

Adult Learning Principles in an Online Learning Faculty Development Program

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ABSTRACT

Background: Foundation for Advancement of International Medical Education Research (FAIMER) Regional Institutes have online discussions through the listserv as an integral component of their faculty development programs.

Objectives: In this paper we describe our experiences during the PSG FAIMER regional institute (PSG-FRI) online listserv discussion on the topic 'educational research' and also how we could leverage some of the adult learning principles during online learning.

Materials and Methods: During the listserv discussions, questions on the topic 'educational research' were posed to a group of 45 participants. Responses were analyzed and comments were assigned to the four themes identified under 'educational research'.

Results: Two hundred and nine emails and twenty-three learning resources were exchanged and shared during the discussion. We could identify the usage of adult learning principles such as active participation, relevant learning, constructive feedback, learning built on previous knowledge and experiences, and learning in a safe non-threatening environment in our model of online learning. Learning outcomes were evident in the form of periodic (weekly) summaries of learning by the participants and a scholarly report on educational research.

Conclusions: The PSG- FRI online discussion paved the way for exploring perspectives, sharing resources and debating and discussing issues pertaining to education research in the non-threatening cyberspace environment.

► *Implication for health policy/practice/research/medical education:*

We highlighted the appropriateness and our experience of using adult learning principles in an online discussion forum of a faculty development program in health professions' education. We were able to appreciate the learning outcomes in the form of cooperative learning which culminated in a scholarly report on educational research.

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1. Background

Online learning has gained considerable attention in the recent years (1). It gives the flexibility of learning at one's own pace, style and in one's own surroundings. Adult learners are characterized as autonomous, self-directed and experienced learners who are goal- and relevancy-oriented (2). Adult learning principles have been used as the foundation stone in designing many educational interventions (3, 4). The importance of adult learning principles in enhancing learning transaction in continuing professional education has been addressed by researchers (5). A few principles of online learning which are rooted on adult learning has also been described by researchers (6). In an online learning environment, adults can arrange their learning around their everyday lives (7). Listserv is an electronic mailing list wherein when a sender sends emails to the address of people in the mailing list, the email will reach everybody who is in the mailing list.

Foundation for Advancement of International Medical Education Research (FAIMER) seeks to create and enhance educational resources and networking efforts for those who teach health professions programs (8-10). FAIMER regional institutes (FRI) have online discussions through the listserv (approximately around 50 to 100 mails per week) as an integral component of their faculty development programs. Every month, participants are required to participate in the dynamic discussions on different topics in medical education. FAIMER faculty guide the discussion when needed. In the present paper, we make an attempt to highlight our experiences of using adult learning principles in an online discussion on the topic 'Educational Research'.

2. Objectives

The purpose of this paper is to describe:

- a) The authors' experiences during the PSG FAIMER regional institute (PSG-FRI) online listserv discussion on the topic 'educational research'.
- b) How the authors could leverage some of the adult learning principles during online learning.

3. Materials and Methods

3.1. Participants

The present study was cross-sectional. The participants (n = 45) in the listserv discussion were health care professionals belonging to medical and paraclinical backgrounds from various universities across India (Manipal university, Sri Balaji Vidyapeeth university, Dr. MGR medical university, Chettinad university, K.L.E university, Andhra university, Maharashtra university of health sciences, Calicut university, Amrita university, Rajiv Gandhi university of health sciences) and also from abroad (Tehran university of medical sciences, Iran & Tribhuvan university, Nepal). Participation was voluntary, but it was

expected that everybody should participate in the discussion.

3.2. Process

Table 1 depicts the topics that were discussed. Discussions were initiated by posing questions on different aspects of educational research to the members. For example,

- Is there a need for research in medical education?
- What according to you are deficiencies in the current medical education research?
- How according to you our medical undergraduate students are currently learning their courses?

Learning resources, mainly articles on various aspects of educational research were posted, critically reviewed by each participant and then the take home messages were shared on the listserv. Constructive feedback by the faculty moderators guided the discussion and understanding of the subjects in the right direction. Further, responses to the questions asked in the listserv discussions were analyzed and comments were assigned to the four themes identified under educational research.

4. Results

During the planning phase, (in November 2008, before the discussion on educational research was initiated) a total of 36 mails were posted in an iterative manner between the moderators planning the discussion and a total of 209 emails and 23 resources were exchanged and shared between the participants during the discussion. As indicated in Table 2, current trends and deficiencies in educational research evoked the maximum participation from the fellows and faculty, followed by introduction to educational research, opportunities and funding in medical education research and challenges in medical education. Table 3 depicts an example of responses obtained during a discussion on why educational research is needed. The team encouraged active participation by asking questions and providing small tasks. Additionally, articles pertaining to the discussion topics were posted and the participants were asked to reflect on their learning, from the articles. For example, relevant articles on educational research were studied in detail and the main themes were discussed. Sharing previous experiences in conducting educational research and learning from each other's experience was an eye opener in many instances during the discussion.

5. Discussion

The present study reinforced the importance of applying adult learning principles in an online learning environment. Knowledge, like nature, is revealed not in itself but through our methods of questioning (11). In order to retrieve more responses from the group, questions were asked about each topic. We could appreciate the follow-

Table 1. Topics Discussed During the Listserv Discussion on Educational Research

First Week: Introduction to Educational Research
Definition of educational research
Need for educational research
Steps to be fulfilled before embarking on educational research
Conducting an educational research project
Types of educational research
Focus group discussions
Types of qualitative and quantitative research
Data collection methods
Second Week: Current Trends and Deficiencies in Educational Research
In Nepal
In India
In Iran
Third Week: Opportunities and Funding in Medical Education Research
Curriculum and teaching issues
Skills and attitudes relevant to the structure of the profession
Individual characteristics of medical students
The evaluation of students and residents
Fourth Week: Challenges in Medical Education
Favorable and challenging factors in planning, execution and analysis of results and publication results at the departmental level as well as institution level

Table 2. Participation, Email Exchanges and Resources Shared in December 2008 in the Listserv

Topics	Participants, %	E-mails Exchanged, No.	Resources Shared, No.
Introduction to Educational Research	37.7	73	11
Current trends and deficiencies in Educational Research	46.6	68	7
Opportunities and Funding in Medical Education Research	26.6	41	5
Challenges in Medical Education	24.4	27	0

Table 3. Responses Obtained Regarding the Need for Educational Research

To know, to improve effective learning by students
For teachers to teach effectively
For investigating the success or failure of the curriculum
Research in medical education is a concept which many (? a majority) of medical teachers really don't fathom. especially in India
It is required for updating teaching system for better learning. Students' also get an opportunity to participate
It is the only method we have of ensuring that our medical education is capable of meeting the challenges of a fast changing world

ing adult learning principles in our structured process of online learning:

- Active participation
- Relevant learning
- Constructive feedback
- Learning built on previous knowledge and experiences
- Safe non-threatening environment

Online learning through the FAIMER listserv evoked active participation from most of the fellows which was obvious from the number of emails and resources exchanged during the discussion. Research on adult learning implies that adults learn better when they are actively involved in the learning process (12). Online learning through listserv discussions also served as a platform for self-directed learning by giving an opportunity to take responsibility for our own learning (13). For example, in order to respond to the questions posed during the discussion, the participants had to review the literature concerned with the topic and keep a track of the new articles published in the topic. The weekly summary section on discussion as well as preparation of Scholarly Report”, an essential requirement for certification which was implemented with the objective of promoting scholarship also demanded more responsibility and commitment.

Relevant learning took place as the participants felt that the issues discussed were relevant to their professional development as they were engaged in discovering, sharing and receiving new information. For example, the discussion focused on the methods of education research which was informative and relevant to majority of the group, as many were new to the field of medical education.

The structure of online learning environment is considerably different from the traditional classroom environment as the latter is operating in isolation despite connections with a wide network of people through the internet. The motivational factors contributing to learning which are usually present during face-face interactions are often absent in an online learning setting (14). This was overcome to a great extent by the constant reminders of reward, by the faculty, of involving ourselves in the discussion as well as consequences of not doing so.

It is reported that adults view new material through the lens of previous experiences (15). Prior learning experiences have the potential to enhance or interfere with new learning (16). The online discussion served as an opportunity to share what we already knew, how and why we learned in the past and what motivates us to pursue new educational opportunities. The discussion forum utilized questions which probed into our previous knowledge regarding educational research.

It is reported that adults generally learn best in an atmosphere that is non-threatening and supportive of experimentation and in which different learning styles are recognized (17). This was very true in the listserv atmosphere

where everybody respected each others' viewpoint. Even though participation in the listserv was strictly monitored, there was active participation because of the relevance and need felt for the same.

The PSG FRI listserv served as a platform for discussion on educational research in December '08. The discussion paved the way for exploring perspectives, sharing resources and debating and discussing issues pertaining to education research in the non-threatening cyberspace environment. Through this paper, the authors have highlighted the appropriateness and our experiences of using adult learning principles in an online discussion of a faculty development program in health professions education. Learning outcomes were appreciated in the form of cooperative learning which culminated in a scholarly report on educational research.

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None declared.

Authors' Contributions

As this article is about an online faculty development program, all authors have contributed to study concept and design, Analysis and interpretation of data, statistical analysis and Critical revision of the manuscript for important intellectual content. The first draft of the article was written by Reem.

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