

The Looking Glass

A Newsletter of the Educational Psychology Society
The University of Northern Colorado
Spring/Summer, 2006

Educational Psychology Society Colloquia Provide Wide Range of Opportunities

Several colloquia sponsored by the Educational Psychology Society have been offered this year, providing information to many participants regarding a wide range of issues.

Dr. Susan Hutchinson spoke to a large group of graduate students regarding the dissertation process. Her presentation is encapsulated elsewhere in this newsletter.

Christie Adams arranged and facilitated two “brown bag” luncheon meetings. The first addressed issues regarding the state of affairs in the field of educational technology, and the second was focused on strategies regarding various assessment types and applications.

Lori Reinsvold, EPS webmaster, arranged a presentation by Laurie MacDonald about the use of EndNote, a type of citation manager software. The software has been purchased for student use.

The main article in this issue of *The Looking Glass* features an extensive review of the content delivered by Dr. Deborah Leong in a presentation about her work in early childhood development, specifically in regard to “school readiness,” using a Vygotskyan approach to the issue.

This lecture drew a large audience of both faculty and students. Arranged by EPS member (and former EPS president) Chisty Wale, Dr. Leong’s lively presentation drew on a long and practical application of work with at-risk pre-schoolers in several states.

As she demonstrated, there is a lot more to school readiness than the ability to count to ten or to recognize some letter shapes. The long-term consequences of ignoring socio-emotional readiness of pre-school children only begin with poor academic performance. They get much worse. On her view, play time is likely to be the most important time of the day; it requires more, not less, attention.

Leong Fascinates EPS Attendees With Vygotskian Approach to Play

Dr. Leong



In March, guest speaker and Metro State professor Dr. Deb Leong spoke to a standing room only audience about her recent work in “School Readiness and How Teachers Can Use Play to Promote It: The Vygotskian Approach.” While much of the current emphasis in assessing pre-K children on knowing facts such as names of shapes, letters of the alphabet, and the names of animals for example, or on having skills, such as phonemic awareness, ability to write one’s name, or to count objects, these practices ignore equally important ingredients for success such as underlying cognitive skills that enable children to learn other things beyond the previously mentioned declarative and process-oriented skills, which may be too rote or shallow to provide a realistic base for further learning. Likewise, and just as egregious, current practice in assessing school readiness often ignores confirmation of social and emotional skills which allow children to meet the demands of an elementary classroom.

Characteristics of elementary classrooms often require self-motivation, learning-on-demand, and internalization of classroom behavior standards. There is too often an obvious gap between our expectations of academic and behavioral performance and the realistic abilities of our pre-schoolers. The Vygotskian approach, avers Leong, posits that pre-school children develop school readiness by learning self-regulation, specifically of the following: physical behavior, emotional behavior, social behavior, and cognitive behavior. If children do not have self-regulation in kindergarten, they have difficulty developing higher-order thinking skills, are more likely to fail academically, and are more likely to develop social and emotional problems.

Typical pre-schoolers react (and are slaves) to their environment, attending to, seeing, and remembering whatever is loudest, brightest, funniest, etc. Thinking about consequences is very difficult either before or after behavior; that is they have difficulty anticipating consequences and also learning from their own mistakes. They often need many repetitions before remembering some things. Early childhood teachers report that their single most difficult challenges are in dealing with disruptive behaviors from the youngsters who lack self-regulation. Further, teachers are frustrated in their own lack of understanding in how to help students develop self-regulation.

Though we know these abilities take years to develop, the early stages of these behaviors are present and accessible, if we work to elicit them. Dr. Leong and her colleague Dr. Elena Bodrova have taken a Vygotskian approach to the situation. Their research suggests that self-regulation issues are even more predictive of long-term school performance than family Socio-Economic Status! With their research groups of pre-school children, many of whom were identified as “at-risk,” they trained their teachers in Vygotskian tactics, and advocated communicating clear and consistent expectations, and provided learning contexts that supported self-regulation. In a bold move, their teaching program focused primarily on PLAY.

For Vygotskians, play is the primary context that supports self-regulation. Ideally, that play is sustained and imaginative, with non-specific props.

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The drawback of too-specific props is that they limit, rather than enhance imagination. Likewise, too many props become just a succession of temporary things to manipulate, rather than things which require imagination, creativity and socialization. Play is positively related to the development of self-regulation, cognitive skills such as memory and symbolic thinking, social skills, literacy skills, and general school adjustment. Certain kinds of well planned, mature play, on the Vygotskian view, are the most important activities for cognitive and social learning. In short, play provides the opportunity to learn and practices life skills and roles. Ideally, mature, “dramatic” play involves roles, and may eventually evolve into games. It is probably no accident that there seems to be an insatiable thirst among children of all ages for role-playing video games.

Immature play does not have “roles,” but merely objects. Immature play does not sustain roles, or use language to create scenarios or roles. Immature play often stops because of squabbles about objects or roles. On the other hand, mature play exhibits explicit and implicit, sustained roles, “pretend” scenarios created through language, symbolic use of props, multiple interwoven themes, and extended time frames.

To foster mature play, teachers will set up an environment rich in roles (not *things*), provide props to help children stay in roles and help children create and invent their own props, manage play centers for optimum groupings, encourage children to plan, and help children with the play as it is developing.

Too often, what little play time is provided is used as a time to turn away from the children, but it really should be a focus of teacher attention as the most important developmental period of their time together. And there should be more, not less, time devoted to play. Leong says, “Learning roles helps kids grow into adults who fulfill roles.”

A Vygotskian approach to teaching early childhood educators how to use play as a critically important tool for child development seems to improve students’ classroom behavior, class climate, and achievement in literacy and math through improve attention and memory. By emphasizing play, Leong and Bodrova have found that children can concentrate for longer periods of time, disagreements are much fewer in number and more readily solved by the children themselves, and the social climate of inclusion and respect are fostered. Pre-school appears to be a good time to work on early development of self-regulation and the pre-frontal lobe. Older kids without self-regulation tend to be more problematic.

A humorous and energetic speaker, Dr. Leong invited attendees to recall their own play as youngsters, where a neighborhood “pretend” game might last all summer, or the classic joke about the box a toy came in as being more fun and providing more creative play than the toy itself.

For more information, readers are encouraged to “google” either researcher’s name.

CEBS Welcomes Two New Faculty Members

Two new staff members will be joining our ranks in the fall semester. Dr. David Daniel and Dr. Kevin Pugh are most recently from the University of Maine at Farmington, and the University of Toledo, respectively.

Dr. David Daniel

Dr. Daniel attained his PhD from West Virginia University in 1995, and recently held the position of Visiting Scholar at the Harvard Graduate School of Education's Human Development and Psychology/Brain and Education Program.

An award-winning teacher and Coordinator for the Teaching of Developmental Science Institute for the society for Research in Child Development, Dr. Daniel delivered the opening plenary address in May at the Association for Psychological Science Teaching Institute in New York City.

His most recent publication was in a recent issue of *Child Development*, concerning developmental and individual differences in conditional reasoning. He will also be managing editor of a new international Blackwell journal called *Mind, Brain, and Education*.

Dr. Kevin Pugh

Dr. Pugh attained his PhD from Michigan State University in 2000 after years of K-12 teaching service in Utah and Michigan.

Dr. Pugh has recently published articles in the *Journal of Science Teacher Education* and *Science and Education*. Another recent article, titled "The Effects of Schooling on Students' Out-of-School Experience," was published in *Educational Researcher*.

In addition to science education, Dr. Pugh's professional interests concern motivation, conceptual change, and Deweyan philosophy. His research specifically focuses on transformative experiences where students actively use curricular concepts to see and experience the world in a personally meaningful new way.

The Looking Glass is published in the Fall and Spring by the Educational Psychology Society.

Contributions of articles, photos, graphics, suggestions, and corrections are welcome. Please contact me, Robert Johnson, at robertjohnson@go.com.

Many thanks this term go to the Educational Psychology Society officers: Chris Hill, Laura Lara, Christy Adams, and Lori Reinsvold. Special thanks to EPS faculty sponsor, Dr. Teresa McDevitt.

Any errors are mine alone; insults, aspersions, and bric-a-brac may be hurled at me during my usual office hours in McKee, 411:

Most Tuesdays: 1:00-1:40

Most Thursdays: 3:30-4:00

Dr. John Cooney: An ACE Player

Professor John Cooney has been on an extended leave from UNC in a new role as assistant to Hank Brown, newly appointed president of Colorado University. Among many other duties, Dr. Cooney has been a chief proponent of and technical advisor for the Alliance for Choice in Education program (or “ACE”). This Denver-based organization awards scholarships to low income families to send their children to private schools of their choice.

Some 116 recipients, enrolled in grades 3 through 10 were eligible to participate in the evaluation. Now finishing their second year, students have recently completed a second battery of achievement tests, the results of which will be compared with their first year results, as described below. These results established a baseline against which future progress will be measured.

A first year evaluation study to judge the effectiveness of the scholarship program in raising academic achievement includes the following findings:

- Male and female scholarship recipients are equally likely to be reading at the *Advanced* or *Proficient* levels as *Partially Proficient* or *Unsatisfactory* in the 3rd grade.
- The likelihood of female students reading at the *Advanced* or *Proficient* levels increases between grades 3 through 9, whereas the likelihood of male scholarship recipients reading at the *Advanced* or *Proficient* levels relative to *Partially Proficient* or *Unsatisfactory* levels decreases over the same period.
- After one year in private schools, scholarship recipients are 3.23 times as likely to be reading at the *Advanced* or *Proficient* levels relative to *Partially Proficient* or *Unsatisfactory* levels. The improvement in reading proficiency, however, is restricted to the male students. Female scholarship recipients actually show a slight decrease in reading proficiency, even though they were showing consistent gains from year to year.
- Male and female students are equally likely to be achieving at the *Advanced* or *Proficient* levels in mathematics in the 5th grade.
- The probability of performing at the *Advanced* or *Proficient* levels in mathematics declines from approximately .50 in the 3rd grade to .10 in the 9th grade for both male and female scholarship recipients.
- Both male and female scholarships recipients show a slight increase in the probability of performing at the *Advanced* or *Proficient* levels in mathematics after one year of a private school education. Male and female scholarship recipients are 1.64 times more likely to be *Advanced* or *Proficient* than *Partially Proficient* or *Unsatisfactory*; however, this increase is not statistically significant.
- On average, scholarship recipients scored at or below the national norms in reading and mathematics achievement based on the assessment administered in 2005.

Hutchinson Delivers

When Dr. Susan Hutchinson presents a dissertation preparation seminar, people listen. Her January talk, at the invitation of the Ed Psych Society, was no exception. Following is a too-brief synopsis of the presentation, but of course readers are encouraged to attend future presentations for the full effect.

In a general way, we must understand the PhD is a degree, defining a scholar in relation to one's field. Hutchinson suggests a series of stages in the process: first, know the subject through coursework, theory, conferences, and reading and doing research. After this early stage, selecting both the topic and committee with care become paramount. One continually refines one's knowledge base; depth and breadth must be sufficient to demonstrate real expertise, where a real a unique and significant contribution to the field is the result. Much, if not most of the work will be in preparing the proposal: 1) "What"-enough information to justify the need for the study; 2) "Why"- why these questions and variables; 3) "How"- methodology and feasibility.

Upon completion of the study, the defense consists of two prongs: the ideas (theory and design) and the paper (completion and quality). Other than the basic format, there is little externally required structure; it is up to the researcher to provide a convincing work. Using checklists, deadlines, timelines, and purposeful meetings, the disciplined student will succeed.

Is There Life After UNC?

Decidedly So, Report Two Recent Graduates

Reflecting the climate of her new home in southern California, **Marla Gallagher's** life with her daughter and grandchildren is sunny and warm. She is teaching as an adjunct professor in three different colleges, and the good wages contribute to her positive disposition. She specifically remembers and emulates **Dr. McDevitt's** case study techniques, and **Dr. Cooney's** ability to inspire students. She would love to hear from any of those "traveling the path [she] trod for 10+ years" at jeanne1595@yahoo.com.

Stef Owens has found that her recent work in an Outward Bound Expeditionary Learning School, the Roots and Wings Community School north of Taos, New Mexico is giving her the "grounding" she sought after graduating from UNC with her doctorate in Educational Psychology. With a team of three other adults, she teaches two dozen middle level students in an intense program of academic and experiential studies. She is also working to teach other teachers and politicians about their ELS program, which requires an even greater understanding and articulation beyond the front-line, "in the trenches" work she is doing with students.

"In short," she says, "I LOVED the educational psychology program at UNC, especially my wonderful professors. Their commitment to education continually influences my own teaching and professional development. I use my knowledge of human learning and development on a constant basis. Being a witness to these children's growth is truly amazing. I worry greatly about teachers graduating from programs that no longer provide educational psychology courses. For me, every other aspect of curriculum and instruction derives from my knowledge of educational psychology. I would feel lost without it."

CEBS Research Team Explores Middle Level Math Strategies

Collaboration Enables UNC Professors to Serve Students, Families, Schools

Three CEBS professors have been working with a group of middle school students and their families in a research program designed to improve the students' strategies and performance in solving math word problems. Drs. **Nancy Karlin, Francine Murray, and Todd Allen** did a pilot study last summer with nineteen middle level students, grades 4-9, focusing on the students' use of cognitive and metacognitive math strategies, as well as their attitudes about math. The research is the basis of four articles and two small and some larger (up to one million dollar) grant proposals, now in process. In an interview with Dr. Karlin, she expressed the opinion that this collaboration was a prime example of how professors from different fields could make a real difference in the lives of students by employing expertise and creativity in a common cause.

The collaborative effort combines the expertise, skills, and research background from Murray (in Special Education), Allen (in Memory and Neuropsychology) and Karlin (in Memory and Socio-Cognitive Psychology). The team used the sixteen-lesson "Solve It!" program by Montague in one-on-one tutoring sessions. Pre- and post-measurements were taken regarding math and problem-solving abilities, self-knowledge of metacognitive skills, and attitudes about math.

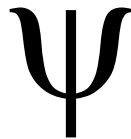
Results indicated statistically significant improvement in word problem solving ability, metacognitive self-knowledge, and overall opinion of math.

Four themes were identified from an analysis of responses to an attitude questionnaire. These included a better liking of mathematics, a better understanding of problem-solving strategies, a development of structured plans/approaches to solve math word problems, and an increase in number of attempts to solve word problems attributed to a greater knowledge of math problem-solving strategies.

Surprisingly, a large number of students had no strategies at all before the intervention. Results tended to be improved for students regardless of whether or not they had strategies in place before the intervention, but the largest gains were for those who had none to begin with. In a time where politicians tend to bemoan how little our children know and can do, and when they want to "solve" the "problem" by more and more standardized testing, this group of UNC professors has taken a more practical approach. The title of one of their articles about this research says it nicely: "Now I Know How to Solve Mathematical Word Problems: Analysis of Cognitive and Metacognitive Strategies as Used by Middle School Students."

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