



Canadian Interprofessional Health Collaborative
Consortium pancanadien pour l'interprofessionnalisme en santé

*learning to work together, working to learn together
apprendre à collaborer, collaborer pour apprendre*

Proposed Research approaches in the twenty funded IECPCP projects

October, 2007

Members of the research committee of the CIHC



The *Canadian Interprofessional Health Collaborative (CIHC)* is made up of health organizations, health educators, researchers, health professionals, and students from across Canada. We believe interprofessional education and collaborative patient-centred practice are key to building effective health care teams and improving the experience and outcomes of patients. The CIHC identifies and shares best practices and its extensive and growing knowledge in interprofessional education and collaborative practice.

Canadian Interprofessional Health Collaborative
College of Health Disciplines
University of British Columbia
Vancouver BC V6T 1Z3 Canada
www.cihc.ca

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CIP data will be made available

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The members of the research committee of the CIHC (Canadian Interprofessional Health Collaborative) undertook a review of all of the IECPCP funded projects to determine the research approaches each of the projects was going to take, and then requested an update from each of the project teams to account for changes and accuracy.

The members of the research committee developed a template to be used including a working definitions document (appendix A). Each PI of the projects was asked to provide an electronic copy of the proposal and any other data that would be useful.

Two of the co-chairs of CIHC's research subcommittee (Jennifer Medves and Hassan Soubhi) reviewed all the projects. In addition, three research assistants, based at Queen's University, abstracted the data using the template. Each proposal was read by two RA's and then checked for congruence with each other and by Jennifer Medves. Discussion of differences in interpretation or clarification was carried out as needed. The results were then transferred to Excel spread sheets and returned to the PI of each project for checking and clarification.

Results have been provided in the following tables that will be useful to scholars to understand the initial and subsequent understanding of their project goals and objectives through conceptual frameworks, philosophy, theories and research questions

Results (in tabular form)

PHILOSOPHICAL TRADITIONS

Project	Tradition
SCRIPT	Positivist
QUIPPED	Critical Action
IEGC	Positivist
In-BC	Participatory Action
The Institute	Constructivism
Cultivating communities of practice for collaborative care	Pragmatism
IPODE	Narrative Pedagogy
Project ECIP	Participatory Action

*Only those projects that outlined a philosophical tradition have been included in the table

CONCEPTUAL FRAMEWORK

Project	Conceptual Framework
Creating an interprofessional learning environment	Communities of Practice; D'Amour and Oandasan
SCRIPT	D'Amour and Oandasan
QUIPPED	Queen's Health Sciences Model
Collaborating for Education and Practice	D'Amour and Oandasan
IEGC	D'Amour and Oandasan
P-CITE	D'Amour and Oandasan
Patient centred care	D'Amour and Oandasan
McGill Educational Initiative	D'Amour and Oandasan
In-BC	D'Amour and Oandasan
The Institute	D'Amour and Oandasan
Seamless Care	D'Amour and Oandasan
Cultivating communities of practice for collaborative care	Communities of Practice; D'Amour and Oandasan
IPODE	Narrative pedagogy used to create learning communities
Project ECIP	D'Amour and Oandasan
PIER	Complexity science models of change within practices of relationship centred care
Teaching Interprofessional Collaborative	Interprofessional patient centred humanities learning module based on D'Amour and Oandasan
University of Manitoba	D'Amour and Oandasan
Interprofessional Education using simulations	D'Amour and Oandasan and Building a better tomorrow initiative
IDEAS	D'Amour and Oandasan
CIPHER	Kellogg Logic model focused on left side of D'Amour and Oandasan and University of Western Ontario Logic model based on Orchard's conceptual framework

THEORIES

Project	Theory
Creating an interprofessional learning environment	Theories of tacit knowledge and Practical wisdom Eraut, 1992; Coles, 2000
SCRIPT	Semantic/communication theory, change management theory, and theory of professional talk
QUIPPED	Change theory
Collaborating for Education and Practice	Adult learning theory, blended learning, common learning, service learning
IEGC	Systems theory
P-CITE	Adult learning theory, problem based theory
Patient centred care	Experiential learning
McGill Educational Initiative	Adult learning theory
In-BC	Adult learning theories
Seamless Care	Social cognitive theory, situated learning/communities of practice
Cultivating communities of practice for collaborative care	Adult learning theory, Communities of Practice. 1 st Nations ways of learning
IPODE	Case based theory
Project ECIP	Situated learning in Communities of Practice
PIER	Relationship centred
Teaching Interprofessional Collaborative	Theory of idea dominance, action reflected learning and adult learning theory
University of Manitoba	Knowledge encapsulation theory

* Only those projects that outlined theory have been included in the table

Changes and additions to the IECPCP projects

RESEARCH QUESTIONS

Project	Research Questions
Creating an interprofessional learning environment	What constitutes effective interprofessional lateral mentorship in Communities of Practice? 2. What competencies are required for multicultural Communities of Practice? 3. What are the contextual characteristics within education and practice environments that support effective interprofessional learning? 4. How do we create an interprofessional learning environment for students, faculty and practitioners through Communities of Practice? 5. What are the impacts of interprofessional Communities of practice on collaborative, patient-centered care?
SCRIPT	Does equipping ward staff with a body of skills and tools for practice change improve important health, health care and staff satisfaction measures in those units receiving the intervention in comparison with those which received it at a later time?
QUIPPED	How do IPE activities/experiences influence learner attitudes/skills/behaviour to contribute to enhancement of patient-centred care?
IEGC	What are the changes in: 1. participants'/learners' perspectives of the IPE experience. 2. the reciprocal attitudes or perceptions towards IP teaming within and between participant groups. 3. participants knowledge re IP collaboration and the competencies required for effective IP teaming. 4. behaviours indicating that individuals are transferring IP learning to practice and changes in professional practice itself. 5. the organizations and delivery of care. 6. the clients' awareness and perception of IPE initiatives.
McGill Educational Initiative	What are the factors that sustain or impede the viability of clinical units as centers of IPE and IPP
In-BC	How does the teaching occur; who initiates the learning; how is the learning effected; in what ways is the learning evaluated by both the teacher and learner; and how does the learning impact practice and health outcomes
Cultivating communities of practice for collaborative care	What is the impact of the facilitator development program and related activities on participants? Do participants change their IPE practices as a result of the ICC modules and how effective are they in IPE? What components of ICC modules have been used in curricula and what have been the challenges integrating CPCP and IPE into teaching and learning
IPODE	Phase 1 How to professionals in this are work together Phase 2 Patient group: What do health professionals need to know to meet the needs of patients and families living with cancer." p 14 Learner group: What knowledge/skills attitude do health professionals need in order to function well in an IP, collaborative practice. p 13
Project ECIP	Research questions stated in the Ethics Review Document were: 1) can communities of practice (CoP) be adapted to the clinical settings involved? 2) can they contribute to improving interprofessional collaboration, and if so, which components of CoP seem promising for that purpose?
PIER	Will complexity and relationship centered methodologies support locally desired change in team functioning and IPE? p 30.

Project	Research Questions
IDEAS	<p>1) What is the influence of professional context and scopes of practice on level of implementation of the IDEAS program? 2) How does interprofessional collaboration in program development and implementation influence student learning, readiness for IPE learning and team performance outcomes? 3) What is the perceived influence of enhanced professional development initiatives for faculty on the implementation of the IDEAS program? B) Outcomes Evaluation: 1) Does an IPE curriculum improve student's attitudes towards interprofessional learning? 2) Does an IPE curriculum improve team performance when delivering care in an ER/disaster situation. 3) Are knowledge and skills obtained by students through an IPE curriculum translated to and sustained in the professional practice of graduates? 4) Does integration of student teams into disaster/ER plan simulations improve perceived system efficiency? (pp19,21)</p>

* Only those projects that included specific research questions have been included

Summary & Discussion

All the projects were conceived as educational initiatives meant to bring about changes in the IPE curriculum, and/or improve care delivery, and/or affect patient outcomes. In response to Health Canada requirements for the proposals, all the projects included an evaluation component. Yet, only ten of the projects had research or evaluation questions specifically formulated in the original proposal.

The projects separated IPE from IPP, and only three projects (using a community of practice model) were integrating interprofessional learning and practice (IPE and IPP). Several projects were specific about creating changes in existing curricula while other proposals articulated developing curriculum for IPE opportunities.

Learners were included in all the proposals as either pre or post licensure or continuing education opportunities for clinicians. Faculty members as learners were also included in several proposals recognizing that content experts may also need updating and assistance to teach in the new integrated interprofessional modules. Expected influences were on patients specifically (satisfaction, attitudes towards IPE/IPP) or on outcomes of care.

The projects were conceptualized either directly on the basis of D'Amour & Ondasan's framework or had to show how their conceptual frameworks did fit with it. When specified, the theoretical frameworks included adult learning theories, narrative pedagogy, stages of change, and situated learning theory.

When reported, research questions were consistent with either the theory or conceptual framework presented. Three categories of questions could be identified: **What Questions**, **How Questions**, and **Model or Method Specific Questions** that were more relevant to the framework or theory that was used.

What Questions addressed either the components of effective interprofessional education or the change in these components. These components were targeted at two levels: the context of IPE and the professionals. Contextual factors included the organizational, educational, and social factors that facilitate or impede IPE/IPP. Professional factors were considered as the ingredients that were required for IPE/IPP to occur: scope of practice, attitudes, competencies, knowledge, skills, behavior. Other projects considered the changes that were required to occur in the contextual or professionals factors for an effective IPE/IPP. Only one project included a question on what sustains or impede the viability of clinical units as centers of IPE and IPP.

Example of what questions: What knowledge/skills/attitudes are needed? What organizational, educational and social factors can impede IPE? What changes in organization's attitudes, structure and process were required to participate in IPE? What changes in knowledge, skills, attitudes/behaviors result in participants?

How Questions were addressed by four projects. These questions considered the process through which IPE activities affected the learners (readiness; attitudes/skills/behaviors), interprofessional practice (team performance; working together), or the outcomes of care (enhancement of patient-centered care).

Examples of How Questions: How does the program influence student readiness, learning, and team performance? How do professionals work together? How do IPE activities/experiences influence learner attitudes/skills/behaviour to contribute to enhancement of patient-centred care?

Model or Method Specific Questions were more specific to the framework or learning method used. Examples include: what factors are required to adapt Communities of Practice (CoP) to the clinical setting? How to create interprofessional learning environment through CoP? How do CoP improve IECPCP? Will complexity and relationship centered methodologies support locally desired change in team functioning and IPE? Does integration of student teams into disaster/ER plan simulations improve perceived system efficiency?

By far, participative research with a mix of quantitative and qualitative methods was the dominant approach to research and/or evaluation. It included measuring outcomes and assessing change through quantitative methods and unearthing deeper meanings, perceptions and beliefs of the collaborative or learning experiences through qualitative research. Quantitative designs included, a cluster randomized trial (1 project), Stage Innovation Design (2 projects), and pre-post measures (3 projects).

Overall, the projects devised various ways to handle the complexity of multiple activities of curriculum development, learning and process or outcome evaluation. Two projects specifically used complexity science principles or methods and eleven projects specifically mentioned using an iterative or formative approach to the development or implementation of curriculum changes or to the evaluation of the project. This is congruent with the current lines of thinking about complex interventions in health care. These interventions have multiple components and only a phased iterative approach can help develop a sound understanding of the active ingredients of the intervention (Campbell et al, 2000; Bradley et al, 1999). Bradley et al for example, recommend combining qualitative and quantitative methods and rolling analyses over time with a view at optimizing the development of the intervention and improving understanding of its active ingredients before submitting it to RCT testing.

A companion document commissioned by the Calgary Health Region project and the QUIPPED project provides a background to theories used in IPE and IPC and theories that may be useful to help in interprofessional education and practice (Reeves, Suter et al, 2007). The document is available on the CIHC web site

Bradley F, Wiles R, Kinmonth A-L, Mant D, Gantley M (1999) Development and evaluation of complex interventions in health services research: case study of the Southampton heart integrated care project (SHIP). *BMJ*,318:711–5.

Campbell M, Fitzpatrick R, Haines A, Kinmonth A-L, Sandercock P, Spiegelhalter D, Tyrer P. (2000). Framework for design and evaluation of complex interventions to improve health. *BMJ*, 321;694-696

Appendix A: Working Definitions

CIHC RESEARCH COMMITTEE DEFINITIONS

The CIHC provided definitions of terms to help illustrate the data we were hoping to gather.

PHILOSOPHICAL TRADITIONS

Those philosophies that have influenced the conduct of knowledge development. In health care research those traditions most influential are empiricism, logical positivism, hermeneutics, phenomenology, ethnography, feminism, symbolic interactionism, post modernism, and post structuralism. Also called methodologies by some people.

CONCEPTUAL FRAMEWORK

A set of concepts and those assumptions that integrated them into a meaningful configuration (Nye & Berardo, 1966)

The concepts in a conceptual framework are highly abstract and usually not directly observable in the real world. Similarly, the assumptions linking the concepts are abstract generalizations that may not be immediately testable. (Fawcett, 1980)

A conceptual framework is used in research to outline possible courses of action or to present a preferred approach to a [system analysis](#) project. The [framework](#) is built from a [set](#) of [concepts](#) linked to a planned or existing [system](#) of [methods](#), [behaviors](#), functions, relationships, and [objects](#). A conceptual framework might, in computing terms, be thought of as a [relational model](#). (Wikipedia)

Concept/Construct

Concepts are abstractions that allow us to classify natural phenomena and empirical observations. For example, the concepts of “play” or “food” imply specific sets of recognitions and expectations that we have developed through our life experiences and feelings.

Concepts that represent non-observable behaviours or events are called constructs, i.e. invented names for abstract variables that cannot be seen directly, but are inferred by measuring relevant or correlated behaviours that are observable. Intelligence is an example of construct that we cannot see. (Portney & Watkins, 2000)

THEORY

A theory is formally defined as set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by specifying relations among variables (Kerlinger, 1973)

“It is theory that lets us speculate on the questions of why and how treatment works, accounting for what we observe. Theories provide the explanations for findings within the context of what is already known from the successes and failures of previous investigations” (Portney, & Watkin, 2000, p.21)