

Instructional Design Team

Minutes From Presentations And Discussions

- 1) **Introductions:** John Spence began with a table introduction. Everyone outlined their association with the project and their objectives for the retreat. Generally speaking, there were two perspectives: people who had a pretty clear idea of what they wanted to accomplish and people wanting a clearer vision of what LearnCanada was all about.
- 2) **Overview of workpackages:** Team Leaders were asked to present their component within LearnCanada. Each leader was given 10 minutes.
 - a) Nancy Parsons Heath: Memorial University -who has the daunting task of handling the adminstrivia associated with this federally funded program. Nancy spoke of the broadband network, tele-mentoring, and virtual community. She outlined the diagram that has served as the main vision of the project overall. There was a diagram outlining the connectivity of the project through the nodes associated with CANet and the LearnCanada pipe.
 - b) Karen Andrews delivered her presentation on Instructional Design. Teacher teams represent each of the 6 cooperating school boards. ID team is to develop online PD and supporting online resources for teachers through the sharing of best practices, collaboration, and exemplars. Karen spoke of telementoring, presentations over broadband, the sharing of practice, and discussion of pedagogical issues. There will be a minimum of 8 online PD sessions, a retreat (this one), a national conference using the pipe, and an international conference. Tracking of our progress in the ID team will be done through regular communication and scheduled events that are outlined on a flow chart made available to each of the school boards and the ID Team members. Reporting will be done by the teachers through the team leaders, although the official evaluation of project effectiveness compared to the deliverables will be done through confidential reporting by the evaluation team. This will be discussed further in an interdisciplinary meeting scheduled for Friday's session. We will be using a standard format for our reports. The online events that have been scheduled were outlined according to the outline that all members will discuss at a further meeting.
 - c) Michel Savoie presented the Infrastructure package. The Key to the LearnCanada project will be the ease with which team members will use the national network. Michel referred to an infrastructure called the "National test network" as being key. The project will be relying on existing broadband network and the regional advanced networks. A rather complex diagram outlined the CA net primary and diverse routes, plus the various regional area networks that are being used as part of the program. Edmonton is on the diverse route, not the primary, which is directed through Calgary. Some of the various activities in each province are outlined as part of the diagram. There are possibilities for international events through a new network that connects from New York to Europe. Michel outlined some of the features of the network tools available. He then spoke of some of the innovations and testing that will take place as part of the LearnCanada project. He outlined some of the operations and maintenance of the program and the maintenance of the technical website for teacher and technician use. Michel's team will set up a network operations center through the CRC, and will be evaluating the performance of the various tools used.
 - d) Marion is the research and evaluation coordinator for the project, and she is totally bilingual. How do we combine established and new research design and evaluation

- methods? That is the challenge ahead for the evaluation team. There needs to be a balance between quantitative and qualitative methods. Silos vs. Pillars? In each silo there needs to be a common evaluation or a bridge between the various elements. Formative and summative evaluation will facilitate feedback between the various groups and allow different groups to work together instead of against one another. REPORT REPORT REPORT. This team will ensure all the regular research elements, including reporting, team leader coordination, and ethics. The process will include a literature review, developing an evaluation plan, and going through the three cycles of evaluation. The final report should be complete by February or March 2002. The dates associated with the cycles are somewhat flexible, although the final report is relatively set in stone.
- e) John Spence presented on Virtual Community. He spoke to the technical and human components of establishing communities. The founding members of the project have a contractual obligation to deliver for CANARIE. Pedagogy + Infrastructure + Multimedia expertise are the three elements of the community development process. At the teachers' requests, we can add expertise from outside, thereby enhancing the community in some way. There will be certain technical and behavioral requirements on the part of the various users. Sustainability was also mentioned as a critical element. Once the environment is running, everything must be continued. The resilience of the community and the collaborative environment seems to be the key – how do we establish resiliency within a virtual community? Many references to mountain climbing.
 - f) Martin Brooks from the National Research Council is coordinating the Multimedia and Software Component. He had no PowerPoint presentation, despite being a "Techie." [This gave me an instant respect for the man]. Connectivity is crucial, but software acts as a medium for the connectivity and actual projects to join together. He will liaise with both instructional and infrastructure groups to ensure the various platforms will work together. He mentioned types of software to be used
 - videoconferencing that will include interactivity and shared presentations
 - Sharing and annotation of video means you must have the ability to share information and make comments during the video itself, either oral, textual, or hyper-textual (will include conference comments)
 - transformation of video into multimedia can include keyword searching or hierarchical browsing
 - Portal/Repository will be the virtual place for the exemplars, the virtual glue for our virtual community
 The process will start with teacher discussions, development of betas, try the stuff out, fix it, then use it. The portal repository software is not exclusive to LearnCanada, but is a cross project platform to which we will provide requirements and standards that will help teachers. We will also be involved in the evaluation of the final product.

Instructional Design Component Team Sessions

- 3) Team Introductions from team leaders.
- 4) **Discussion of Overview:** A brief review of Karen's presentation from the earlier session for the teachers that missed the morning presentation. FOIPP was mentioned as an issue of the eventual video production –these video sessions would be informally "staged" with consent from the teachers and students involved. There was a proposal put forward that in the initial stages, videos are shared across the broadband network during conferences. ID Deliverables were discussed in relation to CANARIE funding. There were a number of mentions of the broadband network as being central to the funding. There were assurances that K-12 teaching would remain the focus for the group, and not the technology.

- 5) **Pedagogical Possibilities of LearnCanada:** Karen then started the new presentation, talking about the cracks in current education and how they each present an opportunity that LearnCanada addresses. We broke into groups and discussed the opportunities provided by the LearnCanada project.
- 6) **Administration Details:** After lunch we reviewed the documentation available in the binder, particularly the administrative pieces. We discussed the phases of the project. We also discussed teacher roles within the project and the deliverables outlined. We then broke into a group regarding objectives and deliverables. "Check for Understanding". The specifics were examined, one by each group. Results are summarized below:
 - a) **Verification of Objectives:** Logistics of the whole project –some discussion of issues: connectivity, release time, comfort with technology. The broad goals are clear, but the specifics of how this will happen is still up in the air and will depend on the feedback from teachers and other variables.
 - b) **Achievement of the Objectives:** There were a number of ideas, particularly surrounding communication. Communicating needs and questions will be crucial for the objectives to take place. Everyone can use a central repository to put this information together for access. Universal access will be crucial. Feedback when a goal is achieved becomes important. Meaningfulness of activities could be important. The leads have to provide feedback for regular reports. Leads can also get the information directly from the individuals' information for the reports, if the information is available at the repository. FAQ'S should be available as well. Reflection on the part of the individual teachers. Team leaders should follow up on team members to ensure the consistency of the project. COMMUNICATE COMMUNICATE COMMUNICATE
 - c) **Signs of Success:** Meeting of deliverables, we can show the person outside the project the end result i.e. the bank of projects, if the repository can be used without specific training, if we collaborate through these projects, if we use the input from other people instead of just meeting, if the projects have depth and detail, if we are frequently using the technology and PBL in the classroom, if other teachers are interested or getting involved in the project, if the school community is positive about the project based learning and connectivity. Parental congratulations for the work done (said tongue in cheek but may have been more realistic than first thought).
 - d) **Verification of Scheduling:** identification of the projects – two weeks to come up with a plan or general theme. Software requirements by the end of October – what does that mean? If it is general, that's fine. If specific requirements are necessary, there is a problem with not having tried to use anything yet. It must be an ongoing dialogue instead of a one-time deal. Matching up allocation of teacher time, etc. with the deadlines – that will have to be done by individual school districts. Objects are required in phase three - objects are things placed within the repository. The flow chart will be re-visited in tomorrow's planning session.
 - e) **Team and individual roles and responsibilities:** The responsibilities were divided into teacher roles, leader roles, and roles associated with both groups. The teachers were responsible for the documentation of their individual activities, the collection of resources, the collaborative effort they put in, the identification of projects, the definition of software and hardware requirements, and the participation in online conferences and events. The coordinator is responsible for the submission of monthly reports, the coordination of their teachers involved in LearnCanada, and the presentation of Professional Development seminars. Both groups are jointly responsible for the identification of questions or areas of concern, making suggestions for action, creating records and resources for future use and analysis, the assessment of existing and proposed content, the development of PBL

objects, the evaluation of the programs, testing the final products, and the implementation of projects once completed.

- f) **Reporting Requirements:** No group reported, the format was adopted as indicated below.

Reporting Format:

The monthly reports should have the following information:

1. Activities Update:

- a. A list of deliverables and milestones that have been met.
- b. The status of teacher activities
 - i. PBL module development
 - ii. Collaborative activities (online interactions / conferences)
 - iii. PD activities and suggestions
 - iv. Resources found
 - v. Outreach activities

2. Identify Areas of Question or Concern.

3. Suggestion for Action.

- a. How can the issue be resolved?
 - i. Assistance from other members
 - ii. Conference call requested
 - iii. Timeline change

4. Other relevant information.

- 7) **Developing PD on Project Based Learning:** Geoff Irvine began talking about PBL from a personal standpoint. Project based learning is not group learning. "Project Based Learning is the epitome of teaching" as it incorporates every discipline within teaching. You tend to teach the way you learn, which may be detrimental for other people, as they may not learn the way you do. We completed a learning style inventory worksheet. We all figured out what quadrant we were all in. This was 4MAT learning. This suggests roles within in an organization, and suggests something about the way you learn and the way you teach. A Unit test is low relevance, low bloom scale; project based learning is high relevance, high bloom. The "zone" is in the top right quadrant. Several annotated video clips were shown. Discussion of value of PBL, particularly outcomes and student results. Most important question to ask: why are we doing this? Projects give very clear outcomes, but do not expect or define a result. Outcomes will be a measure of success, but results can be entirely ambiguous. Establishment of standards through rubrics. Assessment is part of the planning process. **PERFORMANCE BASED ASSESSMENT.** The teacher's role becomes one of troubleshooting and facilitation, by making technology and other tools available – making it clear to students how to do the basics involved in the project. Boiling it down: expect nothing, celebrate anything, let the kids do whatever they can to make them feel in control of the project.

- 8) **PBL Examples:** Karen pointed out the list of projects from Avalon East and the research review provided by John Thomas. Explored Marge Marika's (from EPS) math drafts. We examined the student projects from Applied Math 30. Jonathan Brown suggested that there could also be an additional element related to the ethical issues surrounding the implementation of a pipeline. Introduced the various parts associated with project, including the student notes, the teacher notes, the exemplars, and the rubric. Questions were

presented regarding the exemplars and the concepts behind LearnCanada. There were a number of questions regarding the use of students in LearnCanada projects, and the nature of collaboration (French and English?).

Resolutions on PBL: It was decided that we work with one or two large themes for the initial project set. These themes will serve as the basis for projects to be done by the end of the semester. The themes will allow team members to articulate what role they wish to serve in the collaborative effort, and will also allow each team member to achieve a high level of collaboration. Our assignment for the evening is to come up with a major theme that we can bring to the table for the next day's sessions. At that time, we will establish some parameters for the projects themselves.

- 9) **CANARIE Presentation:** A representative from Canarie spoke to us regarding time sheets. Any time sheet will do, but all projects will be audited and will require time sheets of some kind be filled out and signed by the coordinators of each school board. You can put down either hours spent on the project or a percentage of time. Either way, you must account for any time spent on the projects. They would also require a sample of what you are working on, i.e. what part of the project did you work on –ID, Infrastructure, etc.. Materials and other stuff that might be reimbursed must be paid first then repayed by Canarie. December 31st is the deadline for reimbursement, and will cover all expenses incurred before the 31st. Industry Canada is “quite a bureaucracy and is causing some delays in reimbursement payments”. Records must be kept under federal regulations for three years. Mileage claims will be done on a board-by-board basis. Monies are allotted for each school board and have already been clearly identified. Invoices and receipts will be kept for auditing purposes. All bills, etc. must be in within three or four days of a deadline in order to count – although the reimbursement might take a LOOOOOOOOONG time.

Friday October 13th, 2000

Instructional Design Minutes

- 1) Review of possible themes for Project Based Learning

Discussion Points

- What theme/s should we pursue for PBL projects?
- What project ideas can we develop based on these themes.

Group Report:

- French-English relations
- Sociological stuff across regions of Canada
- Simulation game (career life management) Provincial factors
- Diversity –within and across provinces
- Resources: Water

PBL Projects must have:

- Teacher Instructions, examples
- Culminating task
- Assessment tools
- Connections

- 2) Review of virtual community needs and components.

Our Tasks

- Framework for online conferences
- Topics
- TeleMentor
- Timeline (dates for events)
- Structure

Notes from group reports and discussions:

- a) Components needed to facilitate the community
 - i) Time: continuous substitute, to help make sub time easier
 - ii) Schedule for use of the pipe particularly with the communities crossing over
 - iii) Division of labour based on their strengths so that the teams can be made up of those that know what they're doing.
 - iv) Guidelines for team work and for community involvement
 - v) Respect for the diversity of the community and the associated projects
 - vi) Provide support for one another (reality checks)
 - vii) Moderators should watch the community and ensure that everything runs smoothly.
 - viii) Universal access to information.
- b) Aspects of an effective community
 - i) Shared vision
 - ii) Clear priorities and articulated goals (remind ourselves about theses goals)
 - iii) Open communication
 - iv) Structure to be defined
 - v) Responsible and independent
 - vi) Flexible
 - vii) Adaptable
 - viii) Resilient
 - ix) Willing to fail
 - x) Aggressive culture
- c) Why collaborate?
 - i) Recognition of a problem of no collaboration as a normal part of school life
 - ii) Collaboration resembles the types of project based learning that we expect our students to take part in.
 - iii) Pd can be ongoing rather than a once a semester activity, particularly considering how PD can be exactly the opposite of effective teaching.
- d) PD needs of teachers in the project
 - i) Support for the pedagogy – what to do in PBL
 - ii) Technology – training and technical support
 - iii) Support group within our own schools and online
 - iv) Where do we go with ideas and where can we go to generate ideas

- v) The language barrier with Quebec
 - e) Barriers
 - i) Supports in the technical area – schools have to be hooked up regardless of where they are in terms of the hook up right now – school access is crucial. Equipment should be tested and trusted, and there should be a quick turnaround “plug and play” – should be user friendly so that outside teachers can see how to use it.
 - ii) Language
 - iii) Time and working through different time zones and working within the time frame provided for the teaching activities
 - iv) Real release time – not just substitute time.
 - v) Getting Started including mentoring both within the school and over the pipe – link up with someone who knows what’s going on. What am I doing wrong? Nothing.
 - vi) Same technology both on the pipe and off the pipe – shared resources should be shareable.
 - vii) Psychological barrier – PD is essentially non existent right now and pushes us to look for quick fixes instead of deep meaningful PD activities. Focus on the enhancement of your craft – this could be a difficult jump to make.
 - f) Activities/topics and events
 - i) Topics include motivation, rubrics, classroom management, initial presentation of ideas, sharing of final projects
 - ii) Each person should contribute a clip of video, using the wideband to share the information as it is presented
 - iii) Need for support system – perhaps an event should focus on the supports available for the teachers in the group
 - iv) PD – personalized PD that will allow individual contact – training based on individual needs rather than focusing exclusively on the macro needs of the groups.
 - v) Activities that we bring up should meet our needs - just like the students there’s a definite feeling that we will be going against what the whole concept of the project s.
 - vi) There should not be only synchronous event-based PD – go with small unit universally accessible PD as well.
- 3) Martin Brooks joined us to discuss the coordination of ID with infrastructure and software.
- a) Brainstorming session: Technical dreams and issues.
 - i) Interactive whiteboard to be shared over the internet (like NetMeeting)
 - (1) training and comfort level will be addressed in the first few sessions and a rehearsal format
 - (2) Is it possible to print information that is placed on the whiteboard?
 - ii) “Inspiration” software – brainstorming during conferencing by adding ideas to the brainstorming
 - iii) Common platform for sessions – submission of materials ahead of time to allow conversion of materials. Martin discussed the use of IRC and regular internet connections at the same time as the videoconferencing. Document transfer from one platform to another or one program to another can be messy – perhaps the teams

need to come up with a set of standards that will be used for documentation, etc. these standards may include saving materials under certain formats.

b) Regarding videoconferencing

- i) Question regarding how you can focus on one group rather than them all. The response was related to the master node and who controls the availability of windows on the video screen, etc.
- ii) Video clips sent over the broadband pipe. Video editing capability was a major question – question is how much software do you need and do you have the appropriate equipment? Each school will have a different answer to this problem. One person voiced a concern regarding video editing and the idea that he can't handle the editing for the whole team. There is no stock answer; each group will have to come up with something to answer. Possibly adding the video card to the "Isabella Box" to avoid having two computers equipped for video editing.
- iii) It is possible to download video right onto your computer and send it right through the pipe. There were questions about the nature of video and analog vs. digital cameras. One possibility to avoid this and the previous problem is to standardize the video editing software and training over the broadband network.
- iv) Capturing videoconferencing encounters – how do we do it, and is there software that can be used? If so, can we eliminate the capturing of a part of an event if it should be "off the record." There are some questions about the justification of capturing: the record button might not always be on...questions regarding "clean" data for the evaluation team. The capturing process is difficult, as you can capture each source or the entire screen – both present their own unique difficulties. Some questions regarding "voice activated capture"
- v) Standardized simple stuff to allow teachers to focus on pedagogy. Martin expressed his concern that people need to approach team members with problems as they arise.
- vi) Network questions: Isabelle works for multi point conferences quite well. One site needs to establish itself as a control site in order to make multi site conferencing done. A flow server is just another box that makes multi point conferencing easy. EPS is trying to set up a flow server as we speak (well not as we speak as the key people are all here in Ottawa right now).
- vii) Annotation of videos – NRC will create software by gluing together commercial software to help create an annotation system. That version will be made available through the network or at one site so as to avoid problems with site licensing. The First step in the process will involve some team brainstorming.
- viii) Can we record video off of a videoconferencing? The answer was somewhat unclear. Video logger is software that captures the voice, creates printed text, and moves into a search engine. That gives us a sense of when in the video certain conversations took place and will allow a better method of capturing particular sessions based on the times that are on the video. Barrier is money.
- ix) Technical support – there will be tech support at each board. The method of communication between infrastructure team and local tech support will be worked out.
- x) How will annotated video look to the end user? You see a timeline or story line, a list of comments, a full viewing process, an indicator for annotations, perhaps a search function.
- xi) Translation of information – is there software that exists? There are many software packages that translate, but they are not all that good. Martin will look at the packages and do what he can. There are many possibilities. Perhaps we can

examine simultaneous translation of videoconferences...is it possible to annotate work with French and English commentary.

- 4) Lunch – some discussions regarding what was being done for PD on computers in Quebec, including the options for Quebecois parents for their kids regarding getting internet connectivity
- 5) Marion and the evaluation team came in to deliver a discussion on their roles with ID.
 - a) Outcomes of the project to be assessed include the functionality of the broadband enabled learning environment, including accessibility, response time, frequency and ease of use; the effectiveness of adult learning within the virtual learning environment; the effectiveness of software multimedia objects and the need to sustain a virtual community of practitioners on an international and a national scale.
 - i) The evaluation has two purposes, providing feedback (formative) and accountability (summative)
 - ii) Actions were completed according to time lines, functionality of the broadband enabled the learning environment, the schools were able to support the technological environment are all indicators of the level of success according to the evaluation team. There are more indicators to come
 - iii) Evaluation measures include status reports from team leaders, technical monitoring (a whole bunch of areas), and local network functionality. These indicators are simply used as possibilities right now – the role the evaluation team is still somewhat amorphous. Questions were brought up by many team members that would be discussed at a later time.
 - iv) The Purpose of Research in this project: The guiding question is “Is the LearnCanada broadband environment an effective medium for professional development?” How is effective? What skills are necessary? How effective is the software and objects? What is needed to sustain and expand the virtual community? There will be no comparison of the use of this technology with other methods of PD. This is another method, not necessarily a better method.
 - v) Good indicators can include the demonstration of innovation in learning behaviors and culture, the sharing of practices, collaboration, increasing understanding of PBL and the implementation in to teaching, and the use of technology for PD.
 - vi) Measures are still under construction, but may include rubrics, etc.
 - vii) Ethical issues will be a major concern, as each school board will have various responsibilities. CANARIE is bound to certain principles and so are the students and teachers under school district policy. There will be an assurance of confidentiality, and no district, student, teacher, or school will be identifiable in the basic data. No report will be given on any one part of the project (teacher, student, school, etc). Will not have any evaluative input on teacher effectiveness. There were questions regarding the identification of communities through the nature of the projects: Craig assured us that there would be no ramifications for any project that did not work out. Also, there are issues that have yet to be discussed related to the evaluative process.
 - viii) Asking for indicators that we feel would demonstrate ongoing project success and advice for the evaluation team
 - (1) Indicators – Collaboration on the part of the teachers – create useable content for others – introduce new collaborators to the mix – Desire to keep using the system – Continue using PBL in the classroom – Use broadband as a tool because we want to, rather than have to – we’re getting better results than otherwise possible, more engaged in the project, higher order thinking skills, motivation of the students – change of role from that of teacher/disciplinarian to

that of facilitator – lack of complaints – If other teachers begin to question regarding PBL – transfer to other disciplines because students ask for PBL in other classes – improved quality of final projects – change the questioning strategy we use with our students – positive feedback from the parents and from the community regarding motivation, engagement, new or improved skills that have a place and value in the real world – a possible question for the teacher evaluation might ask “how much time do you currently use for PBL? How much time do you plan to use? – change in prep time – equitable improvements in student achievement (changes in my teaching benefit everyone equally and equitably).

- (2) Advice – Make surveys available on line – regular reporting of evaluative feedback – Make the instrument easy to fill out – include a comment box for the various pieces of the instrument – forms made available in both English and French – Be aware of school community information that may affect results – keep in mind the various levels of connectivity etc. before making generalizations about the effectiveness of the project – evaluation should be flexible and relevant to actual progress of the project.
- 6) As a culmination to the 2 days of work, we broke into three groups and considered the three items listed below. The first group was made up of a representative from each of the school boards. After we finished we were asked to complete an evaluation form.
 - a) REVISED FLOWCHART FOR INSTRUCTIONAL DESIGN TEAM: Revision of dates, etc. It would be easier to schedule more dates and not use them than rather schedule things at the last minute because of problems, etc. November 30th large group. Thursdays seem to be the more popular dates for conferences. Time should be 11 Am Eastern. It seems to make people generally happy. Something should be scheduled for every few weeks. Oct. 30th still works. Large group December 14th. Every second Thursday there will be a chance for a large or small group activity. November 16th...smaller groups will have an online opportunity. We'll get the calendar together and send it out from Edmonton. February 8th large group – January 25th small – February 15th small – march 1st Large Groups – January 18th small group also. **Resolution: A calendar of events will be sent out by Karen asap.**
 - b) DEVELOPMENT OF PBL MODULE TIMELINES: The themes should be discussed and identified by October 30, the date of the next conference. Come prepared to present a theme and discuss which themes the teams will do. Water and diversity in Canada will be presented as the main themes, within which the various team members will decide on specific collaborative projects. The storyboards for projects should be completed by November 21st, which is the end of the Quebec first semester. All proposals will be sent by email. November 28th will be a date when we can update the whole crew on progress. December 11th conference. How are we doing and present the project plans. January 30 – display what has been done for the semester (how are we doing). EPS will type out a calendar to send out to team members.
 - c) STRUCTURE FOR ONLINE MEETINGS: Nametags should be there – salutations and informal greetings at the start of each meetings which will act as a ritual – another ritual will include 45 seconds of “A light moment” (each site to take turns)– one person will moderate or chair the sessions with a set agenda that includes a TeleMentor (somewhere in the middle) – the agenda should be related to one of the elements of PBL – period for discussions – preparing the next videoconference – there should be time for training basic little tidbits each and every time – the agenda should be somewhat open in the event of other items coming up – what items are information items and what items are discussion/decision items – there should also be a recorder at each site.
- 7) Ended the retreat with a Broadband VideoConferencing Demo and tour of the badlab.

Our thanks to the CRC for hosting the Instructional Design Team