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Abstract

Action research in the critical paradigm involves a process of continual refection in and on action including the research process itself. In the second in a series of several papers we report on the day-to-day management of the QUIPPED project. The aim was to facilitate patient centered care through inter-professional collaboration with health care learners at a Canadian university. Reflections of the continuum from early conceptualization of the project in 2004 through to lessons learned in 2008 are described. Key components include the importance of team development, overall coordination, and attention to logistical and structural issues are explored. The importance of learner driven initiatives as well as the need to prepare faculty for inter-professional teaching cannot be emphasized enough.

Keywords

Interprofessional Education and Management of Action Research

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The Constant Cycle: Day to Day Critical Action of the QUIPPED Project

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Action research in the critical paradigm involves a process of continual refection in and on action including the research process itself. In the second in a series of several papers we report on the day-to-day management of the QUIPPED project. The aim was to facilitate patient centred care through inter-professional collaboration with health care learners at a Canadian university. Reflections of the continuum from early conceptualization of the project in 2004 through to lessons learned in 2008 are described. Key components include the importance of team development, overall coordination, and attention to logistical and structural issues are explored. The importance of learner driven initiatives as well as the need to prepare faculty for inter-professional teaching cannot be emphasized enough. Key Words: Interprofessional Education and Management of Action Research

Introduction

An Action Research (AR) approach (Carr & Kemmis, 1986) is being undertaken to understand and promote interprofessional education in the Faculty of Health Sciences at Queen's University, Kingston, Ontario, Canada. The first paper in this series (Paterson et al., 2007) focused on demonstrating the credibility of a critical action approach for research in interprofessional education (IPE). This second paper of a series focuses on the day-to-day action of research through the management of the project and highlighting the progress of IPE. Critical action research (CAR) (Higgs, 2001) does not occur in isolation. There are often several issues that require action to occur simultaneously. Action research was chosen as the most appropriate methodology to study the transformation of health education to accommodate interprofessional learning opportunities for pre- and post-licensure learners. Interprofessional teaching and learning activities are becoming increasingly more common with the recognition of the value of team-work in health care (Lemieux-Charles & McGuire, 2006).

We have argued that health care professionals share common competencies, so teaching and learning together makes sense (Verma, Paterson, & Medves, 2006). A close examination of curricula offered in academic health science centres offers many opportunities for interprofessional teaching and learning, and the challenge is to exploit these opportunities. At Queen's University we had a unique opportunity with external funding through Health Canada to develop interprofessional teaching and learning. The process of developing the critical action research project through team building of faculty, and inclusion of students and patients, requires an assessment of the status quo; an environmental scan and a plan to transform through change processes. A critical action research project is established if there is built-in reflection in action (Schön, 1983) and assessment of change through evaluation as both a formative and summative exercise. The process by which this project developed in the first two years is presented to allow the reader to assess the evolution of the project.

Background

The Romanow Report (Health Canada, 2002) led to a call for proposals from Health Canada for Interprofessional Education for Collaborative Patient Centred Practice (IECPCP). Twenty projects were funded across the country. A 21st project bought all the projects together to share resources, processes, and provide a forum for developing interprofessional education and practice across the country. One project, the Queen's University Inter Professional Patient-centred Education Direction (QUIPPED), was funded in July 2005. The goal of the project was to "create an interprofessional education 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". http://meds.queensu.ca/quipped/assets/quipped_proposal.pdf accessed 17th October 2008 The primary research question was: How do interprofessional activities/experiences influence learner attitudes/skills/behaviour to contribute to enhancement of patient-centred care?

Conceptualization of the Project

From the outset, learners and patient advocates were invited to participate as full members in the development of the project proposal, the Steering Committee, and collaboration in the development of a number of initiatives. This concept was central to the action research philosophy that underpinned the origin of the project. As the project was perceived from day one as iterative, ethical approval for the project was sought at a macro level with the understanding that there would be many amendments as the project progressed. Thus when their opinions were sought, learners identified missed opportunities in the existing structures such as the Clinical Learning Centre where volunteers are interviewed and examined as "patients," the high fidelity Simulation Laboratory, in clinical settings, and in more traditional classroom settings. Using the same process of identification of gaps in the existing system, patient advocates identified when it was appropriate to include "patients as teachers" and multiple components to evaluation. Building on the enthusiasm for creating new opportunities identified by

patient advocates and learners, the faculty examined more broadly where interprofessional activities could fit in the curriculum. The chair of the Health Sciences Research Ethics Board has demonstrated remarkable tolerance to the continued submission of updates and amendments; to date we have submitted 14 of varying complexity. In addition, to keep the overall evaluation of the project separate, an ethics submission to the General Research Ethics Board was also submitted and approved.

From the conceptualization of the project in September 2004, learners from both pre- and post- licensure were involved in all aspects of design, implementation, and evaluation of the project. The learners were from the professional programmes of nursing, occupational therapy, physical therapy, medicine, and medical radiation technology, although not all professions were represented on every aspect. They have worked on learner driven projects (n = 22), served on the QUIPPED steering committee, developed community outreach opportunities, conducted research projects for graduate school requirements, presented and published, and provided useful feedback to faculty which will help in future planning of interprofessional opportunities in education programmes.

Developing an Interprofessional Team

New teams in health care education and research develop over time. The initial Principal Investigator (PI) group evolved out of existing relationships both personal and professional, which had a common goal to achieve transformational change in the curricula of the Faculty of Health Sciences. Naturally, this was feasible given that each of the three were representatives at a high academic level in the three health disciplines of medicine, nursing, and occupational therapy. MP and SV had successfully published together in the past, and MP and JM were involved in developing an interprofessional rural course. These past experiences had settled into mutual trust and the established professional collaborations were based on respect for each other's academic credentials. As the groundwork for collaboration had already started it was easier to establish a working relationship between the professions across the faculty and build a research team. Although an early attempt for grant funding was not successful, they realized that the continuation of a collaborative relationship brought three professional perspectives together and could be further developed in subsequent applications for funding. This early flattened hierarchy in the governance model was crucial as the subsequent navigations through the politics between the various collaborators in the development of the grant proposal for Health Canada which required solidarity amongst the three Co-PIs.

At the start of the proposal development, a message was sent to all faculty and students to encourage them to participate in one initiative and not divide into several initiatives. A team of 15 to 20 people met weekly and worked on sections, others provided weekly feedback, and others reviewed the whole proposal for congruence and logic. The project had 48 investigators acting as a team including faculty from Health Sciences (including basic scientists and clinicians), Engineering, Education, Business, and Theology. Several patient advocates were asked to provide feedback and two signed on to the project as collaborators and have been part of the process since that time, including many who volunteered to become members of the Steering Committee, who acted as an advisory team. These volunteers represented all stakeholders and provided

direction to the research team. The two patient/consumer advocates were especially active as ongoing consultants to the project and both were active in many ways including presenting at scientific conferences, and advising about student research projects.

During the project the critical action cycle has welcomed new members to the IP team, while others have had less of a role because of their change in job description or circumstances. An additional PI was added, CS, when SV moved to a different city. By having an open team concept it has allowed new members to feel part of the team and welcome. It has also allowed for faculty to be committed for one part of the development of a module, but not to feel obliged to contribute to the overall project objectives if they are not able to commit any more time. The project has brought together faculty who have traditionally worked together and it has introduced new people who perhaps did not know they had shared interests. While faculty tends to know people who teach in the same substantive area, they may not be so aware of those who teach in the same clinical agency or institution.

The day-to-day management of the project fell to the project manager in close collaboration with the PIs who shared responsibility for various aspects of the project. JM oversaw the budget throughout the project and liased with the funding agency, Health Canada; MP was responsible for the annual performance appraisals; SV took the lead facilitating scholarship activities and offering an arms length perspective; and CS developed the sustainability plan and was appointed as the inaugural Director of the Office of Interprofessional Education and Practice. The project had a high turnover of staff by switching to other jobs or accessing higher education opportunities in various disciplines (law, medicine, and occupational therapy). This has resulted in new ideas and energy coming into the project throughout. However, it has been a challenge due to the continual need to articulate and explain the project to new staff.

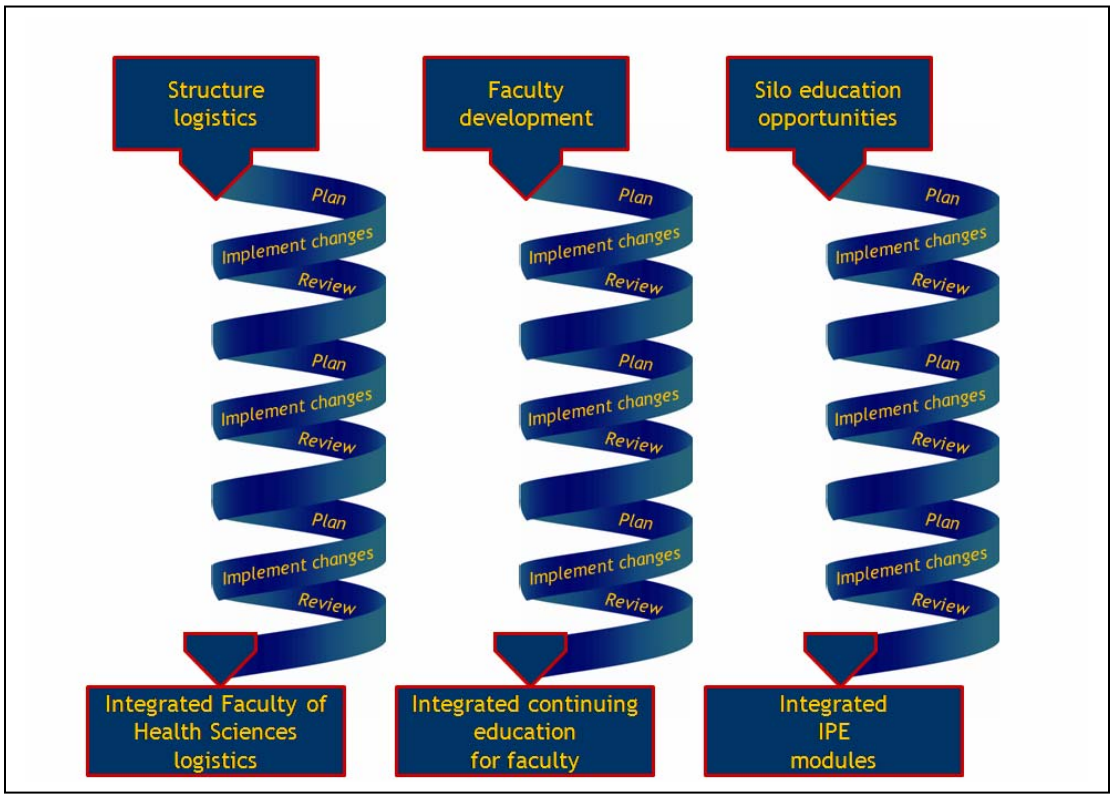
In addition, at the beginning of the project a template was developed that helped track the objectives of the project. At least four times a year the template was examined by the PI's and the project staff, to make sure we were doing what we said we were going to do. At the end of the first year we realized we were leading all of the initiatives and recognized that if IPE was going to be sustainable we had to facilitate others rather than doing it ourselves.

Interprofessional activities have taken place ad hoc over many years at Queen's University and this has helped in the development of the QUIPPED project. One activity, the intimate partner violence workshop, evolved into a multidisciplinary session with professionals from various professions presenting their perspectives, responsibilities, and challenges. The learners obtained a great deal of information, but it tended to be didactic with little opportunity for group work (for students from different disciplines to interact in order to learn with, from and about one another). Communication skills have been taught together by faculty from Rehabilitation Therapy and Nursing periodically in a variety of settings, in a number of different courses. These relationships made assembling the team an easier job, as well as the fact that they all belonged to the Faculty of Health Sciences.

Early on in the project time frame we identified that there were significant barriers to timetabling interprofessional activities that take place over several days or weeks. In many circumstances we might have confined out activities to overcome these structural barriers. The team took a pragmatic approach that we would not let these

barriers hold up our progress; we would attend to structural barriers at the same time as addressing the identification, development, teaching, and evaluation of core competencies in the health professions that lend themselves to interprofessional teaching and learning. Figure one, below, shows the critical action research cycles working together side by side.

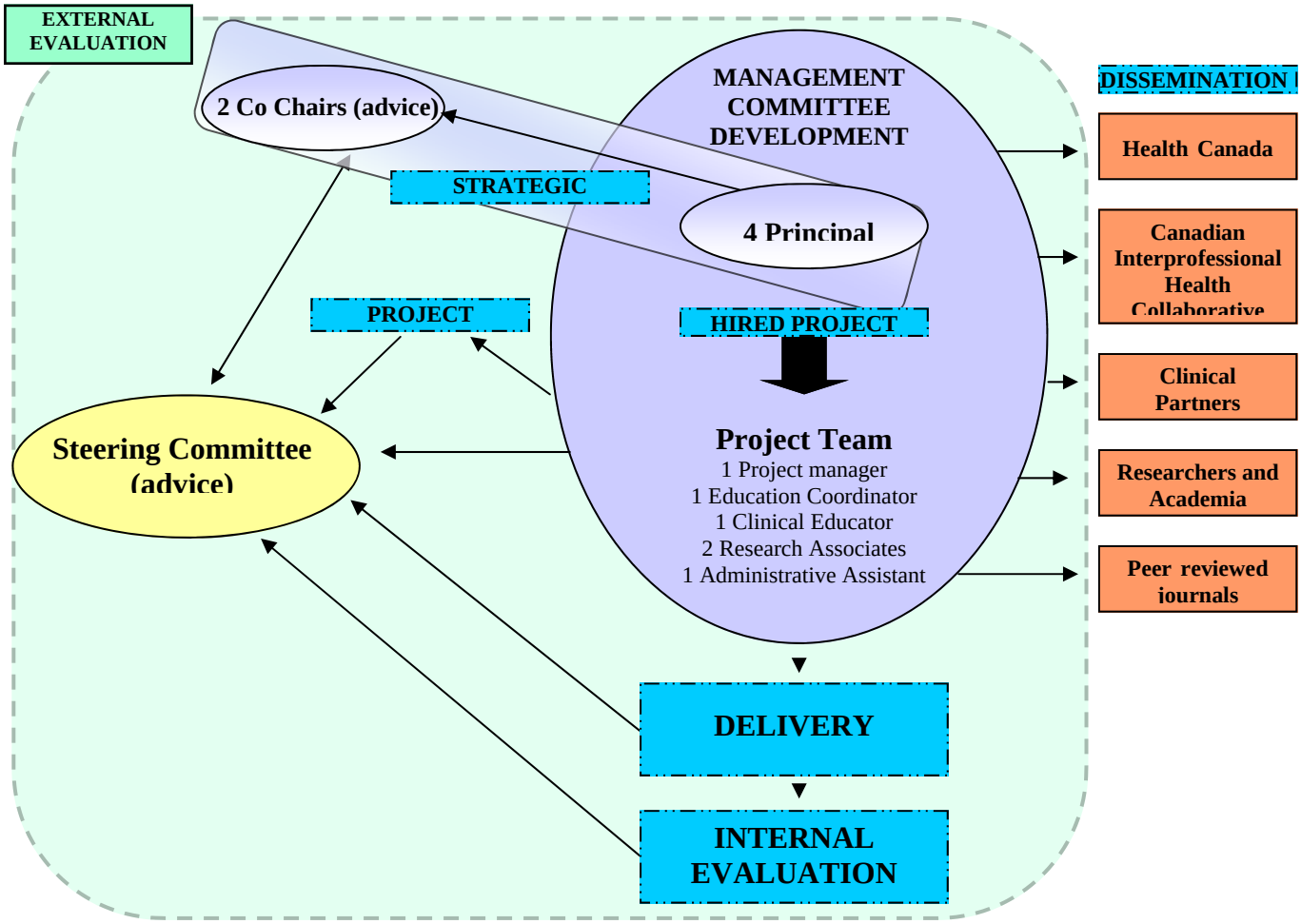
Figure 1 QUIPPED Conceptual Framework



Overall Coordination of the Project

The project was funded in July 2005. The steering committee meets every other month for a one-hour meeting. The committee is made up of members from all of the schools, faculty, and students and two patient advocates. There are two co-chairs, senior faculty representatives (one from Nursing and one from Rehabilitation Therapy). In the early months these meetings tended to take the form of reporting back to the steering committee, we now send written reports ahead of time and provide more time for discussion at the meetings, thereby encouraging feedback and the generation of ideas from committee members for curricula development.

Figure 2QUIPPED Organizational Structur



The four principal investigators then hired the research team. Some members stayed for short periods of time, some have stayed for the whole project. The PI's realized that as some could not guarantee long term employment, we needed to recognize that people may move on. The research team consisted of a project manager (TB), an educator (CC), a clinician (AO'R), and an executive administrator. With the PI's, those hired formed the team that met regularly. As we had on average three cycles of CAR ongoing at any one time it required regular meetings of the team to assess workload, priorities, and lessons learned. Naively, we thought this would happen monthly; lesson learned on reflection, we have met every week for approximately one and a half hours. We prepare minutes of each meeting, review the agenda each week, and re-prioritise often. The PI's and the team are always present for the meetings, unless they are out of town, and occasionally guests are asked to come and present and discuss a particular issue.

These weekly meetings have been critical to the success of the action research project, as all participants are encouraged to discuss issues that had arisen over the past week and to share any relevant concerns. The atmosphere in these meetings has been supportive and encouraging with as much emphasis placed on the "process" of the meeting and resultant discussion as the outcome or "product." In other words, we have been highly sensitive to the action in the field on a weekly basis and responsive to the most relevant issues or concerns at that particular time. We learned early on that some of the team were process people and others product people. At times the product people, including the first author, were uncomfortable with the team building exercises as they wanted to move straight to data collection and analysis. However, we all recognized the importance of taking time to develop as a team and understanding not only professional differences but also character differences between team members. The PI's readily admit that they learned much about the other professions including the language that while acceptable in one profession was unacceptable in another. The word "training" in medicine holds no negative connotations, while in nursing training it is seen as a reflection of hospital based apprenticeships. Nursing professors stress education rather than training. Nursing uses the terms clinical placement, occupational therapy uses the term fieldwork. By recognizing and articulating our differences we all came to appreciate the differing views, language, and understanding of scopes of practice.

The external evaluator attends a meeting approximately four times a year to report back on findings and to discuss issues with the team. In addition, we have a one-day retreat meeting twice a year as a strategy setting session.

The external evaluator has been hired to be at arms length of the research team to evaluate the effect of the project on the Queen's education environment. As such, interviews and focus group participants are able to speak freely are not identified to the research team, and the statements are not attributable to an individual. This was believed to be the best way to ensure we were not hearing feedback based on what participants believed we wanted to hear, but also to give a frank and authentic opinion on many issues related to interprofessional education.

Structure and Logistics

At Queen's University we are fortunate to have the three lead health care professional programmes on our grant in one Faculty of Health Sciences. In many Canadian Universities there is a division with medicine often in its own faculty with or without some other health professions. Over the first two years we tried a number of pilot learning modules with a small number of students; sometimes as an elective to their professional programme, sometimes embedded in a compulsory course to learn as much as we could about the potential barriers.

The decision making process has been an interesting aspect of the QUIPPED action research project. We realized early on that we could not work in isolation and develop wonderful programs that would not be sustainable, but rather we would be more effective as change agents working within the various faculties and bringing others onboard as "IPE champions." A major focus of the project was to provide IPE training via a certificate in Interprofessional Teaching and Learning (IPTL) with 33 participants to

date. This IPTL program will be the focus of the next manuscript in this four part series in TQR and will be explained in depth at that time.

We have decided to take the approach of integrating modules into existing curricula where overlaps between programs occur by replacing some uni-professional learning with interprofessional learning, as this appears to be the easiest approach given the different structures of the schools of medicine, nursing, and rehabilitation therapy. Even though the professional programmes are in unison within the Faculty, the design of the curriculum is very different throughout the various schools. The School of Nursing has courses offered over a 12 week term in the undergraduate university time slot system, the School of Rehabilitation offers courses in seven week blocks over a 14 week term reflecting the graduate university system, and the School of Medicine has a curriculum offered in phases that do not easily match with either of the other two schools. We have also recognized that the competencies acquired for interprofessional practice can be obtained in a number of different ways and as a result, we will offer options for students. In this way, students will be able to select IP activities that are more in line with their interests rather than being forced to take a number of modules that may not help them once in practice. Logistically it makes it simpler if not all 300 plus students are required to complete every module every year. Rather, over the course of their program they will practice and demonstrate core IP competencies. We recognized that we had to replace uni-professional with interprofessional opportunities; IP could not be in addition to existing education. In the first year we spent significant time trying to match existing curriculum and trying to find a time each week for interprofessional education. Two of the schools were able to free up Friday mornings in both fall and winter terms, the other was not able to make the necessary changes. In addition, the team recognized that having an IP time each week was isolating these opportunities from the normal curriculum and could be perceived as not essential. In a discussion with faculty in Health Sciences it became clear that IP should be integrated, not every opportunity needed to be compulsory, and it had to replace, not be in addition to, existing education modules.

Although we have encountered barriers, we are committed to trying to create ways to overcome them by approaching the problems differently. Funding for professional programmes makes moving money from one to another very difficult. In order for the Theology 730/RHBS 830 course to have the funds to pay a coordinator and provide the necessary course materials, multiple sources were sought. Originally, we funded part of the course through the Bridge Street United Church foundation. Instructors taught without compensation, and a small amount of funding came from the Faculty of Health Sciences. In the second and third year the QUIPPED project partially funded the course, with an in kind contribution of research analysis. The PI's met with the senior administrators at the university to try and find ways to organize inter-faculty courses, which could ensure that similar courses could be offered, there was some way to account for costs, and faculty could be acknowledged for their contributions to the course. The course does require a coordinator to ensure smooth running and this has presented the most problems due to union rules governing hiring non tenure track instructors. Everyone at the university is sympathetic to the issues and wants to resolve them, but there is no solution – yet.

Long term funding needs to be secured and we hope that by completing three iterations and demonstrating the benefits we can ensure the course continues.

Each department or faculty has a workload agreement with the teaching faculty. As each one is different, weighting of courses is varied. Thus, obtaining equivalency across the campus is a work in progress. At this time most faculty are teaching IP components that are not embedded in an existing course and therefore a responsibility above and beyond their regular teaching load. Issues of workload are minor compared to differing expectations by students of acceptable work required. In the Theology 730/RHBS 830 one group of students were astonished at the workload for an elective and negotiation between them and other students, and the faculty developed it into a useful discussion of differences between professions and the amount of course credit students obtained from taking the course.

Preparation of the Faculty for Interprofessional Teaching

Groups of faculty naturally came together to approach substantive areas early on in the project to design interprofessional sessions on family violence identification and management, rural professionals, high fidelity simulation, grief and bereavement, suffering, medication errors, and communication. As the notion of interprofessional education became more evident at Queen's University other topics were identified including stroke rehabilitation, geriatric care, mental health in the community, palliative care, and intellectual disabilities.

From the conceptualization of the project we had known that part of the project needed to be faculty development in interprofessional teaching. Very careful preparation involving a large planning committee has enabled the first offering of an interprofessional teaching and learning professional development programme in the second year of the project. There were almost as many instructors in the programme as there was faculty taking the course. The numbers of faculty involved in the development of this program was large, in part because the program required the collaboration of members from various professions in the planning and the modeling of interprofessionalism while instructing. The numbers of participants was kept small to allow for and model interactive, experiential learning necessary for IPE. The numbers of faculty involved in the planning and delivery of this program enabled a wide variation of teaching styles and substantive areas to be taught, and a clear demonstration of the skills required to teach in an interprofessional environment.

Identification of Learning Modules

At some institutions, in order to incorporate interprofessional activities, time has been set aside in the curriculum to bring all students together for a day or a week to engage in an interprofessional courses or modules. The University of Toronto has a very successful Pain Management week (Watt-Watson et al., 2004). The University of Alberta offers an interdisciplinary course where health care professional learners are taught together and meet twice weekly for a five week time period (University of Alberta, 2007). This theoretical course is also linked to a clinical course that can be taken over five weeks where groups of interprofessional students are placed together in clinical settings to work as a team.

Identification of learning modules at Queen's University has not occurred in isolation. At the same time that the QUIPPED project was funded, a high fidelity simulation infrastructure grant was obtained. This has allowed for development of interprofessional modules in the simulation laboratory to be conducted, and we have used the information learned through the IPE action research project to develop different learning modules in the Simulation Laboratory. The modules were identified as those where at least two professions work together and were clustered around acute care incidents, which occur mainly in the emergency and urgent care departments.

Development as a Team

The PI's (SV, JM, MP, CS) and the management team (TB, CC, AOR, LM, LP) recognized early that we have different strengths in our personalities. JM, SV, and MP had developed projects together in the past. CS was new to the team, and so the four PI's spent some time getting to know about each others' clinical and professional backgrounds. We had to recognize that we all in some way wanted to know about the benefits for our students and to a certain extent, ourselves. It was important, especially in the early days, to listen to everyone in the group and recognize when someone was talking about an issue that was really critical to them. In doing so, we wanted to ensure that no one would feel their voice was not heard, and hoped that if consensus had to be obtained no one person felt alienated enough to leave the group. The management team often met weekly to discuss what each was working on, to provide advice, and help as required, and also to prioritize meetings, initiatives, and scholarships. We have also sought additional funding, and by bringing in other researchers and funds to the project, we have persuaded the senior administrators that this is an approach to education and practice that is established and importantly our expertise is receiving external validation with new funding.

We all believe in interprofessional education and practice, but how we make it function differs. We work well together as a team, but it took effort to learn to know each other and appreciate our differences. Everyone on the team recognized the importance of developing as a team so that we could model interprofessionalism to our colleagues and learners. Discussion of work processes helped understand the context of each others working environment. Everyone had to acknowledge that the PI's had other jobs with varying responsibilities that at times made them simply unavailable for meetings and discourse. By recognizing that, there was no hierarchy of the "other" parts of the lives of the PI's we adapted to cherishing and valuing the time spent together and ensuring we planned day long meetings well in advance, weekly meetings were set when all could be available, and we respected that at times team members were unavailable. An assessment of our personalities using the Keirsey Temperament Sorter (2008) demonstrated that our team included a good balance and range; three guardians, three idealists, one artisan, and one rational with a good mixture of the secondary traits. It helped to know who on the team really liked process discussion and who did not. The comfort of the team to engage in gentle teasing, respecting other opinions, and celebrating achievements as a group were essential. This involved spending social time together, meeting over lunch hours, and baking cakes for birthdays. In this way, the team interactions became more authentic and acknowledged our diversity as well as our commonalities.

The team also recognized the importance of developing a cadre of faculty, who would be able to teach in interprofessional modules and demonstrate the attributes to other faculty. The definition of interprofessional education adopted by most Canadian researchers and educators is: occasions when two or more professions learn with, from and about each other to improve collaboration and the quality of care (Canadian Interprofessional Health Collaborative, 2007). During the planning of the Grief and Bereavement workshop, the team recognized that while faculty from many different disciplines were willing to work together (they had the same goal) to develop a workshop, they still did not really work together. At the workshop, while participants did not recognize this issue, it was plain that despite planning, the teaching on the day was still multi-professional rather than interprofessional, as there was little integration of material across professions, which was delivered to multiple professions.

Learner Led Initiatives

At the time of the national funding competition, pre-licensure student organizations across the country launched the National Health Sciences Students Association (NaHSSA, n.d.). Queen's University students were one of the first to join the organization and have subsequently developed a chapter at Queen's. As part of the mandate of the project we considered it to be important to inform the general population about interprofessional education and practice. A session was organized in the local shopping mall to showcase interprofessional activities. The half day session was designed and organized by learners and we had 120 children and their families participate. From this session it was also understood that if we wanted health care professionals to work together, we needed to inform students prior to enrolling in programmes. As a result, we have also included sessions at the high school open houses offered by the university. Potential applicants have been interested in learning how professionals work together.

Lessons Learned

We have learned so far that team building starts at the personal level, and it helps if it can be built on existing relationships to develop respect. The team has to commit to a common theme, focus, and never allow internal disagreements to be known and exploited. The common message about the benefits of collaboration in education is primary and adhering to the goals and outcomes is the key. The federal government of Canada spearheaded this initiative and provided research funding, creating an environment for change. Several members of the team had struggled for years to establish an elective course across several faculties. There was no interest in funding the initiative until external money became available and then there was a commitment from senior administrators. Clinical partners were determined to assist staff in utilizing IP opportunities as they believed it was a useful retention strategy.

The team in critical action research is absolutely fundamental; they must be able to live with uncertainty and constant change. The members of the team have to be compatible in styles so that the work is done, and committed to the long-term goals. Someone has to worry about process, but everyone has to value process- even when it seems to slow down progress. Equally some one must monitor outcomes of the project

and ensure the research questions are being answered. Professionals in a team must value their own profession in order to value the others.

Critical action can be successful when a number of spirals are in action; care must be taken to prioritize activities so that changes are taking place and not in isolation from other changes. Critical action allows for, and should take advantage, of new opportunities. During the time of this project, we have submitted several other grants to complement the activities and have secured infrastructure funding for a further three years. We will perform the evaluation of an interprofessional high fidelity simulation research project, develop modules for IP through a grant from the Canadian Patient Safety Institute, and are leading the application for a provincial IPE/IPC collaboration.

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