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Integrating Technology into Early Learning

PROMISING PRACTICES and CHECKLIST

Promising Practices

Have you thought about using technology, such as a tablet or desktop computer, as a teaching and learning tool in your preschool classroom?

Perhaps you are unsure about how to use it in your classroom in ways that are age-appropriate. Or maybe you are already using technology in your classroom, but you would like to know more about how to make your children's time with it more meaningful. We have gathered a number of evidence-based recommendations and suggestions you can use as a guide to help you successfully integrate technology into your classroom.

① Before Getting Started, Consider Your Class and Your Goals

Before selecting any device, software, or app, it's important to **think about the developmental level and age of the children who will be using it**. As a teacher, you know best what your learning goals are and how to support your children in achieving them. Before allowing children to use devices on their own, **explain how to care for and use the device**. As children become more experienced with handling the devices, you can gradually give them more responsibility in using them independently.
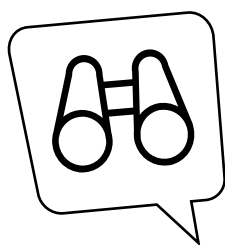
It is also important to **preview the app, program, or game you will be using in your class** before using it with your children. For example, play through games on your own so you will understand what your children will be experiencing when they play the game. This will help you see the activities the children will be engaged in, and whether or how the technology gives feedback. You can use this information to anticipate what challenges children will have and what supports they might need when they use the app, program, or game. You also can **screen any digital resources to make sure they are age- and content-appropriate**, and that any parental controls and ad blocks for the device have been turned on to prevent children from seeing unwanted content.

2 Build and Support Relationships

Because young children learn best from warm and responsive caregivers, technology use should support this kind of relationship. One of the biggest concerns about using technology with children is that it will take the place of personal interactions, or that children will lose opportunities to collaborate with or learn from their peers and teachers. **It is very important that technology not replace other important early childhood activities, such as creative play, exploration, social interaction, or conversation.** As much as possible, digital tools should be used to expand children's participation in these childhood activities. For example, try to find games that encourage joint play by two or more children at the same time, or encourage children to talk about what they are doing when playing a game or using a program.

There are some ways that you can stay engaged with children while they are using a device on their own. For example, make it a point to check in with the child before and after they are set up on the device. **Consider asking them open-ended questions about what they are doing while they are using it, and encourage them to connect it to other classroom experiences.** For example, "I like the way you're collecting the shapes in your basket in that game. It reminds me of when we collected acorns in the playground yesterday. Can you tell me about which shapes you're putting in and leaving out?"

Another effective use of technology is as **a tool to communicate with the families of the children in your class.** For example, you can send families photos of their children's classwork or art work or videos of their children in the dramatic play area. These visuals help strengthen the home-school partnership by including families in their children's education and providing opportunities for families to talk with their children about the events of their day. You also can use technology to strengthen the home-school connection by using resources to help you **translate documents into children's home languages when sending notices or letters to families.**
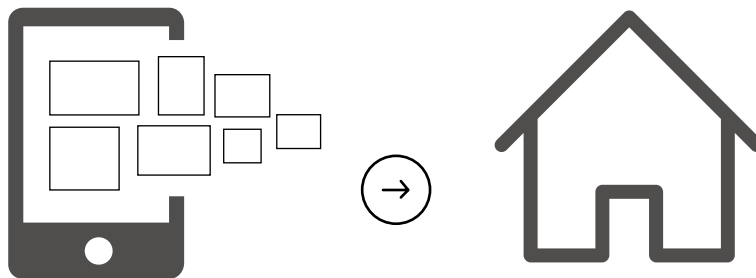
Finally, consider sending home a letter explaining the **purpose of using technology in the classroom** to get parental buy-in for classroom technology use. You also can talk about how you will be using technology in the classroom and can provide examples during parent meetings or Back-to-School night.

3 Encourage Collaboration

Have children share their technology-based learning experiences with teachers, families, and other children in the classroom, just as they would share other learning materials. **Having children use digital resources collaboratively with others, rather than on their own, has been shown to have greater potential for engagement and learning.** For example, if you are watching a video on the computer with the children, **consider pausing every so often** so that you can ask questions about what they are watching, or **make a connection to a non-digital activity**. This is similar to pausing when reading stories to young children to ask questions that provide opportunities for sharing and learning. You can discuss how the activity that children are doing on the device relates to something from the class, such as a topic discussed during that day's morning meeting, or how the content they are watching might differ from their home lives, such as living in a city versus living on a farm.

Allowing children to work with partners is also a great way to support collaboration. You can set up a space in your classroom that **allows children to work together with technology**, such as at a table with a bench. When children are viewing something on a screen, consider pairing them up with a classmate or with an adult, so they can watch, listen, and talk together about this shared experience. You also can design **digital projects for children to work on in a small group as a social way to learn**, such as creating a class book of digital photos taken by each child on a scavenger hunt in the park. Using these collaboration strategies will help children develop important language and social skills.

4 Let the Child Create Content

While many digital apps, programs, and games only provide children with opportunities to use the content or game in the way it has been created, there are many open-ended digital tools that can be **used by children in creative and exploratory ways**, such as cameras, painting apps, and storytelling tools. Encourage children to take the lead when it comes to using these creative tools in the classroom. For example, children can **use a digital camera to collect examples of shapes** in the neighborhood and publish a class book of what they find. They also can record and share real-life experiences, such as outdoor or dramatic play, through images, videos, and sounds. By saving these recordings, **children can re-explore and share them at a later time** with adults and peers. Finally, you can allow children to **use a painting and drawing app to create pictures of their family**. Young children can use these types of open-ended technology tools creatively, just as they would use paper, markers, clay, and other craft materials.

5 Use Media to Reflect Diverse Learners

Try to find and use **culturally responsive** digital resources. These are resources with content that **reflects the diverse backgrounds of the children you teach**. It is important to find out about the home languages and cultures of the families and children in your class, because it **sends the message that their differing backgrounds and cultures are a valuable source of knowledge**. You then can use this information to teach in ways that **connect to your children's home culture and values**. Select videos and audio samples of music from many different cultures to play for your class. Try to select videos and apps that include diverse representations of people and do not reinforce stereotypes. You also can use technology to translate familiar classroom words into your children's home languages for classroom use.

Technology tools have great potential to support young children with their learning. When making decisions about how to use digital tools in the early elementary classroom, researchers and other education experts recommend that you keep in mind these five ideas:

1 Consider your goals for your children and use the technology to help meet these goals

2 Use technology to support peer-to-peer, teacher-child, and family relationships and communication

3 Encourage collaboration and communication among children as part of the technology use experience

4 Look for opportunities that allow children to be creative with digital tools, not just consumers of digital content

5 Include culturally responsive materials that connect to the diversity of cultures and values in your class

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Where to Learn More

» For more information about using technology with early learners:

Guiding Principles for Use of Technology with Early Learners
https://tech.ed.gov/earlylearning/principles/

» For more specific examples of technology use in the classroom:

Selected Examples of Effective Classroom Practice Involving Technology Tools and Interactive Media
https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS_technology_Examples.pdf

» For more general information about perspectives on technology and interactive media in early childhood programs:

Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8
https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS_technology_WEB.pdf

» For printable copies of this and other early learning resources, available in Chinese, Spanish, and English:

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