

2014 Duke AHEAD Grant Proposal

Title: Education Skills (curriculum development, teaching, and evaluation) Mentoring Program (ESMP)

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Focused question: Does a year-long faculty development program incorporating workshops, mentoring, and development of an education project, improve faculty self-efficacy and education practices in curriculum development, teaching, evaluation and scholarship?

Background:

To meet the demands of modern health professions education faculty need to be equipped with the theoretical background in adult learning theory and the knowledge and skills of designing, implementing, and evaluating effective educational programs (Hammick 2007). These skills empower faculty to serve as clinician educator role models and assist them in facilitating learning for profession specific trainees as well as interprofessional teams (Silver 2009, Sicut 2014, Davis 2014).

In 2004, as part of a four school consortium funded by the Donald W. Reynolds Foundation, faculty and staff at the Duke University Center for the Study of Aging and Human Development launched the Program for Faculty Development to Advance Geriatric Education (FD~AGE). The program, led by Drs. Cohen, Heflin, and Pinheiro, offered a range of initiatives to develop participants' knowledge and skills in education program design and teaching. (Heflin et al., 2012) As its centerpiece, the program offers weeklong faculty development "mini-fellowships" for faculty from across the US. These visiting scholars attend workshops on curriculum design and evaluation and receive individual mentoring toward implementation of an educational project. Through the program, we have trained over 200 faculty from a range of institutions and programs across the US. In addition, the FD~AGE program has offered a seminar series to help Duke geriatrics fellows and faculty develop skills in teaching and curriculum development. (Pinheiro et al, 2008) Because of its popularity and utility for faculty and fellows, it has become a regular feature of geriatrics grand rounds on the third Wednesday of each month. In addition, although the initial series was intended primarily for physicians and physicians in training, it has continued to attract an interprofessional group of faculty and students from a variety of locations across the medical center. This has enriched the program with a variety of educational perspectives and strategies and has spawned a major grant funded project in interprofessional education (the Duke Geriatrics Education Center). The appeal of the series has also led to the replication of several sessions in other departments and venues at Duke and also at medical schools in Brazil (Universidade Federal de Juiz de Fora) and Rwanda (National University of Rwanda – Central Teaching Hospital of Kigali).

In light of the growing need for health profession faculty to improve their skills as curriculum developers and teachers, and based on extensive previous experiences in developing faculty development training activities for interprofessional faculty, educators in the Division of Geriatrics propose to design a program to train Duke health professions faculty to design, implement, and evaluate adult learner-centered curricula.

Specific aims:

The ESMP will use a modified format of the FD~AGE program to provide education skills training (curriculum development, teaching, and evaluation) and mentoring for clinical faculty (medicine, nursing, PT, PA). The aim of the program is to develop effective educators who will use adult learning principles (Knowles 1980) in the design, implementation, and evaluation of educational programs. The program will also strive to incorporate the

traditions, learning context, and experiences of the different professions and disciplines in creating a rich environment for professional development and collaboration, and learning about interprofessional teaching. Our objectives are that by the end of the program participants will be able to:

1. design effective educational program for adult learners;
2. use a variety of interactive teaching strategies to facilitate learning;
3. design and implement learner assessment and program evaluation; and
4. disseminate findings via presentation and publication.

Methods

The aim of the program will be achieved by creating a faculty development program based on sound educational principles and research in faculty development (Hitchcock 1993, Pinheiro 2002). We will implement key strategies identified by faculty development experts including experiential learning, peer and expert mentoring, adherence to adult learning principles of teaching and learning, and use of multiple instructional methods (Steiner 2006).

The program will be led by a PhD, professional educator (SP), with over 20 years of experience designing, directing, and conducting faculty development activities for interprofessional faculty, and by clinician educators from the Division of Geriatrics who in the last 10 years have developed curricular materials and conducted faculty development activities for over 226 clinicians from medical centers across the US.

Participants will be recruited from all Duke health profession schools via Duke AHEAD website and email to faculty in the health profession schools. They will fill out an application form where they will briefly state how they envision the program being beneficial to their work as an educator, and will describe an education project they will be working on during the year. The faculty will read and rank the applications and select 8-10 applicants to participate in the program.

The program will consist of the following learning activities:

1. Education skills focused sessions (in a 3 day retreat format).
2. Development and implementation of an educational project by participants (preferably involving the design and teaching of a curriculum/course/clinical rotation).
3. Individual mentoring from the faculty in the development and implementation of participants' project.
4. Observation and feedback of participants' teaching activities (at least 2 times per year by the faculty and peers).
5. Presentation of participants' project at an end of year presentation/poster session.

Organization of Program Activities

Advance organizer/Assignments

In preparation for the 3 day retreat, participants will be provided with readings on adult learning theory and curriculum design in medical education (Svinicki 1991, Kern 1998). They will submit a preliminary educational plan for a project they desire to implement in their school/department. See Appendix A for template of plan. These assignments will serve as advance organizers to facilitate the discussion on curriculum development and the process of teaching and learning. Their educational project plan will serve as an object for learning about designing and revising an educational curriculum

Workshop sessions (3 day retreat)

During the retreat participants will attend several workshops which will guide them through the process of designing, implementing, and evaluating a curriculum. These educational skills sessions will address several topics including curriculum design process, writing learning objectives, instructional strategies for active learning, learner assessment and program evaluation, creating significant learning experiences, effective clinical teaching, giving constructive feedback on learner's performance, and assessing and improving teaching. The first workshop will present a framework for designing educational curriculum. During the three day retreat participants will apply the framework to modify and enhance their educational project plan as they learn to write measurable objectives, identify key content resources, and choose instructional strategies and evaluation methods for their educational project.

Individual mentoring and Observation of Teaching Activities

The program will provide participants with individual mentoring. One faculty member will meet with participants individually during the 3 day retreat to discuss and provide feedback on their educational project plan, career

development as an educator and plans for scholarly activity. This individualized mentoring relationship is designed to continue for at least one year following the retreat, so that participants can consult with faculty about their educational project and teaching endeavors. Faculty will also observe and provide feedback on participants' teaching activities.

Scholars' project presentations (poster session)

Participants will present a poster at the end of the program/year highlighting their curriculum and accomplishments. This poster presentation may be an ideal addition to the Duke AHEAD annual showcase conference. Mentors will assist in preparation of these presentations and will guide participants in the subsequent submission of project descriptions and results for publication.

Outcomes and measures

As a primary outcome, we will measure the effect of the ESMP on participants' educational practices (curriculum design and teaching skills). We will utilize both quantitative and qualitative evaluation methods for data collection and analysis. An application will be submitted for review and approval by the Duke IRB. Data from and about participants will be treated with strict confidentiality. Data will be stored on password-protected server. Although participants' identities will be known to the investigators, their identities will be kept confidential and the reports of research findings will only be done in aggregate form. Evaluation measures will include the following:

Learner/Participant assessment:

- a) Pre and post self-efficacy survey of teaching and curriculum design skills. Scholars will rate their agreement on a Likert scale with a series of statements aligned with the goals of the program.
- b) Review and feedback of scholars' educational plan at the beginning of the program.
- c) Submission of final educational plan and presentation of project at an end of the year event.
- d) Observation of and feedback of participants' educational project/teaching activities (at least twice a year by faculty, peers, and students) using an observation checklist.

Program evaluation (participants' level of satisfaction with various aspects of the program including assignments, workshops, mentoring, achievement of objectives, overall experience, as well as recommendations for improvement of the program):

- a) End of program evaluation survey (administered at the end of the 3 day retreat and end of the year/program to ascertain participants' satisfaction with the program).
- b) Focus group with participants at the end of the year to ascertain participants' perceived learnings, satisfaction, and recommendations for improvement of the program.

Challenges:

One of our greatest challenges might be the scheduling of a 3 day retreat for the program in a time that is convenient for all participants. We know that participants are very busy faculty members who wear several hats including clinician, researcher, and teacher; and each professional school follows a slightly different academic schedule, so we will need to take that into consideration in planning the right time for the retreat. The observation of participants' teaching activities might also create some challenges for our faculty as they are also busy clinicians and will have to allocate time to visit the participants' classrooms, which can be located off campus. However, we hope that by scheduling these observations far in advance, faculty will be able to incorporate them into their schedule with ease. Also the fact that we have a lot of clinician educator faculty will also help us to meet the time demands of observation.

Sustainability:

This program may provide a model for a larger faculty development program for educators that could be offered through Duke AHEAD and expanded to include a larger number of participants from across health professions schools and training programs. This may necessitate charge of a small tuition to support the program. As the program graduates skilled faculty, they will be ideal mentors in the future. Ultimately, such a program will be of interest to interprofessional faculty from other institutions—either to participate at Duke or to replicate it with our guidance.

Opportunities for subsequent scholarship:

Besides being able to report on the evaluation of the EMSP, program faculty and participants can generate scholarship products out of the education projects each participant will have to design, implement, and evaluate as part of this program. Collaboration among faculty, participants, and their peers will be encouraged and fostered by program faculty.

Broader Impacts:

The project will have impact not only in the teaching and curriculum development skills of individual participants, but will foster interprofessional learning, collaboration, and innovation in interprofessional education, as participants will be able to learn with and from each other. The hope is that this interprofessional learning experience which will foster interprofessional interaction and teamwork will be carried on by the participants to their teaching and clinical practices, so that they can serve as role models to their students and co-workers, and design effective educational programs for their learners. The successful implementation of this program will also help further expand the growing community of educator scholars at Duke and thereby support the mission of Duke AHEAD and the Health System as a whole.

Timeline:

Date	Activity
December 2014	Recruitment of participants
January 2015	Candidates' application will be reviewed and participants will be selected for the program
February 2015	Administration of pre-program self-efficacy survey Participants submission of preliminary education project plan 3 day training retreat
March – October 2015	Mentoring and observation and feedback of teaching activities
October – November 2015	Collection of end of program evaluation data Administration of post-program self-efficacy data
November – December 2015	Evaluation data analysis and reporting of findings Participants' project presentation

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Appendix A
Educational Project Plan

Name: _____

Project Activity Name: _____

Educational Problem or Need: (What educational problem or need have you chosen as the focus of your program planning? Why is this program needed in your institution?)

Target Learners: (Who are your target learners? Please describe their existing proficiencies, current performance, attitudes, perceived deficiencies and needs.)

Goal of the Project: _____

Learning Objectives (What would you like the learners to achieve through the participation in your program? What will they know/be able to do at the end of your program?)	Instructional Content (List content areas to be taught as part of the program in order to assist learners to achieve the objectives)	Educational/ Instructional Strategies (List events/teaching methods you will use to teach the content)	Evaluation Methods (List evaluation methods you will use to assess if the learning objectives were achieved)
By the end of this program learners will be able to:			Formative Summative: