

# EXPLORING PARENTS' AND TEACHERS' PERSPECTIVES ON EXECUTIVE FUNCTION OF SCHOOL-AGED CHILDREN IN THAILAND: A QUALITATIVE STUDY

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## ABSTRACT

**Objective:** To explore the perspectives of teachers and parents regarding executive function (EF) skills in school-aged children in Thailand. **Materials and Methods:** A qualitative phenomenological design was employed with five parents of school-aged children and five teachers of school-aged children. Data were collected through video call interviews conducted via Webex and analyzed using thematic analysis. **Results:** The study involved a total of ten participants, consisting of five parents and five teachers. The majority of participants were female (90%). The average age of the parents was 43.4 years, while the teachers had an average age of 44.4 years. Based on in-depth interviews and subsequent data analysis, five main themes emerged: 1) executive function skills are essential self-management abilities that significantly influence the performance of daily life activities; 2) promotion through hands-on engagement positively contributes to the development of executive function skills; 3) activities that involve collaboration with others enhance the development of executive function skills; 4) child-rearing can serve as both a facilitator and a barrier to the development of executive function skills; and 5) educational systems and curriculum structures act as barriers to the promotion of executive function skills. **Conclusion:** Parents' and teachers' perspectives highlight the significance of executive function skills in children's daily lives and development. Limited educational support and insufficient understanding may hinder effective promotion, underscoring the need for accurate public awareness.

**Keywords:** Executive Function, EF, Thai school-aged children, Perspectives

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## INTRODUCTION

### Background and Significance of the Problem

Parents emphasize children's academic and extracurricular growth, with executive function (EF) as a core skill. EF supports reasoning, problem-solving, and learning success (Baggetta & Alexander, 2016), while early self-regulation fosters focus and resilience (Berthelsen et al., 2017). It also enhances social interaction and cooperation (Moriguchi, 2014). EF, especially working memory and inhibition, predicts reading and math achievement (Best et al., 2011), whereas weak EF hinders regulation and school readiness (Diamond, 2013).

School-aged children (6-12 years) begin more academically oriented learning and diverse activities, supported by developing executive function (EF) skills (Dumrongphol, 2017). Significant EF growth in early school years lays the foundation for advanced cognition, behavior, and social interaction into adolescence (Best & Miller, 2010; Best et al., 2011). Strengthening EF is essential for school readiness and predicts reading and math competence across academic years, influencing lifelong success (Diamond & Lee, 2011).

Currently, executive function (EF) training is delivered through multiple modalities, such as analogue activities (paper-and-pencil exercises), computer-based programs, and mobile application platforms (Birtwistle et al., 2025). In addition, real-situation contextual practice, training across various situations, and pedagogical strategies involving explanation and demonstration have also been emphasized (Gunzenhauser & Nückles, 2021). These methods can be further categorized by their methodologies, including individual or group training, and by the training contexts, which may occur in schools, homes, or clinical settings. Research indicates that early application, especially in the initial primary school years, produces the most advantageous results (Birtwistle et al., 2025). Consequently, cultivating executive function from an early age is imperative, necessitating significant participation from both parents at home and teachers in schools to establish consistent and supportive learning environments. Parental, familial, and educational support is essential for the development of children's growth and executive function (EF). Scaffolding inside the Zone of Proximal Development (ZPD) promotes autonomy and skills that exceed children's own capabilities (Darcy, 2014; Jaikla et al., 2023). Affirmative parental perspectives and healthcare assistance increase confidence and developmental results (Seelae et al., 2023). Teachers' comprehension of executive function and its correlation with academic performance enhances students' self-regulation and academic achievement (Biecheler, 2019; Morgan-Borkowsky, 2012).

Occupational therapists play a key role in assessing and promoting children's cognitive abilities, particularly executive function (EF), which underpins daily performance and independence (Gomez et al., 2021). They also support families by educating, advising, and fostering understanding to enhance caregiving practices (Riley & de Sam Lazaro, 2021).

Parent and teacher perspectives significantly influence children's executive function (EF) development, either positively or negatively (Berthelsen et al., 2017; Madanipour et al., 2025). Thus, parents' and teachers' understanding and support are crucial for promoting children's EF skills (Biecheler, 2019; Keenan et al., 2021; Kong & Yasmin, 2022; Madanipour et al., 2025). However, there remains a lack of in-depth information regarding parents' and teachers' perspectives on children's executive functions.

To address this need, the present study was designed to explore parents' and teachers' perspectives on the executive function skills of school-aged children. Understanding these viewpoints provides essential insights into current practices and challenges, serving as a foundation for enhancing knowledge among those who influence children's development, such as parents and teachers, to effectively promote executive function skills.

**Objective:** To explore the perspectives of teachers and parents regarding executive function (EF) skills in school-aged children in Thailand.

## METHODS

### Study Design

This qualitative phenomenological study was designed to explore in-depth the perspectives of parents and teachers on executive function skills in school-aged children.

### Sample group

The inclusion criteria for the parent participants consisted of 1) Be a parent of a primary school student (Grade 1-6) aged 7-12 years with typical developmental progress, 2) Be a Thai national with proficient Thai language communication skills, 3) Be between 30 and 60 years of age, 4) Parents who have lived continuously with the child for at least the past 6 months prior to data collection.

The exclusion criteria for the parent participants consisted of 1) Diagnosed by a doctor with a disorder that may result in inaccurate information, such as schizophrenia or intellectual disability, 2) Cannot provide information by oneself.

The inclusion criteria for the teacher participants consisted of 1) Have more than five years of teaching experience, 2) Be a teacher instructing primary school students (Grade 1-6), 3) Be a Thai national with proficient Thai language communication skills.

The exclusion criteria for the teacher participants consisted of 1) Not currently teaching, 2) Cannot provide information by oneself.

### Instruments

**Demographic Data Form:** Data were gathered on parents' and teachers' characteristics, including gender, age, region of residence, relationship to the child, education level and teaching experience.

**In-depth interview questions on perspectives of executive function skills:** The in-depth interview questions were divided into two sets, one for parents and one for teachers. All questions were open-ended, aiming to elicit participants' perspectives on executive function skills in school-aged children. The questions underwent content validity assessment through IOC analysis, as evaluated by experts, to ensure their relevance in capturing participants' perspectives on executive function skills.

### Data Collection

The data in this study were collected through in-depth interviews conducted between the researcher and the participants via one-on-one video calls using the Webex platform. Prior to the interview, participants were required to sign an informed consent form. In addition, before the interview commenced, the researcher reviewed the consent form with each participant and requested verbal confirmation of their agreement to participate. Following this, the researcher provided an overview of the interview procedures and the estimated duration. The interview consisted of ten questions designed to elicit in-depth insights into participants' perspectives on the executive function of school-aged children. Each interview lasted no longer than 30 minutes. All video recordings of the interviews were kept strictly confidential, accessible only to the research team, and were subsequently transcribed for analysis using the thematic analysis approach.

### Data Analysis

#### Sample size calculation

Convenience sampling was employed. The research team initially planned to recruit 10 participants for the in-depth interviews. This estimation was informed by Guest et al. (2006), who suggested that data saturation often begins to emerge after approximately six interviews and is typically reached by the twelfth. Based on this guideline, the research team determined that a sample size of 10 would be sufficient. After conducting and transcribing the interviews, data saturation was observed at the tenth participant, at which point further recruitment was discontinued and the process of data analysis commenced.

### Participants' characteristics

Through invitations and publicity to parents and teachers to participate in this study, and by conducting in-depth interviews on perspectives regarding executive function skills, a total of 10 participants took part in the study. These comprised 5 parents and 5 teachers, all of whom participated voluntarily, signed the informed consent form, and agreed to be interviewed. The participants' demographic information is presented in Tables 1 and 2.

A total of five parents participated in this study. All participants were female (100%), with a mean age of 43.4 years ( $SD = 6.88$ ). They all resided in the central region of Thailand (100%) and served as the primary mothers of the children under their care (100%).

A total of five teachers participated in this study, comprising one male (20%) and four females (80%), with a mean age of 44.4 years ( $SD = 10.61$ ). All participants resided in the central region of Thailand (100%). Three teachers held a bachelor's degree (60%), while two held a master's degree (40%). In terms of teaching experience, one teacher had 5-10 years (20%), another had 11-20 years (20%), and three had 20-30 years (60%).

## RESULTS

**Table 1** Demographic Characteristics of Parents of School-Aged Children

<b>Parents: n = 5 (100%)</b>	
<b>Gender</b>	<b>Age (years) (Mean <math>\pm</math> SD)</b>
Female 5 (100%)	43.4 $\pm$ 6.88
<b>Region of Residence</b>	<b>Relationship to the Child</b>
Central region 5 (100%)	Mother 5 (100%)

**Table 2** Demographic Characteristics of teachers of School-Aged Children

<b>Teachers: n = 5 (100%)</b>	
<b>Gender</b>	<b>Age (years) (Mean <math>\pm</math> SD)</b>
Male 1 (20%)	44.4 $\pm$ 10.61
Female 4 (80%)	
<b>Region of Residence</b>	<b>Education level</b>
Central region 5 (100%)	Bachelor's degree 3 (60%)
	Master's degree 2 (40%)
<b>Teaching Experience</b>	
5-10 years 1 (20%)	
11-20 years 1 (20%)	
20-30 years 3 (60%)	

The data obtained from the in-depth interview transcripts were analyzed using thematic analysis, following the steps proposed by Braun and Clarke (2006): familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and finally, writing the report. Members of the research team independently conducted the coding and theme development to ensure analytical rigor. Subsequently, the team engaged in collective discussions to compare, refine, and consolidate overlapping themes. Through this collaborative process, the themes were revised to more accurately capture the essence of the participants' narratives. The analysis yielded five main themes: 1) executive function skills are essential self-management abilities that significantly influence the performance of daily life activities; 2) promotion through hands-on engagement positively contributes to the development of executive function skills; 3) activities that involve collaboration with others enhance the development of executive function skills; 4) child-rearing can serve as both a facilitator and a barrier to the development of executive function skills; and 5) educational systems and curriculum structures act as barriers to the promotion of executive function skills.

**Theme 1: Executive function skills are essential self-management abilities that significantly influence the performance of daily life activities**

Children's daily routines vary according to their individual habits. Executive function skills are an essential and necessary set of abilities that enable children to carry out these activities effectively, allowing them to manage themselves and interact with their surrounding environment efficiently.

"In children, executive function can be understood as the ability to manage and regulate themselves. I perceive this as a foundational skill that enables children to further develop and enhance the quality of their daily lives." (007)

"It is very important because when children come to school, especially nowadays, when many of them are only children, they must learn to interact and coexist with their peers. In the classroom, they are expected to carry out various routines and responsibilities, including academic tasks and participation in group activities. Therefore, they need to be able to participate effectively with their peers. If children are unable to manage themselves well, numerous problems can arise in the classroom, ranging from difficulties in learning and following schedules to challenges in taking responsibility and interacting with peers during play. From the teachers' perspective, a common issue observed is children being self-centered and lacking inhibition. By lacking inhibition, it is meant that when children desire something, they expect to receive it immediately. This can lead to conflicts with peers, difficulty in playing cooperatively, and an inability to wait patiently. These factors negatively affect their learning, preventing them from achieving the educational outcomes that teachers aim for." (007)

"EF is about planning, managing, and organizing, like when we carry out a task." (002)

"It is important for school-aged children because they can take responsibility for themselves and help themselves. At the same time, they have to manage both their studies and their time, allocating time correctly for studying, reviewing lessons, and also for playing. This way, they can organize and divide their time properly." (002)

**Theme 2: Promotion through hands-on engagement positively contributes to the development of executive function skills**

From the interviews, participants mentioned various approaches to promoting executive function skills; however, promotion through hands-on engagement in different activities was frequently highlighted.

"Most of the time, they are shown examples or learn from real-life situations. For some specific tasks, they are allowed to start trying it out themselves." (002)

"With guidance and support, they are taught, prompted, and given information. They are given time and participate in activities together, such as helping with household tasks, doing the laundry, washing dishes, sweeping, or mopping the floor. This way, they learn by doing things together." (005)

"It is about training them to do things on their own, with the teacher coaching them. Activities like this help them develop more continuously than just learning from textbooks. These experiences can occur in their daily life. When they gain experience from hands-on activities, they learn various skills that come with doing things, such as interacting with peers, working toward goals, achieving success, exercising inhibition, learning patience, and managing their own responsibilities." (007)

"At school, teachers may incorporate this into their teaching methods, learning management processes, or during homeroom periods and activities with the children. This can help promote executive function a little, allowing children to learn, practice, and try activities related to EF. For example, regarding emotions, they can learn how to manage their own emotions." (009)

### **Theme 3: Activities that involve collaboration with others enhance the development of executive function skills**

Children's participation in various activities promotes different components of executive function skills. Activities that involve collaboration with others appear to be particularly effective in enhancing executive function skills, according to the participants' perspectives.

"First of all, the projects at school are thought to help promote executive function. The projects focus on group work, because in group activities, children get to use their executive function skills fully. Individual work also has an effect. In individual work, as mentioned before, when they have assignments from three or four subjects, they need to know how to manage which tasks to do first and how to carry them out." (008)

"When they work in groups, it helps them develop cooperation and their own creativity. For example, when we give them a project to do, the students create their own mind maps." (010)

### **Theme 4: Child-rearing can serve as both a facilitator and a barrier to the development of executive function skills.**

Parental caregiving is one of the main factors that can influence children's development and various skills, including executive function skills.

"If it affects executive function, the foundation comes from the family. Each child's family background has a significant impact on their ability to manage themselves." (006)

"Yes, parental caregiving plays a role. Nowadays, when children are with their parents, because of the parents' love, they want to help and support them all the time. This can prevent children from learning to do things on their own. Parents may still see them as young children, but in reality, these skills can be trained from an early age. We act as coaches, guiding and supporting them, and encouraging them to have the confidence to do things independently and to rely on themselves. I think the foundation of caregiving from each child's parents is very important." (007)

"Factors? Mainly, it would be teachers, parents, the school, and the environment. For example, for parents at home, they should promote this skill by at least allowing children to think and do things on their own. At school, we try to give them problems to solve frequently." (008)

"Hmm, I think it would be the family and the outside environment. Parenting, care, love, and attention within the family have a great impact on a child's executive function. I have experienced this myself as a parent of two sons, who are completely different. One is a bit reserved, and the other seems more... outgoing. This also depends on the circumstances during each stage of the family's life. With my first child, the parents might not have been fully prepared, so we raised him in one way." (004)

### **Theme 5: Educational systems and curriculum structures act as barriers to the promotion of executive function skills.**

The education system has been continuously developed to improve curricula and promote student learning; however, from the participants' perspectives, these efforts may still be insufficient or face obstacles in promoting executive function skills.

"In the school system, if it is a small school, the education system is not like that of private schools; it is government-run. In terms of budget, procedures, and personnel, it is difficult to provide support unless it relies solely on the teacher." "Yes, both budget and personnel are limited because, as a small school, it does not receive support like private schools. They say there are enough computers for every student according to policy, but in reality, this is not feasible." (006)

"There are many students in the classroom, around 40-50. So, when teaching with only one teacher, the teacher thinks that caring for or helping the children might sometimes not be possible within a one-hour lesson. Moreover, the workload in the teaching profession is heavy, with paperwork and many other tasks. Sometimes, there simply isn't time to provide the support for students as intended. Therefore, the teacher thinks that if the country's education

system could focus more directly on teaching and reduce procedural steps and paperwork, it would be very beneficial for teachers.” (007)

“Well, at this point, education has developed to some extent. Does it promote executive function? I think it probably does to some degree, but not fully.” (004)

## DISCUSSION

This research aims to explore the perspectives of parents and teachers regarding the executive function skills of school-aged children in Thailand. Through in-depth interviews, the study found that participants viewed executive function skills as related to self-management and highly important for daily activities. Various factors and methods were identified that could either promote or hinder the development of children's executive function skills.

From the qualitative data analysis of this study, the participants perceived executive function (EF) skills as abilities related to self-management, including planning daily activities from the moment a child wakes up. These skills contribute to success in various activities, including learning, which aligns with Baggetta and Alexander (2016), who stated that executive function skills are core abilities that influence activity performance and academic achievement. Although the participants' perspectives on EF did not cover all components, they are consistent with the EF model proposed by Diamond (2016), which includes inhibitory control, working memory, cognitive flexibility, reasoning, problem solving, and planning.

Executive function skills, in addition to influencing self-management and learning, also affect social participation and collaborative activities, such as joining peer groups at school or working on group tasks with classmates. This is consistent with the findings of Moriguchi (2014) and Holmes et al. (2016).

In this study, the participants mentioned various approaches to promoting executive function skills, particularly by allowing children to experiment or engage in activities on their own, as well as encouraging them to help with tasks. This aligns with previous research by Diamond (2012), which highlighted that engaging in a variety of activities can promote executive function, and with Tepper et al. (2022), who reported that encouraging children to participate in household chores helps enhance EF.

The environments surrounding children that were frequently mentioned include family, the school community, teachers, and peers. These environments can either promote or hinder the development of executive function skills. Among these factors, family was mentioned most often, as it represents the first social context a child encounters. If children experience warm and supportive parenting, their executive function skills are more likely to develop appropriately. This aligns with the findings of Kong and Yasmin (2022) and Kao et al. (2018), who noted that nurturing and supportive parenting fosters positive executive function development. Conversely, as highlighted in the interviews, inadequate parenting may result in the opposite developmental outcomes for executive function.

Biecheler (2019) stated that it is important for teachers to understand executive function skills and the connections between executive function and learning. Madanipour et al. (2025) further emphasized that teachers play a crucial role in promoting executive function skills through classroom activities, including the use of open-ended questioning. The findings from the in-depth interviews are consistent with this perspective, highlighting the teacher's significant role in fostering executive function among students. However, other factors were also mentioned as barriers, particularly the educational system and curriculum structure, which limit the time teachers can devote to supporting students. Therefore, the education system emerges as another major factor that hinders the development of executive function in school-aged children, both directly and indirectly.

## LIMITATIONS

The data collected from this study were qualitative, obtained from in-depth interviews with participants chosen via convenience sampling. This method has challenges related to sample size and selection. Furthermore, utilizing thematic analysis in the interpretation of qualitative data may add biases stemming from the researchers' viewpoints. These factors may restrict the generalizability of the findings, as the sample may not sufficiently represent the broader population, and the interpretation of data could be affected by researcher subjectivity. To bolster the credibility of the findings, the research team participated in collaborative discussions to evaluate and authenticate the analyzed data. The researchers propose that further studies should aim to recruit more heterogeneous samples and utilize mixed-method research designs that incorporate both qualitative and quantitative methodologies. These kinds of strategies would make research results more reliable, thorough, and accurate overall.

## CONCLUSION

This study explores the perspectives of parents and teachers regarding the executive function (EF) skills of school-aged children, highlighting their essential significance in children's everyday activities and overall development. Environmental influences, such as family, friends, educators, and daily experiences, significantly impact the development of executive function. Nevertheless, the Thai education system may still insufficiently facilitate the systematic cultivation of these crucial cognitive skills. The results indicate that parents as well as teachers frequently perceive executive function only as self-control, neglecting essential elements like working memory, cognitive flexibility, and inhibitory control. This constrained comprehension may diminish the efficacy of executive function promotion in both home and educational settings. Consequently, conveying precise and thorough information is essential for improving awareness and promoting more effective EF development in children. The findings from this study can provide a crucial basis for policymakers, the Ministry of Education, schools, and other pertinent stakeholders by offering contemporary, evidence-based viewpoints from parents and teachers concerning executive function (EF) skills. These findings underscore particular domains requiring further knowledge enhancement and information dissemination, providing a research-informed foundation for the revision of teacher training programs, the adaptation of educational curricula, and the development of EF-related educational resources for parents and the general public. Initiatives should commence by defining and elucidating the essential elements and enduring significance of EF, subsequently introducing pragmatic techniques for cultivating these skills across varied real-life scenarios. When parents and educators have a knowledgeable and cohesive view of executive function, they are more adept at collaborating effectively to continuously support children's executive function development both at home and in school. This collaborative initiative will significantly enhance the comprehensive development of children, who ultimately embody the nation's future.

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**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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