

# Work-Based Learning in Faculty Development Through Educational Scholar Program (ESP): A Mixed Method Study

Fatemeh Keshmiri (✉ [Keshmiri1395@gmail.com](mailto:Keshmiri1395@gmail.com))

Shahid Sadoughi University of Medical Sciences

---

## Research Article

**Keywords:** Scholarship, Teaching, Learning, Education, Qualitative, Experiences, Faculty Development

**Posted Date:** May 28th, 2021

**DOI:** <https://doi.org/10.21203/rs.3.rs-558445/v1>

**License:**  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

---

# Abstract

**Aim and background:** The aim of present study was to assess the effect of faculty development courses as educational scholar program (ESP) in viewpoints of faculty members.

**Materials and methods:** The study is a mixed method concurrent embedded design. Faculty members participated in the ESP from different faculties (n=15). ESP is designed as a long empowerment course in two phases of training and scholarship. Data collection about faculty members' satisfaction and experiences were conducted through a 9-items questionnaire and semi-structured interviews, respectively. In the first phases, data was analyzed by descriptive tests (mean, SD). The inductive content analysis approach was used for data analysis in qualitative phase. Inductive analysis approach was conducted by open coding, category, and main categories.

**Results:** In the study, faculty members from different faculties including dentistry (n=8), public health (n=2), medicine (n=1), pharmacy (n=2), nursing and midwifery (n=2). 10 women (66.66%) and 5 men (33.33%) were participated in ESP. 15 educational scholarship projects developed by faculty members in the student assessment (n=9), teaching and learning (n=3), curriculum development (n=3) domains. The results showed the satisfaction score of participants was 4.8(0.14). The experience of participants in ESP was divided into four main categories including, motivator for change, experiential learning practice, change leadership capabilities, and executive difficulties.

**Conclusion:** The results showed that the experience of empowerment courses based on experiential learning cycle helped participants acquire the key capabilities to design and execute scholarship projects. Although individual-motivational factors can be effective in the success of participants in implementing scholarship projects, resource development and system support are also required.

## Introduction:

The need to improve the quality in higher education institutions and to highlight the "educational role" of faculty members has led to generating a new perspective on scholarship. Scholarship of teaching and learning (SoTL) or educational scholarship has provided an opportunity to revitalize education as a key element of the academic mission at universities. The SoTL is defined as facing the challenge of teaching and learning area, analyzing the problem through appropriate methods, applying results, self-reflection, and peer evaluation (1). Characteristics of SoTL based on the Glassick criteria include clear goals, preparation, appropriate methodology, significant results, effective presentation and reflective critique (1). In the Q2engage model, the areas of SoTL are defined as teaching, educational planning, counseling, management and educational leadership, and learner evaluation (2, 3). Regarding, educational scholarship which has been described as one of the key roles of faculty members, the demand for faculty empowerment programs in the SoTL area has increased (4, 5). Empowerment programs are recognized as a tool for improving the effectiveness of education by paying attention to the individual teacher's needs and the policies of the organization to promote academic excellence (4). Faculty development

programs are pursued for a variety of purposes, including personal development, educational improvement, leadership development, and organizational empowerment (6).

The comprehensive faculty empowerment model is comprised of five levels. The first and second levels emphasize the acquisition of basic skills, professional values, norms and expectations of the organization, as well as contemplate the application of theory to the teaching performance of faculty members using them. The third level describes acquiring the skills needed to lead training programs as a course manager. The fourth level defines empowerment courses where faculty members improve the ability to recognize the problem, diagnose and implement the solutions to improve the quality of education. At the fifth level, empowerment programs are defined for managers and faculty who participate in the policy making process (6). In the present study, a project-based empowerment program was developed according to the fourth level to improve the skills of designing and implementing educational scholar activities. In scholar programs at the universities of Iowa, Arkansas, Michigan, Washington and UCSF, there are some common points. The programs emphasize the improvement of participants' skills about educational methods and strategies. All of the participants are required to conduct a training or research project, and learners were involved in the training process. Common educational topics among these programs included teaching skills, curriculum development and evaluation, educational research, educational leadership, and learning theories (7). In another study, the educational scholar program was implemented at McGill University, Montreal, Quebec, with the aim of improving teachers' professional development by enhancing their experience in designing, implementing and leading the educational programs. The program included courses, monthly seminars, research, or projects related to curriculum design and evaluation. The results of the study showed that scholar courses improved learners' knowledge and skills, understanding of "community of practice", and career paths and opportunities among learners (5).

In the investigated context, the empowerment programs are mainly conducted by workshops, focusing on the development of learners' knowledge, skills and attitudes, and less on the application of knowledge is considered. ESP aimed to develop scholar skills and apply project-based learning principles conducted for the first time at the investigated university. Steinert stated that the results of various studies showed that scholar courses improved the knowledge, skills and attitudes of faculties, but needed further studies to explain the various dimensions of ESP in the educational community (8). The scholar program provides the foundation for developing learners' skills to improve their educational capabilities and ability for transferring to educational community (9). Previous studies have quantitatively examined the impact of scholar empowerment programs (4). In reviewing literature, we have found few studies that addressed the experiences of participants in ESP by qualitative approach. Understanding the different dimensions of ESP from the perspective of stakeholders who participated in the program can be effective in directing ESP. The aim of present study was to assess the effect of faculty development courses as educational scholar program (ESP) in viewpoints of faculty members.

## **Materials And Methods:**

The study is a mixed method concurrent embedded design.

**Participants:** Faculty members participated in the ESP from different faculties (Dentistry, Public Health, Medicine, Pharmacy, Nursing and Midwifery) of X University of Medical Sciences enrolled in this study.

### **Educational Intervention: Educational Scholar Program**

ESP is aimed to enhance participants' ability in developing and implementing of educational scholar projects in educational community beyond improving their teaching skill. ESP program is designed as a long course in two phases of training and scholarship. ESP focused on areas of education including curriculum development, evaluation and assessment, and teaching-learning methods. The program was conducted based on a student-centered strategy and active teaching and learning methods. The educational phase includes workshops, learning in small group settings, self-directed learning and reflection assignments. The educational sessions are regularly scheduled and were held using active teaching-learning techniques such as JIGSAW, snowballing, small group discussion, role playing, video tape, case-based learning.

The scholarship phase includes journal club sessions to critical appraisal of scholar projects in small group sessions and counseling clinics and project conducting independently. In the phase, based on the principles of scholarship, learners assessed the educational needs and problems at the educational community. They explained a problem, wrote and implemented a SoTL project to solve the problem. Finally, the expert committee's scholarship projects were evaluated. Each participant attended 3 to 5 sessions of counseling sessions. The Glassick criteria were the requirements of the design, implementation and evaluation of the participants' project in SoTL.

### **Data collection:**

In the quantitative phase, the satisfaction of participants was assessed by a 9-items questionnaire. (Cronbach Alpha =0.89). The scoring of the questionnaire was done using a 5-point Likert scale.

In qualitative phases, data were collected using individual and semi-structured interviews. Trained interviewer (F.K., Ph.D.) at Educational Development Center conducted 15 Interviews. Prior to the interviews, clarification was made on the benefits of conducting this research. The purpose of the research, the interview method, and the right of individuals to participate in or refuse to take part in the study were explained. They were assured the recorded interviews and the information collected would remain confidential and then informed consent was obtained from them. All interviews were recorded during the data collection. To increase the credibility, all interviews started with a key request, "Tell us about your experience in educational scholar program". The process of data collection continued until a rich interpretation was obtained and no new data emerged during the interviews (saturation of results). Each interview lasted between 60-90 min.

### **Data analysis:**

In the first phases, data was analyzed by descriptive tests (mean, SD). In qualitative phase, inductive content analysis approach was used for data analysis. Inductive analysis approach was conducted by open coding, category, and main categories (10). All of the recorded interviews were transcribed verbatim immediately after the interview and were reviewed the transcripts for several times. Then, to extract codes, short meaningful sentences were identified and recorded by marking the margins of the coding text. The meaning units were extracted from the participants' words and expressions reflecting their experiences. After that, open coding was generated by taking notes in the margins of the text. At this stage, we transferred the codes to coding sheets. These codes were then grouped together as categories. Finally, the main categories emerged by comparing and contrasting the categories. In this study, the data coding was performed by two of the experienced persons and was supervised by an expert in qualitative research. In cases of disagreement over the coding, discussions about the codes were continued until a consensus was achieved.

**Rigor:** In this study, the criteria described by Schwandt (11) was used to ensure trustworthiness. Semi-structured interviews, field notes, and lengthy engagement with the research topic were used to achieve credibility of the data. In addition, we reviewed the extracted codes and categories by the participants, the research team, and experts. Eight texts and related analysis were returned to the participants to ensure that codes and categories were consistent with what they had experienced. The process of data analysis was thoroughly examined by experts in inductive content analysis. In this study, steps of research, especially the data analysis, have been thoroughly documented. The present study provides a clear description of the context, participant characteristics, data collection and data analysis process to facilitate the transferability of the findings.

**Ethical Considerations:** The study was approved by the Ethics Committee at the National Agency for Strategic Research in Medical Education. X. (ID: 981039). In this study, the principles of confidentiality of information and informed consent for interview, recording of conversation and the right to withdraw from research were considered.

## Results:

In the study, faculty members from different faculties include dentistry (n=8), public health (n=2), medicine (n=1), pharmacy (n=2), nursing and midwifery (n=2). 10 women (66.66%) and 5 men (33.33%) were included in the study. Average working experience of participants was 8 years (4). The academic degree of participants consist of preceptor (n=2), assistance professor (n=11) and associate professor (n=2). 15 educational scholarship projects developed by faculty members in the student assessment (n=9), teaching and learning (n=3), curriculum development (n=3) domains.

The results showed the satisfaction score of participants was 4.8(0.14). The experience of participants in ESP was divided into four main categories including, motivator for change, experiential learning practice, change leadership capabilities, and executive difficulties (Table1).

### A- Motivator for change

In the main category, the two preceding factors for participating in the ESP were determined as "understanding the need for change" and "recognizing personal limitations".

### **A.1- Understanding the need for change**

The category addressed the factors encouraging participants to achieve the ability to improve the quality of education. Understanding need to improve the quality of teaching and learning process motivated participants for attending ESP. a participant stated:

*"I wanted to impart what my duty defined but I didn't know how to do it for long time. I implemented it by trial and error. I heard about education through slides, patients and simulated patients. But I didn't know anything about their principles." (Female-35-year-old)*

### **A.2- Recognizing personal limitations**

Personal and professional limitations as a motivator factor were explained in this category. Participants acknowledged that lack of familiarity with the educational concepts and principles led them to understand the need of learning about education principals in medical science system even after several years. A participant stated:

*"I did not have any training about educational principals, no one had offered it to me, and I had not gone to any class. Just because I had a board certificate, I became a faculty member and a teacher. I did not know anything about teaching and education. I understand my defects and have a plan for learning and experiencing the new methods (Female -38 years old).*

### **B- Experiential learning practice**

In this category, experiences of participants about the educational process in ESP were explained. The main category consisted of categories, "Reflective Collaborative Learning" and "Project-Based Learning".

#### ***B.1- Reflective Collaborative Learning***

The category refers to participants' experiences about the instruction process in ESP. Adherence to the principles of collaborative learning, and reflection in learning process have been emphasized as fundamental principles in the ESP. Learning in small group settings, problem centeredness and directing group activities for learning during ESP were considered by the participants. A participant acknowledged:

*"Actually, I had taken a series of notes in previous empowerment workshops and have a file full of these papers that I had taken and forgotten. This was the first time I attended in a course that I had to do assignments. I would discuss the experienced problems with our classmates and pursue them based on the solution. The interesting thing was that I talked a lot, we constantly discussed them with each other in order to resolve the problems or questions. The process was not boring at all." (Female - 38 years old)*

Creating an opportunity for reflection on experiences and duty in the teaching and scholarship phases was emphasized in this study. Concepts of reflection in-action and on-action were considered in the scholarly courses. A participant stated:

*Once, a participant in basic sciences analyzed the challenges of her lesson and suggested a solution for it. I had not thought about the challenges before that, but after the interdisciplinary discussion, I thought about my class. I was motivated for changing the teaching method in my class. Interdisciplinary situations could awaken and direct my mind. My mind suddenly cleared and was activated in ESP. I could find solutions for problems that I realized. In addition, I thought about subjects that had not already been considered. (Female -30-years old)*

### **B.2- Project-based learning**

In this category, the experiences of participants about opportunities for learning based on the application of knowledge, practical learning in team and project implementation was independently explored. The learning process prepared participants to collaborate in interdisciplinary teams for designing and implementing a scholar project. Participants attained knowledge related to education, scholarship and apply what was taught in the training phase. During the scholarship phase, the opportunity is provided to undertake the design, implementation and evaluation of a scholar project. Participants believed the creation of opportunities to exchange experiences in interdisciplinary teams had an effect on improving the outcome of scholarship phase. Practical learning experiences, application of theory, interdisciplinary interactions, and supportive counseling were explored as effective factors for enhancing scholar competencies.

Participants believed that the scholarship phase provided an opportunity to apply their knowledge that helped them to have deep learning. In this regard, a participant suggested:

*"I experienced scholarship phase as a job market in my specialty field. I spent six years in dentistry. After, I had entered the clinic I found what I needed to learn to succeed in the practice. The implementation of a scholar project helps me to learn better through practical learning". (Female - 41-years old).*

The learners' experiences related to interdisciplinary collaboration and interaction for learning practically and conducting a scholar project in a team was explored. A participant suggested:

*"Whenever, the facilitator or other participants raised their issues and problems, I would remember what I had experienced. The small group discussion provided the situation where experiences of participants in different disciplines were exchanged. In the interdisciplinary group, we discussed about the educational problems and their solutions. We came up with a list of solutions and wrote a good project according to them" (Female - 37 years old).*

### **C- Change leadership capabilities**

In this category, the experienced outcomes of ESP such as the improvement of educational knowledge and skills, the ability of critical appraisal and ability to lead change and conduct a SoTL project through collaborating in a team were addressed. The experiences of participants were categorized as follows: achieving capability to change, and encouraging elements for change.

### **C.1- Achieving Capability to Change**

In the category, the learners' experiences about the acquired abilities were explained. Participants believed that ESP helped them to become familiar with educational concepts and principles and to gain the ability to design and implement an educational scholar process. Participants acknowledged their self-efficacy to carry out SoTL project improved. A participant stated:

*"I already knew that my teaching method had to change, I changed my teaching method based on my experiences, but we did not know what the right thing was and what the principals were. Now, I know what the right way is. I can even tell our colleagues what to do for the students based on the principals". (Female - 38 years old).*

Developing sensitivity to learning problems and the challenges, recognizing the methods to find solution, achieving critical appraisal ability and comprehensive view to their educational process were described as the capabilities that participants acknowledged they needed to attain. A participant stated:

*"ESP helped me get a comprehensive view of the educational process included planning, teaching and evaluation methods. I critically reviewed my educational process. I recognized planning needed to change in my teaching. Now, if I want to teach, first, I look at what the contents are and how they must be taught. I stopped making PowerPoint and giving lectures because I found another way of teaching." (Female - 32 years old).*

### **C.2- Encouraging Elements for Change**

This category explained outcomes such as receiving positive feedback, generating student satisfaction, and understanding the ability to change in teaching and learning process were perceived as progressive factors. A participant believed:

*"The important thing for me is that the students said, "your new method encourages us to learn us learn deeply". The method motivated my students, as well as being a motivating force for me. When I asked for feedback from the students, I found they were very satisfied. They told me, "The method was very good, we would like to continue this method in other courses". I witnessed the performance of students improved and it motivated me. I anticipate using the method in my internship courses in future." (Female-32-year-old).*

Another point taken into consideration in this category is forming the motivation for change among colleagues and peers in the faculty and the teaching team. In this category, participants' experiences

about collaborating with others and forming a team for conducting a scholarship program at college and university are explained. In this regard, a participant stated:

*"I felt compelled to accompany my coworkers in the department. Therefore, I explained my scholar project in meetings. I talked to my collages about new methods in assessment such as DOPS. I planned to review checklist and materials with my coworkers. All of them asked, what this is and what are we doing?. It was very interesting to me that they were commenting on how to improve the work. They inquired about the evaluation method. After a while, they would come and want to get involved in the scholarship process. (Female-36-year-old).*

## **D- Executive difficulties**

The main category addressed executive challenges in scholarship process. Participants described the factors such as the atmosphere of resistance for change among colleges and educational system, the lack of human resources and equipment to implement scholarship projects, and the administrative challenges to implementing new approaches and methods explored as executive difficulties in educational scholarship process.

### **D.1 - Resistance to change**

The creation of atmosphere resistant to change and human resistance was defined as the executive challenges of scholarship projects. Participants believed that by presenting scholarly suggestions for improving the quality of education, they were mostly faced with resistance that posed a serious obstacle to implementation of scholar project. A participant stated:

*"I think one thing that is very important to conduct a scholar project is providing strong support. Whenever I want a good idea to come out of the thinking stage and into implementation, I experienced so much pressure that sometimes my hopes turned to despair. In my opinion, the biggest problem about conducting an educational scholarly project is the futile pressures that often distract me from the mainstream. (Female-41-year-old).*

### **D.2- Insufficiency of Resources**

This study addresses the challenges about human resources, financial resources, and equipment associated with the implementation of scholarship projects. Participants believed that although they understood the need for change and were highly motivated to address it, barriers related to human and physical resources and educational equipment prevented the effective implementation of educational scholarship project. In addition, some participants said that the challenges of physical resources and related equipment have made the scholar program unfeasible. A participant stated:

*In my need assessment, student assessment was identified as a main problem of our faculty. I want to change the assessment system at the college, I understood the lack of infrastructure at the college was a big problem. For example, we did not have the space and equipment for the OSCE, we did not have*

*enough simulation equipment, and we did not have enough microscopes for exams in our school. Even, we did not have enough computers to run electronic tests. We want to solve a problem, but we do not have any infrastructure and faced lot of challenges. (Female 34- year-old).*

## **Discussion:**

The empowerment courses about educational scholarship prepare faculty members to personal and organizational development. The results showed faculty members satisfied from the ESP as a faculty development course. In this study, the participants' experiences about ESP were explored in four main categories include motivator for change, experiential learning practice, change leadership capabilities, and executive difficulties.

'Motivator for Change' category addressed learners' experiences about understanding the need to change and recognizing their personal limitations as persuaders for achieving key scholar capabilities. The realization of personal and systemic deficiencies for providing effective learning process, and unfamiliarity with the education alphabet were explored as the perceived weaknesses of participants. Participants believed they could understand the challenges of education but they could not find a suitable solution. Confusion in solving the perceived problems more than any other factor encouraged participants to improve their abilities in education field. Participants acknowledged recognition of performances' deflection encourage them to develop their personal and professional capabilities. Help-seeking behavior was based on self-reflection to direct learning activities guide providers to improve their personal and professional competencies (4, 12). A competency domain was described as the ability to use self-awareness about knowledge, skills, emotional limitations, as well as practice flexibility in adjusting to change as a core competency to personal and professional development (12). The present study showed participants perceived their limitation and prepared for changes in the educational communities. Although motivation, self-interest, and background in education are essential, organizational support mechanisms appear to be important in conducting the educational scholar and developmental activities (13).

In this study, ESP was described as an experiential learning exercise in the viewpoints of participants. In the process of experiential learning four concepts of learning through real-life contexts, learning by doing, learning through projects, and learning through solving problems are considered (14). Participants in the training phase experienced collaborative learning opportunities in small groups. They have been able to reflect on their experiences, compare what they have learned with how they had performed, and plan for their future performances. Creating opportunities for individual and group reflection in small groups included faculty members from different colleges has led them to learn deeply. In the scholarship phase, participants analyzed the educational challenges by critical appraisal, selected the high priority problem and designed the scholar project to solve it. The participants acknowledged that the application of knowledge and practical learning during the design and implementation of the project had an important role in their effective learning. In addition, the formation of interdisciplinary teams has played an important role in guiding their learning in this process. In the Steinert study, the opportunity to participate

in active discussions focused on teaching subjects, reflected on their teaching-learning experiences, created a collaborative atmosphere and peer support in educational activities at the scholarship program was emphasized. In addition, the implementation of independent scholarship projects has provided an opportunity for individuals to independently pursue the interest topics that enable them to apply their scholar skills to the field of education. Knowledge transfer in the learning environment was explored as the main theme by the participants, and time constraints as the challenges of scholarship, were explained from the perspective of the consultants (15). Similar to the present study, creating multiple opportunities according to the experiential learning cycle led participants to complete their deep learning in the process of project-based learning, and problem solving in the real environment (16). In line with the present results, opportunities for peer learning, reflection, and occasions for applying knowledge were emphasized in ESP.

Ability to design, implement and lead the process of scholarship was explored as an outcome of ESP. Understanding the education system needs and acquiring knowledge and skills empowered participants to implement appropriate scholarship projects. Moreover, the experience of student-centered processes has led faculty members to have a favorable attitude toward interactive educational processes. Similar to the present results, the findings of scholar programs showed the improvement of knowledge, skills, and attitudes towards new approaches of education (15, 17). In addition, participants in the present study acknowledged acquiring the ability to implement the scholarship project. The present findings may have been achieved due to the implementation of knowledge transfer steps in ESP. There are eight steps in transferring knowledge to practice including 1) identifying a problem, 2) identifying, reviewing, and selecting knowledge to resolve the problem or the gap, 3) adapting the defined knowledge to the context, 4) evaluation barriers to apply the knowledge, 5) selecting, adjusting, and implementing interventions to promote the application of knowledge, 6) monitoring the application of knowledge in practice, 7) evaluating the results of application of new knowledge and 8) sustaining of the application of new knowledge (18). The participants in the present study believed they were able to go through the stages of applying the knowledge in the scholarly projects to improve the quality of their teaching processes. Achieving a holistic view on the educational process, attaining the ability of critically appraisal, the development of scholarly abilities to design, implement and evaluate educational interventions and improve reflective ability were explored as achievements of participants in ESP. In addition, they acknowledged that their confidence and self-efficacy in implementing scholarly projects improved. The results of the Steinert study, which developed an empowerment program aimed at developing scholarship and leadership skills, acknowledged learners' knowledge about the principles of effective learning and their skills related research in education improved. More than half of the participants were recognized as the leaders of educational change in their department, which is called the unpredictable outcome of the empowerment courses (5). Opportunity of apply knowledge leads to a better understanding of the educational community, creating a sense of belonging to the educational community, facilitating change in profession and occupation, and forming a sense of confidence in implementing the change outlined in his study (5). The results of Macario's study showed training sessions besides the opportunities for project implementation in the educational community improved learning processes in investigated

schools (17). Further, learners have been able to intentionally design from the beginning to the end of a learning process (15). The results of studies confirmed the confidence of faculty members to conduct new approaches or methods such as active teaching-learning methods after participating in the empowerment course improved (5, 19). Regarding faculty members who were not familiar with all of the factors influencing the learning process, ESP was able to familiarize them with their role as educators (17) that is similar to our results. Better understanding of the role of teacher, recognizing the elements of the educational process and improving the ability to lead an effective learning process indicated in this study.

Encouraging coworkers to collaborate in scholarly projects was described as another achievement of ESP. Participants were mostly able to persuade colleagues to participate in the process of educational scholarship. According to the participants' viewpoints, this will expand the scholarship perspective in education system. The involvement in knowledge transfer process led to empowering and encouragement for continuing the process of scholarship. In addition, participants considered creating positive outcomes and receiving favorable feedback from their learners as an important motivating factor that kept them going through the process of scholarship. The feeling of becoming empowered in teaching and satisfaction were pleasure elements that some participants described as a motivational factor. Similar to the present result, the implementation of the scholarship course resulted in participants using the active learning as a valuable teaching tool and enhanced their satisfaction in Davis's study (19).

The executive difficulties category addressed the challenges of implementing scholars' processes such as systemic challenges, lack of support from educational managers and various stakeholders as well as lack of equipment, and resources. The resistance to change of various individuals, especially faculty members with high work experience, and lack of peer and managerial support for implementing scholarly processes have been described as human dams. Individuals preferred to resist new approaches and programs of change in training processes for a variety of reasons, such as the shortage of motivation and lack of faith in new approaches and the possibilities for increased workload. Similar to the present results, the lack of recognition and support of departments and the limitation of peer support for educational scholarship project are identified as barriers in Zibrowsk's study (13). Faculty members in the investigated environment, due to highlighting on research more than educational scholarship and quality improvement activities, have no motivation towards the development of quality education. Further, capability and expertise constraints, inadequate collaboration, lack of motivation, and lack of mentoring are defined as the challenges of implementing SoTL project in various studies (20-22) that is similar to the present findings.

Although human resources are important in the scholarly process, time and resources are important requirements for ensuring the quality of scholarship implementation (20). In the present study, challenges related to physical resources and educational equipment for implementing scholarship projects were explained. The problems compelled some participants to change their subject of scholarly project. The mismatch between existing expectations and resources, as well as the misalliance between the ideal

situation and what is applicable in the real environment exacerbates the scholarship challenges (21, 22). In the investigated context, teacher-centered and discipline-based approaches were dominant, so, there are no facilities, equipment and physical space needed to implement innovative approaches in teaching and assessment processes. In line with present results, time, educational infrastructure, and available resources were the perceived challenges by educators to implement educational scholarship in Clarke's study (22). Developing collaboration with coworkers, sharing skills and resources, creating peer and systemic support and developing motivational factors have been introduced as strategies for resolving the challenges of implementing scholarly project (13, 21) that needs to be considered in the investigated context. The restriction of the present study includes the limited time participants were engaged in ESP (one course), and the limited number of participants enrolled in the present study.

## **Conclusion:**

In this study, the experiences of participants on ESP as a project-based empowerment course were explored. The empowerment program was designed to develop the scholarly abilities of faculty members in two phases of training and scholarship. The results showed faculty members satisfied from the ESP as a faculty development course. The results showed that the experience of empowerment courses based on experiential learning cycle helped participants acquire the key capabilities to design and execute scholarship projects. Although individual-motivational factors can be effective in the success of participants in implementing scholarship projects, resource development and system support are also required. Understanding the factors contributing to develop of faculty members' competencies can aid in the planning of ESP. Recognition of the factors contributing to the development of faculty members' scholarly skills can help in the effective planning of empowerment programs.

## **Declarations**

**Acknowledgments:** "This project was funded by the National Agency for Strategic Research in Medical Education. Tehran. Iran. Grant No. 981039".

### **Authors' contributions:**

F.K. conceptualized and designed the study. F.K. collected the data and analyzed the data. F.K. wrote the main manuscript text and approved it. The author have met criteria for authorship and had a role in preparing the manuscript. Also, the author approved the final manuscript.

### **Funding**

This study was supported by a grant from the National Center for Strategic Research in Medical Education (NASR) in Ministry of Health and Medical Education (No. 981039) Tehran, Iran. The grant supported data collection process. The funders had no role in the design of the study and collection, and analysis, interpretation of data or preparation of the manuscript. The report of the study's findings is sent by the authors to funder at the end of the study.

## Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

## Ethics approval and consent to participate

This study was approved by the the National Center for Strategic Research in Medical Education (NASR) in Ministry of Health and Medical Education (981039). The written consent forms were obtained from all participants. The work was conducted in accordance with the Declaration of Helsinki. All participants were provided with information on the study gave consent.

## Consent for publication

Not Applicable.

## Competing interests

The authors declare that they have no competing interests.

## References

1. Glassick CE. Reconsidering scholarship. *Journal of public health management and practice: JPHMP*. 2000;6(1):4–9.
2. Simpson D, Fincher RME, Hafler JP, Irby DM, Richards BF, Rosenfeld GC, et al. Advancing educators and education by defining the components and evidence associated with educational scholarship. *Medical education*. 2007;41(10):1002–9.
3. Simpson D, Hafler J, Brown D, Wilkerson L. Documentation systems for educators seeking academic promotion in US medical schools. *Academic Medicine*. 2004;79(8):783–90.
4. Steinert Y, Mann K, Anderson B, Barnett BM, Centeno A, Naismith L, et al. A systematic review of faculty development initiatives designed to enhance teaching effectiveness: A 10-year update: BEME Guide No. 40. *Medical Teacher*. 2016;38(8):769–86, DOI: 10.1080/0142159X.2016.1181851.
5. Steinert Y, McLeod PJ. From novice to informed educator: the teaching scholars program for educators in the health sciences. *Academic medicine: journal of the Association of American Medical Colleges*. 2006;81(11):969–74.
6. Wilkerson L, Irby DM. Strategies for improving teaching practices: a comprehensive approach to faculty development. *Academic medicine: journal of the Association of American Medical Colleges*. 1998;73(4):387–96.
7. Lawrence DJ. A teaching scholar program in chiropractic education. *The Journal of the Canadian Chiropractic Association*. 2010;54(1):17–23.

8. Steinert Y. Faculty Development: From Program Design and Implementation to Scholarship. *GMS journal for medical education*. 2017;34(4):Doc49.
9. Raff BS, Arnold J. Faculty Development: an approach to scholarship. *Nurse Educ*. 2001;26(4):159–61.
10. Elo S, Kyngas H. The qualitative content analysis process. *J Adv Nurs*. 2008;62(1):107–15.
11. Schwandt TA, Lincoln YS, Guba EG. Judging interpretations: But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New directions for evaluation*. 2007;2007(114):11–25.
12. Hicks P, Schumacher D, Guralnick S, Carraccio C, Burke A. Domain of Competence: Personal and Professional Development.. *ACADEMIC PEDIATRICS*. 2014;14:S80-S97.
13. Zibrowski EM, Weston WW, Goldszmidt MA. 'I don't have time': issues of fragmentation, prioritisation and motivation for education scholarship among medical faculty. *Medical Education*. 2008;42(9):872–8.
14. Knobloch NA. Is experiential learning authentic? *Journal of Agricultural Education*. 2003;44(4):22–34.
15. Steinert Y, Nasmith L, McLeod PJ, Conochie L. A teaching scholars program to develop leaders in medical education. *Academic Medicine*. 2003;78(2):142–9.
16. Hawtrey K. Using experiential learning techniques. *The Journal of Economic Education*. 2007;38(2):143–52.
17. Macario A, Tanaka PP, Landy JS, Clark SM, Pearl RG. The stanford anesthesia faculty teaching scholars program: summary of faculty development, projects, and outcomes. *Journal of graduate medical education*. 2013;5(2):294–8.
18. Graham I, Logan J, Harrison M, Straus S, Tetroe J, Caswell W, et al. Lost in knowledge translation: time for a map? *Journal Continuing Education Health Profssional*. 2006;26(1):13–24. DOI: 10.1002/chp.47.
19. Davis TS, Desselle SP. Perceptions of a faculty cohort using education scholar as a basis for faculty development in active learning strategies. *Currents in Pharmacy Teaching and Learning*. 2013;5(5):394–401.
20. Reed DA, Cook DA, Beckman TJ, Levine RB, Kern DE, Wright SM. Association between funding and quality of published medical education research. *Jama*. 2007;298(9):1002–9.
21. Yarris LM, Juve AM, Artino Jr AR, Sullivan GM, Rougas S, Joyce B, et al. Expertise, time, money, mentoring, and reward: systemic barriers that limit education researcher productivity—proceedings from the AAMC GEA workshop. *Journal of graduate medical education*. 2014;6(3):430-6.
22. Clarke SO, Jordan J, Yarris LM, Fowlkes E, Kurth J, Runde D, et al. The View From the Top: Academic Emergency Department Chairs' Perspectives on Education Scholarship. *AEM education and training*. 2018;2(1):26–32.

## Tables

**Table 1-** Exploring the faculty members' experiences about an educational scholar program

Quotation	Category	Main category
I want students to become stronger in terms of knowledge and practice. I realize the need to change for training a competent graduate. This is very important to me as a teacher. (Female - 42 years old)	Understanding the need for change	Motivator of Change
In my opinion, a big problem in our university is teachers are not familiar with the alphabet of medical education. They play the role of teacher incompletely. (Female - 33 years old)	Recognizing personal limitations	
First, I was a learner in the course. The courses were conducted in a way that I felt good about being a learner. I could freely criticize and invent. I could refine the learned methods or revise them. This course gave me opportunities to review my experiences to find the challenges and solutions. I could talk in with others in a small group, and learn from them to get ideas for teaching methods. The interactive atmosphere allowed me to form new ideas. (43-year-old Female).	Reflective collaborative learning	Experiential Learning Practice
During the course, one thing was very interesting for me, I could learn better by doing. I got the first impression in class, however I learned deeply when I did my project (40-year-old Female).	Project-based learning	
I participated in a scholar course that focuses on teaching. I was able to achieve a better understanding of the other elements of the teaching process by discussing it in the classroom. I recognized the midwifery final exam needed to change. Now, we have decided to change the practical part of the final exam and align the evaluation based on what is taught. (Female – 35- years old)	Achieving capability to change	Change Leadership Capabilities
I was able to accompany my colleagues in scholar projects. When they came with me, they become keen on changing the process of the education system and may be the spark toward looking for new ways to improve the system. (Male – 45- years old)	Encouraging elements for change	
I was faced with resistance to pursue scholarship project. Whenever, I brought up a new idea to counter my colleagues' opposition, even though they were not involved. When we came up with a different method of evaluation in the department, my colleagues said, "we are voting, we can't just trust her". Some who had worked in education field said, "we are not going to join in, we would not disagree, though". It was very difficult to conduct the project. (Female - 34 years old)	Resistance to change	Executive Difficulties
I faced some problems when I wanted to implement my scholar project related to clinical reasoning assessments. I think the educational scholar project needs to form a team. For example, design and peer review of reasoning questions need teamwork, but I was alone. Although there were 8 members in my departments, none of my peers took part in the scholarship process. I asked two other knowledgeable teachers in other departments to participate in designing the clinical reasoning exam.(Female – 33-years old)	Insufficiency of resources in scholarship	