

## Digital Equity Summit: Expert Panel

### *Teaching and Learning*

**Moderator:** Joyce Pittman, Ph.D., The University of Cincinnati  
**Expert Panelist:** Lynne Schrum, Ph.D., George Mason University

#### **Description:**

Teaching and Learning panel experts will address ICT as a potential communication resource to close the achievement gap and bridge barriers between rich and poor, rural and urban, females and males, and between cultural groups in P-16 education.

#### **Current Issues:**

What we know, what we believe -- and what we don't know about teaching and learning with technology is the far reaching problem.

*Issue 1: ICT's Role in Solving Teaching and Learning Problems in K-12 Education.*

As we continue to introduce and advocate for technology integration in the curriculum, technology alone will not change the teaching and learning process or solve the myriad of problems in K-12 education. We know that the existence of ICTs and development of teacher technology skills do not always transform teaching or teacher practices in our schools. Nevertheless, what we do believe is that ICTs can empower teachers to change their teacher practices when certain enabling conditions are present. Research suggests that ICTs may be viewed as tools to expand student voice in schools and as tools to help teachers create more 'learner-centric' learning environments, thereby reducing several social, cultural, and economic gaps by providing more opportunities to learners' understanding and thinking about relevant personal and world problems.

*Issue 2: Impact of Information and Communication Technology on Closing Achievement Gaps between Multicultural Groups*

Teachers' technical abilities, knowledge of ICTs and access to technology tools will not necessarily result in closing achievement gaps. Preparing teachers to effectively integrate and derive satisfaction from ICT use in the classroom to diversify learning and teaching strategies goes beyond teachers' technical skills. Teachers' technical mastery of technology skills is a necessary condition, but not an adequate prerequisite for effective integration to close achievement gaps.

*Issue 3: Effective Resources and Strategies to Support Culturally Relevant Teacher Preparation in ICT skills and pedagogy*

We know that on-going and relevant teacher preparation and pedagogy are essential conditions if payback from investments in ICT is to be maximized in schools. Reforming the "lesson planning process" or teaching methodology is crucial in helping teachers become more comfortable using new resources and strategies to create culturally relevant learning environments conducive to using ICT in the classroom. Research shows that where ineffective preparing and planning has occurred, student work is often unfocused and can result in lower attainment of students despite the use of ICT by teachers.

#### *Issue 4: Impact of Teacher Perceptions and ICT integration on Student Achievement in the Multicultural Classroom*

We know that teachers' pedagogical practices and reasoning are influenced by their personal uses of ICT, perceptions of technology's role in teaching learning, and the nature of ICT access in multicultural classrooms or in poor schools. These conditions of use directly impact student achievement. Research continues to show that a teacher's perception of learners and self-efficacy may have a greater impact on students' achievement than teacher subject matter competence. In other words, the role of the teacher remains central to the learning process during the ICT integration process. Traditional teacher leadership, perceptions, teaching practices and pedagogy are critically important because they could directly impact student learning through lesson planning and other educational activities.

#### **Questions:**

1. What teaching and learning problems are solved through access to and integration of information and communication technologies (ICT) in K-12 education?
2. Based on research, what impact does technology integration have on closing the achievement gaps between rich and poor, rural and urban, females and males, and between cultural groups?
3. What effective and appropriate instructional resources and strategies exist to ensure teachers (pre-service and in-service) acquire ICT skills in ways that are sensitive to equity issues?
4. Is there a relationship between student achievement, teacher perceptions, and the use of information and communication technologies (ICT) in the teaching/learning process?

## *Professional Development*

Moderator: Trina Davis, Ph.D., Texas A & M University  
Expert Panelist: Milton Chen, Ph.D., George Lucas Educational Foundation

### **Description:**

Implementing effective professional development models can empower educators (both pre-service and in-service), and other stakeholder groups to bridge the digital and learning divide that still exists in underserved schools and communities. The challenge continues to be the implementation of targeted high-quality programs that are equitable, sustainable, scalable and accessible from homes, schools, and communities. The panel discussion will address critical issues and highlight successful models of professional development.

### Issue #1

As the technological landscape continues to evolve, minority and economically disadvantaged students continue to be underserved, enlarging an already significant learning divide. New models of sustained professional development are needed that effectively address the ICT needs and skill development of stakeholders that serve diverse groups.

### Issue #2

Many educators (pre-service and in-service) still lack the technological skills to seamlessly use digital tools and content to their fullest potential. Because the classroom still remains the sole access point for many underserved learners, well conceived teacher professional development models, that take into account mobility, retention and retirement issues, are paramount. Notably, teachers with emergency or no certification are more likely to work in high-need schools. This situation leads to, among other things, having practitioners who are less prepared to use technology in essential ways and harness it to its fullest potential in teaching and learning.

### Issue #3

Finding and presenting multicultural technology content that is meaningful and relevant to students and teachers is critical. Targeted teacher preparation and professional development programs are needed that focus on diversity responsive content. Promising practices and strategies should be highlighted (e.g. the use of students' and teachers' experiences to develop interactive technology content through multimedia presentations).

### **Questions:**

1. As we develop home, school, and community professional development programs, what practical, yet proven research-based strategies should be employed to address the needs of diverse groups?
2. What types of partnerships should be established or scaled up so schools with large groups of underserved students have a well-prepared cadre of teachers and master teachers?
  - a. In general, how can schools with large groups of underserved students keep teachers for at least 3-5 years?
  - b. How can model, technology-rich, diversity responsive preparation and professional development programs facilitate this?
3. Teachers who work in schools where a large percentage of the student population is on free or reduced-priced lunch are more likely to use technology for drill and practice rather than for problem solving as compared to teachers in more affluent schools.

- a. What type of professional development should be provided to teachers so they incorporate the use of technology into teaching and learning to address different learning styles and as a tool for problem solving and critical thinking?

## *Leadership & Support*

Moderators: Elsa Macias, Ph.D., Center for Urban Education,  
Helen Soule, Ph.D., Cable in the Classroom  
Expert Panelist: Peggy Kelly, Ph.D., Associate Dean, California State University San Marcos

### **Description:**

Leadership & Support panelists will address issues of particular importance to leaders around policy, professional development, technical support, funding, and stakeholder support. Resources and expertise will be shared in relationship to creating, maintaining and supporting an equitable, effective, up-to-date learning environment for students, teachers, and administrators of the 21st century.

### **Current Issues**

- Building high quality ongoing professional development programs to ensure that teachers, administrators, and board members know how to utilize technology effectively for learning and remain up to date with research, changing technologies and pedagogical uses of technology and media.
- Building and maintaining stakeholder support for transforming learning and schooling with technology.
- Maintaining effective technical support systems, with appropriate safety features, while facing funding/resource challenges and changing technologies and applications.
- Keeping the policy structure of the school district up to date so it does not interfere with, but takes advantage of, the application of new technologies/delivery mechanisms (such as online learning, podcasting, video conferencing, blogs, etc.) for learning.

### **Questions:**

1. How do you build and maintain stakeholder support for the changing technological and learning landscape?
2. What are the effective and appropriate components of a professional development program for school leaders?

## *Infrastructure*

Moderator: John Porter, Esquire, Montgomery County Public Schools  
Expert Panelist: Lean King, Ph.D., Encinitas Union School District

**Description:** In order for all learners and their educators and families to master technology skills, they first must enjoy equitable access to the essential resources of a “learning technology infrastructure:” hardware, Internet connectivity, educational and productivity software, and digital educational content. While how well these resources are employed for teaching and learning is dependent on leadership and professional development that emphasizes, expects and supports higher order uses of such resources, we must first ensure that an equitable learning technology infrastructure is in place.

### **Current Issues:**

- There is a great need to develop widespread awareness among educators, administrators, staff developers and teacher educators regarding critical dimensions of the digital divide in education such as inequitable access in the classroom, home and community, to all the essential elements of the learning technology infrastructure.
- The need to create and scale up public-private sector partnerships to provide all educators and learners with equitable access in the classroom, home and community, to all the essential elements of a robust learning technology infrastructure.

### **Questions:**

1. What are the biggest obstacles, in addition to funding, to providing learners and educators, especially in diverse and economically distressed communities, with equitable access in the classroom, home and community to such key aspects of the “learning technology infrastructure” as hardware, software, Internet connectivity, and digital educational content?
2. What are the most promising solutions to providing learners and educators, especially in diverse and economically distressed communities, with equitable access in the classroom, home and community to such core elements of the learning technology infrastructure?