ISCAR | International Society for Cultural-historical and Activity Research

Canada
ISCAR Regional section
USA

CRIRES
Centre de recherche et d'intervention sur la réussite scolaire

CRI_SAS
Center of Research and Intervention for Student and School Success
(CRI_SAS/CRIRES) Université Laval

FSé 50 ans
PASSION
ENGAGEMENT
INNOVATION

ISCAR

Regional Meeting

Canada-United States

Wednesday 1:00PM,
13 April 2016
Room 182, FSÉ

PROVISIONAL PROGRAM (March 29th 2016)

ISCAR EXECUTIVE COMMITTEE & SYMPOSIUM
Future research directions for cultural-historical perspectives
Thursday-Saturday 14-16 April 2016

Auditorium du pavillon La Laurentienne (LL)
Université Laval

	Wednesday 13 April	Thursday 14 April	Friday April 15	Saturday April 16
9-9:15		**Auditorium La Laurentienne Welcome** Fernand Gervais Dean of the Faculty of Education	**Room 726 Pavillon des sciences de l'éducation** **ISCAR Board Meeting** (Board members only)	**Discussion**
9:15-10:15		Scientific meeting. Session 1 *Research as social action: lessons from Vygotsky* Malcolm Reed, U of Bristol, UK *Daycare Professional's conceptions of transitions from kindergarten to school and how their conceptions change through analyses of their practice: What role do values have for practice?* Mariane Hedegaard, U of Copenhagen General Discussion	Martijn van Schaik, *ISCAR secretary's report* ISCAR new online platform	**Newsletter** – Need of support for Aminu's work **Discussion** **Health break**
10:15-10:30		**Health break**	**Health break**	
10:30-11:30		Scientific meeting: Session 2 *Developmental teacher education: prolepsis in a process of double stimulation* Martijn van Schaik, U of Applied Sciences, Amsterdam *Influencing Design with Cognitive and Neuroergonomics: Implications for the job design of digitized production drilling in deep mines* Mohammed-Aminu Sanda U of Ghana Business School General Discussion	Martijn van Schaik webmaster *Hands-on workshop How the website could be used, and developed further* General Discussion	*360° Viewing across the landscape of cultural-historical theory and practice: The state of our scholarship* 5th International Congress August 28th to September 1st 2017 Québec, Canada **Report from Local Organising Committee – Quebec City**, including pre/post-Congress activities (Sections and PhD course) http://iscar17.ulaval.ca
10:30-11:30	**Room 182, TSÉ**			
11:30-13:00	Webconference system tests	**Lunch**	**Lunch**	**Lunch**

13:00-14:00	C_US Business Meeting Chair: T. Laferrière, Regional coordinator . AERA meeting . ISLS & ISCAR proxies . ISCAR 2017, Quebec City . Next event(s) & meetings	Scientific meeting: Session 3 *Belonging in Families, Belonging in School: Making Visible the Relations Between Family Pedagogy and School Pedagogy?* Marilyn Fleer, U of Monash, AU		Transportation Convention Center **Onsite visit** .
14:00-14:30	C_US Scientific Session 1 *Creativity and community among autism-spectrum youth: Creating positive social updrafts through play and performance* Peter Smagorinsky, U of Georgia	*Developing creativity in science: the case of Vygotsky* Manolis Dafermos, U of Crete General discussion		
14:30-14:45	**Health break**	**Health break**	**Health break**	Keynotes
14:30-15:30	C_US Scientific Session 2 *Researchers' activity systems: Identifying contradictions to the benefit of school learners* Sylvie Barma, Christine Hamel, & Thérèse Laferrière (ULaval), Rollande Deslandes (UQTR), Catherine Larouche (UQAC), Anne Lessard (USherbrooke), CRIRES members *Student Experiences, Colonization, and Dysfunction in the Community College* Lara Beaty, City University, NY	Scientific meeting: Session 4 *A sociocultural model to promote children's literacy practices* Rebeca Mejía Arauz, U ITESO, Mexico *L.S. Vygotsky's Principle "One Step in Learning – A Hundred Steps in Development": In Search of Evidence* Viktor Zaretskii Moscow State University of Psychology and Education General Discussion	**Membership and finance**	**ISCAR Medal** – discussion of possible nomination **Meeting continuation (if necessary)** **Closing**

15:30-16:15	C_US Scientific Session 3 *Inquiry into the Mediation of Self-regulated Learning* Alexandre Buysse Université Laval ==Open space for one or two more presentations==	Scientific meeting: Session 5 *The historical-cultural approach in Science Education studies* Andre Machado Rodrigues U. of Sao Paulo Scientific meeting: Session 6 *Activity theory as a foundation for teacher collaborative design* Thérèse Laferrière, Université Laval Alain Breuleux, McGill U		
16:15-16:30	**Health break**	**Health break**	**Coffee break**	
16:30-17:30	C_US Scientific Session 4 *Youth Voice Driven Afterschool Science Clubs : A Tool to Develop New Alliances in Ethnically Diverse Communities in Support of Transformative Learning For Preservice Teachers and Youth* Jrene Rahm, U de Montréal	General Discussion	**Use of ISCAR funds**	
17:30-18:30	C_US Scientific Session 5 ==Invites speaker to be confirmed==)		**Activities of the Regions**	**Dinner in Old Town**

Board member Nikolai Veresov will attend some sessions online but will not present.

Presentations will be webcasted during the ISCAR C_US meeting and the ISCAR Symposium.

Abstracts

ISCAR | International Society for Cultural-historical and Activity Research

Research as social action: lessons from Vygotsky
Malcolm Reed, U of Bristol, UK

In considering examples of research that Vygotsky carried out during his lifetime, I would like to reflect on what the central purpose of cultural-historical theory and practice might be for our times in terms of taking social action. I will draw on the complexities and contradictions of carrying out longitudinal inductive inquiry into negativity in a British state secondary school. Where there is intense governmental regulation and prescription of curriculum and pedagogy in state education, how might we maintain and develop the influence of our tradition in such a situation?

Daycare professionals conceptions of transitions from kindergarten to school and how their conceptions change through analyses of their practice: What roles do values have for practice
Mariane Hedegaard, University of Copenhagen

In the Danish educational system, class zero is constructed to make a transition phase from kindergarten to school. Furthermore the last half year in most kindergartens is to orient children to school learning. The research in this paper questions this approach.

From a theoretical perspective, transition from one institutional practice to another means new demands. Demands from a new institution may lead to conflict, which may be seen as indicating development (Hedegaard, 2012a). The transition to school means that children have to develop new motives and competences that will reorient their relation to other persons and the surroundings. The project, this article draws on, was a two-year study directed towards formulating core concepts for how to support children's transition to school. A discussion forum between researchers and leaders and kindergarten professionals from two kindergartens were created. This discussion forum served as an intervention to explore and conceptualise the kind of contradictions and conflicts that children may become involved in and evaluate what may be developmental or detrimental for their development. The methods used in the study were:

(1) Participant observation of the educational activity in the two kindergartens and then following the children into class zero in school.
(2) Recorded discussion sessions with the kindergarten professionals in which the observations from kindergarten and class zero were used to evaluate and plan changes in the kindergartens' educational practice.

The results led to a discussion of the implications of play for children's development and a formulation of how play may be used to prepare children for school.

Developmental teacher education: prolepsis in a process of double stimulation

Martijn van Schaik, U of Applied Sciences, Amsterdam

In my presentation I'd like to discuss the case of Rob, an in service student teacher Human & Technology at university of applied sciences Amsterdam. As a teacher educator and researcher from the cultural historical tradition I am interested in how I can design, in a team, a developmental teacher education programme that is both open and structured; courses with content in students' zone of proximal development and meaningful for their (future) practice. This case will be presented as a narrative addressing the main question: how can we design developmental teacher education, create meaningful experiences for students and develop educational understanding that might help students like Rob to become agential teachers?

Developing creativity in science: the case of Vygotsky

Manolis Dafermos, University of Crete

The presentation discusses the enigma of creativity in science on the basis of the study of Vygotsky's case. Vygotsky's life course and the development of his cultural historical theory are examined as an unique case of creativity in science. Vygotsky's creative development is a complex, multidimensional, dynamic phenomena. It is argued that creativity may be conceptualized as a contradictory long-term developmental process across the life span. The dialectical thinking with its focus on wholeness, contradictions and change enables to highlight several essential facets of creativity. Emphasizing the interconnectedness of social and personal, continuity and discontinuity, concentration and openness, a dialectical perspective is suggested to explain the developmental nature of the creative process.

Influencing Design with Cognitive and Neuroergonomics: Implications for the Job Design of Digitized Production Drilling in Deep Mines

Mohammed-Aminu Sanda, U of Ghana Business School

Presentation is on a study to understand the cognitive and emotional-motivational aspects of task complexity in the conduct of a high-technology driven drilling activity, and the relevance of such learning towards mediating task complexity in the future design of an efficient drilling job in deep mines. The need to explore the complexity of the drilling activity is motivated by the presumed notion that, a rapid increase of automation in the bolting activity will result in the integration of various processes and unit operations, and by implication make the human-aspect of the bolting job design very efficient. Based on the realistic notion that one cannot perform a complex motor task without significant mental effort and concentration, and that the relationship between these different components of task (i.e. motor and cognitive) is critical in evaluating the complexity associated, not only with the cognitive and motor aspects of activity, but also with its emotional-motivational components, this study was methodologically guided by the systemic structural theory of activity (Bedny & Karwowski, 2007). Data was collected in an underground mine by observing and video recording miners' engaged in two separate production bolting activities using two Boomers simultaneously. A Boomer is a highly automated and computer-based programmable robotic arm attached to the front of highly reinforced tractors that is computer guided by an operator to carry out rock drilling operations in a mining activity. Using the systemic analytical approach, the cognitive aspect of complexity that depended on the specificity of information processing in the bolting activity, and those emotional-motivational aspects of complexity that reflected the energetic aspects of the bolting activity were evaluated. Analysis of the cognitive aspect of complexity that depended on the specificity of information processing in the bolting activity showed that the operators are challenged in their ability to focus on the two boomers that function simultaneously. The operators were also found to experience challenges in their ability to clearly process information marked on the rock surfaces (drilling spots) due to parts of their operational views being blocked by metal guards provided as safety reinforcement in the tractor cabin design, and which spots they were expected to use as guide for the start of the drilling operation using the robotic drilling tool (boomers). The operators were also of the notion that the programmed boomers do not always respond rightly to the programmed commands, and as such requires operators to use their cultural-historical understanding of mine work to guide the boomers to operate optimally. Analysis of the emotional-motivational aspect of complexity that reflected the humane aspects of the bolting activity showed that the operators were not satisfied with the quality of work life component of the bolting job

design. It is concluded that the performance enhancing strategies used by workers to mediate the cognitive difficulties and the expressed emotional-motivational challenges in the bolting activity could be used to reduce the task complexity by integrating them in the design of a friendly and efficient work system for the drilling job in deep mines.

Belonging in families, belonging in school – Making visible the relations between family pedagogy and school pedagogy
Marilyn Fleer, U of Monash

Being, belonging and becoming as a foundational philosophical and pedagogical construct for curriculum in early years education in Australia (Australian Government, 209) is shaping educational practices in both schools and early years settings. But does this theoretical foundation create the conditions for inclusive practices for families and do schools and early childhood settings create a sense of belonging through supporting an inclusive pedagogy? The study reported in this session is based on 100 hours of video observations of two Australian families as their eldest child commenced school. Three observation periods over twelve months generated data on everyday family practices (bed time routines, breakfast, play, walking to school), school activities (group time, play time, individual and small group activities), and homework routines. Digital documentation of activities through video observations (2 cameras following the children in each family) was undertaken, and an analysis from the perspective of the child, as each child entered school and returned to the family home, was undertaken. Further, an analysis of the geography and terrain of the children was also mapped, because it was found that high levels of movement took place at home, whilst a more sedentary approach to schooling was observed. Through the lens of cultural-historical theory (Vygotsky, 1987), the demands and motives met (Hedegaard, 2012a) as the eldest child engaged in family life and transition school (Hedegaard, 2012b) were analysed. A cultural-historical conception seeks to document holistically the relations between personal, institutional and societal conditions (Hedegaard and Fleer, 2008) so as to gain a better understanding of how a child experiences going to school and what possibilities for the child's development are afforded. The study found that when a major disjunction between the pedagogy of the family and the pedagogy of school exists, school failure resulted, suggesting that there is a need for recognising the family pedagogy that has shaped, and continues to shape children as they attend school. Where there is alignment between the pedagogy of the home and the pedagogy of the school, a greater sense of belonging is generated, and it is argued in this presentation that greater school outcomes and personal development are likely to result.

References:

Australian Government Department of Education, Employment and Workplace Relations, (2009). *Early Years Learning Framework,* ACT: Commonwealth of Australia.

Hedegaard, M. (2012a). The Dynamic Aspects in Children's Learning and Development. In M. Hedegaard, A. Edwards & M. Fleer (Eds.); Children's development of motives: a cultural-historical approach. Cambridge: Cambridge University Press.

Hedegaard, M. (2012b). Analyzing children's learning and development in everyday settings from a cultural-historical wholeness approach. *Mind Culture and Activity*, **19**, 1–12.

Hedegaard M. **&** Fleer M. (2008). Studying children. A cultural-historical approach New York: Open University Press.

Vygotsky, L.S. (1987). Problems of general psychology. The collected work of L.S. Vygotsky: Vol. 1. New York: Plenum Press.

A sociocultural model to promote children´s literacy practices

Rebeca Mejía-Arauz, ITESO University

My presentation focuses on a sociocultural model that I am trying to develop with the purpose of promoting literacy practices in young children in a way that is socio-culturally relevant for the populations addressed, according to the interests and motivations of their age and stage of development, and in particular, in a non-school style.

In México there are significant differences in the opportunities children have in their family and community contexts to get more acquainted and familiarized with school practices. Preschool and elementary school are supposed to solve this inequity, but throughout time studies show that our school system is not solving this problem. Furthermore, it seems that our school system preserves these social and cultural differences in learning opportunities.

Learning to read and write very often has been considered mainly a school matter, which often is taught in a very technical way, but literacy goes beyond learning to decode or comprehend what is being read. Literacy has to do with everyday practices, is context and culturally situated and involves social and personal experiences and meanings. If children see or learn that reading and writing is a school only matter, then we are depriving them of an essential tool for life.

For this reason, the model I am trying to develop follows Rogoff et al.´s (2003, 2007, 2014, 2015) studies and theoretical perspective on learning by intent community participation, now known as learning by observing and pitching in in community and family endeavors (LOPI), as well as the line of the *New Literacy Studies* (Gee, 2004). The model is supported by research on learning in non-school situations, or the so called informal learning, providing evidence of how children (and in general young people and adults) learn following the cultural ways of their communities as they observe, participate, get involved, get motivated to belong to a group that is pursuing a goal in complex activities that are relevant for their immediate social group or their communities at large.

The historical-cultural approach in Science Education studies

André Rodriguez, University of Sao Paulo

The practice and research in Science Education are usually supported by a positivist perspective on how science works and how Science Education should work. Such conception is attached to the dehumanization of Science development and therefore the dehumanization of Science teaching. As recent literature in Science Education has shown this positivist or (neo)positivist approach for Science Education are unable to embrace contemporary issues such as gender, minorities, disabilities, emotion, etc. Furthermore, this common view on traditional issues such as learning and scientific concept formation is rather restrict. In this study I discuss how cultural-historical approach can help to overcome persistent issues in Science Education. It is necessary a review of traditional issues and deeper discussion on how this different view on human development provided by cultural-historical research might affect the school daily life and learning process. I aim at exploring particularly the concept of "totality" as a framework to redirect and refresh the current tendencies in Science Education. Although, the philosophical or even psychological content of the concept of totality was not fully addressed by Vygotsky, it is potentially useful category in order to re-frame the state of affairs in Science Education. I present tow cases: (I) the concept formation in deaf education and (ii) initial teacher education in school practice. Both cases indicate the need for a wider and open analytical categories to handle complex issues in cultural-historical research.

L.S. Vygotsky's Principle "One Step in Learning – A Hundred Steps in Development": In Search of Evidence

V.K. Zaretsky, Moscow State University of Psychology and Education

On the basis of L.S. Vygotsky's published works the paper attempts to trace the dynamics of his concepts of child development and to provide evidence supporting Vygotsky's statement that one step in learning equals a hundred in development, which is one of the key principles of cultural-historical theory in its application to child development. This statement is put in a row with two other major principles: one arguing that learning precedes development and the other referring to the zone of proximal development. The paper outlines a multivector model of the zone of proximal development as one of the conceptual tools of the reflective and activity approach to helping children overcome learning difficulties and promoting their development. The paper also describes a case study in which an orphan child with a disability received psychological and educational support that obviously contributed to the child's development. It is argued that L.S. Vygotsky's idea of the specific relationship between learning and development has fundamental theoretical and practical implications, in particular, for working with children with special needs.

Activity theory as a foundation for teacher collaborative design

Thérèse Laferrière, Université Laval & Alain Breuleux, McGill University

Teacher collaborative design of curricular activities is considered a form of professional development. The situative perspective articulated by Greeno et al. (1998) and third-generation activity theory as developed by Engeström (1987) constitute useful conceptual frameworks to describe and investigate teacher learning by collaborative design. In this contribution, three key features derived from these two theories, situatedness, agency and the cyclical nature of learning and change, are used to describe two cases of collaborative design in two different Quebec settings.

Creativity and community among autism-spectrum youth: Creating positive social updrafts through play and performance
Peter Smagorinsky, smago@uga.edu

In Volume 2 of the *Collected Works*, Vygotsky argues for more inclusive treatment of people who depart from the developmental norm. In this essay I review facets of his approach and discuss how they may inform current attention to extranormative mental health makeups, e.g., tendencies toward depression, anxiety, bipolarity, and related neurological influences on personality. I focus on the following sets of Vygotskian tenets: (1) his belief that mental and cognitive differences do not comprise defects or deficiencies, but rather present developmental channels that depart from the evolutionary norm; (2) his assertion that "secondary disabilities" resulting from stigmatization related to difference produce more deleterious effects on one than does the source of difference itself; (3) his belief that feelings of inadequacy, if socially channeled toward productive roundabout means of mediation, can productively promote human growth within existing cultural channels; and (4) his conviction that the goal of education and human development is to promote progress toward a culture's higher mental functions—i.e., those ways of thinking endemic to particular cultural orientations to the world—rather than to remediate sources of difference.

Researchers' activity systems: Identifying contradictions to the benefit of school learners
CRIRES members, Quebec universities

Our multi-university research center has been studying academic achievement and school success since 1992 from different theoretical perspectives. Using a wide range of research methodologies, we have produced, mostly in French, over 500 scientific articles. Our devise has been *No intervention without research and no research without intervention*. We recently engaged in studying our own activity, and this is leading us to the identification of contradictions within our research results. In many ways, this has nothing to do with the results that grew out of a particular approach or methodology. They grow out of the very fact of their coexistence when it comes to knowledge mobilization to the service of teachers and school learners. We will point to some of these contradictions, and ways of overcoming them.

Inquiry into the Mediation of Self-regulated Learning
Alexandre A.J. Buysse, CRIRES, Université Laval, alexandre.buysse@fse.ulaval.ca

Extensive research on Self-regulated Learning (SRL) has revealed it's importance in respect to academic achievement. Different ways to enhance the development of SRL have been found, and the various factors underlying it have been studied, ranging from cognition to volition and emotion. Different approaches have led to different tenets proposing different teaching methods: from direct teaching to inquiry based learning. Notwithstanding this wealth of information, there are few overarching theories taking into account different contexts and learning activities. Based on our extensive review of the existing literature and our own research, we propose a theory based on the study of different mediations, their internalization, the differences in their transmission as well as the different processes they influence. We outline the effects of structuring and controlling mediations, as well as their direct or indirect transmission, according to cultural activity and internalized culture.

Youth Voice Driven Afterschool Science Clubs : A Tool to Develop New Alliances in Ethnically Diverse Communities in Support of Transformative Learning For Preservice Teachers and Youth

Jrène Rahm, Université de Montréal, Jrene.rahm@umontreal.ca

I present findings from a three-year action research project which implied the development of afterschool science clubs in two high schools in ethnically diverse communities, made possible through a partnership among a University, the involved schools and the community. I describe the youth-voice driven practice at the heart of the science clubs which led to the joint-creation of video documentaries on scientific topics of interest to youth. I also discuss the manner the clubs were experienced by students from the University who were asked to visit the clubs twice in light of a course assignment in their second semester of their teacher education program and two other student teachers who participated in the clubs while completing a two-month placement in the same school during their fourth year of their teacher training program. In conclusion, I address its implications for building new alliances among schools, community resources and the University, in support of equity driven practices inclusive and supportive of ethnically diverse youth with complex immigration histories.