



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

## Key Topic 3: A Closer Look at Integrating Technology and Interactive Media into Preschool Programs



### Focus Statement

Students increase their understanding of how to use digital technology and interactive media in the classroom by conducting classroom observations and teacher interviews, viewing and discussing video clips of preschool teachers and children using technology, or hearing from a panel of teachers about ways they integrate technology into their classrooms.

### 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
- Adult Supervision and Mentoring in Early Care and Education
- Administration I: Programs in Early Childhood Education
- Curriculum and Strategies for Children with Special Needs

### Instructional Methodologies

- Class discussion
- Class presentation
- Development of a resource tool
- Interview



- Lecture
- Notetaking outline or tool
- Observations
- Pairs or small groups
- Panel/guest speaker
- Short paper or report
- Video observation

### **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 increase students' familiarity with (1) how technology and interactive media are being used in preschool programs and (2) the guidance available for that usage. Given the rapid changes of new technologies and electronic media, it is important for early education program staff, including administrators and teachers, to have tools to assess the appropriateness of these technologies in the preschool classroom. It will also be useful for students to observe children and adults using different kinds of digital technology and interactive media.

The learning experience is based on students' application of specific content in Chapter 7 to classroom settings. After reviewing and discussing the guidelines and considerations presented in two sections of Chapter 7, "Selecting Technology and Interactive Media to Enhance Children's Learning" and "Integrating and Using Technology in the Preschool Environment," students either view video clips or visit actual preschool programs to observe how children are engaged with different forms of technology and electronic media. If faculty choose to have students visit programs, it may be helpful for faculty to identify programs available for student observations. If students are working in preschool programs, faculty may also let students observe their own or other classrooms at their site. If classroom observations are not feasible or faculty choose to use video clips instead, there are some videos available for viewing on the Technology in Early Childhood (TEC) Center at the Erikson Institute Web site at <http://teccenter.erikson.edu/category/show-me-videos/> and the Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College <http://www.fredrogerscenter.org/2013/07/30/imaginary-play-with-technology/> (accessed January 20, 2016). Faculty may also have their own clips they can use.

Students are asked to read or review several pages of Chapter 7: "Selecting Technology and Interactive Media to Enhance Children's Learning" (pp. 97–99) and "Integrating and Using Technology in the Preschool Environment" (pp. 99–100). They then develop a notetaking checklist to use in their video clip or classroom observations. 1, "Key Considerations for Using Technology in Preschool Programs," is provided as a template for this checklist, or faculty may choose to use a different method for students to plan and record their observations.



As a background or preface to these two sections, students should also be familiar with some of the material on pages 96–97, beginning with the first full paragraph on the right-hand column on page 96. Faculty may include these pages in the reading students do or share this information through a brief lecture. It is important to note the wording in the last paragraph in the left-hand column on page 97: “The following guidelines identify key considerations for programs and teachers selecting, evaluating, integrating, and using technology in preschool programs.” The guidelines mentioned in this sentence and presented in Chapter 7 closely parallel and are very similar to many of the specific practices listed under Guideline 8, Planning the Learning Environment and Curriculum—specifically 8.7, Programs support teachers in selecting, using, and integrating appropriate technology into everyday experiences to enhance curriculum (*California Preschool Program Guidelines*, p. 177). However, faculty and students should be aware that the guidelines presented in Chapter 7 should not be confused with the 10 guidelines described in Part Three of the *California Preschool Program Guidelines*. A comparison of these two sets of guidelines is presented in a chart under “Information Delivery” of this key topic.

Handout 1 is provided as a notetaking guide that students can use to develop examples or indicators of guidelines and considerations they are to look for in their classroom or video observations. An electronic version of this handout will be available when this instructional guide is online at <http://facultyinitiative.wested.org/> (accessed January 20, 2016).

In the “Keeping it going” segment, it is suggested that faculty discuss with students how to identify indicators to guide the students’ observations. The example given is to demonstrate and walk through some software programs to gauge how developmentally appropriate they are. This is suggested because students may not be as skilled in identifying developmentally appropriate practice with software programs as they are with other classroom activities and materials. Faculty may need to obtain and review some software programs.

An alternative approach for this key topic is to invite some preschool teachers and administrators as guest speakers and conduct a panel discussion on how the speakers select and integrate technology and electronic media into their preschool programs. It would be important to provide the speakers with Chapter 7 of the *California Preschool Program Guidelines* and to point out the two sections on pages 97–99 about selecting and integrating technology and interactive media. It is also suggested that faculty refer the speakers to *Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8*, the 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).



Because the research and evidence base around certain issues related to the use of technology in preschool programs is still emerging, faculty should ensure that the speakers are clear about what are their own perspectives and experiences. Faculty may also suggest that the speakers bring photographs and/or video clips. It may be helpful for the speakers to know that the students will have prepared some questions based on their reading and class discussions.

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).

## Information Delivery



Slide 2

As described in the “Before You Start” section, the primary information for this key topic is from these sections of Chapter 7:

- Selecting Technology and Interactive Media to Enhance Children’s Learning (pp. 97–99)
- Integrating and Using Technology in the Preschool Environment (pp. 99–100)

Depending on students’ familiarity with Chapter 7, faculty may have students read this material in class or provide a brief overview through a lecture.

If this is the students’ first exploration of Chapter 7, it is also important that they are aware of some key terminology used: electronic media, screen technologies, and interactive media. The following definitions are found in the glossary on pages 249–250 and provided here for reference:



Slides 3-5

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

The following chart provides a comparison of the guidelines discussed in Chapter 7 and the practices listed under Guideline 8 of the *California Preschool Program Guidelines*.

<b>Chapter 7</b>	<b>Guideline 8/8.7 – Programs support teachers in selecting, using, and integrating appropriate technology into everyday experiences to enhance curriculum. (p. 177)</b>
Selecting Technology and Interactive Media to Enhance Children’s Learning (pp. 97–99)	
<ul style="list-style-type: none"> <li>Consider children’s developmental level, interests, abilities, and cultural and linguistic backgrounds.</li> </ul>	Programs support teachers in selecting technology and interactive media products that are developmentally appropriate and are consistent with the abilities, interests, needs, and cultural and linguistic backgrounds of individual children in the program.
<ul style="list-style-type: none"> <li>Ensure equitable access to technology and interactive media experiences.</li> </ul>	Programs ensure equitable access to technology and interactive media experiences to all children in the program, making accommodations for children with disabilities or other special needs.
<ul style="list-style-type: none"> <li>Identify the underlying objectives of the technology.</li> <li>Evaluate the quality of the content.</li> <li>Use the best available evidence in the selection process.</li> </ul>	Programs support teachers in evaluating the quality of content, overall goals, format, and features of any software program or other forms of interactive media they may use with children in the program.
<ul style="list-style-type: none"> <li>Select technology and interactive media that support children’s creativity, exploration, and problem solving.</li> </ul>	Teachers use technology and interactive media as tools to intentionally support curriculum goals and to promote learning of individual children in the group.



<b>Chapter 7</b>	<b>Guideline 8/8.7 – Programs support teachers in selecting, using, and integrating appropriate technology into everyday experiences to enhance curriculum. (p. 177)</b>
Integrating and Using Technology in the Preschool Environment (pp. 99-100)	
<ul style="list-style-type: none"> <li>Technology and interactive media are used within the framework of developmentally appropriate practice.</li> </ul>	Teachers apply knowledge of developmentally appropriate practice to guide and inform decision making about how to integrate technology and interactive media into the learning environment.
<ul style="list-style-type: none"> <li>Technology and interactive media are integrated into the environment, curriculum, and daily routines.</li> </ul>	Programs provide guidance to teachers on how to introduce and integrate technology and interactive media into the learning environment appropriately and effectively.
<ul style="list-style-type: none"> <li>Time spent with technology and media is limited.</li> </ul>	Teachers establish with children rules and routines to guide appropriate handling and use of computers and other technological devices, setting limits on the time children spend with technology and interactive media (i.e., screen technologies).
<ul style="list-style-type: none"> <li>The use of technology and interactive media facilitates social interactions and relationship building.</li> </ul>	Teachers ensure that the use of technology and interactive media allows for joint engagement between children (or between children and adults) and promotes communication and collaboration among children.
<ul style="list-style-type: none"> <li>Teachers provide support while children use technology and interactive media.</li> </ul>	Teachers observe and support children while they use technology and interactive media, identifying opportunities for teachable moments and making appropriate adaptations to promote positive outcomes for individual children.



<b>Chapter 7</b>	<b>Guideline 8/8.7 – Programs support teachers in selecting, using, and integrating appropriate technology into everyday experiences to enhance curriculum. (p. 177)</b>
Training and Professional Development Opportunities (p. 101)	Programs provide teachers with training and professional development to gain the knowledge and competence to use technology, to think critically about the use of technology and interactive media with young children, and to evaluate the impact of technology on children’s learning and development.

**Active Learning**

**Getting it started**

Begin this learning experience by introducing the issue of technology and electronic media in preschool programs. Faculty may facilitate an initial discussion with students by asking them to share their understanding of and experience with this topic and any questions they have about using technology with young children. Then ask students to read or review the glossary terms related to technology on pages 249–250 and the two sections on pages 97–99, especially noting any information related to questions raised during their discussion. After the students have finished their reading or review, continue the class discussion to answer the questions or clarify any other points shared by the students.

**Keeping it going**

Explain to students that they will be doing an observation of either some video clips or a classroom to see how different technologies and electronic media are being used in preschool programs. Introduce Handout 1, “Key Considerations for Using Technology in Preschool Programs,” and point out how the main bullet points for each section on pages

**Online Options**

Students could complete Handout 1 prior to class and post it online for the instructor’s review. Students could then review their classmates’ handouts before class and be prepared to develop the common set of examples or indicators in a class discussion.

The teacher interview questions could also be developed individually and posted online prior to a class discussion.



Slide 6



97–100 are listed. Students are then to develop some indicators or examples for each point that will help them decide how the guidance or consideration in that bullet can be recognized. Many of these are presented in the text. Acknowledge that some information may be difficult to determine through a brief observation, but the indicators can still be useful for the students in their teaching practice.

Depending on the students' background, faculty may want to discuss a few sample indicators with the whole class first. For example, students may not have much firsthand experience with different software. Faculty could demonstrate a few software programs so students can determine the following characteristics related to the programs' developmental appropriateness:



Slides 7-8

- Is the program designed to primarily entertain or does it have specific learning outcomes appropriate for preschool-age children?
- Does the program take into account children's different interests, abilities, developmental levels, and cultural and linguistic backgrounds? How?
- Does it support children developing a certain skill? Does it introduce new information?
- How does the program allow the child to interact with it? How does the program allow other children and adults to be involved?

Faculty may have students develop these indicators individually, in small groups, or as a full class. If students work individually or in groups, faculty may assign different key consideration bullet points from pages 97–101 to different students or have all the students work on all the key considerations. These key considerations are also included in Handout 1. Whichever method is selected, time should be allotted for students to share their indicators and examples and possibly come to agreement on which indicators to use.

If students are doing classroom observations, interviewing the teacher(s) would enhance the observation. Just as the students developed a common set of indicators, it may be helpful for the students to develop a set of common interview questions that they all use.



### **Taking it further**

Students then conduct their observations and document what they see and hear. Encourage students to look for examples of as many key considerations as possible.

If video clips are used, this step of the learning experience is probably done as a full class. Depending on the students' experience in doing observations, faculty may choose to assign specific key considerations to different students so that the students have a narrower focus for their observations. Students could record their observations individually and then work in small groups to review their observations.

Many students have smartphones with photographic capability. Therefore, if students are doing classroom observations and interviews, their documentation may include photographs if they have permission from the program administration. Remind students that the children's, families', and staffs' confidentiality needs to be honored, so that photographing children and adults often is not allowed. Photographs may need to be only of the classroom environment with students describing how the children and adults used the different technologies and media. Some classrooms have their own cameras and printing capability. Students may be allowed to borrow the cameras during their visit and then ask the program to print certain photos. This ensures that all digital files remain with the program, furthering protecting confidentiality.

### **Putting it together**

After students complete their observations and interviews, class time and a process for sharing and discussing them will need to be provided. One approach could be to review each key consideration and then ask students to share a few examples where they saw indicators for that item in either the video clips or classrooms or in discussion with the teacher. Or if a small group of students did an observation at the same program, the students could do a presentation of the highlights of their visit.

### **Another approach**

Instead of having students do video clip or classroom observations, faculty could arrange for a panel of preschool teachers and/or administrators to share how they are selecting and integrating electronic media in their programs. Prepare for the panel by having students develop a list of questions based on the main key considerations.



The panel discussion could include having the panelists present an overview of how technology and interactive media are used in their programs. Students could then ask some of the questions from their list to either expand on the panelists' comments or address a point that has not yet been discussed. Students could also use a modified Handout 1 to take notes during the panel presentations, noting examples shared by the presenters for each guideline or consideration.

After the panelists leave, students could reflect on the panel discussion either individually or as a full class. The following questions are suggested:



Slides 9-10

- What stood out for you from each panelist's presentation?
- What surprised you? What caused you to pause?
- For which key considerations do you have a better understanding or different perspective based on what you saw or heard from the panel? How might you use this information in your work with preschoolers?
- Where do you still need more information or support on applying these considerations or guidance in a classroom setting? What is a first step you can do to obtain this information or support?

## Reflection

Conclude this learning experience with a reflective class discussion based on the following suggested questions:



Slides 11-12

- Which considerations or guidelines stood out for you from your observations and the class discussions?
- Which considerations or guidelines do you feel most confident in applying? Which ones do you feel will be a struggle?
- What are some key messages that you are taking from doing these observations?
- What is a next step you plan to take to strengthen your knowledge and skill in being able to plan and use technology and interactive media in your preschool classroom?



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.



Slide 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?



Slides 14-15

- 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

Several organizations and Web sites are listed in the “Further Reading” for Chapter 7 on page 104. Ask students to select one of these resources and prepare an overview that includes the following information:



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- Name of resource
- Vision and/or mission
- History
- Primary audience(s)
- Types of information
- Resources
- Publications
- Other noteworthy information

If possible, compile the students’ overviews so that they have a resource tool for future use.



### Key Considerations for Using Technology in Preschool Programs

As you review these two sections in Chapter 7, “Selecting Technology and Interactive Media to Enhance Children’s Learning” and “Integrating and Using Technology in the Preschool Environment,” write in the second column some examples or indicators of that guideline or consideration. You can then use this form to also record some of your observations.



Unit 7: Using Technology and Interactive Media with Preschool-Age Children  
 Key Topic 3 – A Closer Look at Integrating Technology and Interactive Media into Preschool Programs  
 Handout 1: Key Considerations for Using Technology in Preschool Programs

Guideline/Consideration	Examples/Indicators	Observation notes
<p><b>Selecting Technology and Interactive Media to Enhance Children’s Learning</b></p> <ul style="list-style-type: none"> <li>Consider children’s developmental level, interests, abilities, and cultural and linguistic backgrounds.</li> </ul>		
<p><b>Selecting Technology and Interactive Media to Enhance Children’s Learning</b></p> <ul style="list-style-type: none"> <li>Ensure equitable access to technology and interactive media experiences.</li> </ul>		



Guideline/Consideration	Examples/Indicators	Observation notes
<p><b>Selecting Technology and Interactive Media to Enhance Children’s Learning</b></p> <ul style="list-style-type: none"> <li>Identify the underlying objectives of the technology.</li> </ul>		
<p><b>Selecting Technology and Interactive Media to Enhance Children’s Learning</b></p> <ul style="list-style-type: none"> <li>Evaluate the quality of the content.</li> </ul>		



Guideline/Consideration	Examples/Indicators	Observation notes
<p><b>Selecting Technology and Interactive Media to Enhance Children’s Learning</b></p> <ul style="list-style-type: none"> <li>Select technology and interactive media that support children’s creativity, exploration, and problem solving.</li> </ul>		
<p><b>Selecting Technology and Interactive Media to Enhance Children’s Learning</b></p> <ul style="list-style-type: none"> <li>Use the best available evidence in the selection process.</li> </ul>		



Guideline/Consideration	Examples/Indicators	Observation notes
<p><b>Integrating and Using Technology in the Preschool Environment</b></p> <ul style="list-style-type: none"> <li>Technology and interactive media are used within the framework of developmentally appropriate practice.</li> </ul>		
<p><b>Integrating and Using Technology in the Preschool Environment</b></p> <ul style="list-style-type: none"> <li>Technology and interactive media are integrated into the environment, curriculum, and daily routines (NAEYC and FRC 2012).</li> </ul>		



Guideline/Consideration	Examples/Indicators	Observation notes
<p><b>Integrating and Using Technology in the Preschool Environment</b></p> <ul style="list-style-type: none"> <li>• Time spent with technology and media is limited.</li> </ul>		
<p><b>Integrating and Using Technology in the Preschool Environment</b></p> <ul style="list-style-type: none"> <li>• The use of technology and interactive media facilitates social interactions and relationship building.</li> </ul>		



Guideline/Consideration	Examples/Indicators	Observation notes
<p><b>Integrating and Using Technology in the Preschool Environment</b></p> <ul style="list-style-type: none"> <li>Teachers provide support while children use technology and interactive media.</li> </ul>		