

## **Announcing: The TPACK Newsletter**

*Issue #1 – late January 2009*

Welcome to the first edition of the TPACK Newsletter. If you are interested in technology, teaching and learning, this newsletter is for you. If you have no interest in these matters, please accept our apologies. If you are even mildly interested, feel free to surf over to [www.tpack.org](http://www.tpack.org) to find out more.

Toward the end of this document we provide information on how to subscribe (or, heaven forbid, unsubscribe) to this newsletter, how to contribute and other important stuff.

### **Gratuitous Quote about Technology**

“We notice things that don’t work. We don’t notice things that do. We notice computers, we don’t notice pennies. We notice e-book readers, we don’t notice books”— Douglas Adams in *Salomon of Doubt*, p. 110.

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### **1. Special Issue of CITE Journal on TPACK: The Teaser**

Early in March (anticipated publication date of March 1, 2009), [CITE Journal](#) will publish a special issue focused upon TPACK. There will be more details in the upcoming February newsletter, including titles and authors of the articles in that special issue, so stay tuned! (Yes, we are being a bit secretive about this authors and article names, mainly to raise anticipation for the February newsletter...)

### **2. Recent TPACK Publications & Presentations**

Here are a few recent TPACK publications that we know about. If you know of others published within the past several months, please let us know ([tpack.news.editors@wm.edu](mailto:tpack.news.editors@wm.edu))

#### ***Dissertation***

[Cox, S. \(2008\)](#). A conceptual analysis of technological pedagogical content knowledge. Doctoral Dissertation, Brigham Young University, Provo, UT.

#### ***Abstract:***

“This dissertation reports the results of a conceptual analysis of the technological pedagogical content knowledge (TPACK) framework, particularly its component constructs of technological content knowledge (TCK), technological pedagogical knowledge (TPK), and TPACK (the central component of the framework listed earlier). First, a technical use analysis reveals how existing research has defined and exemplified the constructs. Next, interviews with leading TPACK researchers further refine the constructs. The dissertation then reports cases that illustrate each of the constructs and the boundaries between them. The conceptual analysis results in an elaborated model of the TPACK framework, focusing on the essential features of each construct to facilitate classification of future examples. The analysis also reveals that TCK, TPK, and TPACK do appear to be distinct constructs. The boundaries among constructs are elaborated through a discussion of the sliding nature of the framework and the nature of the instructional strategies that are enacted.”

#### ***Papers***

[Ronau, R. N., Niess, M. L., Browning, C., Pugalee, D., Driskell, S. O., & Harrington, R. \(2009\)](#). Framing the research on digital technologies and student learning in mathematics. In L. Bell, L. Schrum, & E. A. Thompson (Eds.), *Framing research on technology and student learning in the content areas*. Charlotte, NC: Information Age Publishing.

[Hofer, M., Swan, K.O., \(2009\)9](#). Framing the research on digital technologies and student learning in mathematics. In L. Bell, L. Schrum, & E. A. Thompson (Eds.), Framing research on technology and student ler. Journal of Research on Technology in Education, 41(2), 179-200.

[Foster, A. N., & Mishra, P. \(2008\)](#). Games, claims, genres & learning. In R. E. Ferdig (Ed.), Handbook of research on effective electronic gaming in education. Information Science Reference; Hershey, PA (1759 pages; 3 volumes). pp. 33-50. [TPACK framework applied to games and learning.]

Abstract:

“We offer a framework for conducting research on games for learning. Building on a survey of the literature on games, we suggest a categorization scheme (physiological and psychological) of the range of claims made for games. Our survey identifies three critical issues in the current scholarship. They are: a lack of authentic, situated research studies; a lack of sensitivity to the pedagogical affordances of different game genres; and a lack of emphasis on the importance of acquiring disciplinary knowledge (i.e., content). We offer the Technological Pedagogical Content Knowledge (TPCK) framework as a way to address these concerns and guide future research in this area. We argue that assessment on learning from games needs to consider the specific claims of games, as they interact with genre and content knowledge. Finally, we introduce an ongoing study that utilizes this approach.”

[Lee, H., & Hollebrands, K. \(2008\)](#). Preparing to teach mathematics with technology: An integrated approach to developing technological pedagogical content knowledge. Contemporary Issues in Technology and Teacher Education [Online serial], 8(4).

Abstract:

“Several organizations have highlighted the importance of preparing teachers to teach students mathematics using appropriate technology (e.g., Association of Mathematics Teacher Educators, 2006; International Society for Technology in Education, 2008). This article provides examples from teacher education materials that were developed using an approach that integrally develops teachers' understandings of content, technology, and pedagogy to prepare them to teach data analysis and probability topics using specific technology tools.”

[Niess, M. L. \(2008\)](#). Knowledge needed for teaching with technologies – call it TPACK, AMTE Connections, 17(2), 9-10.

### **Presentations**

[Mishra, P., & Koehler, M.J. \(2008, November\)](#). Technology integration in teaching: The TPACK framework. Webinar sponsored by the International Society for Technology in Education (ISTE), November 20, 2008.

[Harris, J., & Hofer, M. \(2008, September\)](#). Truly technologically integrated planning for teaching & learning (Spotlight Session). Paper presented at the National Educational Computing Conference, San Antonio, TX, June 30, 2008.

[Harris, J. \(2008, October\)](#). Knowledge for effective teaching with technology. Innovative Learning Conference, San Jose, CA: October 15, 2008. (Sponsored by [SMART Technologies](#)) [presentation viewable online].

### **3. TPACK Goes International**

The CDC has received reports regarding the spread of the TPACK virus to multiple countries. Here are details of a few outbreaks.

#### **(a) North-North American Connections:**

On December 15, 2008, Judi Harris taught a day-long workshop on helping teachers to develop TPACK using [curriculum-based learning activity types taxonomies](#), to all of the regional educational directors and their social studies and mathematics curriculum coordinators in the province of Alberta, Canada – the [Alberta Regional Professional Development Consortia](#). They have incorporated the TPACK framework and the activity types approach to TPACK development into the professional development plan for the province that they have recently submitted to the Ministry of Education.

#### **(b) East is East**

Punya Mishra traveled this summer across Southeast Asia, delivering slight variations on the TPACK talk to different audiences (little did they know that they could have just [downloaded the SITE keynote for free](#) — and so can you!). He spoke at the University Sains Malaysia, Penang (in Malaysia); Chiayi University, Chung Cheng

University and the National Sun Yat-Sen University (in Taiwan); University of Hong Kong (in the PRC); and at the Symposium on Education & Technology in Schools: Converging for Innovation & Creativity, Bangalore (in India).

Not to be outdone, Matt Koehler spread the TPACK message to Chinese educators by presenting a keynote address at the Global Chinese Conference on Computers in Education, right here in East Lansing, Michigan.

### ***(c) Eeew! Did you ignore the EU?***

Punya recently returned from a symposium organized by the Faculty of Behavioral Sciences, University of Twente (in the Netherlands). He both presented a special session on the TPACK framework and conducted a workshop on TPACK and Creativity with master's students in the Department of Curriculum Design and Educational Innovation.

Details on [Matt's](#) and [Punya's](#) talks can be found on their respective Web sites.

## **4. Upcoming TPACK Events**

A selective (OK, pretty arbitrarily chosen) list of upcoming TPACK-related events.

[Niess, M., Driskell, S., Ronau, R., Pugalee, D., Harper, S., Shafter, K., Johnston, C., Browning, C., Kosheleva, O., Weinhold, M.](#) (AMTE Technology Committee members and volunteers). Using Technology Standards for Mathematics Teacher to Design Learning Environments and Experiences for Methods Courses. 3-hour workshop to be presented at the 13th annual conference of the Association of Mathematics Teacher Educators (AMTE) Conference in Orlando, FL, February 5, 2009

31 TPACK presentations at SITE 2009, plus the TPACK SIG meeting, in Charleston SC. Also TPACK at AERA, San Diego, CA. More information in upcoming newsletters.

Coming up: Webinar conference on TPACK-related issues organized by the Committee on Innovation and Technology of the American Association of Colleges of Teacher Education. (No, we don't know when this will be.)

## **5. New TPACK-related Online Resources**

### ***Wiki – Activity Types for Developing TPACK***

Mark Hofer and Judi Harris have put a Learning Activity Types Wiki online at <http://activitytypes.wmwikis.net/>. It serves as the online center for information about the learning activity types approach to teachers' development of TPACK. Along with 5 other collaborators (Meg Blanchard, Neal Grandgenett, Denise Schmidt, Marcela van Olphen, and Carl Young) Mark & Judi are developing and posting 6 activity types taxonomies (for science, math, K-6 literacy, world languages, secondary English, and social studies). Right now, the new wiki includes social studies and mathematics taxonomies, plus online surveys (1 per taxonomy) that we invite folks to complete to help us to vet, evaluate, refine, and revise the taxonomies. By March 1, 2009, all six new taxonomies and feedback forms will be available via this wiki.

## **6. TPACK and Faculty Development**

Craig Cunningham and Arlene Borthwick have been using the TPACK framework for faculty development at [National-Louis University](#). Funded by a Senate Faculty Development Grant, they have brought together faculty from the National College of Education and the College of Arts and Sciences to form small groups to apply the TPACK model to integrating technology into teacher preservice courses. They plan to present their results at a [Center for Practitioner Research](#)-sponsored symposium — which of course we will report on in future issues of this newsletter.

## **7. Learning and Doing More with TPACK**

Interested in learning more about TPACK or getting more involved in the TPACK community? Here are a few ideas:

- Visit and contribute to the TPACK wiki at: <http://tpck.org/>
- Join the TPACK SIG at: <http://site.aace.org/sigs/tpack-sig.htm>
- Join and contribute to the TPACK Google group at: <http://groups.google.com/group/tpack/>
- Review and provide feedback on the TPACK Learning Activity Types at: <http://activitytypes.wmwikis.net/>

Feel free to forward this newsletter to anyone who might be interested in its contents. Even better, have them subscribe to the TPACK newsletter by sending a blank email to [sympa@lists.wm.edu](mailto:sympa@lists.wm.edu), with the following text in the subject line: subscribe tpack.news FirstName LastName (of course, substituting their own first and last names

for 'FirstName' and 'LastName' — unless their name happens to be FirstName LastName, in which case they can just leave it as is).

If you have a news item that you would like to contribute to the newsletter, send it along to:  
[tpack.news.editors@wm.edu](mailto:tpack.news.editors@wm.edu)

If you are interested in volunteering to help run the newsletter (we need help!), send email to:  
[tpack.news.editors@wm.edu](mailto:tpack.news.editors@wm.edu)

### **Standard End-Matter**

If you have questions, suggestions, or comments about the newsletter, please send those to  
[tpack.news.editors@wm.edu](mailto:tpack.news.editors@wm.edu).

If you are subscribed to the tpack.news email list, and — even after reviewing this impressive publication — you prefer not to continue to receive the fruits of our labors, please send a blank email message to  
[sympa@lists.wm.edu](mailto:sympa@lists.wm.edu), with the following text in the subject line: unsubscribe tpack.news

Hope to see you at the TPACK SIG meeting at SITE 2009 (on Wednesday, March 4, 2009 at 12:15 pm) in Charleston, SC!

- Judi, Matt, Mario, and Punya

[Judi Harris](#), Chair, College of William & Mary

[Matt Koehler](#), Vice-Chair, Michigan State University

[Mario Kelly](#), Futon, Hunter College

[Punya Mishra](#), Recliner, Michigan State University