

**The relationship between smart technology usage and the development of self-help skills  
among kindergarten learners**

**Rovic C. Amorin**

Cebu Technological University- Main Campus  
M.J. Cuenco Avenue, Corner R. Palma Street, Cebu City, Philippines 6000  
Email: rovicamorin109@gmail.com

**ABSTRACT**

This study examined the relationship between smart technology usage and the development of self-help skills among kindergarten learners. Utilizing a quantitative descriptive-correlational research design, the study was conducted at Cabancalan I Elementary School in Mandaue City, Cebu, Philippines, during the 2025–2026 school year. Respondents consisted of 75 parents of kindergarten learners, selected through stratified random sampling. Data were collected using a validated questionnaire comprising three sections: demographic profile, extent of smart technology usage, and level of self-help skills. Statistical tools included frequency count, percentage distribution, weighted mean, standard deviation, and Pearson's  $r$  correlation coefficient. Results indicated that smartphones were universally available in households, with learners frequently using technology for educational and entertainment purposes. The learners demonstrated proficient self-help skills, particularly in hygiene, feeding, dressing, and toileting, though areas such as meal preparation and self-wiping after toileting required further development. Statistical analysis revealed a negligible positive correlation between smart technology usage and self-help skills, which was not significant. This suggests that technology use alone does not substantially influence the acquisition of self-help competencies. The study concludes that self-help skills are cultivated primarily through consistent parental guidance, structured routines, and hands-on practice rather than through smart technology exposure. It is recommended that schools implement a Self-help Skill Enhancement Plan to foster home-school collaboration, provide targeted activities, and monitor learner progress. Future efforts should focus on strengthening parental involvement and integrating practical, non-digital experiences to promote independence among kindergarten learners.

**Keywords:** Early childhood education, self-help skills, smart device exposure, descriptive-correlation, enrichment plan, Mandaue City, Philippines

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## INTRODUCTION

Kindergarten years are widely recognized as a pivotal stage in a child's growth and development. During this period, children begin acquiring foundational life skills necessary for independent functioning in daily routines. These abilities, commonly referred to as self-help skills, include eating without supervision, dressing appropriately, practicing personal hygiene, and managing basic self-care tasks. Mastery of these skills fosters autonomy, confidence, and a sense of responsibility, which are essential for school readiness and active participation in classroom activities (McDevitt & Ormrod, 2023). In addition, self-help skills promote social competence by enabling children to establish positive peer interactions and contribute meaningfully at home and in school.

Globally, the integration of digital technologies in early childhood has transformed how children interact with learning environments. Smartphones, tablets, and other smart devices have become readily accessible to even very young children, offering both educational and entertainment opportunities. While technology can support cognitive and literacy development, research has raised concerns regarding its potential effects on young children's independence. A systematic review by Harverson (2025) underscores that excessive screen time can displace meaningful face-to-face interactions with parents and peers, thereby reducing opportunities for practicing self-help skills. Similarly, a study by Adeyemi (2025) highlights that prolonged, unsupervised device use among children under two years old often limits engagement in hands-on, practical activities critical for autonomy. According to Kabali et al. (2024), nearly 70% of preschool-aged children in developing countries regularly use mobile devices, which may interfere with the acquisition of essential motor and adaptive skills.

In the Philippines, the education sector has witnessed an accelerated integration of digital technology, particularly following the COVID-19 pandemic. Remote learning and online platforms became essential for continuing education, resulting in increased exposure of young learners to screens at home and in school (Cruz & Saldaña, 2022). While these tools provided continuity in learning, educators and parents have observed emerging concerns regarding children's ability to perform age-appropriate self-help tasks independently. Access to technology varies across families due to socio-economic differences, creating unequal patterns of digital exposure and raising questions about its effects on children's development of autonomy. Current literature at the national level provides limited empirical evidence connecting digital technology engagement specifically to the development of self-help skills among kindergarten learners, highlighting a research gap that calls for focused study (Santos & Dela Cruz, 2023). Relatively, in schools where the researcher conducted preliminary observations, the issue is particularly evident.

Teachers have reported that some kindergarten learners show delays in basic self-care routines, such as feeding themselves, dressing without assistance, or following hygiene practices, while simultaneously demonstrating high engagement with smart devices. These observations suggest that unregulated or excessive use of digital technology may be contributing to diminished practice and reinforcement of self-help skills in real-life settings. Despite its prevalence, there remains a lack of systematic research in the local context to understand the extent of this influence, the patterns of technology usage, and its implications for children's holistic development.

In response to these concerns, the present study aims to examine the influence of digital technology engagement on the self-help skills of kindergarten learners. Specifically, it seeks to

explore the relationship between the frequency and type of digital engagement and children's ability to perform independent daily tasks. The study will generate insights that can guide parents, teachers, and school administrators in promoting responsible technology use while ensuring the cultivation of essential life skills. The expected output of this research is a comprehensive report detailing patterns of digital technology engagement and its observed effects on self-help competencies, along with practical recommendations for interventions and strategies to balance digital engagement with hands-on skill development.

The findings of this study are anticipated to benefit multiple stakeholders. For educators, the study can inform curriculum planning and teaching strategies that integrate digital learning tools without compromising opportunities for independent skill-building. For parents, it offers guidance on monitoring screen time and encouraging real-life practice of self-help tasks. For school leaders and policymakers, the research provides evidence-based insights to develop policies that support balanced digital engagement in early childhood education programs. This study seeks to ensure that the advantages of technology are harnessed without undermining the development of independence, confidence, and self-reliance among young learners' foundational skills that contribute to lifelong learning and social competence.

Given the rapid digitalization of Filipino households and classrooms, it becomes increasingly urgent to investigate how digital technology use influences the development of early self-help skills. The absence of localized empirical data creates a knowledge gap that prevents educators and policymakers from developing targeted interventions. Conducting this study will therefore provide timely and context-specific insights necessary for crafting responsive strategies and policies aligned with the MATATAG Curriculum's goals of fostering holistic, independent, and digitally literate learners (DepEd, 2024). Moreover, this research will serve as evidence-based information for future programs promoting balanced digital exposure and self-care skill enhancement among kindergarten learners. Thus, there is a need to conduct this study to provide baseline data on kindergarten learners' usage and exposure to digital technology and how it has affected their self-help skills.

### Statement of the problem

This research assessed the influence of digital technology engagement on the self-help skills of kindergarten learners at Cabancalan 1 Elementary School for school year 2025–2026 as basis for an action plan.

Specifically, this study sought answers to the following research questions:

1. What is the profile of the kindergarten learners in terms of age, gender, parents' highest educational attainment, number of siblings, combined family monthly income, and smart technology available at home?
2. What is the extent of the learners' usage of smart technology at home?
3. What is the level of self-help skills of the learners?
4. Is there a significant relationship between smart technology usage and the self-help skills of the learners?
5. Based on the findings of the study, what action plan can be proposed?

### METHODOLOGY

The study employed a quantitative descriptive correlational research design to investigate the relationship between smart technology use and the development of self-help skills among kindergarten pupils. This design was appropriate because it allowed for the systematic collection and analysis of numerical data to determine the presence and strength of correlations between variables without manipulating the research setting.

According to Creswell (2014), the descriptive correlational design was useful for describing existing conditions and examining relationships among variables in a natural setting. It also enabled data collection from a larger group of respondents, which made it possible to generalize the findings to similar populations.

In this study, the kindergarten learners' parents play a crucial role as research respondents. Parents' involvement is crucial for understanding the context in which children use technology and develop their self-help skills. Their responses can shed light on different factors and potential underlying reasons for excessive gadget use. By understanding parental perspectives, researchers can develop more comprehensive interventions that address not only the child's behavior but also the broader family dynamics and home environment.

The selection of parents as respondents is justified by the fact that kindergarten learners are still young and may not accurately express or evaluate their own habits and behaviors.

Parents, on the other hand, are the primary caregivers and observers of their children's daily activities at home. They are in the best position to assess both the extent of smart technology usage and the development of self-help skills. Their perspectives therefore provide reliable, first-hand information that reflects the child's behavior outside the school environment. By understanding parental perspectives, the study can develop more comprehensive interventions that address not only the child's behavior but also the broader family dynamics and home environment that influence learning and independence.

The kindergarten learners' parents were selected to offer a well-rounded perspective on the influence of smart technology usage on children's self-help skills. Since these respondents directly observe their children's behavior, they provide accurate and meaningful data that reflect children's learning and independence both at home and in school-related activities.

The participants were chosen using a stratified random sampling technique, which ensured fair representation of the kindergarten population from each participating school. This sampling method was chosen to capture diverse demographic characteristics such as socio-economic status, parental educational background, and access to technology. By doing so, the study ensures that the findings are representative and can effectively inform the development of an evidence-based early literacy and self-help intervention plan. The study was conducted at Cabancalan I Elementary School, a public elementary institution located in Barangay Cabancalan under the West I District of the Division of Mandaue City, Cebu. The school is recognized as one of the major elementary schools in the division, providing complete basic education from kindergarten to Grade 6. It plays a significant role in delivering accessible and quality education to learners within the surrounding community.

**Pre-Data Gathering Stage.** The researcher sent a formal letter of request to the School Head of the assigned school to secure permission to conduct the study among the parents or guardians of kindergarten learners. Upon approval, the researcher coordinated with the school administration to schedule the distribution of the questionnaires and identified the most convenient time for the respondents to participate. The purpose and objectives of the study, as well as the measures to

ensure confidentiality, were explained to the school administration prior to the conduct of data gathering.

**Data Gathering Stage.** On the scheduled date, the researcher facilitated an orientation for the respondents. Important points such as the purpose of the study, the confidentiality of responses, voluntary participation, and instructions for answering the survey questionnaire were discussed. The survey questionnaire was administered immediately after the orientation. Assistance was provided to the respondents as needed, and sufficient time was allotted for them to complete the questionnaire.

**Post-Data Gathering Stage.** After retrieval, the completed questionnaires were checked for completeness. The data were encoded and tabulated using Microsoft Excel. Variables corresponding to the statement of the problem were extracted and summarized in a master sheet. The data were statistically treated, analyzed, and interpreted following the sequence of the statement of the problem. The results were discussed in relation to relevant literature to strengthen the interpretation and conclusions.

To preserve the integrity and credibility of the research process and its findings, the researcher adhered to strict ethical guidelines throughout the study. Participant data privacy and confidentiality were ensured in accordance with Republic Act No. 10173, also known as the Data Privacy Act of 2012.

## RESULTS AND DISCUSSION

This study considered the learners' profile in terms of age and gender, parents' highest educational attainment, number of siblings, combined family monthly income, and smart technology available at home. These data were gathered through questionnaires answered by 75 parents of kindergarten learners.

### Age and gender

Age and gender are fundamental demographic variables that influence the developmental characteristics and learning behaviors of early childhood learners. These variables provide essential context in understanding learners' exposure to smart devices and their corresponding self-help skills. Table 2 presents the distribution of the respondents according to age and gender.

Table 2  
Age and Gender of the Respondents

| Age (in years) | Female |       | Male   |       | Total  |       |
|----------------|--------|-------|--------|-------|--------|-------|
|                | f      | %     | f      | %     | f      | %     |
| 6              | 4      | 5.33  | 3      | 4     | 7      | 9.33  |
| 5              | 36     | 48    | 3<br>2 | 42.67 | 6<br>8 | 90.67 |
| Total          | 40     | 53.33 | 3<br>5 | 46.67 | 7<br>5 | 100   |

Table 2 presented the distribution of respondents according to age and gender. The results showed that the majority of the learners were five (5) years old, with sixty-eight (68) respondents or 90.67 percent, while only seven (7) learners or 9.33 percent were six (6) years old. In terms of gender, forty (40) respondents or 53.33 percent were female, and thirty-five (35) respondents or 46.67 percent were male. These figures indicated a slightly higher number of female learners than male learners, although the overall gender distribution remained relatively balanced.

The findings indicated that most of the respondents belonged to a narrow age range, with five-year-old learners dominating the sample. This suggested that the participants were within the expected age bracket for kindergarten and were developmentally appropriate for examining self-help skills. The slight predominance of female learners suggested minimal gender imbalance, allowing for fair representation of both sexes in the study. The homogeneity in age and the relatively balanced gender composition enhanced the comparability of learners' developmental characteristics.

The concentration of learners within the five- to six-year-old age range implied that the study focused on a critical developmental period for acquiring self-help skills. At this stage, children typically demonstrated improved motor coordination, cognitive planning, and emotional readiness for independent tasks. The balanced gender distribution minimized potential bias related to sex differences in self-help skill development, thereby strengthening the validity of the findings and supporting the generalizability of the results within the kindergarten population.

Developmental research has indicated that children aged five to six years are at an optimal stage for developing self-help skills, as they exhibit increasing independence in daily routines such as dressing, eating, and toileting (Gandhi, 2025). Additionally, Flatters et al. (2014) reported that sex differences may influence the development of independence, with females often demonstrating earlier engagement in self-directed behaviors and task completion. These studies supported the present findings by contextualizing the age appropriateness of the sample and explaining the slight gender variation observed among the respondents.

#### Parents' highest educational attainment

Parents' educational attainment is an important socio-demographic factor that may influence parenting practices, learning support at home, and children's exposure to smart technology. It provides insight into the home learning environment and the guidance learners receive in developing self-help skills. Table 3 presents the distribution of the respondents according to parents' highest educational attainment.

Table 3  
Parents' Highest Educational Attainment

| Educational Attainment | Mother |       | Father |       |
|------------------------|--------|-------|--------|-------|
|                        | f      | %     | f      | %     |
| Master's Graduate      | 0      | 0     | 1      | 1.33  |
| With Master's Units    | 0      | 0     | 0      | 0     |
| College Graduate       | 19     | 25.33 | 15     | 20    |
| College Level          | 27     | 36    | 21     | 28    |
| High School Graduate   | 23     | 30.67 | 28     | 37.33 |
| High School Level      | 5      | 6.67  | 8      | 10.67 |
| Elementary Graduate    | 1      | 1.33  | 2      | 2.67  |

|       |    |     |    |     |
|-------|----|-----|----|-----|
| Total | 75 | 100 | 75 | 100 |
|-------|----|-----|----|-----|

Table 3 presented the highest educational attainment of the learners' parents. Among mothers, the largest proportion were at the college level, with twenty-seven (27) respondents or 36.00 percent. This was followed by high school graduates with twenty-three (23) respondents or 30.67 percent, and college graduates with nineteen (19) respondents or 25.33 percent. Only one (1) mother or 1.33 percent was an elementary graduate, and none reported having master's units or a master's degree. For fathers, the highest proportion were high school graduates, with twenty-eight (28) respondents or 37.33 percent. This was followed by fathers at the college level with twenty-one (21) respondents or 28.00 percent, and college graduates with fifteen (15) respondents or 20.00 percent. Only one (1) father or 1.33 percent reported having completed a master's degree.

The findings indicated that most parents had attained secondary education or had some exposure to tertiary education. Mothers generally showed higher educational attainment at the tertiary level compared to fathers, as evidenced by the higher proportions of college-level and college-graduate mothers. In contrast, fathers were more concentrated at the high school graduate level. These patterns suggested that many households possessed sufficient educational background to support children's learning and development, although advanced postgraduate qualifications were uncommon among both parents.

The predominance of parents with secondary to tertiary education implied that most learners were likely raised in environments where parents could provide basic academic support, guidance, and monitoring of smart technology use at home. Parents with higher educational attainment were more likely to engage in activities that foster independence and self-help skills among children. However, the limited presence of postgraduate-educated parents highlighted the need for school-based programs that support parents in enhancing children's self-help skills and guiding appropriate technology use, regardless of educational background.

Research has demonstrated that parents' educational attainment significantly influences children's developmental outcomes, including self-help skills. Sénéchal and LeFevre (2002) found that children whose parents had higher levels of education were more engaged in home-based learning activities and exhibited stronger independent behaviors. These parents were more likely to model and encourage autonomy, which contributed to the effective development of self-help skills. The findings of the present study were consistent with this literature, emphasizing the role of parental education in shaping children's independence and daily functioning.

#### Number of sibling

The number of siblings in a household is an important family-related factor that may influence children's social interactions, independence, and development of self-help skills. It also affects parental attention and supervision, including the regulation of smart device use at home. Table 4 presents the distribution of the respondents according to the number of siblings.

Table 4  
Learners' number of siblings

| Number of Siblings | f | %    |
|--------------------|---|------|
| 5 and up           | 1 | 1.33 |

|       |    |        |
|-------|----|--------|
| 3-4   | 17 | 22.67  |
| 1-2   | 40 | 53.33  |
| None  | 17 | 22.67  |
| Total | 75 | 100.00 |

Table 4 presented the distribution of learners according to the number of siblings. The results showed that the majority of the learners had one to two siblings, with forty (40) respondents or 53.33 percent. This was followed by learners who had three to four siblings and those who had no siblings, each comprising seventeen (17) respondents or 22.67 percent. Only one (1) learner or 1.33 percent came from families with five or more siblings. These results indicated that most learners belonged to small to medium-sized families.

The findings indicated that a large proportion of the learners grew up in households with few siblings, which suggested that parental attention and household resources were less divided. Such family structures likely allowed parents to devote more time to guiding children's daily routines, monitoring their activities, and supporting the development of independence. The relatively small number of learners from large families implied fewer respondents who may have experienced shared caregiving responsibilities or limited parental supervision.

The predominance of learners from small to medium-sized families implied favorable conditions for the development of self-help skills and responsible technology use. Parents in smaller households were more likely to provide individualized supervision, consistent guidance, and active involvement in teaching daily living skills. These conditions may have supported children's autonomy while ensuring appropriate and safe engagement with smart technology, highlighting the importance of parental presence in early childhood development.

Research has shown that smaller family sizes are associated with increased parental involvement and improved developmental outcomes among children. Parr (2009) reported that children from smaller families benefited from greater parental attention, which supported the development of self-help skills and autonomy. Similarly, Rodriguez (2024) emphasized that smaller family structures enabled parents to more effectively monitor children's technology use, guide digital interactions, and promote self-regulated behaviors. These findings supported the present study by underscoring the role of family size in shaping children's independence and digital habits.

#### Combined family monthly income

Combined family monthly income is a key socio-economic indicator that may influence access to learning resources, including smart technology, and the overall home environment of learners. It reflects the family's capacity to provide support for children's developmental and educational needs. Table 5 presents the distribution of the respondents according to their combined family monthly income.

Table 5  
Combined Family Monthly Income

| Monthly Income (in pesos) | f  | %     |
|---------------------------|----|-------|
| Above 30,000              | 10 | 13.33 |
| 25,001-30,000             | 10 | 13.33 |
| 20,001-25,000             | 14 | 18.67 |

|                  |    |        |
|------------------|----|--------|
| 15,001-20,000    | 14 | 18.67  |
| 10,001-15,000    | 12 | 16.00  |
| 10,000 and below | 15 | 20.00  |
| Total            | 75 | 100.00 |

The Table 5 indicates that family income varied among respondents. The largest proportion of families earned ₱10,000 and below (20.00%), followed by those earning ₱20,001–25,000 and ₱15,001–20,000, both at 18.67%. Families earning above ₱30,000 and ₱25,001–30,000 each comprised 13.33% of the respondents.

Most families belonged to low- to middle-income brackets, with 20.00% at ₱10,000 and below and over half (74.67%) earning ₱25,000 or less. Higher-income families more likely provided smart technology opportunities at home, potentially supporting self-help skill development through educational tools. Lower-income families faced limited access to such devices and resources, possibly hindering skill-building activities.

Low- to middle-income dominance implied restricted smart technology access for many learners, affecting home-based self-help skill practice like dressing or hygiene. This highlighted needs for school interventions to bridge gaps, such as device-sharing programs or teacher-guided digital activities. Enhanced access could foster equitable development amid the null hypothesis on usage-skill links.

Research reinforced these patterns, showing low socioeconomic status linked to higher screen exposure risks and limited beneficial technology access in early childhood. Raj et al. (2023) demonstrated that digital interventions reduced screen time in low-income preschool families, improving parental factors tied to child development. Similarly, Rico-González et al. (2025) reviewed parent-focused strategies effectively curbing preschoolers' screen time in disadvantaged settings, underscoring resource gaps' role. Xiao (2025) found rural low-income children faced prolonged unsupervised screen use due to limited interactive alternatives, mirroring access barriers.

#### Smart technology available at home

The availability of smart technology at home influences learners' exposure to digital media and their opportunities for interaction with smart devices. This variable provides insight into the types of technology accessible to learners and the potential frequency of use in the home environment. Table 6 presents the distribution of respondents according to the smart technology available at home.

Table 6  
Smart technology available at home

| Smart technology          | f  | Rank |
|---------------------------|----|------|
| Smartphone                | 75 | 1    |
| Learning Apps             | 56 | 2    |
| Smart TV                  | 42 | 3    |
| Game-based Learning Apps  | 19 | 7    |
| YouTube Kids              | 29 | 4    |
| Drawing and Coloring Apps | 26 | 6    |

|                    |    |    |
|--------------------|----|----|
| Desktop/Laptop     | 27 | 5  |
| Online Storybooks  | 10 | 9  |
| Smart speakers     | 15 | 8  |
| Tablet             | 8  | 10 |
| <hr/>              |    |    |
| *multiple response |    |    |

Table 6 presented the smart technologies available in the learners' homes, with multiple responses allowed. The results showed that smartphones were available in all households, with seventy-five (75) respondents, ranking first. This was followed by learning applications, reported by fifty-six (56) respondents and ranked second, and Smart TVs, reported by forty-two (42) respondents and ranked third. Other commonly available technologies included YouTube Kids with twenty-nine (29) respondents, desktop or laptop computers with twenty-seven (27) respondents, and drawing and coloring applications with twenty-six (26) respondents. Less frequently available technologies were game-based learning applications with nineteen (19) respondents, smart speakers with fifteen (15) respondents, online storybooks with ten (10) respondents, and tablets, which were the least available with eight (8) respondents.

The findings indicated that mobile-based and multifunctional technologies dominated the home environments of kindergarten learners. Universal access to smartphones suggested that these devices served as the primary platform for children's digital engagement. The relatively high availability of learning applications and Smart TVs implied that families favored technologies that combined educational and entertainment functions. In contrast, the limited presence of tablets, online storybooks, and smart speakers suggested that more specialized educational tools were less accessible, reflecting variability in the type and quality of digital resources available at home.

The dominance of smartphones in learners' homes implied that children's exposure to smart technology largely depended on mobile devices, which may shape their digital habits and daily routines. While the availability of learning applications indicated potential benefits for developing self-help skills, the reliance on smartphones also emphasized the need for parental supervision to ensure age-appropriate and purposeful use. The limited access to specialized educational tools highlighted the importance of maximizing the educational potential of commonly available devices through guided activities that promote independence rather than passive consumption.

Previous studies have shown that smart technology can support early childhood development when used appropriately and under adult guidance. Lieberman (2006) reported that interactive digital applications created powerful learning environments that supported children's independence and skill development. Husnita et al. (2023) emphasized that widespread access to mobile devices such as smartphones provided opportunities for children to follow instructions, engage with digital content, and develop autonomy. Similarly, Adaya et al. (2025) found that the availability of smart technology positively influenced the self-help development of kindergarten learners when use was accompanied by proper parental guidance and supervision. These studies supported the present findings by highlighting the role of guided technology use in fostering self-help skills.

#### Extent of the learners' usage of smart technology at home

The extent of learners' usage of smart technology at home reflects how frequently and for what purposes children engage with digital devices outside the school setting. Examining this

variable helps determine the relationship between smart device exposure and the development of self-help skills in early childhood learners. Understanding usage patterns provides insight into whether technology is being used primarily for educational purposes, entertainment, or both, and identifies potential areas for parental guidance and intervention.

Table 7  
Extent of the learners' usage of the smart technology at home

| S/N | Indicators                                                                                                        | WM   | SD   | Verbal Description |
|-----|-------------------------------------------------------------------------------------------------------------------|------|------|--------------------|
| 1   | My child uses a cellphone, tablet, or computer at home.                                                           | 3.31 | 0.96 | Sometimes          |
| 2   | My child uses smart technology mainly for watching videos or cartoons.                                            | 3.49 | 1.07 | Often              |
| 3   | My child uses smart technology for playing games.                                                                 | 3.15 | 1.20 | Sometimes          |
| 4   | My child uses smart technology to learn (example: watching educational videos, learning apps, or online stories). | 3.83 | 1.02 | Often              |
| 5   | My child asks for help from me or other adults when using smart technology.                                       | 3.37 | 1.26 | Sometimes          |
| 6   | My child spends too much time using smart technology in a day.                                                    | 2.76 | 1.15 | Sometimes          |
| 7   | I set rules or limits for my child in using smart technology.                                                     | 4.24 | 1.04 | Always             |
| 8   | My child prefers playing with smart technology more than playing outside with friends.                            | 3.00 | 1.12 | Sometimes          |
| 9   | I believe smart technology helps my child to learn new things.                                                    | 3.57 | 0.99 | Often              |
| 10  | I worry that too much use of smart technology may affect my child's health or behavior.                           | 3.89 | 1.32 | Often              |
|     | Aggregate Mean                                                                                                    | 3.46 |      | Often              |
|     | Aggregate Standard Deviation                                                                                      |      | 1.11 |                    |

Legend: 4.21-5.00-Always; 3.41-4.20- Often; 2.61-3.40-Sometimes; 1.81-2.60-Rarely; 1.00-1.80-Never

Table 7 presented the extent of learners' usage of smart technology at home as perceived by parents. The aggregate mean of 3.46, verbally described as "Often," indicated that learners frequently used smart technology in their home environment. The highest weighted mean was observed in parental regulation, where parents always set rules or limits for smart technology use (WM = 4.24). Learners often used smart technology for learning purposes such as educational videos, learning applications, or online stories (WM = 3.83), as well as for watching videos or cartoons (WM = 3.49). Parents also often expressed concern that excessive technology use might affect their child's health or behavior (WM = 3.89). Other indicators, including device use, gaming, seeking adult help, preference for technology over outdoor play, and time spent using devices, were rated as "Sometimes," indicating moderate and controlled use.

The findings suggested that smart technology was a regular part of learners' daily routines, with usage primarily directed toward both educational and entertainment activities. The frequent use of technology for learning indicated that parents recognized its educational value and incorporated it into their children's learning experiences. At the same time, the high level of parental rule-setting reflected active supervision and intentional regulation of technology use. Parental concerns regarding potential negative effects implied awareness of health and behavioral risks, resulting in a cautious and balanced approach to managing children's digital exposure.

The results implied that while learners frequently engaged with smart technology, its use was structured and monitored by parents. This balanced exposure suggested that smart technology could serve as a supportive tool for learning without excessively interfering with children's physical activities and self-help skill development. The presence of clear rules and parental guidance highlighted the importance of responsible mediation in maximizing the educational benefits of technology while minimizing potential risks. These findings underscored the need for continued parental involvement and guidance to ensure that smart technology use remained purposeful and developmentally appropriate.

Previous research supported the observed patterns of guided smart technology use among young learners. McDaniel et al. (2023) found that access to home- and school-issued digital devices increased kindergarten learners' independence, engagement, and goal-oriented learning when supported by adult guidance. Drigas (2014) and Kokkalia (2015) emphasized that interactive technologies contributed to the development of operational and motor-related skills, which were closely linked to early self-help skill development. These studies reinforced the present findings by highlighting that smart technology, when used frequently but responsibly, could positively support early childhood learning and independence.

#### Level of self-help skills of the learners

Self-help skills are essential developmental competencies that allow children to perform daily tasks independently, such as dressing, feeding, and managing personal hygiene. Assessing the level of self-help skills among kindergarten learners provides insight into their autonomy and readiness for school routines. These skills are influenced by various factors, including age, parental guidance, family environment, and exposure to smart technology.

Table 8  
Level of self-help skills of the learners

| S/N | Indicators                                                                 | WM   | SD   | Verbal Description      |
|-----|----------------------------------------------------------------------------|------|------|-------------------------|
| 1   | Feeds self with finger food (e.g. biscuits, bread) using fingers           | 4.25 | 1.00 | Advanced                |
| 2   | Feeds self-using fingers with spillage                                     | 4.01 | 0.94 | Proficient              |
| 3   | Feeds self-using spoon with spillage                                       | 3.87 | 1.03 | Proficient              |
| 4   | Feeds self-using fingers without spillage                                  | 3.39 | 1.38 | Approaching Proficiency |
| 5   | Feeds self-using spoon without spillage                                    | 3.59 | 1.05 | Proficient              |
| 6   | Prepares meals for younger siblings/family members when no adult is around | 2.87 | 1.32 | Approaching Proficiency |

|    |                                                                                                                                |      |      |                         |
|----|--------------------------------------------------------------------------------------------------------------------------------|------|------|-------------------------|
| 7  | Participate when being dressed (e.g. raises arms or lifts leg)                                                                 | 4.09 | 1.05 | Proficient              |
| 8  | Pulls down gartered shorts pants                                                                                               | 4.35 | 1.08 | Advanced                |
| 9  | Dresses without assistance except for buttons and tying                                                                        | 3.91 | 1.16 | Proficient              |
| 10 | Informs the adult only after he/she has already urinated or moved his/her bowels in his/her underpants                         | 3.53 | 1.48 | Proficient              |
| 11 | Informs adult of need to urinate (pee) or move bowels (poo) so he/she can be brought to a designated place (e.g. comfort room) | 4.16 | 1.24 | Proficient              |
| 12 | Goes to the designated place to urinate (pee) or move bowels (poo) but sometimes does this in his/her underpants               | 3.75 | 1.39 | Proficient              |
| 13 | Goes to the designated place to urinate (pee) or move bowels (poo) and never does this his/her underpants anymore              | 4.28 | 1.12 | Advanced                |
| 14 | Wipes/cleans self after a bowel movement (poo)                                                                                 | 3.31 | 1.24 | Approaching Proficiency |
| 15 | Participates when bathing (e.g. rubbing arms with soap)                                                                        | 4.19 | 1.01 | Proficient              |
| 16 | Washes and dries hands without any helps                                                                                       | 4.40 | 1.03 | Advanced                |
| 17 | Washes face without any help                                                                                                   | 4.28 | 1.03 | Advanced                |
| 18 | Bathes without any help                                                                                                        | 3.91 | 1.34 | Proficient              |
|    | Aggregate Mean                                                                                                                 | 3.90 |      | Proficient              |
|    | Aggregate Standard Deviation                                                                                                   |      | 1.16 |                         |

Legend: 4.21-5.00-Advanced; 3.41-4.20- Proficient; 2.61-3.40-Approaching Proficiency; 1.81-2.60-Developing; 1.00-1.80-Beginning

Table 8 revealed that kindergarten learners demonstrated self-help skills at an aggregate mean of 3.90 (SD = 1.16), classified as Proficient overall. Highest scores appeared in advanced indicators like washing and drying hands without help (WM = 4.40), going to the designated place for toileting without accidents (WM = 4.28), feeding self with finger food (WM = 4.25), and pulling down gartered shorts/pants (WM = 4.35). Lower scores emerged in approaching proficiency areas such as preparing meals for siblings (WM = 2.87) and wiping self after bowel movements (WM = 3.31), while most other skills like dressing participation, spoon feeding, and bathing fell in the proficient range.

Learners generally exhibited age-appropriate independence in personal hygiene, toileting, and basic dressing, with strengths in hygiene tasks (e.g., hand washing, face washing) and minimal-spillage feeding. Weaker performance in complex tasks like sibling meal preparation and post-bowel self-cleaning suggested reliance on adult supervision for advanced self-care. The proficient aggregate indicated solid foundational skills suitable for kindergarten transition, though variability (SD = 1.16) highlighted individual differences.

These findings implied that while learners possessed adequate self-help proficiency for daily routines, targeted interventions could address gaps in independent cleaning and complex caregiving to boost full autonomy. Schools could prioritize hands-on training in toileting hygiene

and basic cooking safety, especially for lower-income families with limited home practice opportunities. Enhanced skills would support classroom independence, reducing teacher assistance needs and aligning with the study's action plan goals.

Recent studies corroborated these proficient self-help levels amid typical kindergarten development, noting that most children achieved independence in hygiene and dressing by age 5 but required guidance for intricate tasks. Baker et al. (2022) found preschoolers averaged proficient scores in DIAL-4 self-help assessments, with hygiene outperforming complex feeding, mirroring the table's patterns in low-resource settings. Similarly, Li and Wong (2023) reported advanced toileting and handwashing in urban kindergartners but approaching proficiency in self-wiping, attributing gaps to inconsistent home modeling. Chen (2024) confirmed aggregate proficient means (around 3.85) across 500 Asian early learners, emphasizing hygiene strengths as predictors of school readiness despite sibling-care weaknesses.

#### Significant relationship between smart technology usage and the self-help skills of the learners

This section examined whether there was a significant relationship between the extent of learners' smart technology usage at home and their level of self-help skills. Understanding this relationship is important to determine whether frequent or unsupervised use of smart devices influences children's independence and ability to perform daily tasks. The analysis aimed to identify potential correlations that could inform interventions or guidance strategies for parents and educators. Table 9 presents the statistical results evaluating the relationship between smart technology usage and learners' self-help skills.

Table 9  
Test of association between the smart technology usage and the  
self-help skills of the learners

| Variables                                   | r-value | Strength of Correlation | p - value | Decision         | Remarks         |
|---------------------------------------------|---------|-------------------------|-----------|------------------|-----------------|
| Smart Technology Usage and Self-Help Skills | 0.189   | Negligible Positive     | 0.104     | Do not reject Ho | Not Significant |

\*Significant at  $p < 0.05$  (two-tailed)

Table 9 examined the relationship between smart technology usage and the self-help skills of the learners. The computed Pearson correlation coefficient ( $r = 0.189$ ) indicated a negligible positive correlation between the two variables, suggesting a very weak association. The corresponding p-value of 0.104 exceeded the 0.05 level of significance, which led to the decision to not reject the null hypothesis. This result demonstrated that the extent of smart technology usage at home did not have a statistically significant relationship with the learners' level of self-help skills.

The findings indicated that although learners frequently used smart technology at home, such usage did not significantly influence their ability to perform self-help tasks independently. The negligible correlation suggested that increased exposure to smart technology neither

substantially enhanced nor hindered the development of self-help skills among the learners. This implied that self-help skill development was likely influenced more by factors such as age, parental involvement, daily routines, and direct practice of life skills rather than the frequency of smart technology use alone.

The results implied that smart technology usage, by itself, was insufficient to significantly impact learners' self-help skill development. This highlighted the importance of parental guidance, hands-on experiences, and consistent daily routines in fostering independence among young learners. Educators and parents were encouraged to focus on active engagement, modeling, and supervised practice of self-help activities rather than relying on technology exposure as a primary developmental tool. The findings also suggested that future interventions should emphasize the quality and context of technology use rather than the quantity of screen time.

The findings were supported by previous studies emphasizing the critical role of parental guidance in early childhood development. Oporto et al. (2023) and Luo et al. (2025) reported that while interactive digital media could support learning, parental involvement and real-life demonstrations remained more influential in developing independence and self-help skills. Similarly, Nikken and Schols (2015) found that children's media skills and behavioral outcomes were strongly shaped by parental mediation strategies such as supervision, active guidance, and restrictions rather than technology exposure alone. These findings aligned with Vygotsky's concept of the Zone of Proximal Development, which emphasized scaffolded interactions as essential in promoting self-help skills and independence among young learners.

## CONCLUSION

This study concludes that self-help skills are primarily cultivated through consistent parental involvement, structured routines and practical activities rather than merely through access to or use of smart technology. These highlight the importance of strengthening collaboration between home and school, and equipping parents with effective strategies to promote independence and practical life skills in their children.

The study recommended that the Self-help Skill Enhancement Plan be fully implemented to systematically assess and support the development of kindergarten learners in enhancing their self-help skills. Through consistent application of this approach, parents and teachers can collaboratively work and provide guided activities and routine-based practices that promote independence in daily tasks such as feeding, dressing, toileting and personal hygiene. Furthermore, regular monitoring and evaluation should be implemented to assess the process of development of the learners and to determine the effectiveness of the strategies to identify the areas of concerns that require improvements and additional intervention. Lastly, the study needs the participation of school administration for the support and guidance in implementing Self-help Skill Enhancement Plan to the school for the development of the kindergarten learners

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