



Unit 7 – Using Technology and Interactive Media with Preschool-Age Children

Key Topic 1: Overview and Rationale of the Chapter

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Focus Statement

Students identify the key content of Chapter 7 in the *California Preschool Program Guidelines* and explore some of the research base around technology and young children.

Curriculum Alignment Project (CAP) Student Learning Outcomes

The Curriculum Alignment Project's (CAP) lower division eight courses, CAP expansion courses, and student learning outcomes are mapped onto each instructional guide learning experience. See Appendix A for the specific student learning outcomes, objectives, and examples of course content and topics for the courses listed below.

- Introduction to Curriculum
- Principles and Practices of Teaching Young Children
- Practicum-Field Experience
- Administration I: Programs in Early Childhood Education
- Curriculum and Strategies for Children with Special Needs

Instructional Methodologies

- Brainstorming
- Class discussion
- Jigsaw reading
- Lecture
- Notetaking outline or tool
- Pairs or small groups
- Personal reflection



- Reflective discussion
- Short paper or report

California Early Childhood Educator Competency Areas to Consider

These competency areas are from the California Department of Education, Early Education and Support Division's *California Early Childhood Educator Competencies* (CDE 2011). The "Competency Areas to Consider" below are listed in this instructional guide as a preliminary exploration of how particular competency areas might be addressed through these learning experiences.

- Child Development and Learning
- Special Needs and Inclusion
- Learning Environments and Curriculum
- Leadership in Early Childhood Education
- Professionalism
- Administration and Supervision



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Before You Start

This key topic is designed to familiarize students with an overview of the content and some of the research that has been done on the use of technology and electronic media with young children in preschool settings. Students work in small groups to identify the main points and research based on a few guiding questions for each of the chapter's sections. Students then share their findings with the other students and have a discussion about what they believe are the key messages for each section.

Chapter 7 has six main sections:

- Children and Electronic Media
- Technology and Interactive Media in the Preschool Environment
- The Benefits and the Challenges of Using Technology and Interactive Media
- Selecting Technology and Interactive Media to Enhance Children's Learning
- Integrating and Using Technology in the Preschool Environment
- Training and Professional Development Opportunities

Because of the length of each section, certain sections have been combined for review by one group. Handout 1, "Chapter 7 Notetaking Form," which is a notetaking form with the suggested questions for each section, combines the sections into four groupings. It is suggested that each group have four students, although this will be dependent on the class size.

Although students are probably familiar with the concepts of technology and electronic media, they may not have heard the specific terminology and definitions used in Chapter 7—electronic media, screen technologies, and interactive media. The "Getting it started" part of the "Getting Ready for the Unit" and this key topic provide opportunities for students to explore these terms and definitions. If students have already done the "Getting Ready for the Unit" learning experience, faculty may choose to just do a brief review of the terms for this key topic.



In preparation for this learning experience, faculty may wish to review the terms and definitions provided in the glossary (pp. 249–250) at the end of the *California Preschool Program Guidelines* if they have not already done so. Faculty may also want to have a list of some examples of the different kinds of technologies and media. Handout 2 is a copy of the glossary from the *California Preschool Program Guidelines* that can be used for the “Getting it started” portion or for a review.

Electronic versions of the two handouts for this key topic will be available when this instructional guide is online at <http://facultyinitiative.wested.org/> (accessed January 20, 2016). If students do not have copies of the *California Preschool Program Guidelines*, the Portable Document Format (PDF) version can be downloaded from the California Department of Education Web site at <http://www.cde.ca.gov/sp/cd/re/documents/preschoolproggdlns2015.pdf> (accessed January 20, 2016).

In the “Deeper Understanding” section, students are asked to review *Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8*, a joint position statement adopted in January 2012 by the National Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children’s Media at Saint Vincent College. This statement can be downloaded from the Fred Rogers Center Web site at <http://www.fredrogerscenter.org/initiatives/digital-media-learning/resources/> (accessed January 20, 2016).

Information Delivery

Students are asked to review Chapter 7 and identify key points, research, and key messages related to the use of technology and electronic media in preschool programs. Faculty may choose to have students do the reading themselves as suggested in the following active learning segments or deliver a lecture on the content. In either case, Handout 1, “Chapter 7 Notetaking Form,” may be a useful notetaking form for the students.

As described in the “Before You Start” section, there are six main content areas in Chapter 7:

- Children and Electronic Media
- Technology and Interactive Media in the Preschool Environment
- The Benefits and the Challenges of Using Technology and Interactive Media



Slides 2-4



- Selecting Technology and Interactive Media to Enhance Children’s Learning
- Integrating and Using Technology in the Preschool Environment
- Training and Professional Development Opportunities

Active Learning



Slide 5

Getting it started

Begin by asking students to review the terms “electronic media,” “interactive media,” “screen technologies,” and “assistive technology device” that are found in the glossary to the *California Preschool Program Guidelines* on pages 249–250. Provide students with Handout 2 if they do not have copies of the *California Preschool Program Guidelines*.

Encourage students to pose any questions or comments about the definitions and to note any similarities, commonalities, and differences among them.

Next ask students to brainstorm examples for each of the terms, also pointing out that some examples may fit under more than one term. Record these examples on chart paper or a whiteboard so that all students can see them. Then review the examples and ask students to indicate if they have seen that item used with preschool-age children in a classroom or at home. Put checkmarks by the examples to tally the number of instances each item is used.

Online Options

If there is online-discussion capability, faculty could facilitate a discussion of the three terms. A separate discussion thread could be done for each term, and students could also post examples for each term or category.

Keeping it going

Discuss with students that their review of these definitions and identification of examples and use by young children are a starting point for them to think about the implications of using technology and electronic media with preschool-age children. Chapter 7 provides information, resources, and recommendations that programs and teachers should consider.



Slides 6-8

Provide students with Handout 1 and explain that this handout includes a list of questions that are addressed to some extent in Chapter 7. Ask the students to form small groups of four students each, and each student in the group is to select one or two sections of the chapter to review. Explain that the questions for each section



are to guide the students in identifying the main points for that section. They are not to identify key messages at this time, and they will have an opportunity to share their main points with their classmates.

Online Options

Students could complete Handout 1 individually or in small groups and then post their completed handouts online. After reviewing the other students' or groups' handouts, students would write individually the key messages they pulled for either the instructor's review or as preparation for an in-class discussion.

Taking it further

After they have completed their assigned sections, ask the students to then share their findings with the other members of their group. Encourage students to take notes based on their classmates' presentations and, during this sharing, identify key messages for each section.

Putting it together

After all the students have shared the main points from their sections, the students in each group are to share and discuss the key messages each student pulled for each section. The group is then to come to agreement on five key messages for the chapter. Ask each group to then share their key messages with the other groups.

Another approach

Instead of students working in small groups during class, faculty may choose to have students complete the full handout individually as an out-of-class assignment. Then students could form small groups in class to discuss and compare their main points and key messages. Or students could discuss their review of the chapter as a large group.

Reflection



Slides 9-10

Convene the students as a large group and facilitate a discussion of the content. The following questions are suggested:

- What main points or key messages from this chapter stand out for you?
- What information resonated the most strongly with you? Why?
- What are some new or different understandings or perspectives you have about using technology and electronic media with



preschool children?

- What is something you will do to apply this new understanding or perspective in your work with young children?

This second set of more general reflective questions can be used in this and other key topics for additional class discussion or to guide individual student journaling.



Slides 11-13

- Which ideas or part of this class session stood out most for you?
- What seemed familiar or reinforced what you already know or have experienced? What gave you a new perspective or insight that causes you to think differently about teaching preschool children and/or engaging their families?
- Why do you think the content of this class session was presented the way it was? How did this approach help you understand the content? What else would have helped? What does this tell you about how you learn?
- How will you decide what to apply from this class session in your work with preschool children and families? What will you do to ensure you will implement what you have decided to use?

Deeper Understanding



Slide 14

Much of the content for Chapter 7 references *Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8*, a joint position statement adopted in January 2012 by the National Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. This statement can be downloaded from the Fred Rogers Center Web site at <http://www.fredrogerscenter.org/initiatives/digital-media-learning/resources/> (accessed January 20, 2016).

Students are to read the position statement and compare their notes and key messages from Chapter 7 with this position statement. Faculty could then choose to facilitate a class discussion on the comparison or ask students to write a short paper on their findings and reflections. The following questions may be useful for either approach:

- What part(s) of the position statement really caught your attention?



Slide 15



- Where did you find similarities between the position statement and Chapter 7? Differences?
- Which one gives you a better understanding of the issues related to digital technology and young children? Why?
- How might you use the position statement in your work as a teacher?
- What additional questions or areas of interest does the joint position statement raise for you?



Slide 16



Chapter 7 Notetaking Form

- Children and Electronic Media (pp. 93–94)**
Training and Professional Development Opportunities (p. 101)
- What is the usage by young children (ages birth to six years) of different kinds of digital devices and electronic media?
 - What are some of the impacts of electronic media on young children?
 - What are key reasons for and features of effective professional development for teachers?
 - What research has been done?
 - What questions come to mind as you read these sections?

Main points

Key messages

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 Handout 1: Chapter 7 Notetaking Form



**Technology and Interactive Media in the Preschool Environment (pp. 94–95)
The Benefits and the Challenges of Using Technology and Interactive Media (pp. 95–97)**

- How is digital technology used in the preschool setting?
- What are some of the main benefits? Challenges?
- What are some cautions or guidance?
- What research has been done?
- What questions come to mind as you read this section?

Main points

Key messages



**Selecting Technology and Interactive Media to Enhance Children’s Learning
(pp. 97–99)**

- What should be considered in choosing digital technology and interactive media to use in the preschool classroom?
- What research has been done?
- What questions come to mind as you read this section?

Main points

Key messages



Integrating and Using Technology in the Preschool Environment (pp. 99–100)

- What should teachers consider in introducing and integrating digital technology and interactive media in the preschool classroom?
- What research has been done?
- What questions come to mind as you read this section?

Main points

Key messages



Glossary of the California Preschool Program Guidelines

administrator. An early childhood professional who may hold a wide variety of titles and positions: Center Director in a small, single-site program; Site Supervisor within a large, multiple-site program; or a Program Coordinator for a network of centers. Regardless of the particular size or characteristics of a program, the same issues and concerns must be addressed at all programs.

assistive technology device. Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability (Mistrett 2004).

cognitive flexibility. The ability to switch perspectives or the focus of attention and adjust to changed demands or priorities (Diamond et al. 2007).

dual language learners. Young children who are learning two or more languages at the same time, as well as those learning a second language while continuing to develop their first (or home) language.

ecological perspective. The view or belief that interactions with others and the environment influence development.

electronic media. Media that rely on technology to broadcast or store information. Examples include television, radio, DVDs, computers, the Internet, telephones, gaming consoles, and handheld devices.

executive function skills. Core executive function skills are inhibition (e.g., self-control—resisting temptations and resisting acting impulsively) and interference control (e.g., selective attention and cognitive inhibition), working memory, and cognitive flexibility

(including creatively thinking “outside the box,” seeing anything from different perspectives, and quickly and adapting to changed circumstances) (Diamond 2013).

home language. The primary language used by the child’s family in the home environment. Some children may have more than one home language (e.g., when one parent speaks Chinese and the other speaks English).

IDEA. The Individuals with Disabilities Education Act (IDEA) is a law ensuring services to children with disabilities throughout the nation. It governs how states and public agencies provide early intervention, special education, and related services to more than 6.5 million eligible infants, toddlers, children, and youths with disabilities.

inhibitory control. The ability to resist the temptation to go on “automatic” and to do what is needed to achieve goals (Gallinsky 2013).

interactive media. Forms of electronic media with content designed to facilitate active and creative use by young children and to encourage social engagement with other children and adults (NAEYC and FRC 2012). Forms of interactive media include software programs, applications, broadcast media, the Internet, e-books, and some children’s television programming.

multiple means of engagement. Allowing children alternative ways to communicate or demonstrate what they know or what they are feeling, such as through gestures, sign language, or pictures.

multiple means of expression. Providing choices in the environment that facilitate learning by building on children’s



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interests, experiences, knowledge, and skills—for example, providing a chair for a child who is interested in the sensory table, but uses a therapeutic walker.

multiple means of representation. Information presented in a variety of ways so the learning needs of all children are met. For example, it is important to speak clearly to children with auditory disabilities in an area with little or no background noise while also presenting information visually (such as with objects and pictures).

pedagogical philosophy. Philosophy of teaching.

pragmatics. The rules of language used in social contexts (e.g., one would talk differently to the president than to one's mother). Pragmatics includes gathering information, requesting, and communicating (California Department of Education 2010, 99).

prefrontal cortex. Primary functions of the prefrontal cortex include executive function skills (including planning, working memory), cognitive skills, logic/reasoning, and self-control/inhibition of behavior.

preschool or preschool program. Any early childhood setting where three- to five-year-old children receive education and care. Children can experience preschool in a variety of settings, including child care centers (center-based child care and family child care), state-funded prekindergarten programs, federally funded preschool programs (such as Head Start), and private preschool programs.

reflective practice. Thoughtful consideration of thoughts, feelings, actions, and experiences when applying knowledge to practice. This is done to learn from experience and systematic exploration of other approaches or behaviors. May be most effective when supported by peer collaboration or professionals' coaching.

reflective supervision. Refers to several related ideas and approaches designed to help professionals consider, in the presence of another person, their thoughts, feelings, actions, and reactions as they work to support the healthy development of young children and their families.

scaffolding. A process by which adults or capable peers provide a supportive structure to help children learn and play. Scaffolding is helpful when children are faced with a challenge that they can solve with a simple hint, question, or prompt.

screen technologies. Electronic devices with which users view content through a screen. This category may include televisions, computers, smartphones, and tablets.

specialized service providers. Professionals who work primarily with children and families who have special needs or who need services beyond what is typically provided by an early childhood educator. These providers are often early childhood special educators, but they might also include occupational therapists, physical therapists, and specialists in low-incidence disabilities.

teacher. An adult with education and care responsibilities in an early childhood setting. Teachers include adults who interact directly with young children in preschool programs.

universal design for learning (UDL). An educational framework, based on research in the learning sciences, that guides the development of flexible learning environments and that can accommodate individual learning differences (Center for Applied Special Technology 2008).

working memory. Holding information in mind while mentally working with it or updating it (Gallinsky 2013).

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