A Systemic Cybernetic Model of Programmatic "Action-Research": Lessons from Case Observations of the Integrated Generation, Communication & Management of Health Care Knowledge

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ABSTRACT

This paper presents a case study illustrating the integrated generation, communication and management of health care knowledge using a non-linear, **programmatic** systemic cybernetic action-research model. The model was evolved through the conduct of a 22-year program of applied health services studies. Lewin's theory-driven action and Argyris's practice-driven research approaches transpired simultaneously through synergistic feedback and feed-forward loops that constituted a helix of knowledge generation, communication and management, ever-evolving over time. The case study overviews the outcomes achieved by the interdisciplinary team of Canadian researchers, decision-makers and practitioners.. Outcomes reflect not only the research program's content aim of enhancing the health and independence of in-home healthcare clients, but also, simultaneously, the successful integration of knowledge generation, communication and management processes that ultimately comprised a learning organization attuned to the

on-going evolution of evidence-based practice. The case illuminates several strategies for advancing the theory and practice of integrated knowledge generation, communication and management. In an era demanding accountability for efficient, effective allocation of resources, in-depth examination of this integrated interdisciplinary, inter-sectoral long-term approach affords lessons for both the practice and theory of knowledge translation.

Key Words: programmatic action-research; knowledge translation; systemic cybernetic action-research; empowering partnering

INTRODUCTION

In an era demanding accountability for efficient and effective allocation of human and fiscal resources, the conception and design of approaches oriented to support knowledge generation, communication and management are increasingly important to academics, health services decision-makers and professional practitioners alike. This paper presents an overview of the real-world social construction of a non-linear, **programmatic** systemic cybernetic action-research model, the outcomes achieved, and the lessons learned. An in-depth examination of this integrated interdisciplinary, inter-sectoral long-term effort illuminates co-regulation processes that may enhance future action-research efforts.

THE MODEL

The model was developed through the process of conducting 22 years of funded applied health services investigation. Continuously capitalizing on collaborative relationships and achievements throughout their work together, the researchers, decision-makers and practitioners engaged in this programmatic effort simultaneously socially constructed theory-driven action and practice-driven research. Through this process, they together achieved the integration of research, education, consulting and real-life problem-solving.

To elaborate, from a Lewinian perspective [1], the participants involved in this programmatic action-research effort achieved **theory-driven action** through 25 research studies (11 qualitative; 14 quantitative). These studies generated knowledge for refinement of evidence-based health services and care aimed specifically toward optimizing the health and independence of older people requiring in-home/community-based services for chronic disease and/or long-term disabilities. Through several projects early in the program, participants explored, developed, tested and promoted organization-wide familiarity with an empowering partnering approach to in-home health services delivery and care [2-10]. The approach recognizes and builds on the strengths and resources of all involved in receiving and providing health care, integrating their personal knowledge, self-care abilities and decision-making throughout the care process. As programmatic effort continued, efficacy and effectiveness tests and interpretive investigation identified significant gains in clients' independence, health-promoting effort, perceived self-efficacy and quality of life [11-25]. As well, these studies uncovered substantially reduced hospitalization rates, and overall, reduced use of in-home care [11, 21]. Thus, research informed health care practice and service delivery directions.

Concomitantly, the group achieved **practice-driven research** [26] as they collaboratively generated, communicated and managed knowledge. To meet expectations for organizational accountability, decision-makers collected information on and progress toward "benchmarks", which, in turn, informed administratively and professionally accountable decisions to pursue specific research questions. Acquiring answers to these questions motivated evaluative research to determine the appropriateness and cost-effectiveness of organizational implementation of empowering partnering. As programmatic work continued, practice and service delivery directions implemented through the organization's strategic plan, benchmarking, continuous quality improvement, policies and procedures for

everyday service delivery and care afforded research opportunities. For example, demonstrated gains in the organization's benchmarks related to client satisfaction with service (a 21.25% increase) and client satisfaction with perceived care outcomes (a 23% increase) spearheaded decisions to adopt, apply and continue to generate knowledge related to empowering partnering.

OUTCOMES ACHIEVED

Overall, this systemic-cybernetic approach to programmatic action-research has resulted in the expansion of the theory of relational practices. This theoretical knowledge is academically represented by both publications and theses related to empowering partnering in health care and service delivery [2-25] and to systemic cybernetic programmatic "action-research" [27- 40].

Applications of this theory also have materialized, as represented by expanded organizational operations/actions premised on the empowering partnering theory. One large home care program servicing over 50,000 clients annually across South Western Ontario has fully operationalized the empowering partnering care model in collaboration with numerous provider agencies through policies, procedures and tools for in-home service delivery and care. The Canadian Association on Gerontology and the Seniors Directorate of Canada have espoused two national policy statements on health care for older people. The application of this theory also has been promoted as a provincially-rated accessible "health care improvement" available at a provincial practices registry site (http://www.health.gov.on.ca) and through educational and support materials made widely available at a website (www.healthline.ca). The theory generated through this work also constitutes a significant component of the South West Ontario Local Health Integration Network's *Self-Management in Theory and Practice- A Guide for Healthcare Providers*. The guide promotes an understanding of various

self-management approaches and tools to support the initiation of chronic disease-related self-care management. This resource is available both in hard copy and on-line (www.selfmanagementtoolkit.ca).

Expanded application of this theory also has focused on the systemic cybernetic programmatic "action-research" **process** [27-40]. Two website resources specifically operationalize this theory. One, a CIHR-IHSPR federal government-related website, presents case examples of knowledge transfer processes. The other is the National Collaborating Centre for Methods and Tools for Public Health Registry of Knowledge Translation Methods and Tools for Public Health, www.nccmt.ca.

The effort and outcomes of this programmatic approach to action-research also have meant numerous consultations and workshops. Examples include work undertaken for the Ontario Ministry of Health and Long Term Care's Supportive Housing Initiative, the Ontario Association of Community Care Access Centres, the McMaster Summer Institute on Case Management, Health Canada, VON Canada and Veteran's Affairs Canada. In total, these achievements reflect the successful integration of research, education, consulting and real-life problem-solving by a network of knowledge innovators, disseminators and adopters.

LESSONS LEARNED

Several co-regulation processes and synergistic loops are illuminated by this real-world case. Perhaps most importantly, conceptualizing "action-research" as a **programmatic** rather than as a singular project approach affords time to build mutually trusting relationships. Having a formalized infrastructure comprised of advisory and implementation committees representing all stakeholders, including policy makers, decision makers, health and social service practitioners from diverse disciplines, community leaders, family caregivers and seniors themselves, ensures the regular allocation of time and place for

relationship-building. Formalized opportunities for knowledge communication and management also promote relationships aimed toward knowledge integration, communication and management. In this programmatic research, we used: a four-month Freierian "dissemination for practice" integrated workshop/critical reflection exercise series for practitioners; a one-day regional "call-to-action" workshop for over 200 stakeholders; an 18-month national consensus strategy to create evidence-based Canadian consensus on health, social and economic issues related to seniors [33,35]; a transformative participatory knowledge translation pilot study [37]; and a two-phased study of a social interaction approach to accelerating knowledge to action [39]. Throughout all of these initiatives, longer-term relationships have been essential to achieve the integration of knowledge generation, communication and management.

As well, mutual commitment to and effort toward evolving a systemic cybernetic action-research approach over time and across studies enables the nimble responsiveness and spontaneous synergistic action that is required to achieve knowledge creation and flow that is embedded in and arises from real-world issues, problems and concerns. Furthermore, the ongoing acts of creating mutually-agreed processes and goals and sharing the recognition for outcomes achieved promote the development of a shared epistemological culture. Above all, the on-going execution of a reflexive, dialogical interaction amongst all involved and the sustained mutual facilitation and implementation of the systemic cybernetic programmatic model evolve leadership, continuous knowledge generation and use, and use of that knowledge in performance evaluation.

All of the activities of this programmatic approach to systemic cybernetic action-research naturally synthesize research evidence with tacit and experiential knowledge, and enact knowledge generation, implementation and management throughout everyday work. The approach thus creates, nurtures and sustains communities/networks of "action-research". Active participation of all stakeholders throughout the process has encompassed inter-professional reflective practice, and cultivated a transformative learning organization culture [38] amongst invidivuals, teams and institutional partners. Simultaneously this approach promotes the identification of the right research questions, the kind of information required to address them, and the utility of sought-after research findings. Ultimately, a programmatic approach to systemic cybernetic action-research helps to sustain networks of innovators, disseminators and adopters critical to the theoretical soundness, timeliness and practical application of new knowledge. (Funders: CIHR: MRC; NHRDP; Health Canada; MOHLTC; Rae Family Foundation).

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