Building Skills in Qualitative Research: An Innovative Video-Based Training Curriculum

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A. Project Description

The goal of this project is to develop a comprehensive online curriculum on qualitative research methods that includes video-based training modules and a toolkit of resources. The video-based curriculum will provide researchers with brief, targeted tutorials on how to design and conduct rigorous qualitative or mixed-methods research, and will include practical step-by-step strategies that can be directly applied to the development of personal research projects. The toolkit will include guides, templates and instruments to assist with qualitative study design, data collection and analysis.

B. Rationale

There is a growing need to build and strengthen qualitative research skills and capacity among medical professionals. Physicians and health researchers are increasingly looking to qualitative research to incorporate the participant voice into investigations of contemporary medical and public health challenges and to address questions left unanswered by quantitative methods (i.e. how, why and to what degree). In medical education, the application of qualitative research methods is at a tipping point and is increasingly being applied to program evaluation and learner assessment in both undergraduate and graduate programs[1].

Currently, few opportunities exist for faculty, fellows, residents and medical students to gain the foundational knowledge necessary to conduct rigorous qualitative or mixed-methods research[2]. Courses at the university are limited in number and may be difficult to attend given clinical duties and required coursework. The development of an online, video-based curriculum is warranted and would address the growing interest in qualitative and mixed-methods research.

C. Pilot Curriculum

Qualitative Courses: Primary investigators (Drs. Bereknyei and Bruce) spent the last three years developing and teaching a three-quarter qualitative methods course for medical and graduate students. PEDS 202C, "Qualitative Research Methods and Study Design," provides an introduction to qualitative methods and prepares students to design their own qualitative research projects. PEDS 202A & B, "Practical Applications in Qualitative Analysis" is a two-quarter qualitative analysis course that teaches students to analyze data using a comprehensive team-based plan. Students disseminate their work through university-hosted, regional and national conferences, and through completion of a publishable manuscript.

Advanced Training for Faculty, Fellows and Residents: The investigators provide instruction on qualitative methods to faculty and fellows across all School of Medicine departments and provide mentorship on the design, implementation and analysis of their qualitative or mixed-methods research projects. For over 10 years, they have provided instruction to pediatric residents through the Scholarly Concentrations Program. Pediatrics residents in the Stanford Advocacy and Medical Education Scholarly Concentrations, as well as fellows in the Rathmann Medical Education program, receive individualized project-based mentorship and technical assistance on qualitative or mixed-methods from the investigators.

D. How the project supports/promotes diversity

Diversity in Participant Perspectives: Giving all research participants a voice, especially underserved populations, is critical to understanding unique perspectives and needs. Underserved and/or limited English speaking populations are often less accustomed and comfortable with traditional quantitative research methods such as surveys[3]. Qualitative or mixed-methods are frequently endorsed as appropriate methods for research with diverse populations.

Diversity in Research Methods: Contemporary medical providers must learn to critically examine the literature to make judicious use of current best evidence for patient care[1,2]. Integrating standards of excellence for qualitative and mixed methods research can support this goal[4], as it provides greater methodological diversity and the application of scholarly interests in multiple fields (i.e. community-engagement, public health, global health, medical education, etc.).

E. Methods

Goal: To increase faculty, post-doctoral student, fellow, resident and medical student capacity to conduct rigorous qualitative or mixed-methods research using an innovative video-based curriculum.

Strategy 1: Develop a comprehensive video-based curriculum with a complementary toolkit of resources

A series of brief educational videos will be developed based on the curriculum currently provided to medical and graduate students, residents, fellows and faculty. Videos will address up to four core areas:

1. Research Design (e.g., qualitative research questions, incorporating theoretical/conceptual frameworks, research ethics, and IRB);
2. Research Methods: Data Collection and Management (e.g., conducting interviews, focus groups and observations, effective use of surveys, designing interview guides, surveys and observation forms, and data management);
3. Research Analysis (e.g., inductive and deductive approaches to codebook development, inter-rater reliability and inter-rater agreement, when and how to use grounded theory, thematic and content analysis, team-based analysis, and how software can help facilitate analysis);
4. Dissemination of Findings (e.g., standards for reporting qualitative and mixed-methods research)

***Strategy 2*:** Pilot test the videos with trainees, medical professionals and researchers developing their own qualitative research studies. Evaluate video delivery and content to identify opportunities for improvement through surveys and focus groups, and then revise the modules.
Strategy 3: Disseminate the revised curriculum across the School of Medicine and academically though MedEdPORTAL.

F. Timeline and implementation plan

Activity Name	Mar	Apr	May	Jun	Jul	Aug
Strategy 1: Video creation						
Qualitative methods and analysis content development and refinement						
Pilot testing scripts						
Video scripting, filming, editing						
Strategy 2: Pilot Testing & Evaluation						
Pilot testing, evaluation of comprehensive modules with learners (focus groups, surveys, etc)						
Revision of materials						
Strategy 3: Dissemination						
Widely disseminate updated curriculum throughout the School of Medicine (online platform)						
Video submission to MedEdPORTAL						

G. Anticipated work product
Strategy 1 Products: A multi-module video training series addressing up to four core content areas (see Section E). Each content area will include one to three videos, each 10-15 minutes in length accompanied by a practical toolkit for participants to develop that content area. Videos will be appropriate for all learner levels (medical/graduate students, residents, fellows, post-docs, faculty, allied health care providers) who are new to qualitative or mixed-methods research.
Strategy 2 Products: Output data from video downloads and evaluation data regarding opportunities to improve the delivery and content of the curriculum.
Strategy 3 Products: Summary of dissemination venues in the School of Medicine and MedEdPORTAL submission.

H. Plan for evaluation
The following metrics will be used to evaluate the curriculum: 1) Organization of course content; 2) quality of course content and resources; 3) clarity of course content and resources; 4) effectiveness of instruction; 5) usefulness of materials for project development and implementation; 6) number and content area of video watched; 7) amount of time spent watching video; 8) number and type of resources downloaded.

I. Plan for dissemination of results
We will submit modules (consisting of videos, practical worksheets and guides) to MedEdPORTAL, an online, peer-reviewed repository of educational resources for medical providers and trainees.

J. Anticipated impact on education/mentoring at School of Medicine
We anticipate a broad impact on education within the School of Medicine. First, the curriculum will fill a gap in the research training currently provided to faculty and trainees. Second, it will increase access to and knowledge of the core principles of rigorous qualitative methods. Third, the course will ideally impact the level of rigor applied to qualitative and mixed-methods studies across the School of Medicine, which is likely to impact publication potential. Fourth, we anticipate the accessibility of a practical qualitative methods course will increase engagement in qualitative methods across the School of Medicine as faculty and trainees alike gain greater exposure to the value of this methodological approach in medicine. Finally, if successful, there is potential to disseminate the curriculum regionally and nationally.

K. Specific educational aims
- Develop an evergreen, comprehensive set of videos on qualitative research methods for medical providers
- Develop a corresponding "toolkit" of resources to assist with the practical application of methods (e.g., training guides, templates)
- Evaluate the utility of the videos and toolkit in supporting individual research efforts

PROJECT BUDGET

Compensation Items:

Description	Compensation / Salary and Benefits amount	% FTE (if applicable)	Cost per 100% FTE- salary and benefits	Total cost
Research Scholar (JB)		1.5%	n/a	$1500
Videographer (Stanford Video)	$ 600 / day x 3 days	n/a	n/a	$1800
TOTAL				$3300

Non-compensation Items:

Description	Item	Quantity of item	Cost per item	Total cost
Images for Modules and Toolkits	Creative Commons Images (e.g., Shutterstock)	Bulk download 350 images	$200	$200
Video creation	Basic HD Camera Package from Stanford Video	3 days	$1300	$3900
Video creation	Camera – Sony NXCAM from Stanford Video	3 days	$75	$225
Video creation	Video editing services	10 hours	$125	$1250
Video creation	Video encoding for web distribution	5 hours	$50	$250
Focus Groups/Survey Participant Gift Cards	Gift card	20	$20	$400
Focus Groups Food	Lunch/snacks	20	$10	$200
Focus Groups Transcripts	Transcription of audio	4 hours	$1/min	$240
TOTAL				$6665
Compensation and non-compensation TOTAL				**$9965**

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