		1: Benjamin B. Olshin	1: Robert K. Branson	1: Darrell Cole
1	**Name**	1: Benjamin B. Olshin	1: Robert K. Branson	1: Darrell Cole
4	**Title**	4: Scientific Thinking and Modernity Meet Traditional Culture	4: Finding the Seeds to Grow	4: Considering the Pragmatic Mind
8	**Session type**	8: I would like to do a brief presentation of the basic argument/idea, with the majority of time devoted to questions and "round-table" discussion; this session will be especially interesting to an audience comprising people from different cultural backgrounds. I could make available a paper beforehand, so that participants would be ready for the discussion and debate right after the presentation.	8: An interactive session to collect crititical incidents that describe how the participants first became interested in science. This couold be a roundtable or a group session.	8: brief presentation and interactive roundtable
9	**Short description**	9: This session will examine what I consider to be a fundamental challenge in today's world: the conflict between scientific (i.e., analytic/systemic thinking) -- and its accompanying notion of "modernity" -- and traditional culture. The global conflicts concerning resources, development, and governance we see in contemporary times are really all about modernity. That is, the basic question is: should we move towards a Western analytical way of thinking and living or a different model?	9: Everyone who works in science had a first experience that brought them to delve further into the issues that interested them. Were these school-based experiences or did they come from elsewhere? More specifically, did their beginning interest in science displace previusly held notions about nature? If so, what forms of cognitive dissonance may have occurred? For those who don't work in science, having a scientific mindset can also be beneficial. All people should be able to discriminate between astronomy and astrology.	9: This presentation/interactive roundtable session will introduce and explore the concept of the Pragmatic Mind, both conceptually and practically (through the examination of an existing program). Dialogue will initially focus around such themes as concept validity and (example) program advancement. Attention will then turn to the application of the Pragmatic Mind to the undertakings of session participants, who will be invited to assist their colleagues in advancing their individual, mind-related projects.
17	**Observations**	17: I greatly look forward to the possibility of running this session. I am a historian of science and a professor of philosophy who has worked and carried out research in cultures and countries all over the globe, including England, Portugal, Italy, Brazil, Japan, Taiwan, Turkey, and Ghana. One of my constant pursuits has been the exploration of how different cultures embrace or reject modernity, or try to negotiate a "middle path". In particular, as a citizen of the U.S., I see how the reluctance of our society to address this fundamental issue has led to painful and costly conflicts.	17: I would be delighted to have a co-author or co-presenter. I expect to start the session with a five to ten minute overview. If anyone is interested, we can divide up the work.	

1: David Vogt & Lee Iverson

4: Social Acumen To Resolve Complexity

8: Interactive Forum - If the networking environment is sufficient we will be able to actively engage the entire audience in a social acumen exercise; if only partially networked we will be able to provide a live demonstration and host an active debate.

9: Top-down organizational strategies are no match for change and complexity. - - The Global Urban Sustainability Solutions Exchange (GUSSE) premiered at the World Urban Forum 3 (WUF3) in Vancouver in 2006 as a demonstration of how social networking technologies can provide global "wisdom of crowds" solutions for increasingly complex problems such as urban sustainability. The concept of applying social acumen - the remarkable collective intelligence available in distributed human communities - to resolve complexity is a brilliant opportunity in our networked world.

1: Anda Zeidmane & Anna Vintere

4: The Role of Science Education in Forming Developed Cognitive Skills (DCS)

8: Presentation and discussion

9: The important role of science education in forming developed cognitive skills. For developing cognitive skills are important to attract the interest of the student in natural sciences and investigate methods. It is important to investigate human brain hemisphere¡¦s function and recognize differentiate thinking ways: 1) how experience develop student personality, 2) how to help to develop concepts¡¦ and laws¡¦ perception, 3) how to help to applied adopted, 4) how to let create new ideas.

1: Mariela Herrera

4: Transdisciplinarity and Curriculum Development: A General Model Proposal

8: I am developing a theoretical model for curriculum development based on the notions of interdisciplinarity and transdisciplinarity. I need feedback from people knowledgeable in interdisciplinarity and transdisciplinarity to improve the design. The BtSM2007 Colloquium offers the space to gather the information I need to continue. At the same time, I think the model could serve as pivot to enter possible worlds or scenarios for education and to promote dialogue around the future of education in a sustainable world. From this process, as a curriculum designer, I will be enlightened by the participants to envision possibilities for the implementation process.

9: The workshop proposes four activities: 1. Introduction (workshop's overview). 2. Imagining the school culture in a sustainable world and its curriculum development. 3. Inquiring based on the model's description and elaborating around the question: How the model fit the expectations elaborated in activity 2? 4. Sharing contributions in large group. Elaborations will be done around four "loops":
1. teacher- knowledge - students.
2. culture-school-society.
3. past-present-future.
4.school - body(self/author/agent) - culture & society.

1: Mara Martin & David Vogt

4: Paper ('Automated Muses. A Semiotic & Philogenetic Approach.') already submitted to Dr. J. Visser and currently working on activity session w/ Dr. Vogt, UBC

8: Probably a " ludicrous type cafe" format would fit the most as it would stimulate the active participation. · A4 Paper, a few markers, some glue, a couple of pairs of scissors and a board wiil be required for the various activities

9: The participants will be divided into groups wherein each attendee will actively participate individually and as a team in a series of games designed ad hoc, and in discussions involving, amongst others, the following topics:

*Cross-cultural and interpersonal factors in cognition, creativity and innovation. A semiolic approach.
* Creative or scientific mind, or both? Mental growth and creativity and schooling throughout human history
* Computational support tools and e-learning in the development and stimulation of the creative and innovative young mind

1: Dan Laitsch

4: Thinking scientifically: An educational approach to systematizing the way we use knowledge

8: Critique and dialogue

9: Attendees will examine the nature of our engagement with the world (data) around us, and ways in which we might help formalize learning and improve decision making by engaging more systematically in data collection and analysis through adapting the scientific method and applying it's principles to our daily experiences. After an initial presentation, attendees will be invited to critique the proposed framework and explore barriers and incentives to implementation.

1: Roland Schulz & Awneet Sivia

4. Developing 'Philosophic' Understanding: Using History, Model-based Reasoning and Epistemology to Reform Science Education

8: Interactive; PowerPoint presentation; group discussion; specific activities/experiences regarding pre-service science teacher development

9. This presentation will include several parts. In the first part, we will summarize key problems which plague contemporary science education at the upper levels, and hence the need to re-shift its focus towards an inclusion of the historical and epistemological dimensions of science. In the second part we discuss the "model-based view" of science and science learning as discussed in philosophy of science, cognitive science and science education. This will include how historical contexts and the nature of model based-reasoning can serve to foster understanding and enhance science education both at the secondary and teacher education levels. In the last part we discuss our work with helping preservice science teachers reshape their epistemologies to better reflect the nature of science.

1: Krista Fogel

4: Scientific Creativity in Light of Artistic Spirit: A Literature Review on the Concepts of Intuition and Beauty

8: I have prepared a literature review for discussion. Presentation of key points will involve a concise powerpoint. From this, I would like to discuss possible research problems and methodologies as I am preparing for my master's thesis. I hope to facilitate a sharing of personal experiences in the realm of artistic spirit in your own research, and to stimulate further questions engaging in free conversation.

9: This paper explores scientific creativity in light of artistic spirit. Artistic spirit will focus on intuition and beauty. These concepts are explored in light of high ability scientists and science education. Possible discussion questions are: How might an artistic spirit be important in the scientific domain? Can intuition and feelings of beauty be taught? How can they be ignited? Are there implications for arts-integrated curriculum with the sciences.

17: My educational background is in Psychology and currently Special Education with a concentration on High Ability Studies. My love is for art. In the context of a society that highly values the sciences, I am starting to see possibilites for shared components with art. The idea excites me and I am in pursuit of finding to what extent it is relevant.

1: Michel Aldaheff-Jones

4: Scientific Mind, Critical Mind and Complexity: Learning from a scientist's life history

8: Paper presentation (with possibility of having a group discussion based on the biographical experience of each participant)

9: This papers aims to question the way to promote among scientists the development of a critical mind able to deal with the complexity of their personal and professional lives. Based on the author's own experience of research, it suggests the exploration of a researcher's life history as a way to explicit the antagonisms produced by scientific practice and the strategies developed to cope with them, both at an epistemological and at an experiential level.

1: Marten DeVries & Jaap Swart

4: Minds, Media and Early Education

8: A two hour workshop for 20-30 people interested in the Media, PMH and Early Childhood Education The session will be highly participatory employing a method of work often used in creating succinct media products: overview and concept development, relevant research, brain storm in interdisciplinary group, make script/story board, create product, edit it, display it and evaluate reaction. Followed by plenary discussions of these issues with a larger audience.

9: The workshop creates the opportunity to participate in a "research group discussion format", a method of work often used in creating media productions. The session will focus on the role of Mixed-media in building the Scientific mind and mind sets in general with a special focus on partnering with media and the evaluation of the impact of media in educating the young and very young. Discussions on early childhood education currently in progress by the seminar conveners will be imbedded in the larger role of mixed media in building the scientific mind.

1: Martin F. Gardiner

4: The Arts,Skill Learning and Brain Development: Educating a Scientific Mind

8: Presentation of data and theory, followed by open discussion

9: Even though the Arts and Sciences are often discussed as alternative and even perhaps complementary approaches to interacting with the world, I propose that training that develops skills in the arts can and should be an integral part of education that develops a Scientific Mind. My argument builds on research data, including data published in the journal Nature in 1996, and related theory development. I will also discuss recent curriculum development related to this thesis.

17: ACT has been tested during development and testing at multiple sites is in progress. We are eager to collaborate with others to test and further develop ACT still more widely

1: Jason Ravitz & Yusra Visser

4: Developing the scientific disposition in formal learning contexts: Applications of project- and problem-centered learning

8: A hybrid presentation-discussion session, with discussion stimulated through a series of pre-defined provocative questions.

9: Fostering the development of the scientific mind in the formal learning context presents a multitude of unique challenges. Project- and problem-based learning are two related instructional strategies that have been used extensively in the formal educational context with the goal of supporting skills and habits of mind underscoring a science way of thinking. This interactive session will explore experiences with project- and problem-based learning to date, as well as critically evaluating the potential of these instructional strategies for supporting the holistic development of a scientific disposition.

17: - I believe that we would like to have an LCD projector, and potentially a live internet connection for this session. If access to either is expected to be a problem, please let us know in advance so we can plan accordingly.
- This session will provide a certain amount of up-front conceptual information on the types of issues the PoL group will be dealing with. If this session could therefore be scheduled earlier than the working-group debriefing sessions, that would likely be best.

1: Paul Horwitz

4: The Mouse is Mightier than the Keyboard: What can we learn by observing students' use of computer-based models?

8: I'd like to start with a demo of some of our interactive models and the data that we collect from them, then conduct a free-wheeling discussion of the implications of this powerful tool for teaching and assessing learning in mathematics and the sciences

9: This paper explores the particular advantages of the computer over traditional paper-and-pencil technology for teaching and assessing reasoning processes. The ability of the computer to model complex processes, and to monitor and interact with the student, together with its data acquisition and analysis capabilities, make it an ideal "cognitive X-ray" for exploring how students think.

1: Paul Grobstein

4: The Brain as a Story Teller/Story Reviser: Learning/Doing by Observing/Creating

8: An interactive presentation/discussion in which relevant features of how the brain processes information will be experienced so as to provide a common foundation in brain function which can be used to consider particular aspects relevant to the overall theme of the meeting, including education, creativity, and other ways humans both respond to and produce social change.

9: Talk/demonstration/discussion of key aspects of brain organization, including those features that give humans the ability to explore and create and, in so doing, both to adapt to change and to create change. Special attention will be give to the ability of the brain to create "stories", which in turn underlie both culltural understandings and the capacity to alter culture.

17: In addition to a general session, I am happy to contribute as appropriate to other relevant sessions.

1: Ingrid Philibert

4: Technology in the Learning Environment: A "Love-Hate" Relationship?

8: Short presentation, followed by discussion. Contributions on the role, value and perception of technology in other sectors of learning from other session participants would be valuable to advancing knowledge in this area.

9: Residents and faculty report having a "love-hate" relationship with technology in the learning environment, including the electronic medical record, EBM resources, and self-guided modules. Four factors were identified: 1) purchased systems are not suited to use in teaching settings; 2) faculty concern the systems may infringe on their clinical decisions; 3) learner worries electronic resources may replace face-to-face interaction with faculty; and 4) conflict between care and learning goals, accentuated by the effect of technology.

17: While the session does not list formal collaborators, the primary role of the presenter is to set the stage for active discussion on the role of technology in the clinical-education interface at at minimum in other settings where learners and practicitioners interface with technology.

1: Faiza Hussein Abd Alla

4: The Right of the Pre-school children to have a Scientific Mind

8: I will submit a paper to be distribuited before the session. I will diliver a short summary of the paper during the session to allow time for discussion on the content of the paper and the recommendation given by the auther.

9: The paper rests on a study of pre-school formal education in Sudan from a human right perspective. The paper is going to tackle the following: (1)Importance of pre-school age; (2) Importance of pre-school education; (3) Importance of having a scientific mind; and relation to human rights(4) The type and content of education offered in relation to development of the scientific mind in Sudan; (5) Pre-school education in Sudn(coverage); (6) Policy of UNICIEF in Sudan regarding pre-school children and why it should be changed; (7) Other suggestions inter allia refining of the "Right to Education" in such a way that it specifies its quality.

17: Iam interested to discuss suggestions which will appear in the text particulary with representative of UNISCO.

1: Mohsen Tawfik & Jan Visser

4: Threats to Nurturing the Scientific Mind in Today's World

8: Interactive roundtable exploring what detracts from developing the scientific mind with particular emphasis on such threats in today's world.

9: Some obvious threats to nurturing the scientific mind in today's world seem to be related to the reemergence of dogmatism and fundamentalism. There is a seeming opposition also between science and religion, but it is perhaps more useful to search for what it is in both science and religion that opposes the scientific mind and, conversely, what helps it along. The latter perspective assumes that the opposition between science and religion, if at all relevant, needs to be clarified in terms of different interpretations of both science and religion before a real debate is possible. More threats undoubtedly exist and the roundtable should identify them.

2: Jan Visser

4: The Scientific Mind: Revisiting the construct

8: Interactive roundtable discussion inspired by initial sketch of the construct 'the scientific mind' as elucidated in concept paper on 'The Scientific Mind in Context' available at http://www.learndev.org/dl/TSM-ConceptPaper.pdf.

9: The paper 'The Scientific Mind in Context' is a reflection of my thoughts around 1999/2000 regarding the construct 'the scientific mind.' Transdisciplinary discussions on the construct took place during BtSM2005 but we really never really reached convergence. This is a continued attempt to pin the construct down through transdisciplinary dialogue and to see what we can collectively agree upon.

1: Carolina Ödman

4: Universe Awareness: Inspiring young children with the beautiful universe

8: To follow

9: To follow

1: John van Breda	**1: Brian Cantwell Smith**	**1: Terrence Keeney**
4: Towards a Transdisciplinary Hermeneutics: A New Way of Building the Scientific Mind for Learning in the Perspective of Complex and Long-term Change	4: Title (in domain of 'non-conceptual knowledge' and/or 'transcending the received epistemologies of science') still to be determined.	4: Nature consciousness
8: Interactive group discussions facilitated by rotating chairpersons	8: To follow	8: To follow
9: Exploring the building of the scientific mind through a wide range of areas associated with a truly trans-disciplinary dialogue, including, but not limited to, questions of ontology, epistemology and methodology of transdisciplinary understanding and knowledge creation	9: To follow	9: To follow

1: John Avery

1: Roy McWeeny, Angel Sanz, & Jan Visser

1: Paul Barach

2: Science for the Long-Term Future

4: For the love of science: Reaching out to the as yet unreached

2: The role of the microsystem in enabling scientific development of the clinician's mind and soul

8: Brief plenary tele-presentation with discussion from Copenhagen, Denmark, based on a chapter in my new book "Energy, Resources and the Long-Term Future", World Scientific, 2007 (see http://www.worldscibooks.com/economics/6480.html.)

8: Brief plenary presentation on the state of the project. Roy presents from Pisa, Italy, by teleconferencing. Angel and Jan participate in it from behind the table. The audience contributes through suggestions and critical feedback. Sample materials are available for inspection as well as permanently available on the web in English and Spanish at www.learndev.org by following the links 'For the Love of Science' or 'Por Amor a la Ciencia'.

8: To follow

9: The session raises questions about the kind of priorities that should guide the development of scientific pursuit and about who should be in charge of providing the right incentives.

9: For the Love of Science is an initiative that aims at building the scientific mind through exposure to the conceptual beauty and integrity of humanity's knowledge of different aspects of nature as described in the natural sciences. A modularized series of Basic Books in Science is being developed that start from the very beginning and build up to a level that loosely corresponds to what is being taught in first year university science courses. The material does typically not follow the standard curricula of the various school systems but can be used by teachers and students for enrichment purposes. More importantly, we try to reach those hundreds of millions of young and older people who have no access to traditional educational offerings by making these materials freely available via the Web.

9: To follow

1: Tom Bigda-Peyton, Julie Johnson, & Paul Barach

2: Storytelling and Story Analysis: Mechanisms for Influencing the
Development of the Scientific Mind

8: Our goal with this session is to discuss story telling and story telling analysis as an important method of education and training as well as group and community building. We intend to share some of our stories and methods and then invite the group to share their reflections, stories, feedback. We believe this can be applied to all areas of learning and training. 30 min should be adequate.

9: There is a growing interest in stories in a variety of sectors. From health care to the World Bank, people are using stories to elicit tacit knowledge, surface assumptions, and learn from experience together. People also find stories pleasurable and engaging. The session will help bridge the gap between insight and action, by exploring ways of using stories in the workplace to enrich problem-solving, decision-making, learning, and evaluation.   This session will consist of two parts. First, we will do an introduction to story-telling and story analysis, and then share recent examples of application in health care.