Annual Graduate Student Educational Research Symposium

Wednesday, March 28, 2007
Purdue Memorial Union
North Ballroom

Keynote Address by Jonathan Plucker, Ph.D.
“Making an Impact: How to Become a Lifelong Creative Researcher”
Welcome!

It is my pleasure to welcome you to the first Annual Graduate Student Educational Research Symposium at Purdue. As dean of the College of Education I am proud of the accomplishments of all of our graduate students whose areas of study span the education-related disciplines across campus.

This year is the first of what I hope to be an annual exposition of what our graduate students and their advisors do to advance educational research. This symposium brings together the diversity of what educational graduate students do at Purdue. Be they majors in statistics, education, agriculture, civics, science or history, they share the common interest and passion for advancing best practices in the development of future generations of children and adults.

This symposium has been a joint and collaborative effort led by students with advisement and support by the associate deans of the College of Education, Jeff Gilger and Sidney Moon. I want to congratulate them for taking on a new challenge and engaging our colleagues across campus.

I encourage you to enjoy the presentations and I hope that you will take away a message from your experience: that we are outstanding in what we do for education, our students are of the highest quality, and that the model of multidisciplinary research, engagement and teaching lives on at Purdue!

Sincerely,

George Hynd
Dean, College of Education
ABOUT THE SYMPOSIUM
Purdue University’s College of Education and the Graduate Students in Education Council (GSEC) is sponsoring the first Annual Graduate Student Educational Research Symposium, a research symposium for graduate students in education-related degree programs from across the Purdue campus.

SCHEDULE
1:00 pm: Opening remarks
1:15 pm: Poster session I
2:15 pm: Break~refreshments served
2:30 pm: Poster session II
3:30 pm: Break~refreshments served
4:00 pm: Keynote address by Jonathan Plucker
4:45 pm: Awards presentation
5:15 pm: Closing remarks

AWARDS
Best Paper Awards will be given to outstanding papers in each content strand.

ABOUT THE KEYNOTE SPEAKER
Jonathan Plucker is professor of educational psychology and cognitive science at the School of Education at Indiana University, where he currently directs the Center for Evaluation and Education Policy (formerly the Indiana Education Policy Center). After teaching elementary and high school science, he received his doctoral degree in educational psychology from the University of Virginia. His research interests include educational policy, creativity and intelligence, and giftedness and talent development; he has written over 80 publications on these topics. He is frequently sought after by the media to discuss his policy work in Indiana as well as his work on creativity, intelligence and boredom.
SYMPOSIUM ORGANIZERS

BRIAN R. BELLAND, Symposium co-chair, is a Ph.D. candidate in educational technology. His research interests center on the impact of and facilitation of problem-based learning among middle school students. Specifically he is interested in how technology can support student and teacher efforts during problem-based learning units.

Winner of the Department of Curriculum and Instruction’s 2006 Outstanding Graduate Teaching Assistant award, Belland has been in the educational technology program since 2004. He earned an M. A. in French and Italian from the Ohio State University in 2001 and a B.A. in French from the College of Wooster in 1999. He has presented at conferences including AERA, AECT and SITE, and has authored articles in the *Journal of Computer Mediated Communication* and the *Interdisciplinary Journal of Problem-based Learning*.

ELOISA RODRIGUEZ, Symposium treasurer, is a doctoral student in Curriculum Studies. Her research is focused on a critical ethnographical study on grassroots community schools. She currently serves as the president of the Curriculum and Instruction Graduate Student Association.

Eloisa has been in the curriculum studies doctoral program since August 2005. She earned a MS.Ed. from Purdue University in 2003 as a Fulbright scholar and a B.A. in Pedagogy from her hometown university in Honduras. She has presented at AERA, and NAME scholarly conferences.

KATE VAN OOSTEN, Symposium co-chair, is a doctoral student in curriculum studies. Her research interests include multicultural education, civic journalism, and the portrayal of Asian Americans in popular culture. Her particular focus is on Chinese adoption issues.

Kate has been in the curriculum studies doctoral program since January 2005. She earned a MS.Ed. from Purdue University in 2004 and a B.A. in history from Colorado State University-Fort Collins in 1999. Her conference experience includes presenting at AERA, NAME, Curriculum and Pedagogy, and the Michigan Academy scholarly conferences.
POSTER SESSION I

MEGAN ARNOLD
“The Effectiveness of Social Stories on Enhancing Social Skills of Children with Autism Spectrum Disorders”

The effectiveness of social stories on enhancing social skills for children diagnosed with Autism Spectrum Disorders (ASD) was assessed. The experimental integrity of nine articles within the field were systematically reviewed based on the use of experimental design, the types of participants used, the ability of the research to be generalized and maintained and the use of validity, reliability, and treatment integrity. All of the reviewed articles indicated that social stories were effective in enhancing social skills in the children that participated. However, the limitations within the literature indicate that future research should focus on generalization, maintenance, and experimental integrity.

Paper type: Theoretical/Literature Review
Content area: Measurement & Research Methodology

ASTA BALKUTE
“Overlap of Historical and Civic Thinking”

Paper type: Mixed Methods
Content area: Social Context of Education

MIRIAM CHACON, OLIVER WENDT
“Using Functional Communication Training (FCT) to Reduce Aggressiveness in Individuals with Autism: A Systematic Review”

A systematic review of the current research literature was conducted regarding the effectiveness of Functional Communication Training (FCT) in reducing and often eliminating aggressiveness in individuals with autism. FCT is a systematic intervention used for replacing inappropriate behavior with a socially acceptable behavior. Quantitative effectiveness measures were applied to evaluate the effectiveness of FCT and to discuss its outcomes relative to evidence-based practice (EBP).

Paper type: Theoretical/Literature Review
Content area: Learning & Instruction

MARIA-ALEXANDRA DA FONTE, TERESA TABER-DOUGHTY
“The Use of Alternative Communication Modes in Infancy: How Early Can We Start?”

An alternating treatment design across infants was used to determine if infants at three different developmental ages could respond to two alternative communication modes to request preferred items. Results demonstrated patterns of communicative behaviors of infants in three different developmental stages and noted behavioral differences across children. A demonstrated consistency of preferred alternative communication modes selection across children was also found. Results suggest no significant difference between the two communication modes offered to the infants. However, a difference in response mode and learned behavior of cause-effect across age groups was found.

Paper type: Other
Content area: Teaching & Teacher Education
SHANNA DALY, LYNN BRYAN
“Middle and High School Teachers’ Conceptions of Nanoscale Phenomena Models”

The NCLT supports the integration of nanoscale concepts into middle and high school curricula. Data collected from science teachers in an NCLT workshop form the basis for our understanding of teachers’ conceptions of uses for models of nanoscale phenomena and the impact of our model-based activities. Teachers expanded their views on the use of models; however, when asked to select or create their own model of a nanoscale phenomenon, most of the teachers did not choose models that incorporated inquiry. This finding contributes to a larger understanding of how teachers view models, and guides refinements to our model-based inquiry activities. 

Paper type: Qualitative
Content area: Teaching & Teacher Education

ANGELA HODGE
“Pre-service Secondary Mathematics Teachers’ Educational Experiences Related to Reform-oriented Practices of Teaching Mathematics”

Researchers are debating how pre-service secondary mathematics teachers (PSMTs) can best be provided with experiences that will prepare them to teach mathematics at the secondary level (Floden & Meniketti, 2005). A course which offers PSMTs the unique experience of teaching a college algebra course in conjunction with a tri-weekly seminar has the potential to address some of these issues. A case study investigates the potential mathematical and pedagogical experiences for PSMTs from the novel opportunities offered in this course. Data collection included multiple modes of inquiry: (1) questionnaires, (2) interviews, and (3) field notes.

Paper type: Mixed Methods
Content area: Teaching & Teacher Education
As previous research has shown that student achievement in science increases when students are taught using relevant, real-world examples that are of interest to them, the NCLT is investigating nanoscience concepts to influence secondary students’ interests. This poster will discuss quantitative and qualitative data of secondary science students’ interest in nanoscience concepts. Preliminary results indicate middle school students are more interested in nanoscience than high school students. Analysis of interview data has indicated six components students report as influential to their interests: potential for hands-on work, use of chemicals, relationship to everyday life, prior knowledge, prior experience, and students’ personal interests.

Paper type: Mixed Methods
Content area: Learning & Instruction

This study presents validity findings of a Korean version of the Learning Style Inventory Version 3-Elementary Sample (LSI). The LSI was translated from English into Korean then back into English. The Korean version of the LSI was administered to 1,017 Korean elementary students in grades 3 through 6. Scale reliability and validity were assessed using internal consistency estimates and confirmatory factor analysis (CFA). The results yielded evidence of validity and reliability of Korean data including acceptable internal consistency estimates and good fit CFA indices for the seven factor model proposed for the original LSI.

Paper type: Quantitative
Content area: Measurement & Research Methodology

This study is to investigate the impact of study abroad programs on students’ cultural identities by examining the challenges encountered by students who study in culturally diverse societies. Through narrative inquiry, this study investigates the culturally specific experiences of Japanese female high school exchange students. Data will be collected from interviews, focus-group discussions, students’ journals, letters-emails, and visual records.

Paper type: Quantitative
Content area: Curriculum Studies
This report provides information on the role of middle and high school Family and Consumer Sciences (FACS) education as a means for immediate and long-term economic and societal returns on investments in education. It also examines how the availability of FACS Education for all public school students can alleviate social inequities. This study projects sizable economic cost-benefits of FACS Education.

Paper type: Theoretical/Literature Review
Content area: Educational Policy & Politics

ERIN MOSS
“Preservice Teachers’ Preparation for Racial and Cultural Diversity”

Teachers’ beliefs and expectations play a vital role in perpetuating or mitigating the achievement gap. I use findings from recent educational research to examine preservice teachers’ (PSTs’) beliefs about racial and cultural diversity in schooling, expectations for students from different backgrounds, and reactions to interventions designed to modify these beliefs. I then analyze the literature as a whole, evaluating commonly-used research methodologies, critiquing researchers’ interpretations of data, and identifying limitations of the existing research. I conclude by proposing strategies to mitigate these limitations in subsequent studies on teachers’ beliefs and expectations, and I discuss implications for teacher education.

Paper type: Theoretical/literature review
Content area: Teaching & Teacher Education

NADEZDA PIMENOVA
“Multiple Intelligences and Multi-word Units: Teaching Implications”

This study examines the research behind Multiple Intelligences (MI) Theory and whether it is being applied in English Foreign Language (EFL) teaching materials. In addition, it offers some suggestions on how teachers can incorporate the principles of MI Theory in teaching multi-word units (MWUs). The study suggests that the multiple intelligence profile of an idiom book should be taken into consideration, whether it benefits or not all intelligences learners of EFL. Results show that predominately verbal, interpersonal, intrapersonal and visual intelligences are included in Attitudes Through Idioms (Adams & Kuder, 1994), the book recommended by English as a Second Language (ESL) website eslgold.com. Another recommended book Idioms for Everyday Use (Broukal, 1994) caters mainly to verbal, interpersonal and visual intelligence learners. The study offers some implications on how to teach MWUs catering to all types of MI learners.

Paper type: Mixed methods
Content area: Other

NAHYR ROVIRA-FIguEROA, MARY NAKHLEH
“Gender Learning Styles in an Undergraduate General Chemistry Course”

The purpose of this study was to examine the gender learning-style differences revealed by undergraduate students in a general chemistry course. A sample of 64 participants from a Mid-western university enrolled in second semester of a general chemistry course participated in this study. An online questionnaire through Web-
CT and semi-structured interview were used to assess the ways students perceived the knowledge gained. Results suggested that male students perceived the learning style as applied learners and females as conceptual learners (Canfield & Caffery, 1988; Keri, 2002). Through the identification of the learning style differences by gender; professors can prepare and adjust the science curriculum to concentrate on individual students’ learning preferences.

**Paper type: Mixed Methods**
**Content area: Learning & Instruction**

**BAYASGALAN SESEER**
“Perceived Presidential Leadership Styles and Faculty Job Satisfaction at Mongolian Public Universities”

**Paper type: Quantitative**
**Content area: Administration, Organization & Leadership**

**SHUYING SHA**
“Teaching English as Second Language Using Authentic Literature”

In response to an increasingly diverse student population at public schools in the United States, number of program models have been developed to meet the needs of language minority students, many involving the integration of language and content instruction (Peregoy & Boyle, 2005), it is important to closely examine what is going on at schools, how an ELL teacher teaches English as second language, and the students response to the certain kind of teaching. There are three goals for this paper: (1) to describe and interpret how a teacher use real literature in ELL teaching (2) to describe how the teacher scaffold the students’ writing (3) to describe how the four modes of language benefit each other in literature-based ELL teaching.

**Paper type: Qualitative**
**Content area: Administration, Organization & Leadership**

**TRACY THOENNES**
“Homelessness and Schooling: Understanding the Child’s Perspective”

Since the early 1980’s, the composition of the homeless population has undergone substantive changes. The new face of homelessness is that of the disenfranchised young child. In a given year in the U.S., 3.5 million people, 1.35 of them children, experience homelessness (Urban Institute, 2000). Families with young children have become the fastest growing sector of the homeless, comprising 39% of this national population (U.S. Conference of Mayors, 2003). Identifying how teachers can address the needs of these children is critical to informing how homeless students can experience schooling positively and with the same opportunities as their housed peers.

**Paper type: Qualitative**
**Content area: Social Context of Education**

**YUXIANG WANG**
“Challenges and Opportunities: Multicultural Education in China”

This study explores the challenges and opportunities of multicultural education in China. The challenges which are lack of democracy and freedom of speech, unequal development of economy between Han and minority regions (Wan,
and unbalanced distribution of wealth are examined. Opportunities which are China’s fast economic development, globalization of China’s market and democratic needs from every walk of life are studied. Implications will be provided: multicultural education will help students and administrators learn to respect and value other cultures, will help relieve the ethnic conflicts and hatred, and will enhance the process of democracy in China.

**Paper type:** Theoretical/Literature Review  
**Content area:** Curriculum Studies

**MICHAEL WILKINS,**  
**HEATHER SERVATY-SEIB**  
“Review of Death and Mental Retardation”

The purpose of the present review is to provide an understanding of the present literature with regard to death and mental retardation (MR). We reviewed 75 articles. The results indicated that the most commonly researched areas are aspects of mortality (e.g., mortality rates, cause of death), grieving process/response, caregiver or parental bereavement, and therapeutic interventions. Researchers have focused most on how or how often people with MR die. Researchers also focused on grief responses and interventions. Articles on mortality were largely quantitative whereas those focused on grief responses and interventions were more often theoretical or qualitative in nature.

**Paper type:** Theoretical/Literature Review  
**Content area:** Counseling & Human Development

**POSTER SESSION II**

**BRIAN BELLAND, WILLIAM WHITE**  

Problem-based learning is an instructional framework in which students confront ill-structured problems and must define the problem, generate and pursue learning issues to understand the problem and a potential solution, solve the problem, and build an evidence-based argument to support their solution to the problem. Many scholars have noted the particular difficulty middle school students have in creating evidence-based arguments (e.g., Krajcik et al., 1998). We designed and developed the Connection Log, a database-driven website, to scaffold middle school students’ construction of evidence-based arguments. In this poster we demonstrate and provide evidence of the effectiveness of the system.

**Paper type:** Other  
**Content area:** Learning & Instruction

**DANNY BREIDENBACH,**  
**BRIAN FRENCH**  
“Ordinal Logistic Regression to Detect Differential Item Functioning for Gender in the Institution Integration Scale”

Many issues influence capable students’ decisions to withdraw from college. Retention rates are a concern to universities, especially certain areas of study (e.g., Engineering). Programs targeting retention can benefit from
understanding the factors related to withdrawal decisions, especially in underrepresented groups (e.g., women in Engineering). The Institutional Integration Scale (IIS; Pascarella & Terenzini, 1980) is based on Tinto’s (1975) theoretical framework of academic and social integration and has been suggested as a predictor of student attrition. In this study, ordinal logistic regression (OLR) is used to examine differential item functioning (DIF) by gender in a revised version of the IIS (French & Oakes, 2004).

**Paper type:** Quantitative  
**Content area:** Measurement & Research Methodology

**YOOJUNG CHAE, MARCIA GENTRY**  
“Korean High School Student Perceptions of Classroom Quality: Validation Study”

This study was constructed to verify validity and reliability of Korean student responses to the instrument, Secondary Student Perceptions of Classroom Quality (SPOCQ) - Korean Version (Gentry & Chae, in process). The sample consisted of 713 high school students in Seoul and Ku-Mi regions. Data were collected in Korea and analyzed in the U.S. using confirmatory factor analysis. The initial five factor model with 34 items did not fit the data well; the data supported a second five-factor model with 32 items. The reliability and fit indices of the second model indicated that SPOCQ can be used with Korean secondary student populations.  

**Paper type:** Other  
**Content area:** Measurement & Research Methodology

**LISA DUFFIN, HELEN PATRICK**  
“Pre-service Teachers’ Beliefs about Effective Strategies and Self-efficacy for Motivating Students”

The objective of this study was to examine pre-service teachers’ beliefs about motivating students using both quantitative and qualitative data. Specifically, we investigated the teaching efficacy and efficacy for advancing student motivation of two groups of pre-service teachers (i.e. beginning and graduating). Additionally, pre-service teachers generated strategies for enhancing student motivation for disengaged and engaged students. Significant group differences emerged for teaching efficacy, with graduating pre-service teachers expressing greater confidence in their teaching abilities; albeit efficacy levels were relatively modest. Moderate levels of efficacy for advancing student motivation also emerged. Pre-service teachers suggested strategies for motivating disengaged students congruent with motivational theory. Of concern was the predominant suggested use of extrinsic rewards to motivate engaged students.  

**Paper type:** Mixed methods  
**Content area:** Teaching & Teacher Education

**SYBIL DURAND, BRUCE PARKER**  
“Odd Acquaintances? Democracy and Global Issues in Multicultural Education Classrooms”

The presenters designed and taught a course titled, “Global Issues and Democracy in Education” at Purdue University. The course combined the first “block” of the teacher education program at Purdue (EDCI
205: Exploring Teaching and EDCI  
285: Multicultural Education) to create a curriculum that retained the larger thematic content of the original courses, but had a focus on contextualizing those themes within global and democratic perspectives. The course relied heavily on current events to inform class discussions and student work. The course syllabus, assignment descriptions and other resources will be provided and discussed with conference attendees. The presenters’ discussion and poster will focus on the tensions between democracy and global issues in the classroom.  
*Paper type: Qualitative  
Content area: Teaching & Teacher Education*

**ROBERT EVANS**  
“A Comparative Study of Student Achievement Between Traditional Calendar Schools and Year-Round Indiana Schools”

Are traditional school calendars the most effective way to meet the academic needs of students’ education today? The purpose of this study was to examine if year-round calendar schooling is more effective academically than a traditional calendar system. Specifically, it investigated if there is a difference between elementary students’ ISTEP+ score averages for year-round versus traditional calendar schools from the years 2002 to 2005. This study further investigated subgroups of low socio-economic status, minority, and special education students in year-round schools versus traditional calendar schools. The results showed a positive significant difference in student achievement for all year-round schooling students as well as for specific sub-groups of year-round students.  
*Paper type: Qualitative  
Content area: Administration, Organization & Leadership*

**MICKEY ISAACSON, LYLE LLOYD**  
“Reducing Multiple Interpretations of Mathematical Expressions with MathSpeak”

Print-disabled individuals (blind/visually impaired and many learning disabled) rely heavily on speech for acquisition of extraneous information. These individuals face barriers in accessing science, technology, engineering, and mathematics fields because of ambiguities in spoken communication of mathematical expressions. MathSpeak is a product under development containing a standardized set of rules for presenting expressions in a non-ambiguous format. No efficacy research has been conducted to demonstrate the capacity for MathSpeak to reduce multiple interpretations. Hence, the purpose of the present study was to examine the capacity of MathSpeak for disambiguation. Results show MathSpeak is highly efficacious.  
*Paper type: Quantitative  
Content area: Learning & Instruction*

**JIWON KIM**  
“John Dewey’s Concept of Aesthetic Experience and Moral Education”

The purpose of this paper is to examine the relationship between Dewey’s concept of aesthetic experience and moral education. The main research question is:
“What is positive the relationship between aesthetic experience and moral education?” This paper is based on John Dewey's theories of art and moral education. Discussion of the relationship consists of three discourses: (1) empathy, (2) own moral judgment and (3) senses. More attention to emotions, empathy, or sentiments by educators can increase the possibility of moral education through aesthetic experience, and such moral education may solve its contemporary problem in linking moral reasoning and moral actions. 

**PABLO LLERANDI-ROMAN, GERALD KROCKOVER**

“Field-based Geoscience Education for Puerto Rican Secondary School Science Teachers”

A mixed methods research study on the effects of a five-day long constructivist-based and field-based geoscience education professional development institute upon 26 secondary school science teachers' geoscience conceptual knowledge, perceptions of fieldwork, beliefs about teaching geoscience, and their science lessons at school was conducted in Puerto Rico. Data included multiple sources such as semi-structured interviews, questionnaires and pre and posttests. Results indicate an enhancement of teachers' geoscience conceptual understanding, the geography/geology of Puerto Rico, perceptions of geoscience fieldwork, geoscience teaching beliefs, the processes of science, and increased awareness of social responsibility. Participants also suggested models to improve teachers' geoscience education.

**CANDICE MCCARTY, SAM MATHEW, LYLE LLOYD**

“A Review of Multicultural and Crosscultural Research in Augmentative and Alternative Communication”

Recently, the number of culturally and linguistically diverse individuals with communication needs has increased substantially. Because of cultural and linguistic differences, CLD AAC users and their communication partners may view AAC differently than the individuals providing AAC services. This research aims to provide a comprehensive systematic review of current studies that address cultural aspects of AAC use and service provision. Based upon the review, information about gaps in the present literature and future research directions are discussed.

**JON MILLEMAN, CHARLES KLINE**

“Student Writing Trait Scores and Prediction of High Stakes Testing Outcomes”

Student writing is becoming an important factor in determining achievement in language arts and other subjects. Recent changes in the SAT, with addition of an essay-writing requirement, reinforce this trend. This research provides evidence that writing assessment programs such as the 6+1 Trait® Model can assist teachers.
and administrators with assessment management issues such as the use of one or multiple tests to assess desired student performance. Writing scores in this study, as assessed by the 6+1 Trait® Model, were predictive of certain standardized test scores on the PSAT/NMSQT® and the Indiana graduation qualifying examination (ISTEP).

Paper type: Quantitative
Content area: Administration, Organization & Leadership

**TRAVIS MILLER**

“Online Discussions in Mathematics: Preservice Elementary Teachers’ Perceptions and Attitudes”

The use of online discussions in college mathematics courses remains limited despite their growing prevalence in other college courses. Determination of the appropriateness of this technology for mathematics courses must consider the perceptions and attitudes of the student body regarding the integration of and educational opportunities afforded by online discussions. This poster examines the perceptions and attitudes of preservice elementary teachers enrolled in a mathematics content course that included required weekly participation in online discussions.

Paper type: Mixed Methods
Content area: Teaching & Teacher Education

**LARISSA OLESOVA**

“Focus on Collaborative Internet Projects: Teacher Education in Siberia”

In order to utilize technology effectively for pedagogical purposes, teachers of foreign languages need to have appropriate training. Although all language teachers need to learn the fundamentals, there are special circumstances for those involved in technology training in isolated or less developed regions of the world. This research discusses one such setting, English teachers in Yakutia, Siberia. The teacher training course described here can serve as a model for trainers in regions with similar challenges.

Paper type: Other
Content area: Curriculum Studies

**BRUCE PARKER, SARAH CARRIGAN WOOTEN**

“Interrupted Aspirations: The Impact of Feminist Understandings on a Multicultural Education Student”

This poster presentation focuses on the role feminist curriculum and pedagogies play in preservice teacher’s classroom experiences and the power learning and teaching feminism has had on the presenter’s lives and relationships. The complexities of being male and teaching feminist theories to undergraduate, female, pre-service teachers is explored alongside the difficulties of a female student learning these same theories from a male teacher. The traditional interpretation and assumed implications of our situation would be that the learning and teaching processes would either directly or inadvertently reaffirm male-bias. By exploring the literature around men doing feminism, we will contextualize our experiences and hopefully locate ruptures in traditional feminist understandings that may permit new perspectives.

Paper type: Qualitative
Content area: Curriculum Studies
ALIYA RAHMAN

Prepared for a curriculum studies audience, this poster discusses the role of India’s Hindi-language film industry, nicknamed “Bollywood” due to its concentration in the city of Bombay, in regulating the cultural dimensions of the high tech labor flow between India and the United States. I argue that Bollywood may serve the pedagogical function of subduing a perceived threat of Westernization that might accompany increasing involvement of Indians in American science and technology industries. I offer here three mechanisms by which films may do this: i) the science and technology for India mechanism, ii) the selective translation mechanism, and iii) the scientific/technological literacy mechanism.

Paper type: Qualitative
Content area: Curriculum Studies

ELOISA RODRIGUEZ, MELISSA COLONIS
“Professional Development and the Implementation of a Reform Mathematics Curriculum”

Capturing the enthusiasm of teachers and supporting their efforts through professional development is often the challenge of school districts who adopt a reform mathematics curriculum. In this poster we examine the progression teachers make as they transition from learning about a mathematics reform curriculum to actually adopting it in classrooms. Calistraga Community School Corporation (CCSC) offered professional development in the form of immersion, team teaching opportunities and grade level meetings to teachers who were required to implement Everyday Mathematics in their classrooms. We present findings from a small scale research study of the summer team teaching professional development participants.

Paper type: Qualitative
Content area: Curriculum Studies

EULSUN SEUNG, LYNN BRYAN, MARK HAUGAN
“Examining the Development of Knowledge for Teaching a Novel Physics Curriculum”

The purpose of this study was to investigate physics teaching assistants’ (TAs) development of professional knowledge as they learned to teach a novel physics curriculum. Through a multiple case study research design, data was collected from non-participant observations, digitally recorded video, interviews, TAs’ written reflections, and field notes. The TAs’ knowledge for teaching related to instructional strategies, curriculum and students’ learning was developed through the participants’ teaching practice. The results of this study will contribute to not only the quest to identify the nature of professional knowledge for science teaching but also future preparation of the innovative introductory physics course.

Paper type: Qualitative
Content area: Post-secondary Education
SHIGETAKE USHIGUSA
“Web-based Mutual Language Learning: Characteristics of Informal Learning”

This literature review explores characteristics of informal learning and potentials for service-learning in web-based mutual language learning. Because many characteristics of informal learning are found in natural language learning, it is expected that effective language learning happens in the informal learning context. Service-learning can occur regardless of geographical distance between the places of service-provider and service-recipient. It might be feasible to pursue the possibility of designing Web-based instructional programs that utilize both informal learning and service-learning, based on the shared characteristics between them: They are both contrasting with formal learning, with attention-getting and problem-solving methodologies, and based on learner needs.

Paper type: Theoretical/Literature Review
Content area: Learning & Instruction

DAZHI YANG
“Students’ Interaction in Asynchronous Online Discussion as a Mandatory Course Requirement”

Asynchronous online discussion (AOD), discussion of course material and other participants’ postings, can increase knowledge and understanding of materials (Levin, 1995; Garrison, Anderson, & Archer, 2001). However, it is difficult to engage students in AOD because of various reasons, such as interaction styles and individual learning preferences (Shin, 2002). This study explores students’ interaction styles in AOD as a mandatory course requirement and the factors that impact their interaction in AOD.

Results indicated that personal preferences, instructor’s involvement in AOD, and course requirements are the main factors impacting students’ interaction in AOD.

Paper type: Mixed methods
Content area: Other