

THIRD QUARTER PROGRESS REPORT

PROJECT: #99574 *Fostering interprofessional practice in rehabilitation and complex continuing care through collaboration and virtual learning. (note the title has changed slightly to incorporate OLT grant Appendix A project description title).*

QUARTER: Q3 (October 1 to December 31, 2001)

1.0 PROJECT STATUS

1.1 Deliverables:

a) Forecast Deliverables:

Monthly Reports – At the outset of this research, we predicted, as a deliverable, a minimum yield of 16 notes every month contributed to a communal virtual learning environment called Knowledge Forum. Each month, separate views within the database are created to collect interprofessional monthly reports. Participants are asked to contribute monthly reflective narrative professional activity reports to Monthly Reports views within the Knowledge Forum® database. There, participants read and engage in threaded discourse about each other’s activity reports with an eye to identifying shared problems of practice and opportunities to advance community knowledge and expertise.

Learning Portfolios – At the outset of this research, we predicted that participants would use the Learning Portfolios View within the Knowledge Forum database as a reflective practice repository. We predicted, as a deliverable, a minimum yield of 16 notes contributed to the Learning Portfolios View monthly. Each month, participants are asked to contribute their monthly reports to their Learning Portfolios and reflect on learning over time.

Knowledge Forum Analysis – At the outset of this research, we predicted as a deliverable, ongoing analysis of the discourse and patterns of activity within the Knowledge Forum database. Analyses address the following question: What are the affordances of using a virtual communal learning environment to foster interprofessional practice and continuous learning in health care?

Problem Solving – At the outset of this research, we predicted that discourse among participants in the database would lead to problem identification and problem solving. The problems would be harvested and stored in a view repository called “Problem Solving Holding Tank”.

b) Actual deliverables:

Monthly Reports – Data collection for this project began in November 2000. A total of 14 monthly report views were created in the Knowledge Forum database November through December, 2001. Although we have submitted activity on actual deliverables for the period November through September, 2001 in previous quarterly reports, we have chosen to provide continuous updates of activity in the data base views in the Q3 and final reports. The rationale guiding this decision is that participants use the Knowledge Forum® database continuously over time. In other words, views in the database are ‘living’ workspaces that may be revisited and reworked for multiple purposes. Temporal analyses promises to answer a number of questions concerning research of this kind, including 1) the life span of communal workspaces; 2) the usefulness of communal workspaces; 3) the functions of communal workspaces.

Table 1 below summarizes patterns of interaction with respect to notes created, read, modified and built-on. During all 14 months, participants exceeded predicted minimum outcomes for notes created (N=16) as observed in the summary table below. During the months of October,

November participants met and/or exceeded maximum predicted participation (N=32notes). However, we do observe less participation for December due to holidays. We anticipate more activity during the month of January in the December Monthly Reports View as participants return from holiday and catch up with activities. During all months, participants were engaged in discourse about their interprofessional activity and building on to each other's notes. Discourse analysis this quarter (Q3) revealed participants identified shared problems of understanding in Monthly Reports discourse and carried (copied) on the problem focused discourse over the period of study. This represented a significant shift from previous quarters (e.g., Q4) when the discourse among participants was short lived and task centred.

Knowledge Forum Analysis – Quantitative indicators of interprofessional knowledge building such as frequency of notes created, read, modified and built-on are summarized below (Table 1). For analytic purposes, all members of the interprofessional team are treated as a community of practice. Group results are reported for notes created, read, modified and built-on. For the purpose of this report, I will report only on participation patterns for October and November and their similarity to Q2 results. Although December's results were low in comparison, this is accounted for by the number of participants on holidays and the decreased number of working days for all participants and for that reason, the results yielded from December will not be reported on in detail in this report. We are seeing a consistent increase in all measures (notes created, read, modified and built on) over time. On average, individual participants are reading notes approximately 40 times. As well, participants are modifying notes in the 3rd Quarter more often than they did in the previous 3 quarters (approximately 5 modifications per note). Modification are consistent with previous quarters (approximately 3 modifications per participant notes).

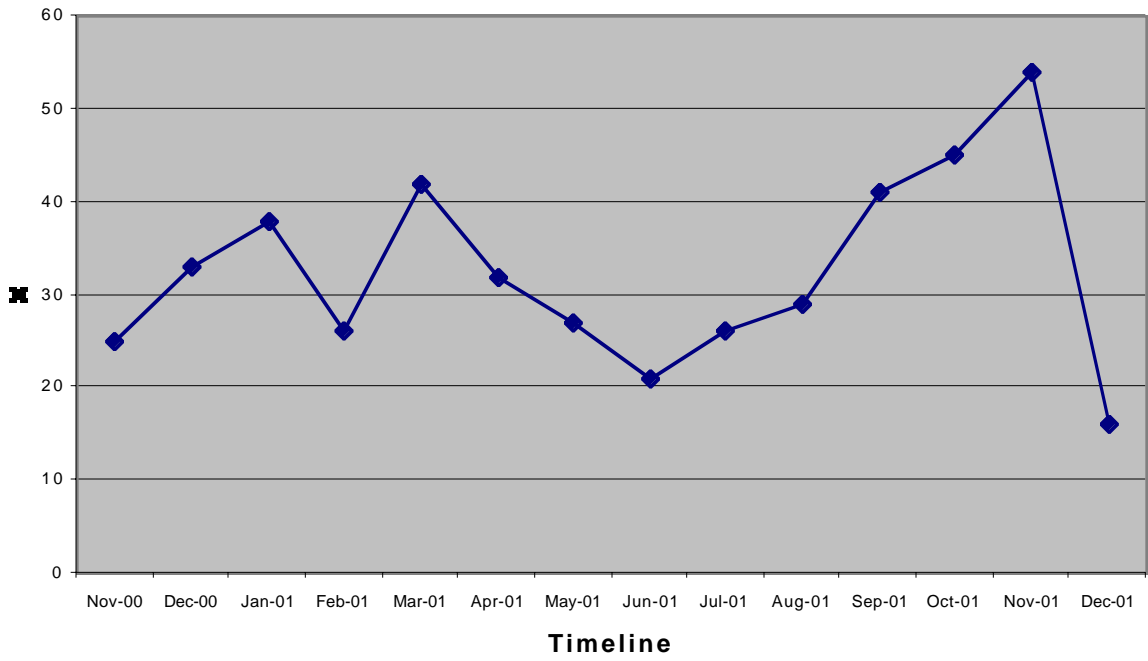
As previously reported in 1st and 2nd Quarter reports, we have come to discover that historical Monthly Report Views are visited for reading purposes long after the activity of contributing to the view has terminated. This is a significant observation in terms of how a communal database, constructed by employees, functions as both a virtual workspace during time limited activities, and an archival communal knowledge resource. Further analysis will be interested in determining the lifespan of specific views in terms of both duration of collaborative activity, and the life of the view in terms of interest and usefulness as a communal resource. Initial efforts have begun to map interprofessional learning trajectories. We consider Summary Graphs below an initial step toward graphically representing interprofessional activity and learning over time in Monthly Reports Views.

Problem Solving - Table 2 illustrates how interprofessional discourse in the database lead to problem identification and solving of problems at more complex levels via creation of new problem solving views. Although at the outset, we anticipated collecting these problems in a 'holding tank', we are pleased that participants have extended beyond expectations of participation in the Monthly Reports activity, and have created new views called Problem Solving views. Over the past 14 months, a total of 16 new problem-solving views have been created in the database. One new view was created this quarter concerning how to use a virtual communal workspace for supervision and project planning.

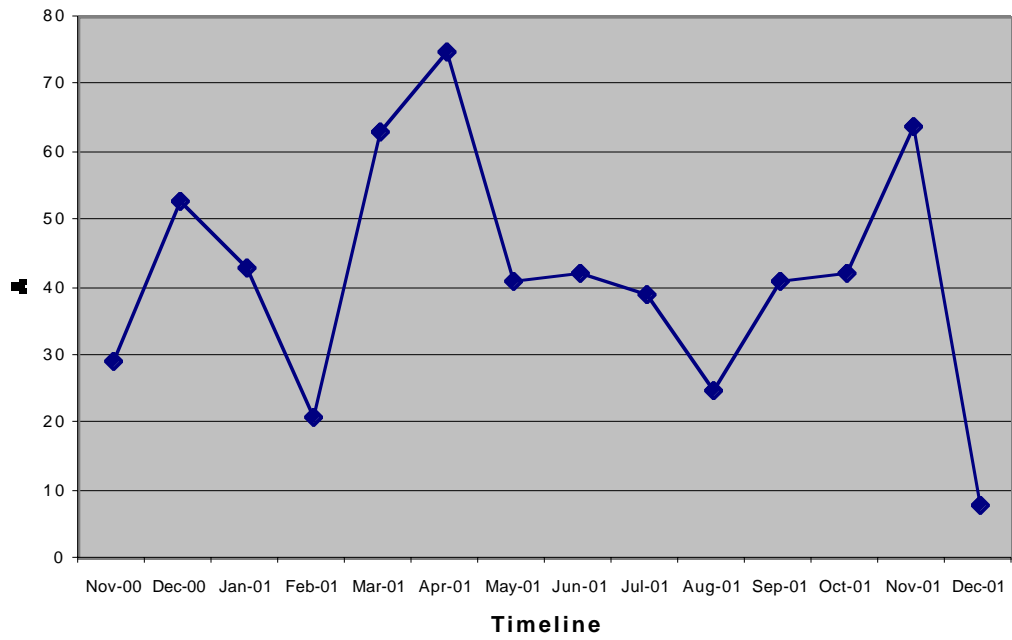
Nov 2000 to Dec 2001 MRs Summary Data Table (Nov 1/00 to Dec 31/01)			
Monthly Reports Views	Notes Created	Participants	Average
Nov-00	25	12	2.08
Dec-00	33	12	2.75
Jan-01	38	17	2.24
Feb-01	26	12	2.17
Mar-01	42	15	2.80
Apr-01	32	14	2.29
May-01	27	14	1.93
Jun-01	21	14	1.50
Jul-01	26	13	2.00
Aug-01	29	14	2.07
Sep-01	41	17	2.41
Oct-01	45	17	2.65
Nov-01	54	18	3.00
Dec-01	16	10	1.60
Monthly Reports Views	Notes Read	Participants	Average
Nov-00	243	15	16.20
Dec-00	428	21	20.38
Jan-01	510	20	25.50
Feb-01	361	23	15.70
Mar-01	791	22	35.95
Apr-01	600	21	28.57
May-01	395	21	18.81
Jun-01	462	21	22.00
Jul-01	494	20	24.70
Aug-01	489	20	24.45
Sep-01	555	19	29.21
Oct-01	708	18	39.33
Nov-01	763	18	42.39
Dec-01	139	12	11.58
Monthly Reports Views	Notes Modified	Participants	Average
Nov-00	29	12	2.42
Dec-00	53	12	4.42
Jan-01	43	17	2.53
Feb-01	21	12	1.75
Mar-01	63	15	4.20
Apr-01	75	14	5.36
May-01	41	14	2.93

Jun-01	42	14	3.00
Jul-01	39	13	3.00
Aug-01	25	14	1.79
Sep-01	41	17	2.41
Oct-01	42	17	2.47
Nov-01	64	18	3.56
Dec-01	8	10	0.80
Monthly Reports Views	Notes Built-On	Participants	Average
Nov-00	10	3	3.33
Dec-00	21	6	3.50
Jan-01	20	11	1.82
Feb-01	13	8	1.63
Mar-01	23	12	1.92
Apr-01	16	8	2.00
May-01	13	7	1.86
Jun-01	8	6	1.33
Jul-01	15	7	2.14
Aug-01	17	10	1.70
Sep-01	23	10	2.30
Oct-01	26	12	2.17
Nov-01	34	12	2.83
Dec-01	9	5	1.80

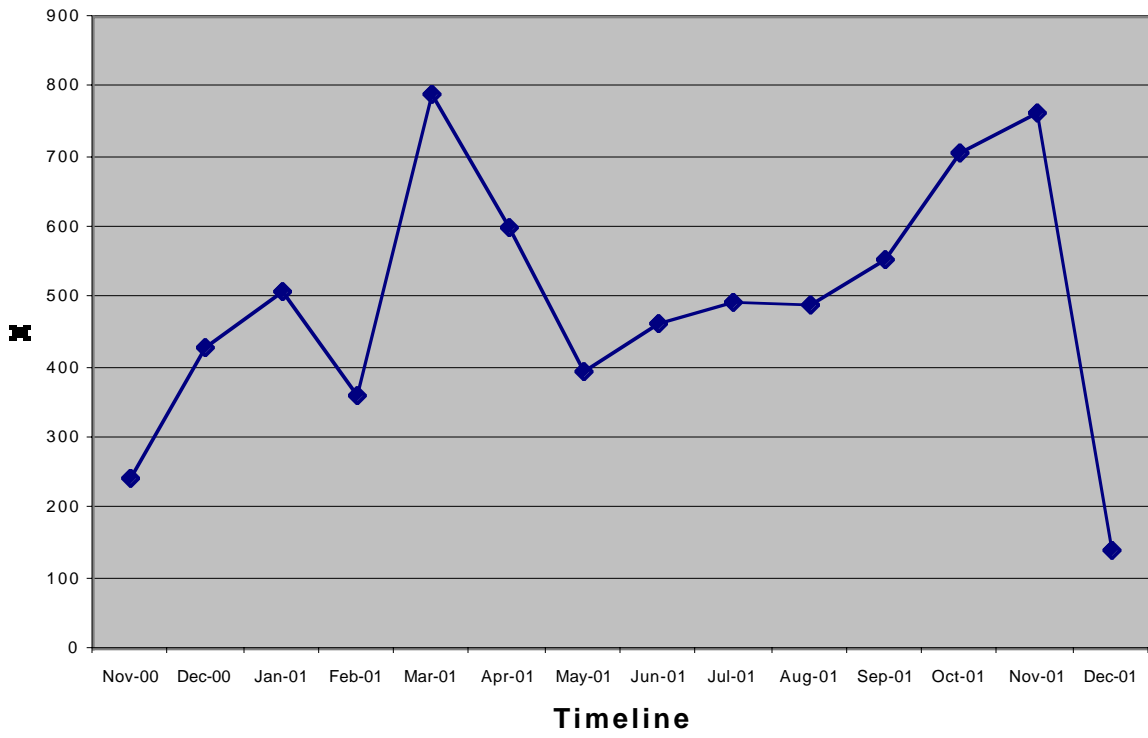
Notes Created in MRs Nov/00-Dec/01



Notes Modified in MRs Nov/00-Dec/01



Notes Read in MRs Nov/00-Dec/01



Notes Built-On in MRs Nov/00-Dec/01

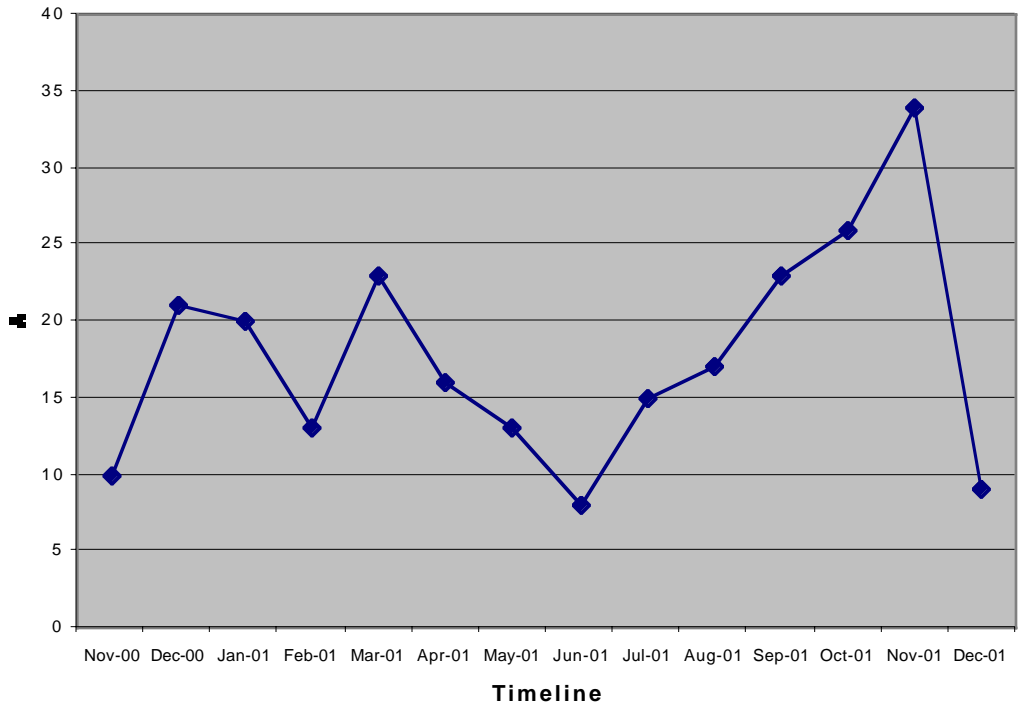


Table 2 - Problem Solving Views (October through December, 2001)

Problems Solving Views	Date Created	Problems of Inquiry
Knowledge Forum Consultations	11/29/01	How to track technical and pedagogical learning needs of participants?
Ethics, Privacy, and Electronic Information Technology	12/06/00	What do we need to understand about provincial and federal privacy legislation and use of virtual technologies in health care?
Chronic Non-Cancer Pain Guidelines	12/13/00	How might Knowledge Forum be used to evaluate chronic non-cancer pain guidelines with complex clinical cases?
Knowledge-Building versus Knowledge Telling	01/30/01	Why is knowledge-building a better pedagogical model in health care education?
Grants and Funding Cycles	02/12/01	How might Knowledge Forum be used for interprofessional grant writing?
Library Services	02/14/01	How might Knowledge Forum be integrated with library services at Toronto Rehab to ensure integration of research into practice?
Virtual Nursing Internship	02/22/01	How might Knowledge Forum be used to support virtual interprofessional mentorship of a graduate-nursing student?
Research Consultations	02/22/01	To collect documentation related to research consultations (interns).
Academic Practice Model	4/23/01	How might knowledge building pedagogy and Knowledge Forum technology help support development of a new model of interprofessional practice dedicated to integration of research into practice?
What's New?!	5/03/01	How might view backgrounds within Knowledge Forum be used as bulletin board of new interprofessional activities and events?
Patient Feedback	5/11/01	How might knowledge building and Knowledge Forum be used to integrate patient and family feedback into the design of patient goals and treatment plans?
KF Summer Institute	7/24/01	How might knowledge building and Knowledge Forum be used to plan and disseminate knowledge about the annual Summer Institute (especially for participants unable to attend the SI)?
GTA Rehab Network	8/28/01	How might knowledge building and Knowledge Forum be used to support the GTA Rehab Network?
Knowledge Society Network	9/25/01	How might knowledge building and Knowledge Forum be used to build on research initiatives identified at the Summer Institute?
Occupational Therapy Planning Space	12/05/01	How might a communal view support supervisor-employee in profession specific project planning.

- c) **Variations from last quarter's stated objectives:** Last quarter (2nd) we reported that we abandoned activity in the Learning Portfolios View due to activity elsewhere in problem solving views. Such was the case this 3rd Quarter and we anticipate no activity in the Learning Portfolios View next quarter. We also indicated that we would review purpose of Learning Portfolio View with participants to determine how this view supports interprofessional practice. Feedback from participants indicates that continuous learning and reflection are being supported in the Monthly Reports views and that the Learning Portfolio view is seen as either redundant or 'over and above' what participants are willing to commit to at this time. The concept of the Learning Portfolio has been well established as a tool for professional development. However, it could well be argued that the ongoing, continuous discourse each month in the Monthly Reports views has transformed a static tool (traditional learning portfolios) into a more dynamic learning activity, and for that reason is more valued by participants. This concept of a 'living' learning portfolio will be further pursued in the literature and reported on at a later date.
- d) **Areas of concern regarding deliverables:** To date, we have no concerns related to this project and have received positive feedback from participants in the study.
- e) **Next quarter's forecast deliverables:** Next quarter's forecast, like this one, will focus on activity in monthly reports and problem solving views, and data analyses.
- f) **Schedule:**

Updated Schedule for Remaining Project Deliverables

Activities	Completion Date	Deliverables
Monthly Reports	March 2002	12 Views, minimum 192 notes
Problem Solving Views	March 2002	6 Views
Data Analyses	To be advised	Descriptive frequency data of participation patterns over time.

1.2 Budget:

(a) Forecast quarterly expenditures:

Direct Salaries and benefits:	\$N/A
Consultant fees:	\$16,625.00
Direct materials and supplies:	\$N/A
Printing & dissemination:	\$5,000.00
Evaluation:	\$N/A
Other:	\$N/A

(b) Actual quarterly expenditures:

Direct Salaries and benefits:	\$N/A
Consultant fees:	\$11,200.00
Direct materials and supplies:	\$N/A
Printing & dissemination:	\$N/A
Evaluation:	\$N/A
Other:	\$N/A

- (c) Variations in expenditures:** We are \$8,475.00 under budget for printing and dissemination for. We would like to carry this amount forward (or at minimum the \$5,000.00 from Q3 that

was unspent). We were \$50.00 under budget for consultant fees and would like to carry this forward to Q4.

(d) Budgetary concerns: None.

(e) Next quarter's forecast expenditures: \$16,625.00 estimated expenditures for next quarter – we expect to be underbudget Q3.

Direct Salaries and benefits:	\$N/A
Consultant fees:	\$16,675.00
Direct materials and supplies:	\$N/A
Printing & dissemination:	\$8,475.00
Evaluation:	\$N/A
Other:	\$N/A

2.0 OVERVIEW

2.1 Changes Affecting Project

None

2.2 Dissemination and Promotion Plan

See below.

1. Russell, A. (May 2001). *Why e-Learning? Benefits and drawbacks of building an e-Learning Environment for Health Professionals*. E-Health 2001: The future of health care conference, Toronto.
2. Russell, A. (May 2001). *Interprofessional knowledge-building in rehabilitation and complex continuing care*. Invited participant in daylong workshop hosted by the Office of Learning Technologies, CANARIE and Health Canada.
3. Campbell, H., Spevakow, D., Russell, A., & Hamilton, L. (June 2001). *Knowledge Forum: Developing chronic non-cancer pain clinical practice guidelines, putting them into practice and using virtual technologies to evaluate*. New Frontiers in Pain, 4th Annual Pain Management Conference, Toronto.
4. Russell, A., Bereiter, C., Scardamalia, M., Campbell, H. (August 2001). *Knowledge-building in health care: Fostering professional development, continuous learning and reflection*. Knowledge-Building/Knowledge Forum Summer Institute, Toronto.
5. Russell, A. (October 2001). *Knowledge-building in health care*. Workplace Learning Conference, Germany-Canada-EU Health Telematics Partnership, Toronto.
6. Parboosingh, J., Jennett, P., Russell, A., & Longpre, (November 2001). *A. Evaluating technologies for team learning in health sector workers: a review and synthesis of the literature and recommendations for future research*. To be posted at <http://olt-bta.hrdc-drhc.gc.ca/>
7. Russell, A., Campbell, H., Scardamalia, M., & Bereiter, C. (November 2001). *Interprofessional knowledge-building using virtual technology*. Poster presented at Ontario Hospital Association Annual Conference, Toronto.
8. Russell, A., Campbell, H., Scardamalia, M., & Bereiter, C. (February 2002). *Interprofessional knowledge-building using virtual technology*. Poster to be presented at the Greater Toronto Area Rehabilitation Network Annual Conference, Toronto.

9. Russell, A. & Campbell, H. (February 2002). *Interprofessional knowledge building*. Paper to be presented at the Collaborative Learning Network Conference, Toronto.
10. Brett, C., Russell, A., DeFroy, S. (March 2002). *The value and validity of knowledge building pedagogy and technology to foster professional development*. Paper to be presented at the American Educational Research Association Annual Conference, New Orleans.

3.0 PROJECT DESCRIPTION

Funding of this project supports continuous learning of an interprofesisonal team in health care.

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