Assignment 3:

Preschool Technology Guidelines

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The increased access to Technology and Digital Media has created learning opportunities for early childhood aged children. Student involvement with technology can create pathways for extraordinary learning experiences (McManis & Gunnewig, 2012). In early childhood programs, an educational element is needed to be integrated successfully into the child's learning and development (McManis & Gunnewig, 2012). In preschool classrooms, students are increasingly more comfortable with mobile technology including touch screen tablets and phones (Couse & Chen, 2010).

Technology provides opportunities for collaborative learning among peers and fosters students' acquisition of skills they will need to meet success in school (McManis & Gunnewig, 2012). Educators can increase collaboration with their students by using technology in early childhood classrooms (Cicconi, 2014).

Chiong & Shuler (2010), propose that kids as young as two years old can easily navigate touchscreen technology (Geist, 2014). Touchscreen devices are easier for toddlers and young preschoolers to use compared to desktop computers (Geist, 2014). Guided interaction during technology use helps children gain a sense of familiarity to promote independent usage of technology (Plowman & McPake, 2013). Both parents and educators may sometimes provide direct instruction for children as they engage with technology tools. Much of the support provided is inadvertent in the form of asking questions, offering ideas, and showing interest in the child's activity while they are using technology (Plowman & McPake, 2013).

The following Technology and Digital Media Guidelines are suggested for educators, childcare providers and parents of children ages 2-8 in early childhood.

Guideline 1:

Technology tools and digital media should be developmentally appropriate.

Description:

Technology tools and interactive media that are selected by a teacher or parent should be age appropriate, provide clear instructions and be well produced and free of commercial messaging. The features of the technology should be chosen to meet the developmental needs of the child based. This includes their interests, motor skills, cognitive abilities and social-emotional needs. Interactions with the technology should be playful and encourage creativity, active play, pretend play and outdoor activities.

Examples:

The use of preschool specific websites such as www.starfall.com and www.abcmouse.com support a child's exploration and natural sense of curiosity. On occasion, sit down with your child, use the website together and encourage your child to share what he or she has learned. Read to your child and have your child read to you. Use embedded music and art lessons within the sites to spark creativity and encourage movement through dance.

Interactive mobile technologies such as iPads or tablets can be used in conjunction with preschool specific apps to reinforce academic skills, to connect to the lives of students and the world beyond the classroom and to explore real-world issues. Interactive White Boards (IWB) can be utilized for whole group activities.

Research: (Keengwe & Onchwari, 2009), (McManis & Parks, 2011), (Simon & Nemeth, 2012), (NAEYC, 2012)

Guideline 2:

Technology tools and digital media should be used to enhance creativity.

Description:

Parents and educators can create an environment that encourages children to explore and play by adapting children's ideas. Creativity allows children to explore and problem solve. Children's interactions with technology mimic their connections with other play materials and include sensory-motor or practice play, make-believe play, and games with rules.

Examples:

Students can explore their creativity with Science, Technology, Engineering and Math (STEM) applications. Children can design and build bridges using Bridge Basher App. Students can build virtual towers using virtual blocks to create structures using the Builder Blocks App. Students can solve puzzles or create a picture using tangrams in the My First Tangrams App.

There are a variety of drawing and coloring Apps that can promote creativity for free time or during instructional time. Children can create pictures independently or collaboratively while using their imagination with the Drawing Pad App. This App has a rollout tray on the side that lets children quickly select from brushes, markers, pencils, stencils and backgrounds to create custom designs.

Research: (Cohen & Cowen, 2011), (McPake & Plowman, 2013), (Aronin & Floyd, 2013).

Guideline 3:

Technology tools and digital media should be used to enhance movement.

Description:

Young children enjoy moving around when they hear music. Children enjoy physical activities that contribute to their healthy development. Physical activities are crucial for healthy bodies, and sedentary behavior is one cause of obesity in young children. Integrated music and movement activities are components of a high-quality early childhood education curriculum. When educators and family members understand how to offer age appropriate physical activities, children can experience the joy of music and movement anywhere that physical space allows. These activities offered with the use of technology can provide daily opportunities for children to develop and learn in authentic environments with careful attention by adults.

Examples:

A variety of free websites and apps such as www.gonoodle.com, Music with Grandma App, Dance Party Zoo App, and CookieCoo Dancing Star App can help children practice basic motor and balance skills. These fun dance games will incorporate music and movement in your classroom or at home. These applications teach children to sing, play and dance and can be utilized in addition to other Apps that encourage movement such as Tot Yoga.

Tot Yoga motivates children to move along with animated animals, trees, and the sun to teach your child how to do 13 yoga poses. Children are encouraged to move, growl, bounce and rest to music. The 13 interactive yoga poses are fun for everyone in the family. Kids' Yoga Journey introduces 19 fully animated poses to awaken the mind, move the body and promote healthy habits.

Research: (Jensen, 2000), (Dow, 2010), (Izumi-Taylor, Morris, Meredith, & Hicks, 2012).

Guideline 4:

Technology tools and digital media should be used to strengthen home-school connections.

Description:

Educators can utilize technology tools to build and foster relationships with parents and promote more family engagement. They can model appropriate interactive media and technology tool usage to create opportunities to educate parents about technology usage in the home. Parents can utilize tools to seek advice, gain important information, and stay engaged in their child's education. Children's early experiences of playing and learning with a variety of technologies at home can impact their progress of learning when they are encouraged at home.

Examples:

Educators can use social media to provide an opportunity for families to see what happens in early childhood environments. Educators can take pictures during field trips or special events such as secret readers. Photos can be posted on Facebook or Twitter with parental consent to further encourage and motivate young learners in their activities. Home-School collaborative tools can be utilized, such as a Family Messaging Journal (FMJ), to increase home-school collaboration and communication. This can be achieved through various apps such as Skype, Verso, or other user-friendly video messaging software. Teachers can use class blogs such as Seesaw or messaging apps such as Remind to create a digital portfolio to share student work with classmates and parents. Using this technology gives students a real audience for their work and offers parents a personalized window into their child's learning.

Research: (Simon & Nemeth, 2012), (NAEYC, 2012), (ISTE, 2008).

Guideline 5:

Technology and digital media should be used for collaborative activities which promote student socialization.

Description:

Positive social and emotional development provide a critical foundation for lifelong development and learning. Technology can support social interactions and collaboration between children when a variety of technologies are used at home and school with adult supervision. Students will learn to navigate new environments, facilitate the development of supportive relationships with peers and adults, and support their ability to participate in learning activities. Children in early childhood classrooms interact with peers, collaborate and share ideas as they help each other navigate technology tools.

Examples:

Robosapien X is a fun activity that encourages students to use technology to develop social skills. The applications teach sharing and collaboration through taking turns with other students in a small group setting. It also provides the opportunity to practice giving and following directions using interactive toys. The Robosapien X will respond to the student's touch via the remote control, which will teach students to follow and give directions.

Some digital book Apps, such as I Like Books, have additional features, where students can create their stories using familiar words and images, record themselves reading the text, and listen to their book. Storykit App allows children to create digital stories by writing pages using typed words, drawing pictures, inserting photographs, and recording audio. The students are collaborating as they share their digital stories and have many chances to work with each other.

Research: (Beschorner & Hutchison, 2013), (Clements & Sarama, 2002), (NAEYC, 2012).

(Wang, & Ching 2003), (U.S. Department of Health & Human Services, 2010)

Guideline 6:

Technology tools and digital media should be engaging, empowering and support student learning.

Description:

Educators and parents should integrate technology that aligns with developmentally appropriate practice and provides students the opportunity to explore, think, listen, and problem solve. These tools can connect on-screen and off-screen activities and provide shared experiences between students, parents, and teacher.

Examples:

Utilizing electronic storybooks that can read to children, via a tablet, laptop computer, interactive whiteboard or desktop computer can be an effective use of technology. These books are accessible from school or at home and provide a means for Anytime Anywhere Learning (AAL). Some examples include the Dr. Seuss, Little Critter, The Berenstain Bears, and the Smithsonian Institution digital book apps by Oceanhouse Media (www.oceanhousemedia.com).

There are many educational applications that promote student learning in engaging ways. Rosita's Jump Count App, from Sesame, counts along in English or Spanish as your child jumps and skips her way to 100. This tool helps your child learn about numbers and Spanish while getting exercise.

Research: (Bergen, Davis & Abbitt, 2015), (NAEYC, 2012), (Plowman & McPake, 2013).

These guidelines provide general information on the implementation and suggested usage of technology and digital media for children in early childhood aged programs. They should be used to help educators and parents to make informed and appropriate choices about how and when technology should be used with young children.

Technology and Digital Media tools can have a positive effect on early childhood learning when used thoughtfully and according to the child's age, developmental level and interests (NAEYC, 2012).

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