Physician Contribution to Developing an Online Master's Degree in Education Program for Health Care Professionals.

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Abstract

Online education is increasingly recognized by medical educators as a teaching and learning tool to support formal and continuing medical education. The faculty development team at Cincinnati Children's Hospital Medical Center (CCHMC) in collaboration with the University of Cincinnati College of Education (UCCOE) developed an Online Masters Degree in Education program designed to provide healthcare professionals with the educational pedagogy needed to teach more effectively and to conduct educational research.

A qualitative case study describes the experiences of four physicians who completed the existing Master's Degree in Education (Curriculum and Instruction major) in a combined in-class/online format. These physicians then helped customize the curriculum for medical education and adapt the program to an all-online format.

Each participant benefited from the program in different ways (e.g. improved educational research methods, teaching and technology skills, assessment techniques, performance-based learning). The program introduced new concepts in education that the physician participants were able to adapt to medical education. All participants became more aware of their role as educators, and demonstrated increased understanding of teaching and learning concepts, including the many benefits of online learning for physicians with full-time professional responsibilities.

Keywords: online masters program, graduate program development, faculty development, health care professional program, masters in medical education

Introduction

Computer technology has been used since the early 1990's for teaching and learning opportunities including online learning. These online learning technologies have significantly impacted all levels of education. Medical institutions are also recognizing the potential of the Internet as a source of information and teaching platform, resulting in medical educators using the Internet both as a learning tool to support formal medical education programs and as a means of delivering continuing medical education training materials online (Casebeer & Allison, 2002; Wiecha & Barrie, 2002; Broudo & Walsh, 2002). Some universities now offer online degree programs at the bachelor, master and doctoral level in the area of health care (Peterson Guide to Distance Learning, 2003). Medical companies have merged their proprietary technologies with medical knowledge and education resources to provide clinicians and patients with advanced, easy-to-use tools to help facilitate the highest quality of medical care including Continuing Medical Education. As medical educators have realized the positive impact online instruction can offer, it has become apparent that an online format also offers great flexibility and increased accessibility. Easy accessibility of online learning is attractive and practical for health care professionals with fulltime responsibilities that allow limited time for face-to-face instruction.

The faculty development group of Cincinnati Children's Hospital Medical Center (CCHMC) recognized the potential of computer technology in education early on. As the faculty development program expanded in depth and scope in 1998, the program leaders identified a need for advanced graduate training in education. Physician educators needed to learn educational pedagogy to teach more effectively and conduct educational research. This need was confirmed by a review of the medical education literature and informal needs assessments at regional and national faculty development meetings. The faculty development team concluded that an advanced degree program would provide the needed graduate level training in education to fulfill life-long learning needs and encourage professional development of physicians and other healthcare professionals (e.g. nurses, physical therapists). To this end, the faculty development team from CCHMC approached the leadership of the University of Cincinnati (UC) College of Education (COE) and presented the idea of developing a graduate program in education for physicians and other health care professionals as a collaboration by the Colleges of Education and Medicine. It became apparent early in the discussions with the COE faculty that

online learning, at least in part, would be ideal to accommodate busy professional schedules and at the same time utilize the increasing capability and advantages of distance learning.

As a result of a series of meetings, the decision was made to adapt the College of Education's existing Curriculum and Instruction (C&I) major, one of the majors leading to a Master's Degree in Education (M.Ed.), to a medical education focus with the help of physicians from the CCHMC faculty development team and concurrently, consider the role online learning might have in such a program. Therefore, in the fall of 1999 four of these physicians (hereafter referred to as the pilot group) enrolled in the existing COE M.Ed. program. The objectives of this pilot group were to: 1) evaluate the curriculum from the perspective of both content and delivery format (vis-à-vis online); 2) adapt and develop the curriculum to a medical education focus; 3) evaluate the time feasibility of the program in the context of full-time professional duties and online instruction; and 4) complete and graduate from the program. This paper will describe the four physicians' experiences in achieving these objectives during program development and course work.

Purpose of the Study

The purpose of this study is to describe the four physicians' experiences and input during program development and the impact on them of the curricular coursework. This qualitative case study addressed three aspects of the program's development:

1. What were the physicians' experiences with the online masters program?
2. What were the physicians' contributions to the online masters program as it related to program development?
3. What was the impact of the program on the physicians?

Original M.Ed Program (Curriculum and Instruction Major)

The existing master's degree in education (M.Ed) program included the core courses from the UC COE Division of Teacher Education, Curriculum and Instruction (C&I) major (see **Table 1**), individual studies, the practicum, and the Masters project. The 54 credit hour program focused on three educational themes: adult learning, curriculum and instruction, and educational research and evaluation. In addition individual studies included specific topics selected by the

participants that were related to medical education and modification of the curriculum to a medical focus. For the required practicum participants prepared an educational portfolio that was a collection of descriptions of various teaching activities and work product (e.g. preparation of teaching modules, lectures, co-teaching, teaching workshops, bedside teaching) and documented evaluations of those teaching projects (combination of self-evaluation, peer evaluation, and expert evaluations). Finally a master's research project was required to complete the program. This project provided participants the opportunity to explore in depth a subject in education of her/his own choice, using knowledge gained from coursework.

Table 1. Master's Program Core Courses

Courses	Content
18 CI 885 Attitude Formation and Change	The course provided in-depth information about how to influence peoples' attitudes/values including reactive and unobtrusive measures for assessing attitudes.
18 CI 833 Computer Tools for Teachers	This course introduced the use of the computer as a tool for educators. The participants developed web pages using the Microsoft Front Page software.
18 CI 701 Masters Research Seminar	The Research Seminar was a formal inquiry course that was intended to lead the participants through the development of a formal research proposal for a primary research topic determined by the participants.
18 CI 850 Adult Learning	This course introduced adult learning theory and how the principles of adult learning theory are applied in teaching and learning settings.
18 CI 848 Teaching and Learning Styles	This course introduced a variety of self assessment tools for evaluating and classifying teaching and learning styles.
18 EDFN 835 Human Learning	This course introduced the major themes in the field of cognitive psychology and current theories of human learning and memory.
18 EDFN 838 Cognitive and Social Aspects of Online Learning	This was a special topic seminar course that covered a cognitive and social analysis of the ingredients of web-based courses and guidelines for combining them into effective learning environments.
18 EDFN 710 Introductory Statistical Methods	This course was an introduction to statistics in social science research including techniques of data analysis using the Statistical Package for Social Sciences (SPSS).
18 EDFN 802 Introduction to Field Methods in Qualitative Research	This course provided a hands-on qualitative research experience such as gaining access to a site, conducting interviews, observations, documenting research experiences, and coding data.
18 EDFN 689 Measurement and Evaluation	This course covered various types of classroom assessment techniques, performance-based learning and assessment tools including benchmarks and rubrics.

Methodology

This study is a qualitative case study exploring the four physicians' experiences in participating in and developing an online master's program (Patton, 1990; Yin, 1994). Since case studies use multiple sources of evidence for in-dept investigation to describe, understand and explain the phenomenon (Feagin, et al. 1991; Hamel, et al 1993; Stake, 1995; Yin 1994), this approach will allow us to explore all issues from multiple perspectives in this pilot study.

Participants

The population for this study included four pediatricians from the faculty development team who volunteered to enroll in a master's level graduate program. This program was offered to this group primarily in a classroom setting with a small number (two) of online courses. Senior (mean age of 54; mean years of medical professional experience was 26) physicians were selected because of their active involvement and extensive experience in medical education. One of the four physicians paid in-state tuition for the courses; the remaining three qualified for tuition remission as faculty in the UC College of Medicine.

Physician A is in his mid 50s and has been in medicine for 30 years. He was trained in general pediatrics and teaches in the area of pediatric primary care and faculty development in education.

Physician B is in his 40s and has been in pediatric medicine for 20 years. He was trained in general pediatrics and pediatric emergency medicine and teaches in the area of pediatric emergency medicine and faculty development in education.

Physician C is in his mid 50s and has been in medicine for 24 years. He was trained in pediatric rheumatology and teaches in the area of pediatric rheumatology and faculty development in education.

Physician D is in her early 60s and has been in pediatric medicine for 32 years. She was trained in general pediatrics and is the senior member of a large private practice of

pediatrics. She teaches general pediatrics in her office and faculty development in education at CCHMC.

Data Collection

The research sites for data collection were various meetings and conference rooms at CCHMC, a tertiary pediatric hospital serving the tri-state region of southwestern Ohio, Northern Kentucky and Southeastern Indiana. Data collection began in the fall of 1999, and the final interviews were conducted in the spring of 2003. In-class observations of pilot group and informal meetings, conversations and interviews with the participants were the main methods of collecting the data. Data sources included semi-structured interviews with the four physicians in the pilot group, participant observation notes (PON) from five courses (see the references for the courses), informal meeting conversations and other documents related to the program development (course materials, participants' project, etc).

Interviews: Interviews were conducted with each of the four participants. Each interview took about an hour. A set of semi-structured face-to-face interview questions was developed to parallel the research focus. These questions were used as a guideline to maintain the direction of the interview. This guideline indicated the major issues to be covered in the interview and was used during the process of the interview to prevent the conversation from going off task.

Observation of the participants: Jones (1996) defines "participant observation" as an observation in which the researcher also functions in a role typical of the group studied and takes part in the same activities. He believes participant observation to be the cornerstone of qualitative studies. In this study, the researcher, the first author of this paper was involved in the program development as an education coordinator and participated in the onsite class meetings. The four participating physicians met every Thursday afternoon in a reserved room at the Children's Hospital for over a year for face-to-face instruction, self-guided instruction, and facilitated group discussions. The investigator functioned both to facilitate the sessions and observe the group interactions with each other and the instructor looking for patterns of contextual behavior and meaning (Stokrocki, 1997).

Informal Meeting Conversations: Working in the same institution as the masters' participants, there were many occasions to meet and discuss informally ordinary topics or work related matters. These informal meetings commonly contained comments and shared information about the master's program. Information gleaned from these meetings is included in the database which was analyzed in this study.

Masters group meetings: Collaborative planning meetings occurred regularly during the development of the masters program for the purposes of problem solving, conflict management, production of medical education applications, administrative issues, and the development of the agenda for subsequent meetings. Because these tasks were sometimes complex and open to discussion of diverse views and opinions, it was important to establish a relaxed social climate to alleviate stress and facilitate a cooperative atmosphere.

Other Documents: Other documents collected and analyzed include curriculum development documents, course materials, and participants' projects.

Data Analysis

The data were analyzed using Grounded Theory principles. Strauss and Corbin (1990) describe the Grounded Theory approach as a series of highly structured steps in which small units of data are systematically compared and gradually built into a system of categories describing the phenomena observed. In this study, four steps were taken to analyze the qualitative data. First, interviews were recorded, transcribed verbatim and checked for accuracy. Second, all the transcripts were read to give a feel for the data, to be comfortable with developing categories, and to make comparisons and contrasts (Creswell, 1994). Third, the interviews were coded for content, based on the interview dialogue. Finally, the text of the transcripts was reviewed with the goal of identifying categories, themes, and recurring processes. The coding procedure was the same for the participation observation notes and research related text.

The design of this study was strengthened by using triangulation, a validity check on the data (Patton, 1999). The three sources of triangulation involved comparison of the results from three different data sources: interviews with the participants, participant observation notes, and other

documents that related to the courses and program development. To reduce researcher bias, analysis was conducted through the various facets of description, classification, and connecting concepts prior to any attempted overview. Researcher bias was probed using the constant comparative method (Glaser, 1978; Strauss & Corbin, 1994), and by checking accuracy of the interview scripts with the participants.

Findings and Results

Five major themes emerged from this study:

1. Academic Motivation

The participants were highly motivated to learn and develop a unique new program. They managed this academic endeavor as full-time physicians with busy schedules including clinical responsibilities, teaching, and family obligations. Because the majority of the coursework currently offered by the COE was face-to-face (rather than online), they had to block out 2-3 hours of their Thursday afternoons to accommodate the in-class time. Time for reading and written assignments came from early morning, evening and weekend hours.

2. Curriculum Adaptation and Core Courses

The curriculum for this program was adapted from an existing C&I major of the masters program from the Division of Teacher Education of the University of Cincinnati College of Education. The curriculum adaptation process began as soon as the physician participants started taking graduate level courses from the COE faculty. (COE faculty had no prior teaching experience with health care professionals). Their experiences with the courses were diverse and ignited significant debate and collaborative discussion. The data showed that some of the courses had differing degrees of impact on the different participants. Physicians in the pilot group were asked to reflect upon the most influential/beneficial and least influential/beneficial courses for each of them in the program.

Most Influential/Beneficial Courses

The participants described some of the courses as "most influential/beneficial" based on course dynamics, instructional activities, and the perceived impact on their teaching practice:

Human Learning: This was the only course the physician participants took with UC COE graduate students. The participants did not have any previous experience with online learning, and, therefore, they were significantly challenged taking this course online (one of two online courses). The instructor had been teaching it for many years and was very competent. The course evoked a very positive reaction, even though one of the participants described her learning preference as face-to-face. The participants quickly became aware of the benefits of independent online learning, which included studying at their own pace, a high level of freedom and flexibility of when and how to study, and the development of time-management and technology skills. The participants also felt the course content represented new material which was valuable to the overall curriculum and applicable to medical education. Physician A commented: "It was really the first time we thought about the process of learning.... [We learned] the underlying principles of how you learn… I think all of us in the program were probably intrigued by [the process of learning] because we all, coming from a medicine background, learned one way to be taught things and that is through didactic lecture….."

Cognitive and Social Aspects of Online Learning: This online course (the second) was taught by the same instructor. Participants reported that was a very valuable course with respect to understanding theoretical viewpoints of online learning, learner-centered instruction, constructivism, social interaction, different electronic tools, and learning formats. Physician D commented: "[the most important aspect of this course was that] I was looking at the [online teaching and learning] process from both the learner and teacher perspective."

Introductory Statistical Methods: This was the only course, of the 10 core courses completed by this group, taken without a formal instructor due to unavailability within the necessary time frame. Coursework and progress were monitored by a COE faculty to ensure quality and content. Using the recommended textbook and suggested course syllabus, the ten one-week sessions were conducted by a rotating group leader using group and peer teaching. All

assignments were self-study-based tasks and the group was responsible for answering questions related to weekly assignments. At the end of this self-study course, the participants returned all their completed assignments in a three ring binder to the college instructor to be graded. Although this was one of the most influential courses for this group, the researcher observed these sessions and witnessed the difficulties and challenges taking this course without an instructor (PON: 2001).

Introduction to Field Methods in Qualitative Research: For this course, participants read extensively about the philosophical foundations of qualitative research and research methodology and were actively involved in the discussion sessions. Each participant selected a research site to conduct observations and explore research questions. The concept was new for them since none had previous qualitative research experience. Although all of the activities in this course were very labor intensive, they enjoyed this course (PON: 2001) and commented on its value to the overall program. Physician D noted: "…the qualitative research portion of the [overall master's program] was a totally new idea that I had never even heard of."

Measurement and Evaluation: This course had a considerable impact on the participants since measurement and evaluation drive the thought and behavior of medical learners. Even though the textbooks were written for traditional college classroom and K-12 all of the participants liked the content of this course, in particular because new educational concepts, such as *benchmarks* and *rubrics* were taught. The pilot group physicians found the ideas very applicable for their disciplines, particularly in the evaluation of the core competencies recently mandated by the Accreditation Council on Graduate Medical Education (ACGME). Physician A commented: "[*Rubric*] was a new term for all of us, even though it is apparently a common concept in K-12 education." Physician C noted: "[Measurement and evaluation of teaching and learning] is an area that physicians are fairly naïve about and somebody needs to step up to the place to be an expert in those areas" in the medical arena.

Attitude Formation and Change: Dealing with patients, families, and community members is a daily activity for physicians and other healthcare professionals. This course was very valuable for the participants since they were not familiar with the theories of attitude formation and

change. As a final project, each participant presented a Power Point presentation, accompanied by a related literature review, of an attitude change program using attitude change theories. Physician D commented: "[Understanding attitude formation and change course content] is extremely valuable to pediatricians who are trying to change attitudes all the time, such as trying to get students, parents, and groups to adopt a [treatment] program."

Least Influential/Beneficial Courses

The participants described some of the courses as least influential based on course organization, teaching methods, and rapport with the instructor:

Computer Tools for Teachers: Two of the participants stated that they should have been given more opportunity to apply computer technology tools to their discipline. Comments included "…too superficial…needed to be developed more… needed more refinement…." They also felt the course materials should have been presented in a more practical and motivating way, ensuring that the physician-students mastered the educational concepts through hands-on experience. Physician C noted: "That class needed more hands-on, more time…it was too superficial"

Masters Research Seminar: The course content was too elementary for the participants' level of knowledge, and the instructor was not aware of the physicians' previous experience with literature searches in various databases (except for ERIC - Education Resources Information Center). Physician B noted: "they made it very basic…it sounds like more of a first year college course. We know how to look at the literature.... All of us have written papers [published in peer-reviewed medical journals]."

Adult Learning: The instructor's approach and the course materials made this course ineffective and irrelevant even though the topic was very important to the participants as adult learners. They felt that the book selected for the course was too philosophical and theory oriented for the stated purpose of the course. In addition, as faculty development instructors, the participants were already familiar with many of the principles of adult learning, which are emphasized in faculty development in education.

<u>Teaching and Learning Styles:</u> Two of the participants found this course "extremely boring" since there was little opportunity for discussion and interaction due to the nature of the instructional materials (which were comprised of a variety of self assessment tools).

Course Satisfaction Factors

Participants' comments reflected the importance of course organization as important to successful learning. They specifically cited instructors' skills in managing, planning and presenting overall course content and learning activities as key organization features. They stated that overall better course organization produced a higher level of their own groups learning and greater participant satisfaction. The data also showed that participants' satisfaction was influenced by the instructional materials, the pace of the course, the type of teacher-learner interaction, and the type of instructional strategies and activities employed in the course. While opinions on these matters are not direct measures of instructors or course effectiveness, they are legitimate indicators of participants' satisfaction with the courses taken.

3. Instruction and Learning

Instructional Methods: All participants were intrigued by the idea of constructivism, student-centered learning and teachers' roles as facilitator since these were relatively new concepts in traditional medical education. However, they thought some of the instructors' teaching methods were not conducive for learning.   Physician B did not feel the participants were always treated as adult learners. Physician D thought some of the instructors did not clearly define the course objectives in every teaching setting, which she felt was important to learning. Physician C did not like having guest speakers (guest speakers from multiple disciplines were invited to provide content in the adult learning course) which he felt decreased the effectiveness of instruction including the overall organization of the course. On the other hand, Physician A was impressed and especially enjoyed the format of graduate education in general. Specifically he cited the reading assignments followed by a general discussion of the reading content, a format which is uncommon in medical school.

Teaching Materials: In this program textbooks were the primary source of content to support participants' learning. As Ornstein and Hunkins (1998) stated "the textbook will continue as the

most frequently used instructional material at all grade levels, from the primary grades through graduate school. In many cases, it will continue to be the only instructional resource used by the teacher..."   Additional materials, such as surveys, hand-outs, and journal articles, were used to supplement the textbooks. All of the participants criticized the textbooks in general because they did not contain information pertinent to medical teaching. Since most of the text books were, in fact, written for K-12 and college level teaching, it was challenging for participants to seek meaning and understanding from these teaching materials in a medical context and to extrapolate the information to the medical setting.   Likewise, the instructors who were teaching physicians for the first time found incorporating medical examples into the course content difficult and uncomfortable; few were able to locate and use instructional materials that were relevant to medicine.

Learning Strategies: The data showed that participants engaged in various learning activities to extend their understanding of educational concepts and skills, rethink teaching and learning methods, and implement new ideas in medical education. Because of the differences in teaching approaches in medicine and education, there were times the participants had difficulty applying the educational principles to their discipline. However, using reflective learning techniques and peer learning strategies they usually found medical applications (PON: 2000 & 2001).

The participants demonstrated excellent group dynamics that kept their motivation high. The way they worked reflected the concept of "Personal Construction Theory" which describes how people experience the world and how they make sense of that experience (Kelly, 1955, 1970). Another learning concept that the pilot group demonstrated was "Engagement Theory" (Kearsley, 1996) which has three components:

- *Relate*: This component was evident in the team effort the group displayed in working together and collaborating with each other on specific problems, application issues, and learning activities.
- *Create*: The group demonstrated considerable creativity in their application of ideas and concepts learned in the program to the medical education setting.

- *Donate*: This component was reflected in their immediate application of educational concepts learned from the coursework to their own medical setting and dissemination to the broader community of medical educators regionally and nationally.

4. Overall Program Impact

Each pilot group participant benefited from the program in different ways. All reported that the program had been a very valuable experience for their personal development in teaching and learning. The program introduced new ideas and concepts in education and provided the opportunity to see contrast their own educational experiences and those of graduate students in the field of education.   The group was able to learn about education in a non-medical education setting and then apply that educational pedagogy to the medical setting.   This process allowed them to meet the challenges of guiding medical learners to higher standards of learning and development (PON: 2001)

All pilot group participants developed new visions for their educational endeavors. For example, Physicians A and B have revised the pediatric resident evaluation process to a competency-based evaluation process incorporating rubrics into the evaluation tool. Physician C became involved in curriculum development and developing evaluation strategies for pediatric rheumatology training programs through the ACGME and the American Board of Pediatrics for re-accreditation and re-certification. He has also begun developing rubrics for use in the evaluation of third year medical school students. Physician D has improved her knowledge of educational research and research methodologies which led her to become a reviewer for a major pediatric journal.

As a result of the program, the participants became more aware of themselves as educators and had a better understanding of teaching and learning concepts. They developed new visions for their future educational endeavors, especially in the area of educational research. They also reported that the masters program improved their teaching skills and increased their awareness of others' teaching and learning styles. One of the participants who began the program as a computer novice greatly improved her technology skills in general and specifically her computer-assisted teaching skills as a result of the coursework and final project.

5. Program Analysis and Recommendations for Change

Participants' Perspectives: Although there was no overall formal evaluation of this program by the pilot group (each course was evaluated by the participants according to the university's course evaluation policy), participants provided continuous insightful feedback based on their experience as program modification evolved. The Pros and Cons relating to the academic environment and resources as identified by the physician participants follow:

PROS

- There was significant intellectual exchange and collegiality among the participants.
- Participants were highly motivated and devoted to medical education.
- The program was feasible in the context of fulltime working healthcare professionals.
- Participants enjoyed the group work and discussions that provided a safe and comfortable atmosphere in which to learn and ask questions.
- Most course materials were innovative and motivated towards learning.
- Much of the program content was new, even to physicians with significant teaching experience.
- The program made participants aware of the breadth of the field of education. They envisioned this program is as a good avenue for academic promotion and productivity.
- Participants were able to present the program at national meetings and conferences.

CONS

- Non-medical teaching materials for certain courses were a challenge to understand within the medical context.
- Instructors' lack of medical background made some of the teaching sessions less effective.
- Courses were not designed to improve medical teaching directly.
- The curriculum did not include any coursework on curriculum development and evaluation.
- Participants' online learning experiences were limited to two online courses.
- All participants were novices regarding program development.

- The planning component (to develop a formal curriculum for online use) was amorphous and not well organized/structured.
- College of Education Faculty who were involved in this project did not provide adequate direction for the participants (e.g. format for master's proposal, practicum).
- This project began with very limited budget, which resulted in inadequate financial support and resources.

Recommendations for Change

The courses taken (and adapted to a medical focus) by the pilot group of physician participants formed the core curriculum for the subsequent online master's program. They concluded that several modifications of the curriculum and format should be made before offering the program nationally:

- Despite the participants' lack of experience with distance learning and the difficulties they experienced (as older adult learners) with this new format, they recommended an all online format in order to make the program more accessible and more feasible for professionals with fulltime job responsibilities. The online format with its inherent asynchronous and 24-hour availability allows participation at the individual's own pace and time of participation in course activities.
- Medical school curricula require constant review, updating, and revision because of the rapid expansion of knowledge in medicine. Because this function is often a major focus of medical educators, participants recommended the addition of coursework in the area of curriculum design and evaluation.
- They made several recommendations regarding textbooks and other supplementary materials (with greater focus on medical education) For example, textbook changes were recommended for the adult learning course as well as having a single instructor (as opposed to guest speakers).
- They recommended seeking a different instructor for one of the courses due to the instructor's poor quality of instruction and minimal time commitment to the course.
- They recommended expanding the budget for the program by means of participant fees and application for grant monies.

- They recommended a change in format for the master's seminar including a needs assessment of students' research experience and more emphasis on development of the master's research project proposal.

Conclusion

The current online master's program, which was developed as a collaboration of CCHMC and the University of Cincinnati College of Education, provides advanced graduate studies in education to physicians and other health care professionals. It is accessible and flexible enough for participants to be able to maintain their full-time professional and family responsibilities. This qualitative study described the experiences and input of four physicians (the pilot group) to assess and customize the existing M.Ed. program to a medical education focus, to help develop program content and delivery format, and to evaluate the feasibility of the program for health care professionals.

The results of this study document that the pilot group of physicians were able to help adapt traditional educational pedagogy to the medical setting through active participation in the existing M.Ed. program and convert the program to an online format. As a result of the experience and recommendations of this group, the curriculum committee has finalized the program curriculum and now offers the program nationally online (www.cincinnatichildrens.org/mastersineducation). Forty-one students are currently participating in the program. Seven, including two of the original pilot group, have completed the program and received their degrees. Four have completed all of the coursework and are working on their final master's projects; we anticipate these four participants defending and receiving their degrees by the end of 2005.

The results of this study are important not only to health care professionals but to other professional disciplines that struggle with similar dilemmas of how to advance careers through advanced studies and continuing professional education within the constraints of time. Advanced studies commonly require block time away from work to complete a degree program.

An attractive alternative given the easy access to the Internet is online learning. However, adapting traditional face-to-face learning to online learning and evaluating its feasibility for professionals requires direct input from the consumer to assure quality. This study demonstrates the utility of input from a pilot group of professionals (from the program target group) to change and adapt an existing educational program to a new focus and format. This requires commitment, time, and motivation from the pilot group, but the outcome is much more meaningful because the professionals' input results from direct and contextual knowledge.

The master's program will require further study in order to continue to evolve and improve. Individual course evaluations and program evaluation with input from more participants to determine program effectiveness and applicability to medical teaching are required. Additional studies should address outcomes of the program on physicians' careers as measured by scholarly output, promotion and career advancement, educational research activities, success in obtaining grant support for educational activities, and fostering lifelong learning.

References

Broudo, M.A. & Walsh, C. (2002). MEDICOL: Online Learning in Medicine and Dentistry. *Academic Medicine*, 77:926-927.

Casebeer, L. & Allison, J. (2002). Designing Tailored Web-based Instruction to Improve Practicing Physicians' Chlamydial Screening Rates. *Academic Medicine*, 77:929.

Creswell, J. W. (1994). *Research Design: Qualitative & Quantitative Approaches*. Thousand Oaks, CA: Sage.

Feagin, J. R., Orum, A.M., & Sjoberg, G. (eds.) (1991). *A Case for the Case Study.* Chapel Hill, NC: The University of North Carolina Press.

Glaser B. (1978). *Theoretical sensitivity: Advances in the methodology of grounded theory*. Mill Valley, CA: Sociology Press.

Hamel, J., Dufour, S., & Fortin, D. (1993). *Case Study Methods*. Sage Publications.

Kearsley, G. (1996). Engagement theory. Retrieved May 5, 2005 from the World Wide Web at http://home.sprynet.com/~gkearsley/engage.htm

Kelly, G. A. (1970). A brief introduction to personal construct theory: In: Bannister D (ed), *Perspectives in personal construct theory*. Canton: Acad Press.

Kelly, G. A. (1955). *The psychology of personal constructs.* New York: Norton.

Jones, M. O. (1996). *Studying organizational symbolism*. Thousand Oaks: Sage.

Ornstein, A.C., & Hunkins, F. P. (1998). *Curriculum: Foundations, principles, and issues (3rd ed.).* Boston: Allyn and Bacon.

Patton, M. (1990). *Qualitative Evaluation and Research Methods*, California: Sage Publications.

Patton, M.Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research,* 35(5):1189-1208.

Peterson's Guide to Distance Learning Programs (2003). Thomson & Peterson's, 2003.

Participants Observation Notes (PON) for the Attitude Formation and Change course, (Fall Quarter, 2000). October 26; November 2, 9, 16, 23, 30; December, 7, 14. Participants Observation Notes (PON) for the courses, Introductory Statistical Methods, Introduction to Field Methods in Qualitative Research, Cognitive and Social Aspects of Online Learning, Measurement and Evaluation (Winter & Spring Quarter, 2001). January 4, 11, 18, 25; February 1, 8, 15, 22; March 1, 8, 15, 22, 29; April 5, 12, 19, 26; May, 3, 10, 17, 24.

Stake, R. (1995). *The art of case research*. Thousand Oaks, CA: Sage Publications.

Stokrocki, M. (1997). Qualitative forms of research method. In S. LaPierre & E. Zimmerman (Eds.). Research methods and methodologies for art education (pp. 33-55). Reston, VA: NAEA.

Strauss, A. L. & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications.

Strauss, A. & Corbin, J. (1994). Grounded theory methodology. In: Denzin N, Lincoln Y (eds.) *The Handbook of Qualitative Research*. Thousand Oaks, CA: Sage Publications.

Wiecha, J. & Barrie, N. (2002). Collaborative Online Learning: A New Approach to Distance CME. *Academic Medicine*, 77:929.

Yin, R. K. (1994). *Case Study Research, Design and Methods,* 2nd ed. Newbury Park, Sage Publications.