The Academy at Harvard Medical School
The Academy Office of Education Research

Request for Applications

The Academy Fellowship in Medical Education Research

Fellowship Period:

1-year Fellowships for Faculty: September 1, 2017 – June 30, 2018
2-year Fellowships for Faculty, Clinical Fellows and Surgery Residents: September 1, 2017 – June 30, 2019

APPLICATIONS DUE: 5 PM Monday, February 20, 2017

The Academy at Harvard Medical School is pleased to announce a Request for Applications (RFA) for one- or two-year fellowships for faculty and two-year fellowships for fellows and residents in medical education research for the Fellowship Period beginning September 1, 2017. The Academy Fellowship in Medical Education Research provides faculty, clinical fellows, and residents who are interested in careers as educators and opportunities to develop the expertise and skills needed to advance scholarship in medical education and medical education research. We will be accepting 2-3 fellows in the coming academic year. There are currently 4 research fellows who will be starting the second year of their fellowship in September 2017, and we will be offering fellowships to 2-3 participants into the program.

For faculty: Fellowship positions are available for HMS faculty at any academic rank either one or two years. Faculty is required to commit to 20% time per year.

For clinical fellows and surgery residents who are beginning the research portion of their fellowship/residency: Fellowship positions are available for clinical fellows and residents with an expected commitment of two years at 60-80% time commitment.

Tuition for the fellowship is provided by the HMS Academy, but individuals must provide funding to support their time devoted to the program.

Learners participating in the Fellowship will:

- Develop analytical and research skills in medical education;
- Acquire working knowledge of key theories and methods to carry out rigorous research in medical education;
- Complete one major group project and one individual project related to medical education.

Fellowship Overview
Academy Associate Director and head of the Academy Office of Research, Amy Sullivan, EdD, is Director of the Fellowship and Amy Cohen, Instructor at the Harvard T.H. Chan School of Public Health is Assistant Fellowship Director. The fellowship leaders and guest faculty conduct fellowship seminars weekly on Thursdays from 2:30-4:30 pm at HMS, beginning after Labor Day (with one or two meetings scheduled during July-August 2016 and 2017). These seminars are required sessions during which the group discusses a variety of medical education research topics and
assigned readings. Sessions address a range of topics including issues in survey development, qualitative and quantitative data collection and analysis, conducting interviews and focus groups, assessing clinical competencies, and evaluating educational interventions. Fellows will review a range of cognitive and behavioral learning theories to apply to their research projects. Fellows will also participate in selected research projects being conducted at the Academy, and will apply what they are learning to the analysis of focus group data and survey data; when appropriate, fellows will collaborate on the development of manuscripts for publication.

Fellowship curriculum is on a **two-year cycle**, with an emphasis on qualitative research in one year (current 2016-2017 session, to be repeated in 2018-2019) and emphasis on quantitative and mixed methods research in the following year (Fall 2017-Spring 2018). In the coming fellowship year, we will cover the following areas:

**Fellowship 2017-2018: Quantitative and Mixed Methods Topics**

**Overview: Fundamentals of research design**
- Overview of research designs (randomized controlled trials, observational, longitudinal [including intervention designs], and quasi-experimental designs)
- Sampling designs
- Formulating research questions
- Conducting literature searches and writing reviews of literature
- Theoretical frameworks to guide medical education research
- Ethics and equity in medical education research

**Survey design**
- Designing and testing survey measures
- Assessing knowledge and attitudes (subjective measures)
- Assessing competencies and behaviors (objective measures)
- Approaches to maximize measurement validity and reliability

**Test construction and design**
- Test construction: MCQs

**Survey data analysis**
- Descriptive analysis of survey data using statistical software program **JMP**
- Basic statistical analyses to assess group differences and change over time
- Introduction to longitudinal analyses of change over time (survival analysis, growth modeling, hierarchical linear modeling)

**Fellowship Year 2018-2019 Qualitative Methods Topics**

Formulating research questions and deciding whether to use qualitative, quantitative, or mixed methods approaches

**General issues in qualitative research:**
- Inductive versus deductive approaches to data
- Research questions-exploratory or hypothesis driven
- Assessing validity and reliability in qualitative analysis
- Reflective practice in qualitative analysis

Faculty who apply for the two-year program and Clinical Fellows and Surgery Residents who continue on to a second Fellowship year (2017-2018) will learn and practice quantitative research methods, including:
Focus group research:
- Developing research questions suitable for focus group approaches
- Developing focus group guides (questions)
- Sample design for focus groups: how many, composition of groups
- Skills for conducting focus groups and managing challenging situations
- Human subjects protections in focus group research
- Recruiting participants for focus groups
- Analyzing focus group data using Dedoose®software

Interview research:
- Determining when to conduct interviews rather than focus groups
- When to conduct single versus multiple interviews
- Sampling decisions for interview research, how to use theoretical sampling
- Developing interview questions
- One on one interview skills
- Handling sensitive topics
- Analyzing interview data

Observational (field) research:
- When to consider observational or ethnographic research
- Negotiating research relationships in naturalistic settings
- Analyzing observational data

Assessing competencies:
- OSCEs and OSTEs development and testing
- Interrater reliability

Fellows from the Academy Research Fellowship will also participate in joint sessions with Fellows from the Academy Medical Education Fellowship, Rabkin (BIDMC) and Mount Auburn Medical Education Fellowships on 4 Fridays during the Fellowship year (dates to be specified prior to the beginning of Fellowship). These sessions include such cross-cutting topics as the history of medical education and issues in medical education research and study design, the latter incorporating discussion of the Fellows’ research project evaluation prospectuses.

Academy Research fellows must complete a research project. Projects may focus on development and evaluation of an educational intervention, an observational project on faculty development or student/resident/fellow learning, assessment of learners, or education policy research.

Expectations:
- **For HMS faculty**: Devote 20% of time to research and Fellowship activities (including the weekly fellowship seminars). Applicants must have the support of their department chair or division chief to devote this time, free of other responsibilities, to the Fellowship activities. Faculty will be expected to complete readings and to carry out an individual project that is appropriate as part of their commitment of 20% effort. Participation in group projects is optional. Faculty may apply for one or two years of the fellowship.
- **For clinical fellows or surgical residents in the research years of their training**: Devote 60-80% of time to research and Fellowship activities for two years (including the weekly fellowship seminars). Applicants must have the support of their department chair or division chief to devote this time, free of other responsibilities, to the Fellowship activities. Submit an abstract of the Fellowship project for a poster presentation or technology demonstration at HMS Medical Education Day in October 2016 and/or October 2017.
- Meet bi-monthly with content area mentor during the course of the Fellowship.
Be committed to meeting weekly during the fellowship year with Fellowship Faculty and other fellows to discuss projects, discuss assigned chapters and articles, and share experiences. Fellowship sessions will be held at HMS in the TMEC Building, 260 Longwood Avenue.

Qualifications for Faculty:
Candidates must possess an MD or PhD (or equivalent), and hold an HMS appointment as a Research Fellow, Curriculum Fellow, or faculty appointment at Instructor level or above. Candidates must be able to devote the necessary time to the fellowship activities and projects. Candidates must identify a mentor who is an expert in their content area and who is willing to meet with the fellow on a bi-monthly basis throughout the Fellowship period.

Qualifications for Clinical Fellows and Surgical Residents:
Candidates must possess an MD, and be approaching the research years of their fellowship (or surgical residency). Candidates must be able to devote the necessary time to the fellowship activities and projects. Candidates must identify a mentor who is an expert in their content area and who is willing to meet with the fellow on a bi-monthly basis throughout the Fellowship period.

Funding
Salary support is to be supplied by the Fellow’s department. Tuition for the Fellowship is covered by the HMS Academy.

Selection Process
An Academy Fellowship selection committee will review all applications and schedule interviews with finalists. Applications are due by Friday, February 17, 2017. Interviews will be conducted within three weeks of the deadline, and Fellowship awards will be announced by March 24, 2017.

To apply for an Academy Fellowship in Medical Education Research, please submit the following eight (8) items:

- **ONLINE APPLICATION FORM**: Please complete the required online application form. The online application will activate your application. It is a required part of the application process.
  
  To be emailed from the applicant as a Word or PDF document to the Academy: Academy@hms.harvard.edu

- **COVER LETTER**: A cover letter that includes a personal statement outlining your career goals and what you hope to gain through an Academy Fellowship in Medical Education Research;

- **CV**: A copy of your Curriculum Vitae;

- **PROJECT PROPOSAL**: A description [no longer than 2 pages] of a project you would conduct during the fellowship year, including:
  - Goals of the project
  - The problem it addresses and who will benefit
  - Barriers
  - Resources required
  - How the project will be evaluated
  - Research methods you hope to learn to carry out the project

- **SALARY SOURCE STATEMENT**: This plan must be reviewed and approved by your department chair or division chief.
  
  To be emailed from each recommender as a Word or PDF document to the Academy: Academy@hms.harvard.edu

- **DEPARTMENT CHAIR RECOMMENDATION**: A letter of recommendation and statement of support from your department chair and/or division chief, including a commitment to free 20% of your time from other
responsibilities to pursue your fellowship project and related medical education research and meet with Fellowship leaders twice monthly.

✔ PROJECT MENTOR LETTER OF RECOMMENDATION/ LETTER OF SUPPORT: The Project Mentor should write a letter of recommendation attesting to your commitment to and involvement in medical education. The project mentor should also indicate his/her commitment to overseeing the project and to spending adequate time mentoring the applicant.

✔ ONE ADDITIONAL LETTER OF RECOMMENDATION: One additional letter of recommendation from a Harvard faculty member (preferably a fellowship director or residency training director) who can attest to your commitment to and involvement in medical education.

Deadline for all materials including recommendations: NO LATER THAN 5:00 P.M. Friday, February 17, 2016

If you have questions about the Academy Fellowship in Medical Education Research, please contact The Academy at Academy@hms.harvard.edu.