



Research Newsletter



College of Education

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This Newsletter is the first in a planned series. It highlights recently published scholarly work of faculty in the College of Education at Wayne State University. These six pieces demonstrate the significance, as well as the breadth of the research that is ongoing in the College.

Thomas G. Edwards, Interim Assoc. Dean for Research

Reconsidering Children's Readings: Insights into the Reading Process

Poonam Arya & Karen M. Feathers
College of Education, Wayne State University,
Detroit, Michigan, USA

This study highlights the complex reading processes of two primary grade struggling readers. It provides a more complete picture of the readers' use of all parts of a text, verbal and visual, to construct meaning during reading. The oral reading data show that students used various linguistic strategies to read words, and the eye-tracking data illuminate not only when, where, and for how long they looked at words (verbal) and illustrations (visual), but also the movement between them. Further, the readers were involved in strategic processing throughout the text and not only when they struggled with the reading. This research helps us understand that children use strategies not just to fix problems, but also to contextualize and construct meaning during reading.

Reading Psychology, 33, 301-322, 2012

Socialization of Novice Teachers Ben Pogodzinski

College of Education, Wayne State University
Detroit, Michigan

Guided by New Structuralism theory, this study examined the context of novice teacher socialization, identified the frequency and substance of interactions between novice teachers and their mentors and other colleagues, and reported on novices' evaluation of the support that they received. Data was collected through semi-structured interviews with district human resource directors and teacher association presidents, as well as surveys of novice teachers in six districts in Michigan and five districts in Indiana. Findings suggest that researchers should examine the informal social structure within schools which can mediate formal induction policy and

that administrators should institute a network approach to socializing novice teachers.

Journal of School Leadership, 22, 982-1023, 2012

Development of a Physical Education Teaching Efficacy Scale

Charlotte A. Humphries & Edward Hebert
Department of Kinesiology and
Health Studies
Southeastern Louisiana University,
Hammond, Louisiana
Durant, Oklahoma

Kay Daigle
Southeastern Oklahoma State University
Durant, Oklahoma

Jeffrey Martin
Division of Kinesiology, Health and
Sport Studies,
College of Education, Wayne State University,
Detroit, Michigan

Relationships have been found between teacher efficacy and many teaching and learning variables, but few researchers have examined teaching efficacy in physical education. The instrument reported here, the Physical Education Teaching Efficacy Scale, was developed based on the teaching efficacy literature, existing scales, and National Association for Sport and Physical Education's Teacher Education Standards. Students attending 11 institutions who are majoring in regular and alternate physical education teacher education and who are at different stages of preparation (N = 592) completed the initial survey. Exploratory, followed by confirmatory, factor analysis resulted in a 35-item, 7-factor scale. Factors were Content Knowledge, which were activities one might teach; Applying Scientific Knowledge in Teaching, which reflected academic content; Accommodating Skill Differences; Teaching Students with Special Needs; Instruction, which included management, motivation, and instruction; Using Technology; and Assessment. Results support that the Physical Education Teaching Efficacy Scale addresses many aspects of teaching physical education and meets research criteria for validity and reliability.

*Measurement in Physical Education and
Exercise Science, 16, 284-299, 2012*



Reading Between the Lines: Teaching Linear Algebra

Jennifer M. Lewis
College of Education, Wayne State University
Detroit, Michigan

Merrie L. Blunk
School of Education, University of Michigan
Ann Arbor, Michigan

This paper compares lessons on linear equations from the same curriculum materials taught by two teachers of different levels of mathematical knowledge for teaching (MKT). The analysis indicates that the mathematical quality of instruction in these two classrooms appears to be a function of differences in MKT. Although the two teachers were teaching from the same curriculum materials, the teacher with higher MKT had more complete and concise ways to describe key concepts, had multiple ways to represent ideas about linear equations, could move nimbly among different mathematical expressions of linear relationships, and gave students a larger role in articulating the mathematical ideas of the lesson. However, curriculum materials seem to have moderated what would otherwise have been larger disparities in the quality of instruction between the two teachers. The lower-MKT teacher made minor mathematical errors, stayed on topic, and defined concepts in reasonably accurate ways when he followed the curriculum materials closely.

Journal of Curriculum Studies, 44(4), 515-536, 2012

Examining Mobile Learning Trends 2003-2008: A Categorical Meta-Trend Analysis Using Text Mining Techniques

Jue-Long Hung
Boise State University
Boise, Idaho

Ke Zhang
Wayne State University
Detroit, Michigan

This study investigated the longitudinal trends of academic articles in Mobile Learning (ML) using text mining techniques. One hundred, nineteen (119)

refereed journal articles and proceedings papers from the SCI/SSCI database were retrieved and analyzed. The taxonomies of ML publications were grouped into twelve clusters (topics) and four domains, based on abstract analysis using text mining. Results include basic bibliometric statistics, trends in frequency of each topic over time, predominance in each topic by country, and preferences for each topic by journal. Key findings include: (a) ML articles increased from 8 in 2003 to 36 in 2008; (b) the most popular domain in current ML is Effectiveness, Evaluation and Personalized Systems; (c) Taiwan is most prolific in five of the twelve ML clusters; (d) ML research is at the Early Adopters stage; and (e) studies in strategies and framework will likely produce a bigger share of publication in the field of ML.

Journal of Computing in Higher Education,
24, 1-17, 2012

Thinking Beyond Field Trips: An Analysis of Museums and Social Studies Learners

Kristy A. Brugar
College of Education, Wayne State University,
Detroit, Michigan, USA

This study describes and explains the ways in which three urban cultural institutions/museums provide opportunities to students for learning in the social studies. Through interviews, observations, and a content analysis of museum-produced materials, I examine the opportunities for various audiences (elementary, middle, and high school students) to engage with, and utilize, museum resources to facilitate meaningful social studies learning. This article includes a discussion of state standards, field trips, and use of technology to engage social studies learners. Implications of this study are two-fold. First, there are the possibilities for museum educators to (1) better reach potential audiences and (2) better present social studies content aligned with state standards. Second, educators can more effectively draw upon local resources to enhance social studies teaching and learning via the cultural institutions of their metropolitan area.

Social Studies Research and Practice,
7(2), 32-49, 2012