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Action Research as a Qualitative Research Approach in Inter- Professional Education: The QUIPPED Approach

Margo Paterson
Queen's University, margo.paterson@queensu.ca

Jennifer M. Medves
Queen's University, jennifer.medves@queensu.ca

Christine Chapman
Queen's University, chapman@post.queensu.ca

Sarita Verma
University of Toronto, arita.verma@utoronto.ca

Teresa Broers
Queen's University, broerst@post.queensu.ca

See next page for additional authors

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Abstract

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Keywords

Inter-Professional Education, and Action Research

Authors

Margo Paterson, Jennifer M. Medves, Christine Chapman, Sarita Verma, Teresa Broers, and Cori Schroder

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Action Research as a Qualitative Research Approach in Inter-Professional Education: The QUIPPED Approach

Margo Paterson, Jennifer M Medves, and Christine Chapman
Queen's University, Kingston, Ontario, Canada

Sarita Verma
University of Toronto, Ontario, Canada

Teresa Broers and Cori Schroder
Queen's University, Kingston, Ontario, Canada

The Canadian government supports the transformation of education for health care providers based on the recognized need for an inter-professional collaborative approach to care. This first paper in a series of papers demonstrates the credibility of an action research approach for the promotion and understanding of inter-professional education (IPE). Located in the critical paradigm, this action research project is concerned with creating an educational environment that enhances the ability of learners and educators to provide patient-centred care through inter-professional collaboration. The QUIPPED project has invited various stakeholders (faculty and learners from various disciplines, consumers of health care, university administration and clinicians) to participate in the collaborative transformation of the educational culture and the co-creation of a shared knowledge for IPE. Key Words: Inter-Professional Education, and Action Research

Introduction

An Action Research approach is being undertaken to understand and promote Inter-Professional Education (IPE) in the Faculty of Health Sciences at Queen's University, Kingston, Ontario, Canada. Interprofessional education is defined as "occasions when two or more professions learn with, from and about each other to improve collaboration and the quality of care" (CAIPE, 1997, p. 19).

In the first of a series of papers highlighting the progress of IPE using action research through the Queen's University Inter-Professional Patient-Centred Education Direction (QUIPPED), this paper has as its focus the critical action research methodology being used for IPE research in particular. The paper demonstrates the congruence of the goals and objectives of the QUIPPED project with the characteristics of critical action research. The discussion supports the connection between the product and process of QUIPPED research and the credibility of action research. It further demonstrates that this approach to research reflects the phenomenon being studied and the type of knowledge required.

Interprofessional Education in Canada

Health care delivery is becoming increasingly complex (Zwarenstein, Reeves, & Perrier, 2005) with significant changes to several aspects of health provision, such as home care, day surgery, and complex drug therapies, all of which are increasingly critical elements of our health system. For a decade or more, there has been concern about the affordability and sustainability of Canada's health care system (Oandasan et al., 2004). In the report *The Future of Health Care in Canada* (2002), Romanow argued for the renovation of our concept of medicare to reflect the reality of our present situation, suggesting that the health care "system" be transformed

> from one in which a multitude of participants working in silos, focus primarily on managing illness, to one in which they work collaboratively to deliver a seamless, integrated array of services to Canadians, from prevention and promotion to primary care, to hospital, community, mental health, home and end-of-life care. (Romanow, 2002, p. xviii)

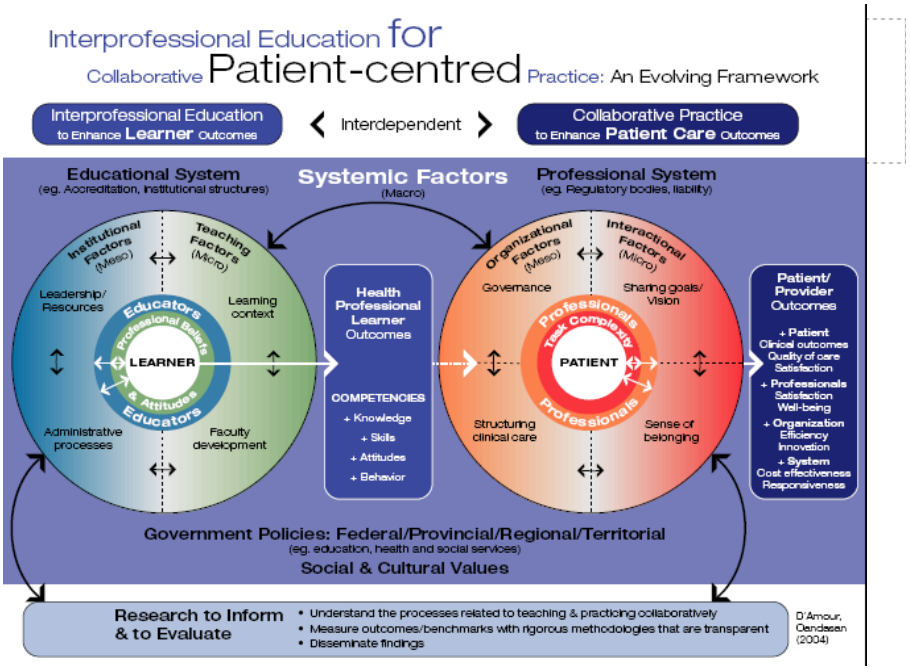
As a result, he recommends that "If health care providers are expected to work together and share expertise in a team environment, it makes sense that their education and training should prepare them for this type of working arrangement" (Romanow, p. 144).

The 2003 First Ministers' Accord on Health Care Renewal reflected Romanow's recommendations that fundamental changes are necessary in order to deliver an effective primary health care system through improvements to continuity and coordination of care (Health Canada, 2003). This Accord set a number of goals including the achievement of an integrated and interprofessional approach to primary care and further identified that changing the way health professionals are educated is a key component of health system renewal.

In 2003, the Federal Budget allocated 80 million dollars over five years to improve Human Health Resources (HHR) (Herbert, 2005). This funding enables Health Canada (Canada's Ministry of Health) in collaboration with the provincial and territorial governments, educators, and health professionals to develop a National HHR Strategy that includes "interdisciplinary education for collaborative patient-centred practice" (IECPCP) as one of its three initiatives.

As a first step, a team of health researchers explored current national and international trends impacting interprofessional approaches to primary health care, reviewed existing models of interprofessional education and collaborative patient-centred care practice frameworks, and provided an analysis of their findings (Herbert, 2005; Oandasan et al., 2004). A conceptual framework was developed D'Amour & Oandasan (2005) to define the essential features and determinants for IECPCP. This framework was designed to bridge the gap between interprofessional education and interprofessional patient-centred practice. It includes two separate but interacting and interdependent spheres for education and practice, and establishes linkages between the determinants and processes of collaboration at various levels; micro (teaching), meso (institutional), and macro (systemic).

Figure 1. Interprofessional education for collaborative patient-centred practice.



A second step sought to determine what evidence exists that links inter-professional education and improved patient outcomes. An initial review found no evidence of the effectiveness of pre-licensure IPE on patient outcomes (Oandasan et al., 2004). While these findings were initially discouraging, "no evidence of effectiveness" does not equate to "evidence of ineffectiveness" (Zwarenstein et al., 2005). These findings led to further exploration and a deeper understanding of the factors and determinants of inter-professional education and patient-centred collaboration, as illustrated by the IECPCP framework described above. One of the factors identified that traditional research approaches may be limiting for this new area of study (Stone, 2006).

A 2004 Health Canada call for proposals from IECPCP was the final (and current) step in this process, providing 13 million dollars to 11 multi-year projects across Canada in 2005 to develop models of inter-professional education and to evaluate their effectiveness using quantitative and/or qualitative research methods to explain the effects of these models. The QUIPPED project was one of the successfully funded projects, receiving almost $1.2 million over a 33-month period for IPE using an action research approach.

IPE at Queen's University - QUIPPED

The QUIPPED project seeks to create an inter-professional educational environment at Queen's University that enhances the ability of learners and faculty to provide patient-centred care, while recognizing the contribution of the health care team within a respectful and collaborative framework.

The educational environment in which the pre-licensure project activities take place encompasses learners from the Faculty of Health Sciences (FHS), comprised of three schools: medicine, nursing, and rehabilitation therapy (physical therapy and occupational therapy), as well as the X-ray technology program offered through the Eastern Ontario School of X-Ray Technology, based at Kingston General Hospital. In addition, IPE targets faculty and staff at the university and academic hospitals as well as health care professionals who work in the community practice setting in the Kingston catchment area.

The QUIPPED project team is governed by a Steering Committee that includes representation by students at the pre and post licensure level, and faculty members from nursing, medicine, physical therapy, and occupational therapy, as well as two consumer/patient representatives. QUIPPED formulated the following objectives from the Health Canada framework in order to achieve its goals.

1. Promote and demonstrate the benefits of inter-professional education for collaborative patient-centred practice;
2. Increase the number of educators prepared to teach from an inter-professional collaborative patient-centred perspective;
3. Increase the number of health professionals educated for collaborative patient-centred practice before and after entry-to-practice;
4. Stimulate networking and scholarship regarding best educational approaches for collaborative patient-centred practice; and
5. Facilitate inter-professional collaborative care in both the education and practice settings.

During the first year of the project, approximately 430 pre-licensure students from three different academic years from medicine, nursing, occupational therapy (OT), physical therapy (PT), and X-ray participated in one or more of the QUIPPED involved activities. Ninety post-licensure first year medical residents have participated in a QUIPPED activity. At least 30 faculty members have been involved in planning or teaching IP courses. Some of the initiatives which promoted shared learning opportunities were: an intimate partner violence workshop (all disciplines); IV and venipuncture skills (medicine and nursing students); professionals in a rural practice course (medicine, nursing, PT, OT, education, and theology students and faculty); and a wellness symposium (inter-professional team of presenters).

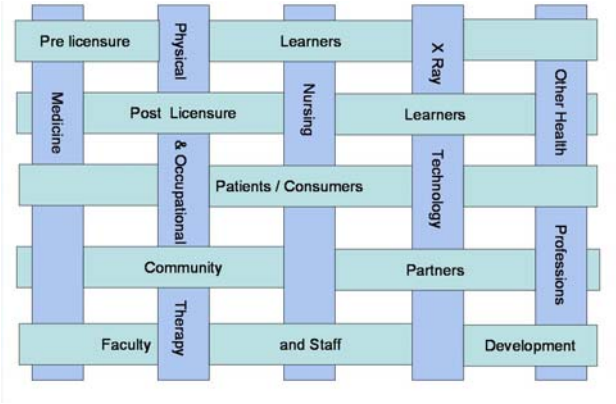
Twenty-two student stipends were awarded to health science students to support bottom-up change. The objective of this initiative was two-fold: (a) to encourage research and other inter-professional activities among health care students in the Queen's community and (b) to raise awareness of the importance of inter-professionalism among the student, faculty, and staff populations.

An IPE workshop was organized by QUIPPED around the issues of loss and bereavement, which was attended by 59 faculty members and clinicians. Two clinical health care teams from the Kingston community participated in the validation of a team survey diagnostic tool and attended a workshop on team development.

As the description above, and the matrix below illustrates, the QUIPPED project, specifically, and IPE, in general, are very complex initiatives. While the QUIPPED

project has initiated many new IPE projects, it has also assisted IPE initiatives already in existence in order to help others to evaluate, reflect on, and improve these initiatives.

Figure 2.
QUIPPED project matrix.



Critical Research Paradigm

The QUIPPED research project, informed by the need for renewal of the health care system in Canada, is located within a critical research paradigm based on the philosophy of realism, which is concerned with how political, historical, and socio-economic factors influence our lives and how we understand them (Higgs, 2001). This process requires critically examining the assumptions underlying knowledge that is held to be common sense with an aim to discover the power, inequality, exploitation, and oppression, which supports these social phenomena and practices.

Critical theory is based on the premise that because all people are socially located, knowledge is always influenced by an inquirer's norms, values, and interests (Greenwood & Levin, 2005; Habermas, 1972). Knowing within this paradigm is understood to be a socially constructed and socially distributed phenomenon (Berger & Luckmann, 1967). The critical paradigm is based on a pragmatic view (Greenwood & Levin) within which knowing is held to be largely tacit, and therefore is expressed in our actions (Polanyi, 1974). Tacit knowing suggests a "hidden" understanding, which guides our actions even though we may be unable to articulate this knowledge. By focusing on the verb *knowing* rather than the noun *knowledge* emphasis is placed on an individual's or group's actions and on this process of construction (Greenwood & Levin).

Within the critical paradigm, knowledge:

1. is not discovered or grasped, but rather acquired through critical debate;
2. requires reflection on how our thinking is socially and historically constructed, and how this limits our actions;
3. enables people to challenge learned restrictions, compulsions, or dictates of habit;
4. promotes understanding about how to transform current structures, relationships, and conditions, which constrain development and reform; and therefore is emancipatory and personally developmental. (Higgs, 2001, p. 49)

The critical paradigm is congruent with, and supports, Health Canada's vision of a Collaborative Patient-Centred Practice designed to enhance, "patient and family centred goals and values, provide mechanisms for continuous communication among care givers, optimize staff participation in clinical decision making within and across disciplines and foster respect for disciplinary contributions of all professionals" (Health Canada, 2003).

Each profession, and the discipline from which it emerged, develops a unique culture, which can be defined as the combination of all the possessions and ways of thinking and acting (Parkes, Laungani, & Young, 1997). This culture distinguishes one group of people from another, and tends to be passed down from one generation to another. The unique culture of each health care profession embodies the values, beliefs, customs, and behaviours, which reflect historic factors, including gender and social class distinctions, during its evolution (Hall, 2005). Within each of these isolated professional cultures, distinct systems of organized knowledge have been generated resulting in an artificial division and fragmentation of knowledge (D'Amour & Oandasan, 2005).

Within the sphere of inter-professional education, socialization issues have been highlighted as the key component that must be addressed as it is the cultural beliefs and attitudes which develop among health professionals that can affect their willingness to collaborate with other health professionals (Perkins & Tryssenaar, 1994; Zungalo, 1994). D'Amour and Oandansan (2005) explain that through their socialization, learners from each profession acquire specific conceptualizations of patients, the patients' needs, and the type of response needed to address the patients' complex health care situations. This process, however, is implicit (Roberts, 1989) and, as Petrie (1976) explains, leads to two different professionals looking at the same thing, but not seeing the same thing.

Within a critical paradigm, since knowledge is understood to be co-generated in context through interaction and debate rather than obtained through objective observation of cause and effect in a controlled environment, it is believed that through reflection on purposeful action an awareness is gained of how values, beliefs, and interests influence knowledge construction. In order for collaboration to be possible, team members must become aware of their cognitive maps as a prerequisite to understanding those of others (Hall, 2005), and to reconcile opposing views and provide an integrated and cohesive response to the needs of the patient (D'Amour & Oandasan, 2005).

Not only have professions emerged from within the isolated cultures of the various disciplines, so too have the research paradigms and methods used by these professions (Stone, 2006). In order to generate knowledge to support inter-professional collaboration, both in education and practice settings, approaches to research also need to become more interdisciplinary (Stone). There is a need to reflect not only on education and practice, but also on the research which supports these endeavors. Critical social science, grounded in a philosophy of pragmatism, attempts to do just this by blending views and methods (Greenwood & Levin, 2005; Onwuegbuzie, 2002). Pragmatists believe in both objective and subjective points of view and in the existence of causal relations, but also appreciate that it may not be possible to pin down many of these relationships (Onwuegbuzie). They accept external reality, but at the same time believe that values play a role in the interpretation of results. Since they believe that research is influenced by both theory and observation, they advocate mixed methods for research, that is, the use of qualitative and quantitative methods.

Within the IPE literature, some of the most important questions in health care concern the organization and culture of those who provide this care (D'Amour & Oandasan, 2005; Pope & Mays, 1995); those activities which traditional research methods in the health sciences have been designed to "remove" or ignore. Research approaches developed within the humanities, as opposed to the medical sciences, are argued to be more fruitful in examining the social and cultural aspects of IPE, as they aim to understand aspects of collaboration in natural rather than experimental settings in an attempt to provide meaning and explanation (Murray, 2002; Pope & Mays). Complex issues and interventions create challenges to traditional quantitative methods since they are not easily defined and are often not fully developed. Qualitative methods are better suited to this purpose (Pope & Mays). Rather than asking, "Did this IPE intervention significantly improve patient outcomes?" more exploratory type questions such as, "What do learners/professionals perceive collaboration to be?" and "What are some of the barriers to collaboration?" are asked. Qualitative research methods which aim to generate hypotheses, provide explanations, and gain understanding can complement the aims of quantitative research methods to test hypotheses, measure outcomes, and form generalizations (Jones, 1995).

Within each professional silo specific customs have generated particular bodies of knowledge, which no longer meet the current needs of the health care system and the consumers who rely on it. The research paradigm and methods adopted determine the form of knowledge generated. The critical paradigm holds that knowledge is co-constructed in action. Therefore, purposeful reflection on collaborative action can focus attention on this process of knowledge construction and give rise to a shared knowledge and collaborative culture. This new culture will support further collaborative action. Through this process a shared culture will continue to evolve to meet emergent needs. QUIPPED aims to encourage this cyclical process through reflection on, and change in, attitudes, beliefs, and values held within the various professions to initiate new ways of learning and acting together.

Critical Action Research

Action research, situated within a critical paradigm, was developed by the social psychologist Kurt Lewin (1946) and has been adopted and adapted by many researchers in various disciplines since this time. While there are many variations on the original model, all forms of action research share some common features; relationship between theory and practice, the value of participation, and the capacity of research to address practical problems in specific situations (Street, 2003).

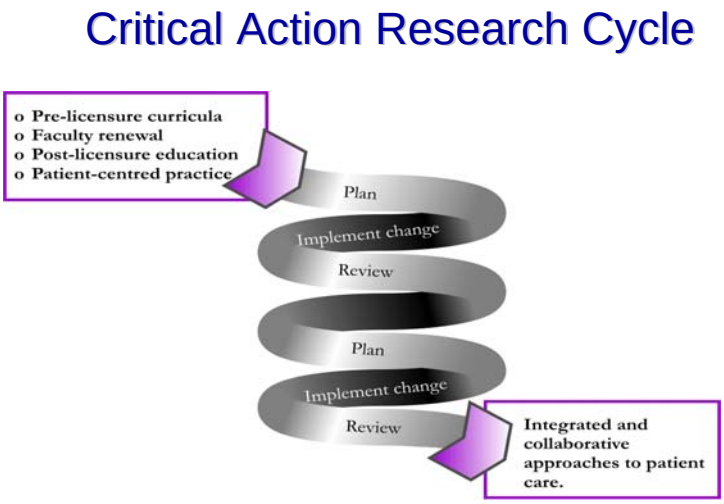
Interventions in health science and educational research are similar in that they take place in the real world and are subject to multiple economic, political, and social factors (Murray, 2002). It has been argued that traditional experimental research designs "may not be adequate, appropriate or reasonable" (Stone, 2006, p. 260) as the sole means of evaluating inter-professional education. Action research is a response to the inappropriateness of positivist science for the study of human organizations (Hart & Bond, 1995).

Street (2003) outlines six characteristics of action research developed specifically for use by health care professionals.

1. *Issue and outcome based:* Research is aimed to specifically address practical health issues of concern to a number of people by providing practical, context specific knowledge and strategies to improve health care and the environments in which care is conducted.
2. *Cyclical:* The research process is structured through continuous ongoing open cycles or a corkscrew spiral design which enables action to be carefully monitored, analysed, and evaluated, which acts as the basis for reflection on the success of the plan and the possibility for modifying it for the next cycle of planning, action, data collection, analysis, evaluation, and reflection.
3. *Knowledge in action:* Action researchers begin with everyday experience and consider how to act in intelligent and informed ways in a socially constructed world. This approach seeks to reduce the gap between theory and practice through the cyclic process of investigation, implementation, evaluation, and theorising. New knowledge is tested in action and in context, and then used to modify further action and change existing theory.
4. *Participatory and democratic:* Action research involves all participants who will be affected by the new knowledge or changes. Rather than the participants being the objects of observation, they become co-researchers who are viewed as possessing important knowledge to contribute to the course of the research. As co-researchers, participants are involved in decision making, inquiring, knowing, taking action, and owning the outcomes.
5. *Educative, developmental and responsive*: Participants "learn by doing" and as a result, action research develops over time as skills develop and communities become established. It is educative in the sense that if change is to be sustainable others need to be educated in the new knowledge and strategies.
6. *Credible, sustainable and transferable:* Unlike quantitative research, action research is unable to generalise and predict the answers to health problems. Action research is considered credible and valid if problems are solved and participants increase the control over their own lives (Greenwood & Levin, 2005). Action researchers endeavor to ensure that their improvements can be maintained over time. Through a series of cycles, this process provides the opportunity for stakeholders to fine-tune the intervention to better fit the emerging needs of the situation. Although context specific, action research enables participants to develop and test conceptual models and theories that can be transferable to other contexts with similar issues.

A phased or iterative approach for development and evaluation is argued to be a more useful approach for complex interventions as it aims to help researchers define clearly where they are in the research process (Campbell et al., 2000). The Critical Action Research Cycle developed by the QUIPPED team to conceptualize this process of action and reflection is depicted in Figure 2 below.

Figure 2. QUIPPED critical action research cycle (QUIPPED proposal, http://meds.queensu.ca/quipped/).



Action research in a critical paradigm is consistent with the conceptual framework for learning within inter-professional education. The IECPCP Final Report describes inter-professional education as collaborative, egalitarian, group-directed, experiential, reflective, and applied. Like action research, collaborative learning is both an end and a means. It is through collaboration with others that knowledge is constructed for that particular setting. Collaborative learning is a means of constructing the knowledge necessary to continue to provide proper care. Egalitarian learning minimizes status differences between participant and teacher, and between participant and participant. Every effort is made to set aside differences between professions in income, social class, and educational background so that participants may learn as equals.

A critical action research approach was chosen by the QUIPPED project to foster collaboration (both between professionals and between professionals and patients) to develop mutual understanding and respect, to support the active involvement in the co-generation of knowledge to solve practical problems. The iterative approach allows for a sequential and systematic examination of all factors and issues through reflective cycles designed to incrementally orient action and generate knowledge in order to clarify definitions, develop models, and evaluate their effectiveness. This approach facilitates the deconstruction of our current educational methods, eases the process for making change, and allows for the reconstruction of an education programme that is more integrated, adaptable, and sustainable. Evaluation is a fundamental component to the research cycle and sequentially follows each change. Changes from one level to the next will guide the mapping of the curriculum and influence learner/patient outcomes.

The QUIPPED experience has not only demonstrated the complexity of developing, implementing, and evaluating IPE, it has led to an understanding of the need for appropriate research methods within a new area of study. Health Canada envisions a health care system based on collaborative patient-centred practice designed to promote the active participation and mutual respect of each discipline in patient care (Health Canada, 2003). Since the cultural beliefs and attitudes of each group of health

professionals can affect their willingness to collaborate with other health professionals (Perkins & Tryssenaar, 1994; Zungalo, 1994), socialization issues have been highlighted as the key components that must be addressed within the sphere of inter-professional education (D'Amour & Oandasan, 2005). Action research, located within the critical paradigm, takes into account these social and cultural aspects of human organizations which traditional experimental research designs currently dominating health science research do not.

Inter-professional education requires a new culture and knowledge (D'Amour & Oandasan, 2005; Hall, 2005; Orchard, Curran, & Kabene, 2005). As a result, the QUIPPED project is not pursuing research of, and education for, an already existing culture and knowledge, but rather research and education to support the co-construction of a new and shared culture and knowledge through the reflective interaction of all participants. During its first year, the QUIPPED project invited stakeholders involved in the health care system including professionals, patients, and students to come together to discuss and debate the needs for, understanding of, and obstacles to inter-professional education at Queen's University and beyond. The QUIPPED project has taken a multi-layered approach to research due to the inclusion of a variety of stakeholders within a naturalistic setting, which gives rise to a broad range of logistical issues; collaboration among individuals and integration of programs; and knowledge, attitudes, and skills attained by various stakeholders for collaborative practice. The iterative cycles of action, reflection, and evaluation act to further define and develop the complex issue of inter-professional education, and support the incremental emergence of a new shared culture.

The next paper in this series will illustrate the implementation of a critical action research approach using the QUIPPED project as an example, demonstrating some of the considerations for and challenges and benefits of putting this research approach into practice in a culture that is accustom to more traditional research methods. This description will include the beginning stages of the project, which involved numerous meetings and discussions to initiate and develop relationships with a variety of administrative and academic leaders within the Faculty of Health Sciences in order to promote IPE and gain support and participation from these leaders.

After a year of networking, learning, and reflecting the QUIPPED project has begun a new cycle of research with a clearer focus allowing for further development and alteration of some of the existing initiatives, as well as the opportunity to begin new ones where areas of need and interest have been identified. Subsequent papers will be used to highlight how these iterative cycles have informed our research path, the co-generation of knowledge, and the transformation of the culture within the Faculty of Health Sciences.

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Author Note

Dr. Margo Paterson is an Associate Professor and Chair of the Occupational Therapy program in the School of Rehabilitation Therapy. Her areas of teaching and research include: clinical reasoning, communication skills, fieldwork education, qualitative research approaches, and collaborative inter-professional practice. She has published articles and book chapters related to all of these areas of interest. School of Rehabilitation Therapy, Queen's University, Kingston, Ontario, Canada, K7L 3N6: Phone: 613-533-6094; Fax: 613-533-6776; e-mail: margo.paterson@queensu.ca

Dr. Jennifer Medves is an associate professor in the School of Nursing at Queen's University and the Director of the Practice and Research in Nursing (PRN) group and an Ontario Ministry of Health and Long Term Care Career Scientist. Recent publications include collaboration in teams to reduce the effects of pandemic influenza, evidence for practice in maternity care, and rural collaborative practice to sustain maternity practice. Her research program, entitled Sustaining Rural Maternity Practice, examines the context of maternity nursing practice, collaborative practice between physicians, nurses and midwives, outcomes of rural births compared to urban births, and community practice to support sustaining rural health care. School of Nursing, Queen's University, Kingston, Ontario, Canada, K7L 3N6 : Phone: 613-533-6000 extension 74740; Fax: 613- 533-6770; email: jennifer.medves@queensu.ca

Christine Chapman, MEd, is the Education Coordinator for the Queen's University Inter-Professional Patient-Centred Education Direction (QUIPPED) whose primary role is to develop inter-professional education initiatives for students and faculty in the Faculty of Health Sciences. Her research interests include action research, inter-professional education, experiential learning, innovative teaching methods, and the exploration of multiple perspectives. QUIPPED Project, Queen's University, Kingston, Ontario, Canada, K7L 3N6: Phone: 623-533-6000 ext. 74750; Fax: (613) 533-6770; email: chapman@post.queensu.ca

Dr. Sarita Verma is currently the Vice Dean of Postgraduate Medical Education at the University of Toronto; She was Postgraduate Dean from 1998 to 2003 and Associate Dean Medical Education from 2003-2005 at Queen's University. She is a family physician who originally trained as a lawyer at the University of Ottawa (1981). She completed her medical degree at McMaster University (1991). She was a Diplomat in

Canada's Foreign Service and also worked with UNHCR in Sudan and Ethiopia. She has traveled extensively and has worked in South Africa, Nepal and India. Her areas of research are in health advocacy, evaluation, international health and inter-professional education. Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada: Phone: 416-978-6709; Fax: 416-978-7144; sarita.verma@utoronto.ca

Teresa Broers, MSc, is the Project Manager and Research Director of the Queen's University Inter-Professional Patient-Centred Education Direction. Her interests are in the areas of community development as well as mixed methods and inter-professional educational research. Her education in community health and epidemiology lends this research group a strong background in quantitative methodologies, while providing her an opportunity to gain a new interest in the value of qualitative methods. QUIPPED Project, Queen's University, Kingston, Ontario, Canada, K7L 3N6: Phone: (613) 533-6000 ext. 78763; Fax: (613) 533-6770; broerst@post.queensu.ca

Cori Schroder MD, MEd, CCFP, FCFP is an Assistant Professor, Departments of Oncology and Family Medicine Queen's University, Kingston, Canada. Cori is a Principal Investigator for the Queen's University Inter-professional Patient-centred Education Direction (QUIPPED) project. Her academic interests include palliative/end-of-life care, inter-professional education, innovative teaching methods, reflective practice, and evaluation of educational programs. School of Medicine, Queen's University, Kingston, Ontario, Canada, K7L 3N6: Phone: 613-548-2485; Fax: 613-5482436; schrodec@kgh.kari.net

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