the FGD sessions, extracted and categorized the results. Y.Z. provided support to S.M in writing the manuscript. Y.Z supervised the project.

### **Ethical approval**

The Research Council approved the proposal for the current study of the Virtual University of Medical Sciences with an ethics code of IR.VUMS.REC.1400.041.

### **Competing interests**

There was no conflict of interest in this research.

### **References**

1. Bigdeli S, Mirhosseini F. The teacher as a scholar. In: Dent J, Harden R, Hunt D, eds. *A Practical Guide for Medical Teachers*. Elsevier Health Sciences; 2021.
2. Allen MN, Field PA. Scholarly teaching and scholarship of teaching: noting the difference. *Int J Nurs Educ Scholarsh*. 2005;2:Article 12. doi: 10.2202/1548-923x.1094.
3. Cleland JA, Jamieson S, Kusrurkar RA, Ramani S, Wilkinson TJ, van Schalkwyk S. Redefining scholarship for health professions education: AMEE Guide No. 142. *Med Teach*. 2021;43(7):824-38. doi: 10.1080/0142159x.2021.1900555.
4. Almeida PA. Scholarship of teaching and learning: an overview. *Journal of the World Universities Forum*. 2010;3(2):143-54. doi: 10.18848/1835-2030/CGP/v03i02/56669.
5. Boyer EL. *Scholarship Reconsidered: Priorities of the Professoriate*. Lawrenceville, NJ: Princeton University Press; 1990.
6. Glassick CE, Huber MT, Maeroff GI. *Scholarship Assessed: Evaluation of the Professoriate (Special Report)*. San Francisco, CA: Jossey-Bass; 1997.
7. MohammadHosseinzadeh M, Sarabadani J, Pouresmail F. How to write an educational scholarship? *Horizons of Medical Education Development*. 2021;12(1):92-108. [Persian].
8. Dadman M, Yamani N, Changiz T, Mousavi A. The performance of faculty members about scholarship of teaching in Isfahan University of Medical Sciences during 2009-2012. *Iran J Med Educ*. 2014;14(6):527-38. [Persian].
9. Morse JM. Critical analysis of strategies for determining rigor in qualitative inquiry. *Qual Health Res*. 2015;25(9):1212-22. doi: 10.1177/1049732315588501.
10. Happel CA, Song X. Facilitators and barriers to engagement and effective SoTL research collaborations in faculty learning communities. *Teach Learn Inq*. 2020;8(2):53-72.
11. Hunt D, Harden RM. ASPIRE to excellence: a novel approach toward benchmarking excellence in medical schools. *Educ Med*. 2016;17(3):97-100. doi: 10.1016/j.edumed.2016.07.005.
12. Fanghanel J, Pritchard J, Potter J, Wisker G. Executive Summary: Defining and supporting the Scholarship of Teaching and Learning (SoTL): A Sector Wide Study. York: Higher Education Academy; 2016.
13. Ramani S, McKimm J, Findyartini A, Nadarajah VD, Hays R, Chisolm MS, et al. Twelve tips for developing a global community



- of scholars in health professions education. *Med Teach*. 2021;43(8):966-71. doi: 10.1080/0142159x.2020.1839034.
14. Miller-Young J, Yeo M. Conceptualizing and communicating SoTL: a framework for the field. *Teach Learn Inq*. 2015; 3(2):37-53. doi: 10.20343/teachlearninqu.3.2.37.
  15. Miller-Young JE, Yeo M, Manarin K. Challenges to disciplinary knowing and identity: Experiences of scholars in a SoTL development program. *International Journal for the Scholarship of Teaching and Learning*. 2018;12(1):3.
  16. Gruppen LD, Frohna AZ, Anderson RM, Lowe KD. Faculty development for educational leadership and scholarship. *Acad Med*. 2003;78(2):137-41. doi: 10.1097/00001888-200302000-00007.
  17. Trigwell K. Evidence of the impact of scholarship of teaching and learning purposes. *Teach Learn Inq*. 2013;1(1):95-105. doi: 10.2979/teachlearninqu.1.1.95.
  18. Tierney AM, Aidulis D, Park J, Clark K. Supporting SoTL development through communities of practice. *Teach Learn Inq*. 2020;8(2):32-52.