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ABSTRACT

In July 2002, Knowledge Works Foundation and the Education Commission of the States assembled key stakeholders to focus on the policy opportunities, needs, and challenges of utilizing technology for coordinated early childhood professional development across the nation. This report summarizes the presentations and discussions held at the meeting and concludes with 10 recommendations promoting the use of technology to better prepare early childhood professionals. Sessions at this meeting focused on using technology in early childhood professional development, the benefits of various distance education approaches, equal access to distance learning, articulation and accreditation issues in distance education, and implementation and funding issues in distance learning. Recommendations are: (1) identifying a person or organization to track distance learning opportunities in early childhood professional development throughout the country; (2) identifying stakeholders; (3) conducting additional research to show how distance learning can increase the availability of high-quality training for early childhood professionals; (4) using research to promote distance learning as an option to increase professional development opportunities; (5) enacting state and federal policies that promote distance learning opportunities; (6) identifying an appropriate organization to provide technical assistance to states to develop models of statewide distance learning opportunities; (7) creating policies and systems to ensure faculty are appropriately trained and supported; (8) continuing efforts to build transfer and articulation agreements; (9) continuing efforts to develop accreditation standards; and (10) addressing intellectual property rights issues. The report concludes with a list of resources. (KB)

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Technology and Early Childhood Professional Development: A Policy Discussion

Hosted by:
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and
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The primary author of this document was Jessica McMaken, ECS researcher for early childhood. Other ECS staff who contributed to the review and production of the report include Kristie Kauerz, program director for early childhood; Dale DeCesare, writer/editor; Genevieve Hale, researcher for the Community College Policy Center; and Josie Canales, proofreader.

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Technology and Early Childhood Professional Development: A Policy Discussion

In July 2002, a group of policymakers and practitioners gathered to discuss "Technology and Early Childhood Professional Development." In particular, the discussion focused on the potential for using various technologies to deliver effective training from a distance to early childhood educators. The intent of the one-and-a-half day meeting was to:

1. Define the main issues involved with using distance learning technology to provide professional development to early childhood educators
2. Identify and share current efforts to use distance learning technology to improve professional development for early childhood educators
3. Discover gaps in knowledge and practice regarding these issues
4. Propose an agenda to close the gaps, to complement existing efforts, and to expand and enhance the use of technology to better prepare early childhood professionals.

This report provides a summary of the presentations and discussions held at the meeting, and concludes with 10 recommendations that promote the use of technology to better prepare early childhood professionals. The recommendations were developed by meeting participants and do not necessarily reflect the view of the Education Commission of the States or KnowledgeWorks Foundation.

Using Technology in Early Childhood Professional Development

Keynote – Sue Bredekamp, director of research, Council for Professional Recognition

Discussion of distance learning technology and early childhood professional development demands careful consideration of the link between well-trained teachers and developmental outcomes for young children. Distance learning is one of many models of professional development and should not be separated from or held to different standards than traditional methods of professional development. All professional development programs should produce high-quality teachers and positive outcomes for children.

The importance of early childhood professional development

Research reveals the need for major investments in teacher preparation and professional development for early childhood educators. In *Eager to Learn: Educating our Preschoolers*, the National Research Council reports that "the professional development of teachers has been shown to be related to quality of early childhood programs, and program quality predicts developmental outcomes for children."[1] Both overall education and training specific to child

[1] Bowman, Barbara T.; Donovan, M. Suzanne and Burns, M. Susan (Eds.) 2001. *Eager to Learn: Educating Our Preschoolers.* Washington, DC: National Research Council, National Academy Press, 263.

development are related to positive outcomes for children, although "existing national studies point to caregiver training as the more important factor."[2]

Challenges in early childhood professional development
Challenges facing early childhood professional development include:

- The crucial components of a high-quality professional development curriculum are many and varied. *Eager to Learn* outlines an appropriate curriculum, which includes child development, assessment, subject-matter content, working with children from diverse backgrounds and more. Early childhood educators also need training in math, literacy, special education, social/emotional issues and the arts.
- Higher education must find a way to keep early learning faculty up-to-date so that the most current information is provided to students.
- The early childhood professional development community must find a way to share the knowledge of a few experts with large numbers of early childhood educators, including those in remote areas.

Why distance learning?
Distance learning technology can answer many early childhood professional development challenges:

- Done properly, distance learning creates an active, "hands-on" learning environment that encourages student interaction and provides the opportunity for application of and reflection on what has been taught.
- Effective distance learning builds on students' current knowledge and is delivered by experts in the field.
- Distance learning also allows wider access to early learning experts from around the globe.
- Effective use of distance technologies can increase the availability of high-quality professional development experiences, which can in turn increase the number of early childhood educators with the training necessary to promote positive outcomes for young children.

Does Distance Learning Get Results for Early Childhood Educators?

Presenters
Chip Donohue, University of Wisconsin – Milwaukee
Julie Hirschler, Education Development Corporation, Literacy Environment Enrichment Program (LEEP)

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[2] Hayes, C.D., Palmer, J.L. and Zaslow, M.J. (Eds.) 1990. *Who Cares for America's Children?* Washington, DC: National Research Council, National Academy Press.

Betty Jones, Pacific Oaks College
Shawna Pinckney, National Head Start Association, HeadsUp! Network

Moderator
Calista Harden, KnowledgeWorks Foundation

The effectiveness of distance learning depends in part on the appropriateness of the delivery system. Distance learning modes can range from traditional paper and pencil correspondence to highly interactive combinations of two-way satellite broadcast complemented by Web-based instruction. Course content, student characteristics and faculty skill determine the most effective technologies for a distance learning course.

The panelists discussed four early childhood educator professional development programs using different technologies for delivery. They reflected on the benefits and challenges presented by each medium. Where available, the panelists shared evaluation research on program effectiveness.

Public Television
Courses offered through public television combine instructional videos with traditional correspondence, allowing students to complete assignments and receive instructor feedback.

Benefits of this approach include:

- Public television is widely available and low-tech.
- Students have easy access to course materials, especially if they are able to record initial broadcasts.
- Course completion can be self-paced.
- The visual nature of the medium increases information retention for visual learners.
- Students can observe high-quality care in a variety of settings.
- Although videos can be expensive to produce, they may be used repeatedly, with many audiences, over a number of years.

Videos created for training early childhood educators must record real classrooms and authentic activities in an unobtrusive manner. Recorded classrooms should reflect a variety of settings so that professionals from all types of early care and education settings are able to identify with what they see.

Limitations of teaching through television include:

- Absence of classroom interaction
- Absence of an onsite facilitator/instructor
- Delayed feedback from submitting assignments via mail
- Instructors' inability to observe students interacting with children in a classroom.

Internet
With Internet-based distance learning, course content is accessed primarily through the World Wide Web. The course may use e-mail, live chat and online message boards for communication among teachers and students.

Benefits of Internet-based distance learning include:

- Many of the same benefits as television-based programs because instructors can make videos available on the Internet
- Videos can be provided on a VCR tape or on a CD rom for those individuals with slow connections, which makes downloading videos difficult
- Ability to view children's work online
- Ability to access content any time
- Opportunity to interact with instructors and peers via e-mail, message boards and live chats.

Because Internet-based courses depend on reading and writing, this medium may be most effective with leadership-level professionals who have extensive experience to share. However, it can also offer less-skilled writers an opportunity to practice this skill in informal written "conversation" with peers. When written reflection is emphasized, anecdotal evidence indicates that the resulting thoughtful correspondence may actually lead to deeper learning than face-to-face group discussion.

Limitations of Internet-based learning include:

- Many early childhood educators do not have access to an Internet connection in their home or at work.
- Even when Internet access is available, old technology and slow connections can make it difficult to easily view pictures and videos.

When offering online coursework it is important to consider the technology available to the students taking the course. Additionally, faculty support and training must be provided, as teaching an online course is new and challenging to many instructors.

Interactive Television

Interactive television (ITV) allows participants in different locations to interact in real time with two-way audio and video. Providing an onsite facilitator and Internet-based course material can create a highly interactive learning environment. ITV is most effective when broadcast to three or four sites with about 15 students and an onsite facilitator present.

Benefits of ITV include:

- ITV combines all the benefits of video and Internet-based instruction.
- The two-way audio/video allows for discussion among experts and peers throughout instruction.
- The presence of an onsite facilitator ensures students are interested and engaged.

Potential limitations of ITV are:

- Students need to be present with a learning community at a classroom site with the ITV technology when the course is broadcast.
- There can be technology challenges – it is essential that the connection is clear and constant; otherwise, students and instructors can become frustrated.

The Literacy Enrichment Education Program (LEEP) uses the ITV/Internet/onsite facilitator model to train early childhood professionals to promote literacy in young children. An evaluation of LEEP was led by David Dickinson, a senior researcher with the Center for Children and Families at the Early Childhood Development Center. The evaluation found that children in classrooms of Head Start teachers and supervisors who took LEEP experienced an increase of 3.28 points in their expected vocabulary gains as measured by the Peabody Picture Vocabulary Test (PPVT).

Satellite Broadcast
Similar to ITV, satellite broadcast is one-way, real time, audio and video. Where ITV provides interaction between an expert and students at a relatively small number of sites, satellite broadcast allows hundreds of students from around the country to interact with a single professional at one time. There is generally time provided to ask questions of the expert, through an onsite facilitator, via telephone or fax. Discussion typically takes place within and not among sites.

HeadsUp! Reading uses the satellite broadcast/Internet/onsite facilitator model to reach early childhood professionals across the country. A small scale evaluation of HeadsUp! Reading, funded by the Heinz Foundation and conducted by Assistant Secretary of Elementary and Secondary Education Susan Neuman during her tenure as director of the Center for the Improvement of Early Reading (CIERA), provides some beginning evidence that teachers learned new information and – according to their own assessments – enhanced their classroom practice as a result of participation in the course. Children's literacy knowledge improved after three weeks and improved significantly after four weeks.

Access for All in Distance Learning

Presenters
Andy Carvin, Benton Foundation
Larry Fox, Learning Options
Tracy Yee, Puget Sound Educational Service District

Moderator
Sue Bredekamp, Council for Professional Recognition

While distance learning allows individuals in disparate parts of the country (and even the world) to effectively share and access information, it is important to acknowledge that not everyone has access to these technologies. In this session, panelists discussed access as the greatest benefit and the biggest challenge of distance learning.

The Digital Divide
Traditionally, the "digital divide" is defined as the gap between individuals with computers and those without. But the digital divide is about more than computer ownership. Andy Carvin of the Benton Foundation points out that even if everyone had a computer, the digital divide would still exist.

The Benton Foundation's Digital Divide Network addresses the digital divide from three perspectives.

1. Do people have access to technology at home, school, work and/or in their community? Is the technology accessible to people with disabilities?
2. Do users have the literacy and technology skills necessary to make effective use of the technology?
3. Are users able to create and share content through technology? For example, do they have the skills and technology to create a Web site?

Increasing access to training opportunities is the primary goal behind the proposed Washington Early Literacy Outreach Project. Tracey Yee, director of Head Start Expansion and Online Development Center spoke of the project's goal to provide access to content through a variety of media so that individuals would have choice in how to access training. The choices range from low to high tech. In a small survey of child care staff conducted by the center, the most popular method of accessing the material was through a VCR at home.

Larry Fox of Learning Options stated that while a digital divide certainly exists, the gap between the "haves" and "have nots" is closing. Fox said that, according to the U.S. Commerce Department, more and more people are on the Internet. Those in the lowest income bracket (less than $15,000/year) are gaining access at the most rapid rate. Fox argued that offering Internet-based distance learning opportunities to early childhood professionals is one way to bridge the digital divide by providing technological opportunities to a low-income population – namely, early childhood educators.

Fox also reported that large child care chains have seen Internet-based training as a cost-effective strategy to provide uniform, high-quality training to educators at all of their centers. He also stated that there has been an increase in the number of family-child care providers interested in these learning opportunities.

Articulation and Accreditation

Presenters
Lisa Holstrom, University of Cincinnati
Karen Kietzman, Higher Learning commission of North Central Accreditation
Alison Lutton, ACCESS – American Associate Degree Early Childhood Educators
Kim Shreve, University of Cincinnati

Moderator
Dale Beckmann, Consultant

Distance learning increases the number of early childhood professionals who have access to professional training. Distance learning opportunities that are offered through, or in partnership with, community colleges for college credit also increase access to higher education for early childhood professionals.

Panelists discussed the role of accreditation in articulation and the importance of articulation agreements for increasing access to higher education for early childhood professionals.

Accreditation is a status granted to an educational institution or program that has been found to meet or exceed certain quality standards. Institutions are accredited by regional accrediting bodies. Programs within institutions may be accredited by professional councils such as the National Council for Accreditation of Teacher Education. Credits from accredited programs are more easily transferred from one school to another.

Articulation refers to statewide or institutional policies and/or agreements to accept the transfer of credits between institutions. The articulation process is intended to ensure problem-free transfer from one institution to another. Associate degrees from accredited programs, for instance, are more easily articulated into bachelor degree programs.

Many early childhood professionals are reluctant to seek higher education. They generally are nontraditional college students and may need flexibility and support in order to succeed in higher learning. Distance learning can open the door for many of these students to higher education opportunities available through community colleges.

Community colleges and associate degrees are important entry points into higher education for early childhood professionals. Community colleges are accustomed to serving nontraditional college students, and the early childhood workforce is similar to the community college student population in education experience. Community colleges are well-equipped to meet the needs of these students and to support them through the attainment of an associate degree, which can articulate to a bachelor degree.

A major barrier to articulation of early childhood education associate degrees is the range of quality in associate degree programs. There are currently no accreditation standards for early childhood education associate degrees. ACCESS and the National Association for the Education of Young Children are developing such standards. It is hoped that, by properly accrediting early childhood associate degree and distance learning programs, early childhood professionals will have better access to other higher education opportunities.

Implementation and Funding

Presenters
Sheri Azer, National Association for the Education of Young Children
Carol Fichter, Nebraska Early Childhood Training Center
Jessica McMaken, Education Commission of the States
Debra Torrence, Frank Porter Graham Child Development Institute

Moderator
Kristie Kauerz, Education Commission of the States

What is currently being done to implement distance training for early childhood professionals, and how is it being paid for? In this session, panelists discussed state efforts to use distance technology to train early childhood educators.

Sheri Azer presented an overview of professional development challenges and policy trends in the states. She shared information from Wheelock College's 2001 Early Childhood/School-Age Career Development survey, which found that 47 states currently have some form of a career development system for early childhood educators. More information on the survey can be found on the Wheelock College Web site (see "Resources").

Nebraska uses distance learning as part of its career development system. Carol Fichter spoke of the work of the Nebraska Early Childhood Training Center. Through the center, Nebraska offers several distance learning professional development opportunities. HeadsUp! Reading courses are supported through the state's satellite broadcast system. First Connections, a Web-based course on caring for infants and toddlers, was developed and is distributed by the center. Students taking these courses can receive college credit at local community colleges. These efforts are funded through a combination of state general funds, federal early childhood special education money, the federal child care and development fund, federal Even Start Family Literacy money, federal Head Start funds, federal Title I money and conference fees.

In North Carolina, CONTACT (College Opportunity Networks and Technology Access for Childcare Teachers) is a pilot early childhood distance education research and training project conducted by the Frank Porter Graham Institute at the University of North Carolina-Chapel Hill. CONTACT worked with state and local partners to develop a model early childhood Internet course and to provide faculty training on how to teach early childhood teachers at a distance. More information can be obtained by sending an e-mail to Debra Torrence at Frank Porter Graham Institute (see "Resources").

State policy can support or hinder efforts to provide distance learning programs. Jessica McMaken of the Education Commission of the States shared current state policy contexts regarding distance learning. Policy-supported distance learning efforts include online networks of distance learning classes available through community colleges and universities and state-funded satellite technology systems. States can also support high-quality programs by legislating distance education quality standards. For more information on state policies regarding distance learning, see the *ECS StateNote* on "Technology and Early Childhood Professional Development" (see "Resources").

Recommendations

Used properly, distance learning can be a powerful means of increasing the availability of high-quality professional development experiences for early childhood educators. This in turn can increase the number of young children with access to early childhood educators capable of providing the kind of high-quality care and education necessary to give them the best possible start in life.

At the Technology and Early Childhood Professional Development symposium hosted by the Education Commission of the States and KnowledgeWorks Foundation, participants made the following recommendations regarding the use of distance technology to train early childhood professionals. These participant recommendations do not necessarily reflect the views of the Education Commission of the States or KnowledgeWorks Foundation.

Recommendation #1:
Identify a person and/or organization to track distance learning opportunities in early childhood professional development throughout the country. This entity should create a network representing all stakeholders to share knowledge and promising practices.

Recommendation #2:
Work to identify stakeholders. Those identified at the symposium include:

- Early childhood practitioners
- Administration and faculty at two- and four-year institutions of higher education
- Current early childhood distance learning providers
- Philanthropic community
- Policymakers
- Federal and state department of education officials
- Technology and telecommunications community
- Business community
- Higher education accreditation bodies
- Resource and referral agencies
- Parents
- Teacher's unions
- Advocacy groups
- State early childhood professional development systems.

Recommendation #3:
Conduct additional research to show how distance learning can increase the availability of high-quality training opportunities for early childhood professionals. Identify appropriate content and technologies for distance delivery.

Recommendation #4:
Use research to promote distance learning as an option to increase professional development opportunities for early childhood professionals.

Recommendation #5:
Enact policies at the state and federal level that promote the quality of, access to and infrastructure support for distance learning opportunities. Implement policies that will sustain program efforts through changes in political climate.

Recommendation #6:
Identify an appropriate organization to provide technical assistance to states to develop models of statewide distance learning opportunities for early childhood professionals.

Recommendation #7:
Create policies and systems to ensure faculty are appropriately trained and supported to teach effectively via distance learning technology.

Recommendation #8:
Continue efforts to build transfer and articulation agreements between and among early childhood education associate degree programs and bachelor degree programs.

Recommendation #9
Continue efforts to develop accreditation standards for early childhood education associate degree programs.

Recommendation #10:
Identify and begin to address intellectual property rights issues that come from sharing content on the Internet.

Resources

(listed by meeting session)

Keynote Speakers

Sue Bredekamp
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Michael Levine
Bush Center in Child Development and Social Policy
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Does Distance Learning Get Results for Early Childhood Educators?

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Betty Jones
Pacific Oaks College
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Shawna Pinckney
National Head Start Association
spinckney@nhsa.org

Resources:
HeadsUp! Reading
Contact Shawna Pinckney
www.huronline.org

LEEP Literacy Environment Enrichment Program
Contact Julie Hirschler
http://www.fpg.unc.edu/highlight_detail.cfm?id=88

Access for All in Distance Learning

Speakers:
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Council for Professional Recognition
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lfox@learningoptions.org

Tracey Yee
Puget Sound Educational Service District
tyee@psesd.wednet.edu

Resources:
Digitial Divide Listserv
Contact Andy Carvin.

Bringing a Nation Online: A Benton Foundation Policy Brief
http://www.digitaldividenetwork.org/content/stories/index.cfm?key=248

Learning Options
Contact: Larry Fox
www.learningoptions.org

KidsCount Snapshot: Disconnected Kids
http://www.aecf.org/kidscount/snapshot.pdf

Articulation and Accreditation

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Contact Alison Lutton
www.accessece.org

Council for Higher Education Accreditation
www.chea.org

Implementation and Funding

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Resources:
Nebraska Early Childhood Training Center
http://www.esu3.org/ectc/ECTChomepage.html

Project CONTACT (College Opportunity Networks and Technology Access for Childcare Teachers)

Contact Debra Torrence
North Carolina Community College System Web site
http://www.ncccs.cc.nc.us/Perkins/professional_development_opportunities.htm

***ECS StateNote* "Technology and Early Childhood Professional Development"**
http://www.ecs.org/clearinghouse/39/15/3915.pdf

Wheelock College Institute for Leadership and Career Initiatives
State-Level Early Childhood/School-Age Career Development Work in 2001
http://institute.wheelock.edu/instresearch/instsurvmap.html

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