Play and Technology in Group-Oriented Japanese Early Childhood Educational Settings

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Abstract: This paper describes how Japanese early childhood educators integrate play and technology in order to support young children’s development and learning in group-oriented environments. The main focus of Japanese early childhood education is to guide children to develop basic human attributes. Teachers in Japan provide children with age-appropriate technology in order to enhance play, rather than focus on academic skills. Through children’s requests, teachers support their play, providing opportunities to engage in technology-related activities. Examining the ways Japanese teachers use such activities can provide an insight into how to implement play and technology for young children.

“Japan has two faces; one is facing the future, and the other is looking into the past.” This is what I heard on the plane as I traveled back to Japan from the United States. One can infer from this quote that although Japan is considered to be one of the leading countries in terms of persevering in the development of technology, Japanese people are adamant about keeping their own culture and traditions intact (Iikura, 2007). Japanese fascination with technology is well documented (Better Than People, 2005; Hey, Big-Spender, 2005; Sakamoto, 1995). Technology refers to “the application of tools and information to make products and solve problems” (Morrison, 2007, p. 371) and includes computers, video recorders, television, videotapes, digital cameras, etc. As far back as 1983 when Nintendo introduced personal computers, Japanese households soon became saturated with its products (Sakamoto, 1995; Shishido, Kaneda, & Mogi, 2006). A study of the successful use of computers in elementary schools was conducted by the Japan Audio-Visual Education Association (2002). This study found that young children enjoyed discovering nature by observing living organisms: for example by undertaking a study in a swimming pool and by sharing their findings with others through the internet. The main purpose of this activity was to broaden the children’s viewpoint of the natural environment as well as to increase their communication skills with other groups. At the same time, since the Japanese value transmission of cultural wisdom, this use of technology becomes one example of such cultural transmission in the education of young children.

Japanese early childhood education is based on play-oriented programs set forth by the government (Muto, 2004; The Monbugagakushou, 1999). Such education guidelines posit that in early childhood education settings, teachers need to teach children basic habits and attitudes necessary for healthy, safe, and happy lives, as well as help them develop healthy minds and bodies through play in group-oriented environments. For these reasons, technology that includes computers is considered to be part of play for children in Japan (Sakamoto, 1995). The basic premise is that appropriate computer software should provide children with authentic and playful
learning experiences, and that technology can increase children’s connection to one another, promoting a willingness to work with others harmoniously in a group-oriented environment.

**The research context**

This paper is based on observational data I collected between 2004 and 2006 at five early childhood settings including childcare centres and kindergartens in Tokyo, Kawasaki City, and Chiba City on the main island of Japan. I observed each school every day for two weeks and was introduced to the children as “Satomi Sensei” (teacher). I took the role of a participant observer in the classroom and helped the teachers and the children as needed in order for the children to become accustomed to my presence (Taylor, Lichtman, & Ogawa, 1998). Permission to observe the children in schools was obtained from the school directors, and they informed the children’s parents of my presence and observations. I made observation notes, and they were coded and analyzed using qualitative methods (Lichtman, 2006).

Participants in my observations were children aged four and five who had been in preschools for at least a year and their teachers who had been teaching for over five years. Each school had at least two classrooms of four and five year olds, and enrolment in each room ranged from 18 to 23 students. As these five schools offered technology sessions to the children aged four and five, I decided to attend every session for two weeks. These sessions were taught by the technology teachers once or twice a week. Children also had access to computers at all times since the five schools provided more than one computer for each classroom.

Japanese preschools are called kindergartens and are attended by children aged from three to five. The first two years of these kindergartens are the equivalent of American preschools, and the third year is equivalent to that of the American kindergarten (Taylor, 2004). All five of the schools in this study subscribed to group-oriented programs that encouraged group activities and cooperation. This paper describes how Japanese early childhood education incorporates technology into play based education. In addition, this paper provides some suggestions as to how teachers can inform their students in how to use technology in play, to develop children’s attitudes and habits in group-oriented classrooms.

**Play-oriented Japanese early childhood education**

The Japanese educational guidelines (The Monbukagakushou, 1999) state that the basic ideal of kindergarten education is to understand the nature of children and to educate them accordingly. In furtherance of this ideal, section 2 states that children learn through play, that play is their voluntary activity and that such activity creates the foundation for a balance between mind and body. It is during early childhood that children develop their foundations for life upon which all else will be built. With parental involvement, early childhood education seeks to provide children with that disposition to which the Japanese refer as the power of living (the basic foundation of their feelings, desires, and attitudes). The main focus of Japanese early childhood education is to guide children to develop these basic human attributes rather than to teach them academic skills.
The notion of play as core to Japanese early education is not surprising, since play advocates Froebel, Montessori, and Dewey were widely studied by Japanese educators in the first half of the century (Ishigaki, 1991). Along with the Western influence on Japanese education, Japanese early childhood education guidelines include educational ideas developed by classic Japanese educational philosophers such as Kurahashi (1925/1965) and Wada (1932) who advocated play-oriented early childhood education. For example, Kurahashi emphasized the importance of supporting children’s development based on their everyday lives, and Wada explained the important relationship between play and children’s development. Wada holds that teachers must provide children with self-initiated play environments. Wada’s play theory involves three stages: “the first stage of which is called experienced play in which children intuitively act out what they see and hear through direct and indirect observations” (Izumi-Taylor, 2006, p. 25). Wada’s second stage of play is termed pretend play, which he explains refers to children’s observational skills, increasing, via their imagination, as they perform everyday events such as playing house, riding trains, or going shopping. Wada also believes that play is a spontaneous activity that promotes children’s bodies and minds through expressive play that includes skill-oriented play activities such as “mental and physical games, gardening, music, and manual arts” (Izumi-Taylor, 2006, p. 25).

Japanese early childhood education is also closely aligned with play as a salient mode for children to develop and learn in group-oriented environments (Izumi-Taylor, 2006; Taylor, 2004). Equally important is the belief that, with a little help from teachers, children should experience activities that are based on their interests.

**Technology in Japanese early childhood education**

Japanese children have access to a variety of technology-related activities in early childhood educational settings. However, many educators consider technology as one aspect of children’s play, and should be used to enhance play. In his efforts to explain the importance of play, a director in one kindergarten in Kawasaki City published the following comments regarding technology in his school brochure:

Children’s desire to learn springs from their interests, so we provide them with opportunities and appropriate environments in order to promote their interests. However, it is not just about free play, as total freedom without guidance leads children to become bullies. In order to avoid this situation, we provide a curriculum that facilitates the development of the power of living and of moral hearts through teachers’ guidance. Based on our belief that children learn from play, we provide developmentally appropriate materials and activities in which children are interested. We especially provide children with outdoor physical play, arts and crafts, and computer play, but these activities are not for the purpose of academic study but rather for enjoyment. Through play children develop agility, the power of persisting till the very end, the power of living, the joy of expression, and the fun of thinking and planning (Izumi-Taylor, 2006, p. 28).

As stated above this school has computers in every classroom as part of children’s play, and children have access to them at any time without adults’ assistance. The school also offers computer sessions led by a professional instructor once a week to four and five-year-old children in the computer
room. However, if some children have no wish to engage in such sessions, teachers allow them to simply observe the sessions. Many times I have observed two or three children sharing one computer helping each other. Although teachers do not necessarily assign them to work together, children naturally group themselves. When someone is in need of help, other children take the initiative in offering assistance. There is much laughter, talking, shouting and pointing to the computer, and even jumping up and down with joy in accomplishing their goals. The following comments made by the five-year-old children are evidence of how they play with computers in a group-oriented environment: “I like to play on the computers with my friends because we can work together without fighting since the computer tells us when we miss something. Besides, it is okay to get mad at computers because they don’t talk back,” “I love computer sessions because we do it together with my friends and get to tell computers what we want to do,” and “We can draw pictures well with the computer when we work together.”

It was interesting to talk to the director of this school about his concept of the use of technology-related activities because he has been a leading advocate in implementing computers in the classroom since 1986. The following comments from the director explain his ideas about computers in early childhood settings:

I used to think of a computer as merely a tool for children’s play, but now I see it as a hub for all their activities. This means that children bring their ideas to computers, expand those ideas, and implement them into their play. It is like an airplane piloted by ideas, which is then refuelled, serviced, and ready to take flight again.

Another example of technology and play in a group-oriented setting was observed in Chiba City when a group of five year olds solved their problem regarding growing rice with their teachers’ help by going online to find a solution to a problem. Growing rice is traditionally the central activity of Japanese farmers, and rice is a vital part of their diet (Yamazaki, 2002). As an exercise, the teachers and children of all the schools I visited grew rice in small wetlands they created in the schoolyards. The teachers told me that because rice is such an important part of their lives. Children in the Chiba City kindergarten grew vegetables as well as rice in their schoolyard, and once the appropriate soil had been collected, the children removed their shoes, and they created a wetland in which to plant the rice. On one occasion, a few days after a rice crop had been planted, one panic-stricken child came running to the teachers shouting, “Sensei (teacher), I saw our rice plants covered with bugs! We have to rescue our rice!” The startled children and teachers ran to the rice field where they found the rice covered with black bugs. Everyone rushed forward and scattered into the field to begin the painstaking chore of collecting the bugs one by one and placing them in jars. The following morning the teachers and members of the class looked up the bugs online. They found, much to their dismay, that the bugs they had collected were actually good for the rice plants because they feast on harmful bugs. Now it became necessary for all concerned to undo their mistakes, so they again rushed back into the field with their collection of bugs in jars and gently returned each bug, one at a time, to the rice plants. The words of a child summed up the relief felt by the caretakers of the rice field, “It is a good thing we kept the bugs in good shape, so they can get back to work!” Some time later, the class members and the teachers went online again and looked up the topic of how to grow rice. While they were online, one child said to everyone in class, “Wouldn’t it be a good idea for us to do our homework before jumping to conclusions about bugs?” After this
experience, based on the teachers’ suggestions, the children dictated their experience to the teachers and kept a journal on the computer of how to grow rice and published it online.

These children whom I observed had ample opportunities to play and to use technology to enhance their everyday activities in group-oriented environments. Some children created their own music using a battery-operated keyboard and made CDs, some took pictures of their art work using digital cameras and published them online, some took pictures of their field trips and created a book, and some used Power Point to present their play activities at parent-child meetings. The basic tenet of play and technology in Japanese early childhood education settings is that, as a group, children decide how to use technology in their play, and teachers act as facilitators of children’s choices. In two schools teachers told me that sometimes children are too busy with their outdoor play or with new toys and do not turn on the computers for as long as a month; at other times together they work hard at playing games of their choice on computers on an almost daily basis. One teacher’s comments summed up how Japanese children use technology-related activities in their classrooms:

We love the way these children, as a group, initiate the use of computers in order to boost their play. We encourage children to work together when they are on computers, just as we do when they play. They seem to think of technology as a play tool. At the same time, we must know what kind of activities children are engaged in so we can help them.

**Suggestions for early childhood education**

According to my observational data in Japan, teacher educators can suggest to their students the following in order to implement play and technology in the classroom:

1. **Children need to take the initiative to engage in technology-related activities in order to boost their play.**

2. **Children should have access to such activities at all times, and teachers should be supportive of children’s choices of online learning.**

3. **Children should be provided with a group-oriented environment where they can play and work together.**

4. **Children should be encouraged to support each other in order to accomplish their goals.**

5. **Children should play and work together in a group-oriented environment through technology-related activities in order to promote their social and emotional development. Technology and play should be used to nurture children’s social and emotional development, not just for the development of their academic skills.**

In summary, many educators note that all young children need an opportunity to experience and explore technology at an early age in order to prepare for life in a modern society and to deepen their creative problem-solving and thinking skills. Because technology plays such an important role
in young children’s learning and development, early childhood educators should know how to implement technology in their programs and how to develop technological literacy for their charges as well as for themselves. However, teachers also must understand how to implement developmentally appropriate technology-related activities, since overexposure to such activities can cause problems (Izumi-Taylor, Sluss, & Lovelace, 2006), including children straining their eyes and incurring repetitive stress injuries (Cordes & Miller, 2000). Examining how Japanese teachers use such activities in a group-oriented environment can provide an insight into the implementation of technology as a tool that enhances young children’s play and provides children with an opportunity to take the initiative. The implementation of play and technology by these teachers is based on their cultural beliefs that during the early childhood years, children need to learn to connect to one another and build a willingness and capacity to live harmoniously in a group where technology is one aspect of children’s play.

Teachers need the opportunity to rethink the relationship between play and technology. One way for teacher educators to inform other teachers of this practice is to offer online video conferencing sessions to review, discuss, and understand practices in Japan. If teachers can see and talk to teachers in Japan about their play and technology, they will be more likely to implement such practices in their classroom. Observing how Japanese teachers use technology and play in group-oriented environments and how children interact to each other using play and technology can only be beneficial to all involved.

References


