National Taiwan Normal University & CommonWealth Parenting (magazine)
[Make the best use of 3C (Digital Device). Give your child a better future with priority companionship].

The "Early Childhood Development Survey Database Project" funded by Ministry of Science and Technology shows:

More than 90% of children aged three to five use digital devices (3C); the younger they are, the longer time they use digital devices (3C).
The longer duration they use digital devices (3C), the worse their language and cognitive developments are.
The industry and academia jointly advocate that reading with children is beneficial to children's language and cognitive development.

The National Taiwan Normal University Education Think Tank Office and CommonWealth Parenting (magazine) jointly held the "Make the best use of 3C (Digital Device). Give your child a better future with prior companionship" Press Conference, which also featured Amy Ho, CEO of CommonWealth Parenting (magazine), and the Principal Investigator of the Early Childhood Development Survey database project. We also invited occupational therapists Huang, Yen-Chun, and Changhua Yuan-Dou Elementary School teacher Lin, I-Chen to give feedback from their observations in occupational therapy and school teaching, respectively, to provide practical solutions to the survey findings for parents. All industries and academia jointly urge all parents of infants and toddlers in Taiwan to respond to the "Put down your phone for 10 minutes, read together for 10 minutes every day" and develop the habit of parent-child accompany reading for 21 days" action to reduce the harmful effects of children's inevitable exposure to 3C products.

According to the "Early Childhood Development Survey Database Project" funded by the Ministry of Science and Technology, more than 90% of Taiwan's children used 3C products at home between the ages of 3 and 5, and the proportion of use increased with the increase of children’s age; by the age of 5, the proportion of children using 3C products has reached 98%. The most used 3C products were TVs, followed by smartphones. The time spent using 3C products at home decreased as children grow older. The average time spent using 3C products at the ages of 3, 4, and 5 was 2 hours and 17 minutes, 1 hour and 59 minutes, and 1 hour and 36 minutes, respectively, which was higher than the recommendation of the World Health Organization and the National Health Service of the Ministry of Health and Welfare that children over 2 years old should not look at the screen for more than 1 hour per day.

In addition, the survey also found that there was a significant negative correlation between the use

time of 3C products and the development of children at the age of 3, 4, and 5. The overall development of children who used 3C products for less than one hour a day was better than that of children who used 3C products for more than one hour, especially in cognitive and language development. It also found that the longer the time spent on parent-child interaction during holidays, the better the overall development of children, and the negative impact of the time spent using 3C products on the overall development of children could be reduced. It is recommended that the government use multiple methods to disseminate the negative effects of overusing 3C products on children's development and encourage parents to spend more quality time with their children.

The April holidays are coming up, and it will be the annual Children's Day soon. It is difficult to completely prohibit children from access to 3C products, as we can see all around us in today's society. In this Press Conference, the Kids in Taiwan: National Longitudinal Study of Child Development & Care (KIT) was used to explain the use of 3C products by young children, the long-term effects of 3C on young children's development, and suggestions on how to mitigate the negative impact of 3C products, and policy recommendations. The results of the analysis were obtained from the questionnaire data of parents who completed the 36-month-old for the first group (3 years old), second group (4 years old), and the third group (5 years old) of the KIT, with a sample size of 1,732 children (888 males and 844 females).

A. The younger the age, the longer duration of use of 3C devices.

According to the tracking data of the KIT, 90% of the children aged 3 to 5 in Taiwan used 3C products at home, and the proportion of use increased as children grew older. The proportion of children using 3C products at home was as high as 93%, 95%, and 98% at the age of 3, 4, and 5, respectively (see Table 1).

In terms of types of devices, the 3C product most used by Taiwan's 3 to 5-year-olds in their daily lives was the TV. At the age of 3, nearly 80% of children watched TV at home; at the age of 4, the proportion of children who watched TV rose to 84%; at the age of 5, nearly 90% of children watching TV. Smartphones were the second most used 3C product. When children were 3 years old, the percentage of using smartphones was about 64%; when they were 4 years old, it slightly increased to 65%; when children were 5 years old, nearly 67% used smartphones.

In terms of duration, it was found that the average time of using 3C products at home for children aged 3 to 5 years old in Taiwan decreases as children grow older. The number of time children spent using 3C products at home when they were 3, 4, and 5 years old was 2 hours and 17 minutes, 1 hour and 59 minutes, and 1 hour and 36 minutes, respectively, all higher than the recommendation of the World Health Organization and the National Health Service of the Ministry of Health and Welfare that the time spent 3C products should be less than 1 hour per day. Children's duration using 3C products at home was getting shorter year by year because most 4 and 5-year-old children went to kindergarten during the day and spend less time at home, while the time using 3C products in kindergarten was not included in this calculation.

Table 1 Use of 3C products by 3-5-year-old children in Taiwan

	3 years old	4 years old	5 years old
Percentage of people using 3C products	93.2%	95.2%	97.9%
Percentage of people watching TV	78.5%	83.9%	88.2%
Percentage of people using smartphones	64.3%	65.1%	66.5%
Average daily time spent on 3Cs at home	2 hours and 17 minutes	1 hour and 59 minutes	1 hour and 36 minutes

B. With lower socioeconomic status, the proportion of young children using 3C is higher, and the usage time is longer.

In terms of duration, it was found that the time spent using 3C products at home differed among children with different family socioeconomic statuses. The difference was significant when the children were 3 years old, 4 years old, or 5 years old; the lower the family socioeconomic status, the longer the time spent using 3C products. The time spent using 3C products at 3 years old: 3 hours and 2 minutes, 4 years old: 2 hours and 46 minutes, and 5 years old: 2 hours and 11 minutes, respectively, which is two or three times longer than the time recommended by the World Health Organization and the National Health Service of the Ministry of Health and Welfare. In comparison, children in high socioeconomic status families used 3C products for 1 hour and 23 minutes, 1 hour and 18 minutes, and 1 hour and 4 minutes at 3, 4, and 5 years old, respectively, much lower than children in low socioeconomic status families.

Table 2 Average daily time spent using 3C products at home by children in different families with socioeconomic status in Taiwan

Families Socioeconomic status	3 years old	4 years old	5 years old
Low	3 hours and 2 minutes	2 hours 46 minutes	2 hours and 11 minutes
Medium	2 hours and 27 minutes	2 hours and 8 minutes	1 hour and 40 minutes
Medium High	2 hours and 10 minutes	1 hour 47 minutes	1 hour 30 minutes
High	1 hour and 23 minutes	1 hour and 18 minutes	1 hour and 4 minutes

C. The longer the children use 3C products at home, the worse the development of children would be.

The survey analysis showed a negative relationship between the duration of 3C product use and the cognitive, linguistic, social, emotional, motor, and overall development of children in Taiwan. In other words, the longer duration the children used 3C products at home, the worse the children's developmental status was, which was confirmed by the data when the children were 3 years old, 4 years old, and 5 years old. In addition, the tracking results also showed that the longer children used 3C products at 3 years old, the lower the overall developmental score they would perform when they turned aged 4 or 5. The longer the children used 3C products at 4 years old, the lower the overall developmental score at 5 years old.

D. Limiting the use of 3C products to 1 hour resulting in the improved children's development; More than 1 hour, as the longer the duration resulting worsen the children's development.

The survey also found that, for example, the overall development of children aged 5 years old was different for children who used 3C products for different period of time; Children who used 3C products for one-hour duration had the highest development score; children who used them for more than three hours had the lowest overall development score.

E. Increasing parent-child interaction time during holidays can mitigate the negative effects of 3C on the overall development of children.

The survey found that the longer the 3-5 years old children in Taiwan use 3C products at home, the lower the time of parent-child interaction; and the longer the time of parent-child interaction, the better the overall development of children. In other words, even when parents work long hours on weekdays, they can try to increase parent-child interaction time during weekends and holidays, which could reduce the negative impact of children's time using 3C products on their overall development.

F. Policy Recommendations

Based on the above findings, this project recommends that the government use multiple methods to disseminate the harmful effects of overusing 3C products on children's development and encourage parents to spend more time with their children and make good use of 3C products. The following are the four aspects of the project: kindergarten, family, community, and media.

I. Kindergarten

1. It is recommended that the principles of 3C use be transformed into parent-child learning or learning sheets through kindergartens to promote health promotion with parents and children as targets.
2. To disseminate the harm of 3C products to young children and take positive actions and provide parents with relevant articles, parents can also be invited to attend kindergarten seminars on:
   (1) teaching children about proper visual behavior.

(2) disseminating the harm of 3C products to young children and take positive actions, in addition to providing parents with relevant articles, parents can also be invited to attend kindergarten seminars.
(3) designing eye-care parent-child activities to guide parents to learn to put down 3C products and encourage parents to take their children to activities together.

II. Family

1. Include topics related to using 3C products for children in the parenting courses. It is recommended that the time spent on 3C products for children should not exceed one hour and should preferably be less than 30 minutes.
2. Encourage parents and children to participate in activities together, such as games, reading, dining, and talking, to increase parent-child interaction duration and reduce the negative impact of 3C products on children's development.

III. Community

1. Promote information on the 3C product using principles to families through community cooperation such as neighborhoods and local activity centers, and combine parent-child activities and lectures so that parents or primary caregivers of young children can understand the impact of 3C use on the development of young children. For example, they can distribute leaflets on 3C use and companionship orientation strategies when the Chief of Village promote government-related information or combine them with exciting government promotional items (e.g., developmental screening toy bags for home care centers, Bookstart reading-together gift bags) to encourage them.
2. Encourage parents and children to participate in activities together, such as games, reading, eating, and chatting. To increase parent-child interaction time and reduce the negative impact of 3C products on children's development.

IV. Media

1. It is recommended that parents spend more time with their children to reduce the time of excessive exposure to 3C products and the negative impact on them.
2. Promote the concept that parent-child reading can start from 0 years old, and invite all parents of children in Taiwan to participate together and participate in the "Put down your phone for 10 minutes, read together for 10 minutes every day" advocacy campaign event.
3. We encourage the media to plan to report exemplary cases of parent-child co-readers in families to provide parents with young children with learning guidelines and increase the effectiveness of parent-child co-reading habits by introducing their parent-child co-reading styles.