

TECHNOLOGY IN THE LIVES OF TEACHERS AND CLASSROOMS:

Survey of Classroom Teachers and Family Child Care Providers

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FRED ROGERS CENTER
for early learning and children's media
at Saint Vincent College

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TECHNOLOGY IN THE LIVES OF TEACHERS AND CLASSROOMS: SURVEY OF CLASSROOM TEACHERS AND FAMILY CHILD CARE PROVIDERS

It is hard to find a national study of children's use of media in the past 20 years that does not demonstrate that media, and especially television, are a dominant activity of childhood. And young children, from birth to age 8, have incorporated media technologies into their out-of-school lives in unprecedented ways in recent years. Early media use is now the norm, with baby videos and 24/7 cable television for children used by even infants and toddlers. On average, American children under 8 spend about 3 hours a day with television (Rideout & Hamel, 2006). The hearth is clearly an electronic one in the homes of American families.

While much has been made of the growing use of media by children at home, far less is known about how media technologies are used in the various early childhood school settings in which young children participate. It is estimated today that more than 60% of children under age 5 are in out-of-home educational or child care settings (Laughlin, 2010). Furthermore, little is known about how contemporary early childhood educators view the uses of media technologies—television, DVDs, computers, handheld gaming and communication devices, and electronic toys—in their classrooms and as educational platforms.

Two recent surveys of in-class technology use have been conducted. Grunwald Associates LLC conducted a survey of pre-K and K-12 teachers in school classroom settings in 2009 on behalf of the Public Broadcasting Service (Grunwald Associates LLC, 2009). And in May 2010, the U.S. Department of Education released its survey of the presence of technology in American public schools (Gray, Thomas, & Lewis, 2010). Neither of these surveys examined media and technology uses across different types of child care and educational settings. Also, they did not examine settings where infants participate. A survey across child care educational settings, which includes young children from birth through primary school ages, would augment this previous research.

There are at least two reasons to seek to determine how media technologies are viewed by teachers in the classrooms and child care settings of young children: First, there is substantial evidence that planned educational programming which can engage children in out-of-school environments is successful in attracting children and is embraced by parents. We have a generation of parents who are more accepting of not just television but also computers and other technologies and who view such technologies as more likely to help than hurt their children's development (Rideout & Hamel, 2006). Second, the National Association for the Education of Young

Children (NAEYC), the major professional association for early childhood educators, has embarked on a collaboration with the Fred Rogers Center for Early Learning and Children's Media to revise the NAEYC technology policy recommendations; information about teachers' use of and attitudes toward the role of technology in children's learning and development could be useful to the ensuing deliberations.

Consequently, with support from the Fred Rogers Center, through its PNC Grow Up Great Endowed Fellowship, and from NAEYC, a survey of NAEYC members was conducted in Spring 2010. During May, NAEYC members were emailed a survey which queried them about their own media use, their use of media in their classrooms, and their attitudes about children's media use. This report summarizes the results of that survey.

Acknowledgments

We would like to thank the National Association for the Education of Young Children (NAEYC) for distributing this survey examining teachers' views toward and use of media in their classrooms and child care settings. Specifically, we would like to thank Madhavi Parikh, Katie Schmitz Scott, Kristina Gawrgy, Kimberly Steimel-Howard, and Robbin Jones at NAEYC, as well as Rita Catalano at the Fred Rogers Center, for their help with this project.

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About the Teachers and Caregivers

While 4153 respondents completed the survey, for this report we are examining survey respondents who are early childhood head teachers (74%), assistant teachers (12%), and family child care providers (12%) of infants, toddlers, preschoolers, and primary school children in grades K through 3. We eliminated for this analysis any teachers of adult learners, college faculty, and other educators/administrators who are not in the classroom or working with children on a regular basis. The final sample size is 1445 respondents.

The vast majority of respondents are female (98%) and most (82%) are Caucasian. About 5% of respondents are African American and 5% are Latino/Hispanic. Half of the sample work in suburban communities, one-quarter in urban areas, and just under one-quarter work in rural areas. There were no differences between center and classroom teachers and at-home child care providers on any of these variables (see Table 1).

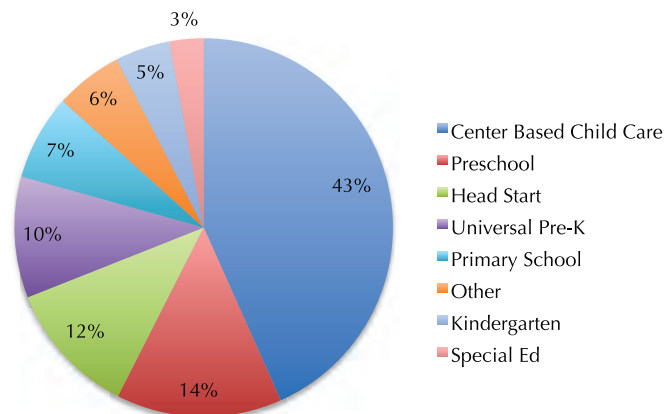
Table 1.

	Classroom Teachers	Family Child Care Providers
<i>Gender</i>		
Female	97%	98%
<i>Race</i>		
Caucasian	83%	80%
African American	3%	10%
Latino/Hispanic	5%	3%
<i>Community</i>		
Urban	26%	29%
Suburban	51%	50%
Rural	22%	22%

Classroom teachers report working primarily in Center Based Child Care facilities (43%) (see Figure 1). About one-third of teachers work in a preschool setting (a Head Start facility, Universal Pre-K program, or Preschool).

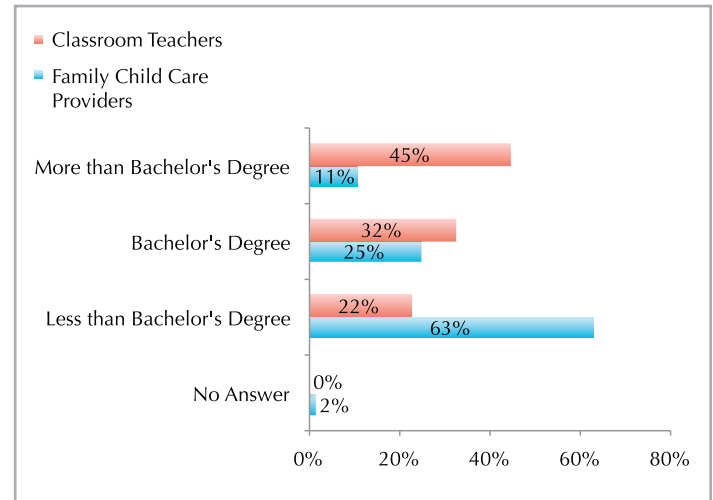
Figure 1.

Classroom Teachers: Types of Programs



However, there are differences between the classroom teachers and family child care providers on several measures. First, about three-quarters of classroom teachers hold either a bachelor's or graduate degree and only one in five has less than a college degree (see Figure 2). On the other hand, among family child care providers, almost two-thirds have less than a bachelor's degree and one in four has a bachelor's degree. Almost half of classroom teachers have some post-bachelor's degree education as compared to about one in ten of family child care providers.

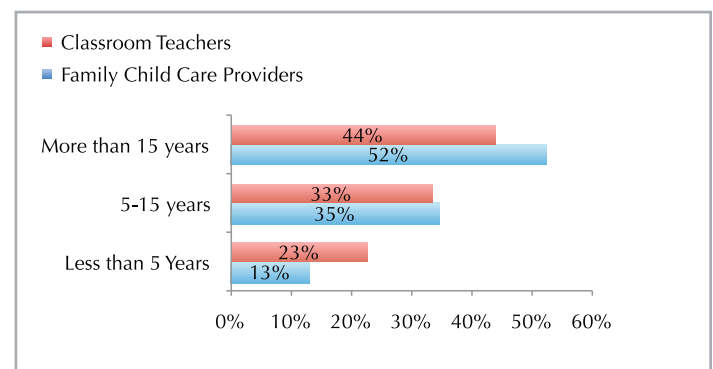
Figure 2.
Education



About half of the respondents have been working with children for 15 years or more. More family child care providers (52%) than classroom teachers (44%) report more than 15 years experience (see Figure 3). In contrast, more of the classroom teachers (23%) report less than 5 years experience than do the family child care providers (13%).

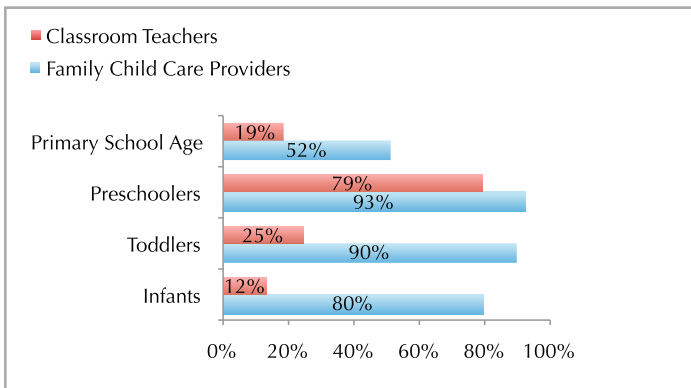
Figure 3.

Teaching Experience



The two groups differed as well in terms of the age of the children with whom they work. The largest difference between the two provider settings is that more family child care providers report working with infants (80%) and toddlers (90%) than do classroom teachers (12% work with infants and 25% work with toddlers) (see Figure 4). The vast majority (79%) of the classroom teachers report working with preschoolers. The percentages do not add up to 100% in each respondent category because teachers and providers could check all age groups that applied.

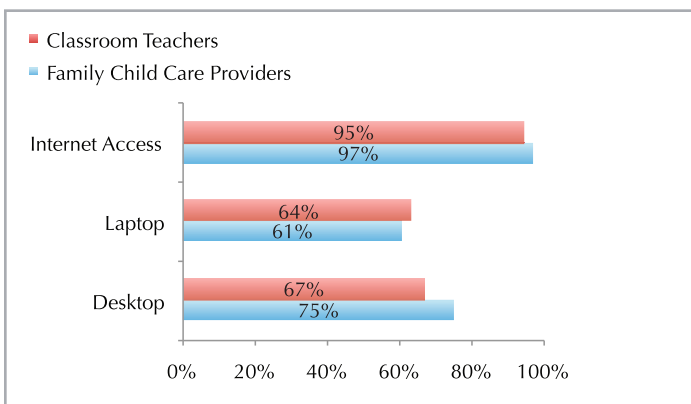
Figure 4.
Age Groups Teachers & Providers Work With



Teachers' and Providers' Own Media Use and Available Technology

We queried the classroom teachers and child care providers about their own use of and comfort with digital technologies. More family child care providers (75%) own a desktop computer than classroom teachers (67%). Overall, more than 70% of the sample own a desktop computer and more than 60% own a laptop. Of those with a computer, nearly all (96%) have Internet connections (see Figure 5).

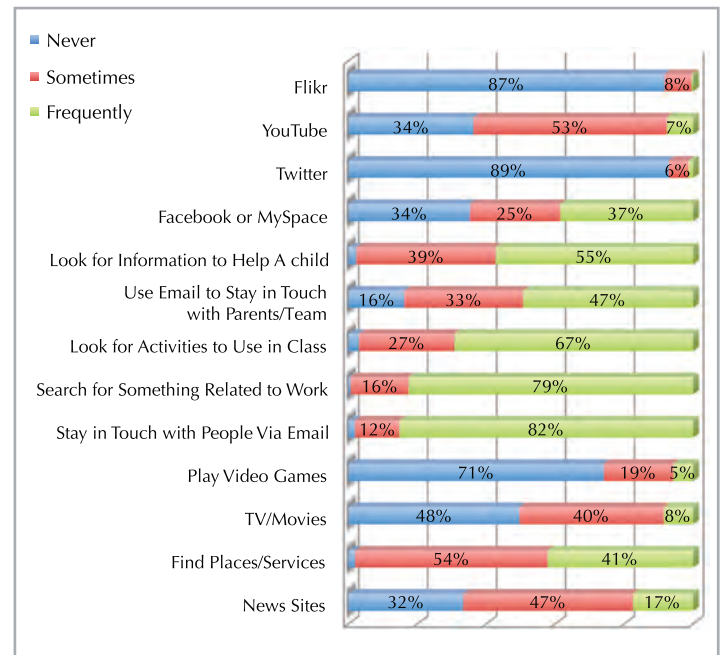
Figure 5.
Teachers' & Providers' Personal Technology Ownership



Activities Online

Respondents report substantial use of and comfort with digital technologies. Four-fifths of the sample go online *everyday* and nearly three-quarters *several times a day*. Typically, they report using the Internet for work related business or to find activities to use with their children (see Figure 6). Half of the respondents report that they *frequently* use the Internet to find information to help a child. Nearly half of all teachers and providers report *frequently* using the Internet to stay in touch with parents or a team member. Importantly, when asked about their comfort with searching online, nearly all of the classroom teachers (92%) and family child care providers (94%) report being either *successful* or *very successful* in their ability to use the Internet.

Figure 6.
Technology Use by All Teachers & Providers



* Bars without number labels had less than 5%.

* Non-response for these questions was 4%.

Available Technology in the Schools and Child Care Settings

We queried respondents about the technologies they have available in their schools or child care settings. Almost all teachers indicate that they have some form of technology available in their classrooms or homes (96%) and more than one-third of the total sample (39%) indicate that they have a wide variety of technologies to use with their students including digital, television, and audio technologies.

We queried the survey respondents about the availability of a range of audio, television based, and computer or digital based technologies. Some form of audio technologies, such as CD players, audiocassettes, radios, and record players are available to almost all of the teachers and child care providers (see Figures 7 and 8). Specifically, almost all classroom teachers and family child care providers have CD players in their classrooms and more than half have audiocassettes and/or radios. Classroom teachers are more likely to report having CD players available to them than are family child care providers, who are more likely to report having record players.

Digital technologies such as computers, electronic toys, or electronic teaching materials such as SmartBoards are available to about half of our sample of classroom teachers and family child care providers. Our findings for computer and Internet availability in the classroom are consistent with those found by Grunwald (2009). Nearly 60% of classroom teachers have a computer and 45% have computers with Internet access in their classrooms. There is no statistical difference in computer availability between the classroom teachers and family child care providers.

The major difference between the two subgroups in the sample is in the availability of television based technologies: TVs, DVDs, or videocassettes. Family child care providers are much more likely to report having a television technology available to use with their children. For instance, 62% report having a television available compared to 28% of classroom teachers. Similarly, videocassettes and DVDs are more likely to be available to family child care providers than to classroom teachers. These differences in the availability of television based technologies differ from the Grunwald (2009) findings; they found that approximately 60% of teachers had a TV in the classroom, which is comparable to our family child care provider sample.

Figure 7.
Availability of Technologies to Family Child Care Providers

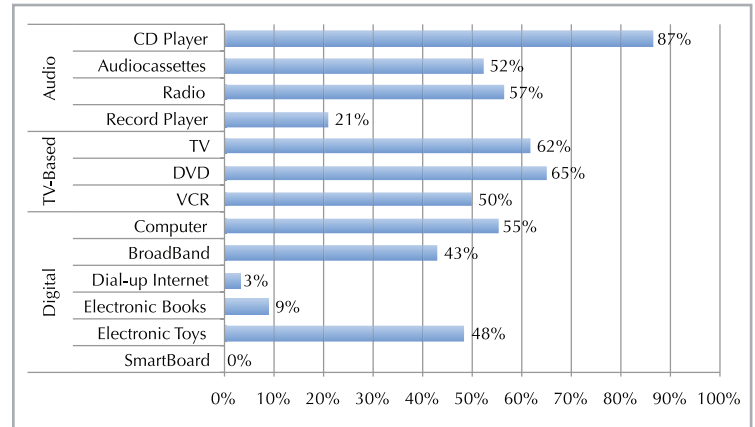
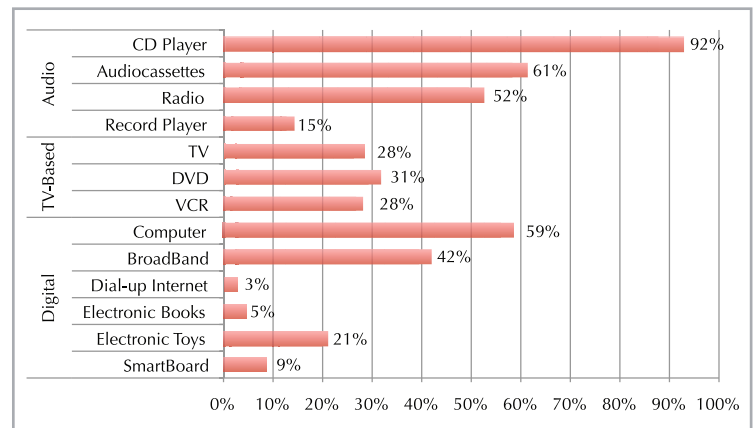


Figure 8.
Availability of Technologies to Classroom Teachers

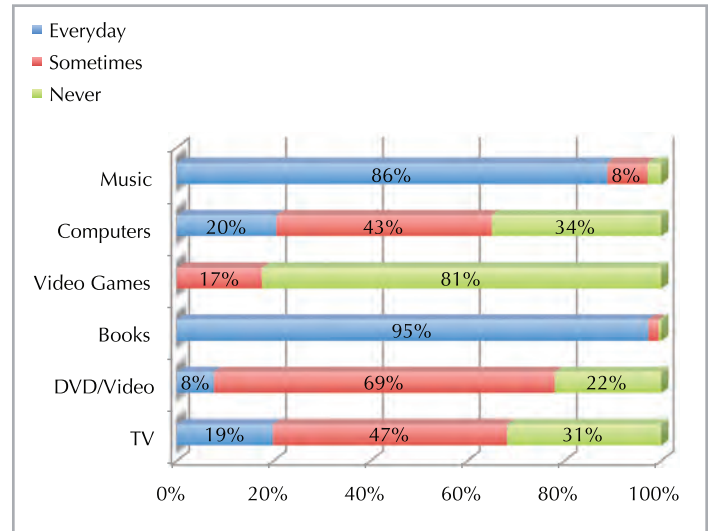


Use of Media Technologies with Children

It is important to understand how frequently classroom teachers and family child care providers are using these media technologies. As a benchmark, almost all of the teachers and caregivers (95%) report using books daily with their children (see Figures 9 and 10). Most of the sample (86%) report using music in their classrooms on a daily basis. Computers are the second most frequently used technology, with more than a third of classroom teachers using computers on a daily basis.

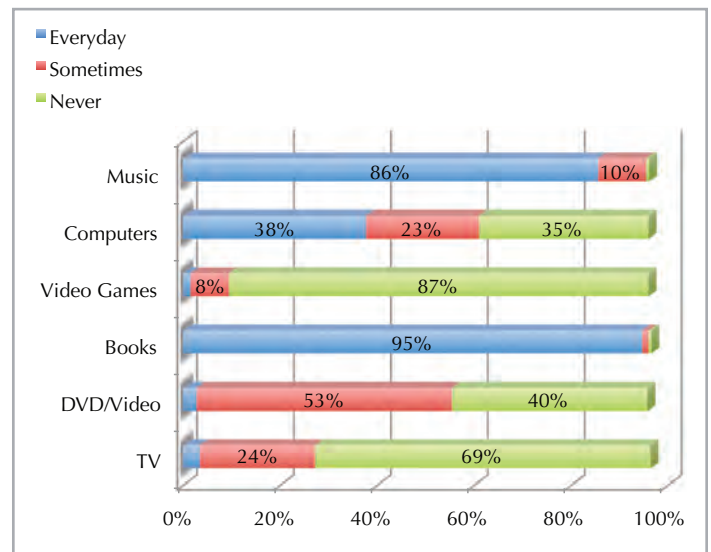
Television and DVDs/Videos are used considerably less frequently by classroom teachers of young children. Three percent of classroom teachers use TV everyday and 3% use DVDs/Videos everyday. Large percentages of classroom teachers report never using these technologies in the classroom (69% for TVs and 40% for DVDs/Videos). In contrast, family child care providers report frequently using television and television based technologies in their child care settings, with one in five family child care providers using TV on a daily basis. When queried about the sorts of television and/or DVDs and videocassettes used, both subgroups report using primarily educational programming.

Figure 9.
Percentage of Family Child Care Providers Using Media



* Bars without number labels had less than 5%.
* Non-response ranged from 2% to 4% of the sample.

Figure 10.
Percentage of Classroom Teachers Using Media



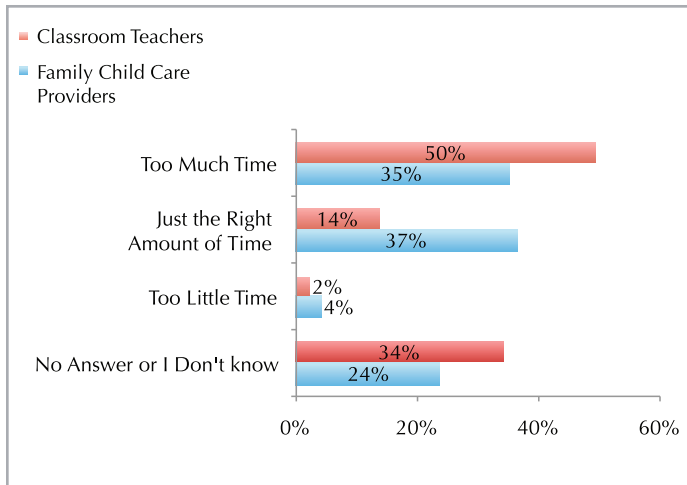
* Bars without number labels had less than 5%.
* Non-response for these questions was 4% of the sample.

Attitudes Toward Children’s Use of Screen Media in the Classroom

We queried the respondents about their attitudes regarding young children’s use of screen media, such as television or computers. Screen based media have typically been the focus of public concerns (Wartella & Robb, 2007) and, indeed, the American Academy of Pediatrics has recommended limiting young children’s use of screen media (American Academy of Pediatrics, 1999) to 2 hours a day for children over 2 years of age and no screen media use for children under 2 years.

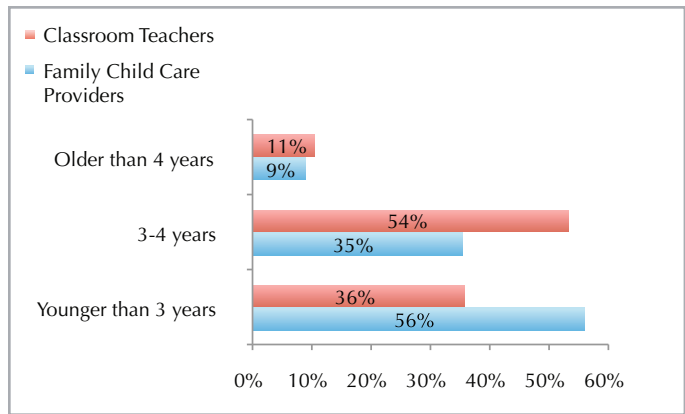
The respondents surveyed were split almost evenly in their knowledge and attitudes about children’s use of screen media. About one-third of the classroom teachers either report that they do not know how much time children spend with screen media, or they did not answer our question, as opposed to one-quarter of the family child care providers (see Figure 11). Overall, more family child care providers report thinking children spend about the right amount of time in front of screens compared to classroom teachers. More classroom teachers think children spend too much time in front of screens.

Figure 11.
Attitudes Toward the Amount of Time Children Spend with Screens



Similarly, the two subgroups in the sample differ in their attitude about the appropriate age to introduce children to media technology. More than half of the family child care providers think that children should be introduced to media technology in the child care setting before age 3, whereas less than two-fifths of classroom teachers think the same (see Figure 12). More than half of the classroom teachers indicate that children should be introduced to technology in the classroom between ages 3 and 4, compared to only one-third of family child care providers.

Figure 12.
Age Children Should be Introduced to Media Technologies in Child Care or Classrooms



Summary

This study examined access to and use of a variety of technologies for classroom teachers and family child care providers who work with children ranging from infants to children in primary school. Findings demonstrate that most teachers and providers have access to and are comfortable using technology with the children in their settings. Additionally, regardless of child care or classroom setting, children have access to and frequently use many forms of digital technology. However, respondents' attitudes toward screen media differ by type of setting. Family child care providers believe that children should be introduced to screens at younger ages than do classroom teachers. Furthermore, family child care providers, who predominately care for infants and toddlers, are much more likely to use television based technologies than are classroom teachers. Overall, media technologies are present and are being used frequently by child care providers and teachers of young children of all ages.

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