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Dear Dr. Daniel,

As educators, health professionals, parents, and advocates for children's health and well-being, we are pleased that National Association for the Education of Young Children (NAEYC) is updating its position statement on Technology and Young Children. Children today face an unprecedented convergence of ubiquitous, sophisticated screen technology and unfettered, unregulated commercialism. They are growing up at a time when our grasp of technology and technological innovation has rapidly outpaced our command of the moral, ethical, and social ramifications of its use. Screen media, and the commercialism supporting it, dominate the lives of many young children today and have significantly altered childhood.<sup>1 2 3</sup> There is a need for more research on the impact of children's screen time on growth and development, and the existing research raises some serious concerns.

For these reasons:

- We urge that the 2010 NAEYC position statement on Technology and Young Children recommend that children have little or no exposure to screen technology in child-care, preschool, and kindergarten settings.
- We urge that NAEYC expand the statement to include children younger than 3 and recommend that child-care settings for infants and toddlers be completely screen free. In addition NAEYC should endorse the recommendations of the American Academy of Pediatrics (AAP) and the White House Task Force on Childhood Obesity of no screen time for children under the age of 2 and limited screen time for older children.<sup>4 5</sup>
- We urge NAEYC to review the research on children and technology with a critical eye, asking who funded it and whether any reported gains can also be achieved through hands-on experiences proven to be beneficial to children without the potentially negative consequences associated with screen media.



Studies show that children spend a great deal of time engaged with screens at the expense of other activities. About 40% of 3-month-old babies are regular viewers of screen media<sup>6</sup> and preschoolers spend 32 hours a week outside of classrooms engaged with screens.<sup>7</sup> Studies also show that screen time can be habituating; the more time young children spend with screens, the more time they are likely to engage with them as older children,<sup>8</sup> and the harder time they have turning them off.<sup>9</sup> Early research on habituation

focused on television, but in recent years there has been growing concern about addiction to computers and video games among adolescents and young adults.<sup>10</sup>

The enormous amount of time young children spend with screens outside of classrooms, combined with the potential harms, is a powerful argument for excluding screens from child-care settings. Yet, according to a 2009 study in *Pediatrics*, 36% of center-based child-care programs include television time, for an average of 1.2 hours a day, and a troubling 70% of home-based child-care programs include television time for an average of 3.4 hours per day.<sup>11</sup>

In the world of medicine, implementation of any medical practice intervention is guided by the principle “Do no harm.” We believe that maxim should guide the use of new technologies in classrooms, particularly since screen time may displace activities with proven benefits for young children such as direct hands-on exploration of the world, connecting with nature and with other human beings, and child-initiated play.

Given the vast amount of time that young children are spending with screens in and out of child-care settings, and the growing concerns about the impact of screen media on children’s well-being and development, we urge the NAEYC to take a leadership position in efforts to reduce the amount of time children spend with screens and promote the kinds of hands-on creative play proven to be beneficial to their growth and development. The specifics of our recommendations are detailed below.

**Recommendation 1: The NAEYC position statement on Technology and Young Children should recommend that children have little or no exposure to screen technology in child care, preschool, and kindergarten, and that child-care settings for infants and toddlers be completely free of screens.**

Research suggests that screen time is associated with negative outcomes such as childhood obesity<sup>12</sup> and poor school performance.<sup>13 14</sup> There is also research suggesting that engaging with some screen media can be beneficial for children over 3.<sup>15 16</sup> **Regardless of content, however, the excessive amount of time many young children are spending with screens today is harming their growth and development.** Since preschool children are spending, on average, about 32 hours a week engaged with screen media at home<sup>17</sup> and older children about 54 hours a week,<sup>18</sup> it is imperative that early childhood educators limit exposure to screens in child-care environments. The White House Task Force on Childhood Obesity recommends that early childhood settings not expose children 2 and under to television and limit media exposure to special occasions.<sup>19</sup>

Not only does classroom media use increase the already troubling amount of time young children spend with screens, it decreases the time children spend in activities proven to be beneficial, including creative play, physical activity, and time spent with adults:

**Creative play** -- The more time preschool children spend with screens, the less time they spend engaged in creative play, which is known to be the foundation of learning,<sup>20</sup> critical thinking,<sup>21</sup> self-regulation,<sup>22</sup> constructive problem solving,<sup>23</sup> creativity,<sup>24</sup> and the ability to wrestle with life to make it meaningful.<sup>25</sup> Research suggests that the amount of time children spend in hands-on creative play is decreasing,<sup>26</sup> as the amount of time they spend with screen media is increasing.<sup>27</sup>

**Physical Activity** -- A key component of Michelle Obama’s Let’s Move campaign to halt childhood obesity is a new initiative called Let’s Move Outside, the materials of which state: “Kids need at least 60 minutes of active and vigorous play each day, and one of the easiest and most enjoyable ways to meet this goal is by playing outside.”<sup>28</sup> Given that childhood obesity is a major public health problem, the sedentary nature of engaging with many screens is troubling. Research suggests that children ages 10 to 16 now spend, on average, only 12.6 minutes per day in vigorous physical activity, yet they spend an average of 10.4 waking hours each day relatively motionless.<sup>29</sup> In addition, young children living in inner cities are failing to develop essential large motor skills. One recent study found that 86% of disadvantaged preschoolers in two cities lacked basic motor skills like running, jumping, throwing, and catching.<sup>30</sup>

While proponents of screen technology laud products like the Wii, which may promote movement, a recent study suggests that simulating activities by playing on a Wii does not burn as many calories as actually engaging in those activities.<sup>31</sup>

**Time spent interacting with adults** -- Screen media are often marketed and justified as a means of promoting adult-child interactions. The rationale is that an adult caretaker is more likely to spend time with a child if they are both engaged with a screen. Research shows, however, that the more time preschool children spend with screens, the less time they spend interacting with their parents, and that even when parents are co-viewing, they spend less time engaging with children in other activities.<sup>32</sup> Talking to children is an important component of literacy education,<sup>33</sup> yet there is also evidence that adults co-viewing with infants and toddlers engage only in limited verbal interactions.<sup>34</sup> Even so-called interactive electronic books—in which pictures do not move, but respond to touch with sound effects or words—are less likely to induce the kind of adult-child interactions that promote literacy than reading traditional books.<sup>35</sup>

One argument often given for including screens—in particular computers—in early childhood settings is that it is important for babies, toddlers, and preschoolers from poor families to gain computer skills in order to compete with their wealthier peers. One question that needs to be addressed, however, is whether poor infants and toddlers, or preschoolers, benefit more from exposure to computers than they do from activities that computer time replaces. There is no conclusive evidence that introducing computers to toddlers or preschoolers produces long-term benefits.<sup>36 37 38</sup>

Another important reason for NAEYC to advocate for screen-free classrooms in child care, preschool, and kindergarten is the negative impact of commercialism in the lives of children. Advertising and marketing that target children is a factor in many of the problems facing children today, including childhood obesity,<sup>39</sup> eating disorders,<sup>40</sup> precocious sexuality,<sup>41</sup> youth violence,<sup>42 43 44</sup> family stress,<sup>45</sup> materialistic values<sup>46</sup> and the erosion of children's creative play.<sup>47</sup>

Most children's media programs—even those known to be educational, and/or produced by public television—promote toys, additional media programming, and other products. Brand licensing, through the use of popular media characters such as Dora the Explorer or Winnie the Pooh, is the primary method for targeting young children. These characters play a powerful role in children's lives, and can even influence taste. A recent study from the Rudd Center at Yale found that children report junk foods in packages adorned with characters like Scooby Doo and Dora the Explorer taste better than unbranded junk foods.<sup>48</sup> Research also shows that, at a very early age, children are vulnerable to the emotional messages associated with brands.<sup>49</sup>

**Recommendation 2: NAEYC's position statement on Technology and Young Children should be expanded to include recommendations for children younger than 3. The statement should encourage teachers to work with parents to implement the recommendations of the American Academy of Pediatrics and the White House Task Force on Childhood Obesity of no screen time for children under the age of 2 and limited screen time for older children.**

NAEYC's original position statement on Technology and Young Children focused solely on children ages 3 through 8. The past 14 years, however, have seen a significant increase in screen media targeting babies and toddlers, and the use of screen media by babies and toddlers is increasingly prevalent—both in the home and in child-care settings. It is vitally important that NAEYC offer guidance about this critical issue. We strongly urge NAEYC to include recommendations for children under 3 in the 2010 version of the position statement.

Studies of screen time in the lives of infants and toddlers show that many are engaged with screen media at home and that such engagement begins early. According to the Kaiser Family Foundation, children as young as 1 view screen media daily for about 49 minutes, and 2- and 3-year-old children view for about 1 hour and 51 minutes daily.<sup>50</sup>

This is particularly troubling because available research shows that screen media are not an effective means of educating babies and toddlers<sup>51</sup> and suggests some evidence of negative outcomes. Screen time for children under 3 is negatively correlated with regular sleep patterns<sup>52</sup> and language acquisition.<sup>53</sup> Toddler screen time has also been associated with problems in later childhood, including lower school and math achievement, reduced physical activity, less classroom engagement, victimization by classmates,<sup>54</sup> increased BMI,<sup>55</sup> and higher consumption of snacks and soft drinks.<sup>56 57</sup> Research also suggests that the more babies and toddlers are exposed to screen media, the harder time they have turning screens off in later childhood.<sup>58</sup>

It is also important for NAEYC to join the AAP and the White House Task Force on Childhood Obesity in advocating for limited screen use by older children. Given that screen time is linked to negative outcomes such as poor school performance and childhood obesity—and the evidence that it is habituating—limiting screen time is important for all children. Limiting screen time has particular urgency for Black and Latino children who spend significantly more time with television and video games,<sup>59</sup> have higher rates of obesity,<sup>60</sup> and do less well in school<sup>62</sup> than children of other ethnicities.

The 1996 position statement on Technology and Young Children notes, “[t]he appropriate and beneficial use of technology with young children is ultimately the responsibility of the early childhood educator, working in collaboration with parents” and urges early childhood professionals to “[p]rovide information to parents on the benefits and use of appropriate software.” We share NAEYC’s belief that educators can play a vital role in educating parents. Such education, however, should include a frank discussion of both the benefits and harms of encouraging young children to engage with screen technologies, including informing parents of the AAP recommendation of no screen time for children under 2, and that there is no research demonstrating that screen media are an effective means of educating babies and toddlers.

**Recommendation 3: In crafting its position statement, NAEYC should review the research on children and technology with a critical eye, asking who funded it and whether any reported gains can also be achieved through hands-on experiences proven to be beneficial to children without the potentially negative consequences associated with screen media.**

The rapidly changing technological landscape makes it unlikely that we will ever fully identify all of the harms and benefits associated with the time young children spent with screen media. Since the research picture is incomplete, the NAEYC position statement will rest, in part, on the core beliefs about the relationship between research and policy held by the committee drafting the document. Given that there exists a wealth of screen-free educational activities known to be beneficial to children, and limited data on the costs/benefits of screen media—in particular, new media—for young children, we strongly recommend that the burden of proof should be on documenting the benefits of screen media, and on proving they are not harmful, before it is assumed that screens should be incorporated into early childhood environments.

In addition, we urge NAEYC to evaluate critically the research behind its recommendations, taking into account who has funded the research and whether that entity has a financial stake in its outcome. Research has shown that studies funded by commercial enterprises are more likely to show results that benefit those companies than studies funded by independent sources<sup>63</sup>—even when the researchers operate independently of their funders.<sup>64</sup>

NAEYC rightly promotes considering the whole child when constructing best practices for early childhood educators. We urge NAEYC to approach this policy statement in the same context and craft a statement that considers the impact of screen media on all aspects of children’s growth and development. We hope that, in its recommendations, the statement will provide an impetus for teachers to consider the impact of electronic media on children’s cognitive, social, emotional and physical development before they include media technology in their classrooms. For instance, studies suggesting that playing video games may have a positive effect on spatial cognition<sup>65</sup> do not address the impact of video game play on other aspects of children’s development, such as the fact that playing violent video games is linked to children’s aggressive behavior,<sup>66</sup> or that video game play is linked to attention issues.<sup>67</sup>

The preponderance of research on the impacts of screen media is focused on television and video, or so-called passive media. While “interactive” media, such as cell phone applications, electronic books, lapware, and virtual worlds, are gaining in popularity, little is known about their impacts on children.<sup>68</sup> Without adequate research, it should not be assumed that new or “interactive” media necessarily confer more educational benefits than “passive” media like television and video.

## Conclusion

We are pleased that NAEYC has chosen to work with the Fred Rogers Center to update its position statement on children and media. The Center, whose mission is inspired by Fred Rogers’s commitment to nurturing children’s growth and development, and to the responsible use of media to promote their well-being, is an excellent choice.

As the nation’s premier association for early childhood educators, the NAEYC and its Technology and Young Children position statement will have a profound effect on the lives of children in and out of the classroom. Guidelines about if, when, and how to use screen media in early childhood centers will directly affect children in their classrooms. The position statement will also help teachers provide important guidance to parents as they make decisions about the value of screen time for their children outside of school.

Since media technologies are already so deeply embedded in our lives, the issues addressed in NAEYC’s position statement will necessarily go far beyond screen time to address broader questions of best practices for educating children to thrive in the 21<sup>st</sup> century and meet its challenges. It will provide guidance for nurturing children to become adults able to make use of technology and still think critically about its applications and contents, and who—in a market-driven, media-saturated culture—maintain essential human values such as curiosity, kindness, creativity, altruism, and a capacity to wrestle with life to make it meaningful.

Given how much time young children spend with screen media, and the potential harms, it is imperative that educators insure screen-free, commercial-free time and space so that children can build a foundation of hands-on engagement. Regardless of content, the excessive amount of time that many young children are spending with screens is harmful to their overall development. We hope NAEYC will take a leadership position and join with the AAP and the White House Task Force on Childhood Obesity in working to set healthy limits.

We look forward to discussing our recommendations with you and to helping, in any way we can, with crafting the statement.

Sincerely\*,

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