

Article

Parent–Preschooler Writing on an Internet Forum as a Potential Platform for Promoting Respectful Online Discourse and Executive Functions

Coral Ayelet Shachar ^{1,*}, Dorit Aram ^{1,*} and Marie-Lyne Smadja ^{1,2,*}¹ Constantiner School of Education, Tel Aviv University, Tel Aviv 6997801, Israel² Faculty of Humanities and Social Science, Ono Academic College, Kyriat Ono 55000, Israel

* Correspondence: coral@coralsha.co.il (C.A.S.); dorita@tauex.tau.ac.il (D.A.); marielynesmadja@gmail.com (M.-L.S.)

Abstract: This research explored young children’s online writing with the support of their parents. In this pioneering study, we explored the nature of the online discourse. We studied parents’ potential influence on their children’s executive function (EF) development by directing their online discourse. After a workshop in the preschools on supporting children’s writing and the promotion of ethics in online discourse, we encouraged parents to support their children in writing messages to their friends within a closed online forum. We asked them to help their children in responding to a child who had not yet received any comments and in writing new posts. The participants were 174 Hebrew-speaking parents and their children ($M = 65.57$ months) from eight preschools in Israel. We analyzed the written messages ($N = 1167$), including posts and comments. Parents guided their children to write positive, friendly messages that included empathic expressions. We identified 14 themes (e.g., sharing experience) in the posts and 4 in the comments. Despite the positive nature of the online discourse, 49 children did not receive any comments, while others received several. We suggest that guided writing in closed forums can be a good platform for promoting EF and teaching children to use the network empathetically.

Keywords: preschoolers’ online discourse; parental involvement; empathy; parental online monitoring; cyberbullying; self-regulation



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1. Introduction

Children are growing up in an environment that includes smart devices and social networks [1]. Indeed, most preschoolers have access to computers and smartphones [2], and as the technological devices become more advanced, convenient to use, and accessible, the degree of their popularity and their prevalence among preschoolers increases [3].

Alongside its advantages, the Internet carries dangers that are not often recognized by young children. A study by the European Union found that children (aged 9 and older) do not have the skills to identify danger on the Internet, and most of them do not feel safe while surfing on the Internet [4]. One of the dangers is cyberbullying, defined as bullying behavior by a single person or a group using digital means [5]. Cyberbullying is one of the offensive online behaviors and expressions that has gained momentum in recent years [6]. As the Internet enables rapid dissemination of information and exposure to many people, cyberbullying is considered more offensive than face-to-face bullying [7–9]. Cyberbullying includes aggressive behaviors (e.g., hurtful writing, writing lies, or writing unpleasant words) and behaviors of isolating, excluding, or ignoring others [10]. Social isolation and bullying are mainly noticeable in elementary school (ages 7–12) but are also visible in preschool [11,12]. Young children perceived exclusion from the group as bullying [13].

Executive functions (EFs) are significant factors in children’s participation in cyberbullying. EFs are complex managerial functions that are found in the prefrontal cortex

and develop significantly in childhood [14]. EFs enable individuals to control and direct their attention, thoughts, feelings, and actions [15] and include self-regulation, emotional regulation, and cognitive empathy (the ability to understand others' feelings). EFs enable positive social and emotional abilities and respectful discourse [16].

Segundo-Marcos et al. [14] found that three of the main EF abilities mediating participation in cyberbullying were inhibition, self-control, and problem solving. A meta-analysis examining 25 studies on cyberbullying found that young children and adolescents who hurt other children online had a lower level of empathy than those who behaved in an ethically respectful manner [17]. Similarly, Ang and Goh [18] showed that children with lower empathy are more engaged in cyberbullying.

Recent studies have demonstrated that the environment, including parental support and guidance, can strengthen EF and empathy [19–21]. A meta-analysis, in which genetic versus environmental factors influencing the development of child empathy were examined, showed that the home environment affects the development of empathy. The effect sizes were 0.36 for monozygotic twins and 0.23 for dizygotic twins [22].

Parent–child joint activities, scaffolding, and parental monitoring significantly influence the development of children's EF and empathy. The more the parents are involved and guide their children in social situations, the more they can promote these important cognitive abilities, including positive social behavior, inhibition, and empathy [23].

Although our search yielded relatively few studies on parental support of children's Internet use [24,25], those we found indicate that active parental mediation is important. When parents surf the Internet together with their children, they create common rules and understandings regarding online usage and discourse, which reduce active involvement in cyberbullying and risky behaviors online as well as the acceptance of such behaviors. Active parental mediation includes conversations about the use of the Internet, proper online behavior, and guidance to be clear and to avoid unfriendly messages. Such parental support encourages children to be more cautious on the Internet, which is part of EF development [25].

Studies of parents' importance for their children's EF development [21,26] and of the importance of parents' mediation of proper behavior in online activities [24,27] stress parents' ability to influence their children's EF (e.g., self-regulation and inhibition) when active on the Internet. Parents can support their children's EF by guiding their behaviors in cyberspace when there is no physical connection and no face-to-face conversations. These studies suggest that if the parents start this active mediation from a young age, it will allow children to practice and strengthen their EF for a longer period.

In the current study, we focused on how parents implement their potential influence on their children's EF development by analyzing the written online discourse they helped their children create with their friends. We encouraged parents to actively mediate and support their preschool children's writing of messages to their peers within a closed online forum.

We sought to learn about the nature of communication of preschoolers' online conversations mediated by their parents. Our aim was to explore the topics that would arise in such online written conversations, identify the more communicative ones, and examine whether seeds of cyberbullying were detectable as early as preschool age. Because of the pioneering nature of this study, we do not have previous research from which to draw hypotheses, and we present three research questions:

1. What are the characteristics of preschoolers' discourse in online forums when monitored by their parents?
2. Are there any indicators of cyberbullying, like ignored posts or unfriendly posts?
3. What are the topics and modes of messages that parents use to guide their children to write? Do they include less "respectful" topics like complaints or anger? And do they include expressions of empathy?

2. Materials and Methods

2.1. Participants

Eight preschools (children aged 4–6) in a big city in central Israel participated in the study. All the parents in these preschools were invited to participate in a writing initiative within the preschools, and 74% participated. The sample included 174 Hebrew-speaking parents and their children (90 boys, 84 girls). The children's mean age was 65.57 months (ranging from 49 to 89 months, $SD = 6.61$). The mothers' mean age was 37.5 years (range—28–51, $SD = 4.26$). The mothers' education ranged from high school (20.1%) to a professional certificate (14.90%), B.A. (33.3%), M.A. (21.8%), and Ph.D. (2.9%). The fathers' mean age was 39.1 years (range—31–51, $SD = 4.41$), and their education ranged from high school (33.3%) to associate's degree (13.8%), B.A. (25.3%), M.A. (18.4%), and Ph.D. (1.1%). Most of the children (86.8%) came from two-parent families.

2.2. Monitoring Children's Writing on an Online Forum

Looking for a simple and safe platform where it is possible to create closed groups with no advertisements, we created eight closed Google groups, one such "online forum" for each participating preschool.

We then conducted a workshop in each of the eight preschools participating in the study. In the workshop, we taught parents how to support their children's early writing development. We discussed the importance of the atmosphere that the parents create, respecting the child's space, supporting the child's ideas, and empowering the child. We stressed the importance of ethics on the online forums (e.g., respect and empathy) and asked the parents to help their children write at least one message each week and respond to at least one message. We asked them to encourage their children to seek out messages that had received neither attention nor response and to respond to them. We invited the parents to write with their children in the preschool's online forum. We asked them to respect their children's choices and monitor their writing, as children's free will increases their writing motivation [28].

After the parents' workshop, the forums were open for ten weeks, during which parents were asked to write with their child at least twice per week. Each forum participant could write and publish a new post or write a comment by responding to an existing post. We specifically asked that each child write each week at least one new post and at least one new comment on another child's message.

2.3. Procedure

The study took place over ten weeks. During the construction of the forums and the workshops and throughout data collection, we were very careful about the ethics rules [29]. The study received the ethics approval of the Israeli Ministry of Education and the approval of the Tel Aviv University Ethics Committee. We contacted the eight preschool teachers via the Ministry of Education. After we talked with the teachers and explained the general aim of the study, the teachers invited the parents to participate in an educational initiative for the promotion of children's early literacy skills and ethical Internet behavior. We sent the parents a letter that explained the workshop and the study. The parents signed consent forms prior to the beginning of the study. The two-hour workshops were held separately for each preschool in the evening by the first author.

2.4. Data Analysis

To answer our research questions, we downloaded all the messages from the eight forums ($N = 1167$). Content analysis was based on analyzing and mapping online discourse by reducing text into main categories [30]. We then proceeded in four stages:

First, we divided the messages into two categories: posts and comments. A post ($N = 520$) is a new message, and a comment ($N = 647$) is a response to a post. We mapped the communication intent of the writers according to the manner of communication of posts (sharing information, question, and a combination of sharing information and ques-

tion). Second, we focused on the posts and analyzed their themes, classifying them into 14 categories (e.g., sharing experience, greeting, and wishes; see Results section for details). Clear criteria were formulated for each of the categories. For example, “sharing experience” was defined as sharing an event that took place or is about to take place, which is related to the child and their personal and/or family experience and/or that of close friends. Following [31], we coded posts that included content that fit into two categories as belonging to both categories. For example, a post saying, “I went to karate class, and then I walked my dog Choco.” would be coded as the category “sharing experience” and the category “animal”. Third, we analyzed the comments, beginning with an analysis of the type of comments that the posts received (one-way comment, two-way comment, and no comment). We analyzed the themes of the comments and categorized them (see Results section). We counted the number of comments for each post and analyzed which posts received a high number of comments. Fourth, we searched both posts and comments for expressions of empathy.

To establish inter-judge reliability, two coders (Ph.D. and M.A. specialists in child development) mapped 21% of the messages (both posts and comments) ($N = 247$) into categories, reaching 73% agreement in their analysis of the posts and 100% on the comments. All the disagreements were discussed and resolved.

3. Results

We present the analysis of the online messages. First, we present the posts’ manner of communication, followed by the content categories. Second, we introduce the nature of the children’s comments. We analyzed the comments and present the posts that stood out more and received more attention and comments. Last, we examined empathy expression in both posts and comments.

3.1. Posts

With the help of their parents, children wrote a total of 520 posts in the preschool online forums. They shared information (457 posts), asked questions (34 posts), and shared a combination of information and questions in the same post (29 posts).

Posts that included questions (a question or combination of information and questions) received more comments than posts that shared only information. The 63 posts that included questions received 137 comments (217%), whereas the 457 posts that only shared information received 510 comments (110%).

The posts were related to various issues. Aiming to learn about the nature of the online discourse, we qualitatively analyzed the themes of the posts and identified 14 recurring categories:

1. Sharing experience: Posts that share an event that has taken place or is about to occur, which is related to the child personally and/or family and/or close friend’s experience. For example, “I left school early today, I saw a doctor quickly and then ate at a restaurant.” “I went to visit my grandparents.”
2. Greetings and wishes: Posts with a greeting or wishes to a specific child, for example, “Congratulations Yoav.” or to the whole group, for example, “Good night, everybody.” “Love to all.” “Shabbat Shalom.”
3. Sharing feelings and/or desires: Posts where children share something they want to happen. For example, “I want to see Dikla.” “I want a doctor’s corner in the preschool.” “I want to go to a park.”
4. Jokes and songs: Posts that include a familiar text, short story, or song. For example, “Once upon a time, a dog landed on a log.” “Elijah the prophet drinks chocolate.”
5. Addressing the preschool group: Posts addressed to the whole preschool group that include a question, initiative, or sharing relevant information with the group. For example, “What did you do today?” “The sun is the biggest star.”
6. Personal messages: Posts directed to one or some of the children. For example, “Asaf and Ido, I have fun playing with you.” “Feel well, Daniela.” “Hello, Hadar.”

7. Birthdays and gifts: Posts related to the writer's or another person's birthday and to the gifts received. For example, "On Friday, we celebrated my sister's birthday." "When will I have a birthday?" "I will have a birthday party next month."
8. Food: Posts related to food or drink. For example, "What do I like to eat? Olives and pizza?" "Foods I like pasta, chips, and Bamba (an Israeli snack)." "I like ice cream."
9. Toys and games: Posts related to games or toys that the writer or another person has or refers to. For example, "I have two spinners (game) at home." "I play Minecraft on vacation." "I have a parrot from the Kinder Bueno egg."
10. Afterschool activities: Posts related to afterschool activities. For example, "Today I was in rhythmic gymnastics training." "I am in ballet class." "Today I have a karate class."
11. Hobbies: Posts related to things the child likes to do in or after school. For example, "I like to read books." "I like to draw hearts." "I like to ride a bike."
12. Achievements: Posts related to the child's or someone else's achievement or aspiration. For example, "I received a medal today." "I learned how to tell time on a clock." "I won first place."
13. Animals: Posts related to various animals. For example, "I have a rabbit, and her name is Tuna." "I have a beautiful and cute dog." "A toad is an animal that runs fast."
14. Random: Posts that include random words. For example, "Bath."

Table 1 presents the distribution of the posts across these 14 categories and the number of comments that each main category received.

Table 1. Post Distribution by Category: Type, Number of Posts, and Number of Comments Received ($N = 520$).

Category	(N)	Percent (%)	Comments Received (n)
1. Sharing experience	175	33.65	195
2. Greetings and wishes	82	15.77	58
3. Sharing feelings and/or desires	64	12.31	86
4. Jokes and songs	6	1.15	4
5. Addressing the preschool group	71	13.65	128
6. Personal messages	3	0.58	1
7. Birthdays and gifts	20	3.85	40
8. Food	32	6.15	49
9. Toys and games	14	2.69	10
10. Afterschool activities	11	2.11	16
11. Hobbies	12	2.31	24
12. Achievements	18	3.46	21
13. Animals	8	1.54	17
14. Random	4	0.77	3

As seen in Table 1, the more frequent categories were sharing experiences ($N = 175$), greetings and wishes ($N = 82$), addressing the preschool group ($N = 71$), and sharing feelings and/or desires ($N = 64$).

3.2. Comments

Most of the posts received at least one comment ($N = 353$, 64.20%), but 167 posts (32.20%) received none. The comments were mainly a one-way discourse, with a child commenting on a post, without the writer responding, or a two-way discourse, with the

post writer responding to the commenter. Table 2 shows the number of posts according to the type of comments they received.

Table 2. Post Distribution by Type of Comments ($N = 520$).

Type of Comments	(N)	Percent (%)
One-way comment	335	64.42
Two-way comment and more	18	3.46
No comment	167	32.12

As seen in Table 2, most of the posts ($N = 335$) received comments, but as the post's author did not write back to the commenters, no dialogue developed. Only a few posts ($N = 18$) had a dialogue in which the author of the post and the commenters continued corresponding. For example, an exchange between Anael, who wrote the post, and another girl, Yael, who responded:

Anael: "Today, I was at rhythmic gymnastics training."

Yael: "What did you do?"

Anael: "My mother bought me dance shoes, a ball, and a rope."

There were also situations in which the group was conversing. For example, Sarai: "Liri, I hope you'll get better and come back to school soon." Other children responded to the girl's post and joined in the wishes, and in response, Liri wrote, "I missed you too." "Thank you very much, I feel better."

However, 167 posts (from 49 different children) received no comments. Most of these posts were generally similar in content to other posts. Yet, a few included messages that were unclear or a short one-word message (for example, the child's name as a message).

To better understand the online discourse, we analyzed the comments and coded them into four main categories: (1) response (e.g., a post in which the writer asked the group about their favorite game and received responses of games, for example, "I like Lego."); (2) encouragement/reinforcement (e.g., a post in which a girl shared that she broke her leg and received responses of encouragement, for example, "I wish you a quick recovery and that you'll return soon."); (3) additional questions (e.g., a post in which a child shared that he went to the zoo, received a response in which another child asked him what animals he saw); and (4) similar sharing (e.g., one of the girls wrote, "I was very excited about the Family Day party." to which some of the children responded, "I enjoyed it too." "I was excited, too"). Comments that contained content that fit into more than one category were coded into multiple relevant categories (see Table 3).

Table 3. Comments' Distribution across Categories ($N = 647$).

Category	(N)	Percent (%)
Response	105	16.23
Encouragement/reinforcement	248	38.33
Additional question	101	15.62
Similar sharing	193	29.82

As seen in Table 3, most of the comments formed a benevolent discourse (e.g., encouraging a child or identifying and sharing similar experiences). For example, a girl wrote, "I was very excited about the Family Day party." and three children commented back: "I am glad to hear, I enjoyed it too." "I had fun too." "The most fun part was when we had fruit salad."

As part of the comment analysis, we studied which posts received many comments. Table 4 presents examples of posts that received the highest number of comments.

Table 4. Posts that Received a High Number of Comments.

Post Topic and Content	Comments (N)
Animals. I love animals.	9
“Great joy, spring and holiday are here.” (A line from a traditional Jewish Passover song.) What Passover songs do you know?	9
“Remember the flower that the teacher mentioned today?” A sunflower.	9
“Silly rhymes.” Who wants to make silly rhymes? For example, once parrot sat on carrot.	10

Table 4 reveals the nature of posts that received many comments. Out of the 12 posts that received the most comments, 7 contained open questions, and 1 answered a question the teacher asked the children in school.

3.3. Expressions Related to Empathy

We scanned the messages (posts and comments) for expressions that related to empathy. We found 109 empathic expressions that we divided into three themes:

1. Support and encouragement: we identified 38 phrases of wishes for success, health, and fun (e.g., “feel good”, “enjoy your trip”) and compliments (e.g., “beautiful” and “well done”).
2. Expression of love, gratitude, and closeness: we identified 31 phrases that included the word “love” that referred to one or more members of the group; phrases that related to a desire to be with friends (e.g., “I like playing football with you”); and messages that included the phrase, “thank you.”
3. Wishes for a group or specific children: we identified 40 phrases that included greetings (e.g., “Good morning,” “Good day”) and wishes (for example, “Happy Passover”).

4. Discussion

This study is an analysis of the characteristics of a specific type of online discourse—one in which parents of preschool children directed their children to have conversations in a preschool forum. The underlying idea was that parents could lead their children to higher self-regulation and pleasant and respectful expression on the Internet, thereby supporting EF development. Specifically, we were interested in themes that arise in this type of discourse; the extent of meaningful, respectful discourse in the messages (posts and comments); and whether they included indications of bullying, ignored posts, or unfriendly posts. These goals were constructed in accordance with the literature that showed that parents influence the development of their children’s EF and empathy. These high cognitive functions are part of the causes of unregulated discourse and cyberbullying [16,17,19–21]. To the best of our knowledge, this is the first study to examine the nature of preschoolers’ parent-mediated online discourse.

In the messages we analyzed, we found no arguments or disrespectful discourse. The messages were positive and included empathic, supportive messages. We found that the posts’ main discourse categories were sharing experiences, greetings, addressing the preschool group, and sharing feelings and desires. Likewise, children’s comments to posts were respectful and positive. They mainly included encouragement, expansion questions, and sharing of similar experiences. Yet, despite our clear request from the parents in the workshop to encourage their children to comment on many posts so that all the children who wrote posts would feel acknowledged, 32% of the posts did not receive any comments at all.

4.1. *The Nature of Online Forums' Communication Monitored by Parents*

Given that there are no previous studies that analyzed the online discourse of preschoolers (with their parents' support and monitoring), we tried to examine the online discourse based on studies that explored preschoolers' face-to-face discourse [32] and online written discourse of college and university students [33]. For example, [32] found that during preschoolers' face-to-face discourse, the main themes were discussion—exchanging ideas and thoughts with the goal of reaching an agreement; building an imaginary story while playing together (e.g., playing with dolls); and explanation—explaining and building mental and social tools aimed at better understanding the world. The analysis of preschoolers' online posts in the present study showed that most of them were written to share information, which can be perceived as “explanation” because, in these posts, the writers explain and share information about their life, family activities, and thoughts. Similarly, a small number of online posts were written as questions and received different comments. The messages (posts and comments) can be partly perceived as “discussion” because the children exchanged ideas, asked for clarifications, and suggested ideas to each other.

We found that posts that included questions received significantly more comments than posts that shared information. The posts with questions created a continuous dialogue between the writer and the commenters because such posts “call” for a discourse. In face-to-face interactions, discussions are often events of negotiation, in which two or more children present alternative or similar positions on a certain topic and try to change the opinion of those who oppose their opinion through reasons, explanations, examples, personal stories, etc. [34]. These discourse events can range in their intensity from calm discussions to stormy ones and to fights between the participants. One of the significant reasons for this range in intensity is the level of the emotions that are involved in the discussion. Discussions in which those involved have a strong desire to “win,” or topics that involve more emotional issues (e.g., whether one child cheated while the other child claims to have played by the rules) will usually affect clear, rational thinking and be more turbulent.

The findings of the present study revealed that preschool children's online conversations (with parental support) were more relaxed than the discussions reported by [34] and contained positive characteristics and content. For example, “sharing experiences”—writing about events that the children participated in or were about to participate in—was the most discussed category in the online forums. Unlike face-to-face conversations, the online sharing experiences, led by the parents, were controlled and did not create competition or attempts to prevail over the words of others, as happens in face-to-face conversations between preschoolers [33,34].

Studies that examined joint writing activities of parents with their preschoolers found that parents who write with their children are active and not just passive observers [35–37]. Also, during joint writing, parents talk with their children and expose them to a range of vocabulary, comments, formulations, and diverse types of discourse [38,39]. In the present study, it is likely that the parents' supervision, their help in thinking about and choosing the content of the messages, and their need to support their children's actual writing/typing affected the messages. This situation required children to delay their response and contemplate the messages they wanted to write to their friends. This naturally moderated children's feelings and led to calmer content.

4.2. *The Nature of the Comments*

Invisibility on the Internet and feelings of openness cause people to lose their inhibitions in cyberspace [40]. Online discourse gives people the courage to do and say things that they would not in a situation of visibility and the opportunity to express themselves with little self-regulation, even if the writers know each other [41]. Analyzing the comments on the posts revealed two categories: sharing and greeting. Possibly, the joint parent–child writing activity produced more positive references than is common in online conversations of school-age children who write independently, without the presence and supervision

of adults [42,43]. For example, in the current study, when children wrote posts about experiences or about gifts they received, they received positive and encouraging comments.

We also found that children commented empathically on their peers' posts. As can be seen in [23]'s study, joint activities, scaffolding, and parental monitoring significantly influence the development of children's EF and empathy. It seems, in line with previous research [44], that parents' monitoring helped children to think about their writing, discuss the messages, and act in a more empathetic and regulated way. In a meta-analysis of 25 studies, [17] found that EF and empathy are protective variables against engaging in bullying and disrespectful behavior toward others.

In the current study, as part of the workshop, the researchers talked with the parents about the meaning and importance of empathy and, specifically, its meaning for online discourse. Parents were asked to cultivate their children's empathy toward their peers when they helped with their online writing. Indeed, as stated before, the study's findings indicated that children wrote positive, supportive, and empathic comments to their peers' posts. We hope that the workshop stimulated the parents to think about this issue, but we cannot claim that the majority of the empathic reactions are a product of the workshop because we did not conduct an intervention study and we did not include a control group.

Despite the positive nature of the online discourse in our study, 49 children did not receive any comments, while others received several. Interestingly, a lack of responsiveness existed even though, during the workshop, parents were guided to encourage their children to comment each week. Moreover, we guided them to encourage their child to comment first on a post of a child who had not yet received any comments. Also, parents were reminded weekly to help their child to comment on a child's post and write a post. Our finding indicates the need to strengthen the way in which parents foster empathy. We think that this finding suggests that the seeds of cyberbullying can include not only offensive or abusive writing but also ignoring children in the group. This is in line with a recent study conducted in Spain [45] that showed that children feel that being ignored in online discussions (WhatsApp groups) is hurtful and insulting like other types of cyberbullying, such as offensive discourse and exclusion from the group. This raises the importance of parents' involvement in promoting and building their children's online social skills, beginning at preschool age. Parents should explain the power of a group and educate and foster ethical behavior in a group [46]. We recommend implementing parent training aimed at directing children toward self-regulation and empathy in online discourse in an organized manner from early childhood and constructing curricula that introduce directing children toward ethical online behavior.

4.3. Limitations and Future Directions

There are several limitations to the current study. First, our data are limited. We analyzed the messages but did not observe the parents and children when composing the messages. We do not know the nature of the parent-child conversations or how the parents supported their children. Future studies can ask parents to audiotape the conversations. Such data will enable an analysis of the process of parental support of young children's online discourse.

Second, we did not assess the children's social skills and friendship patterns within the preschools, nor did we investigate whether there were children who had difficulties connecting to their peers. Such data could possibly explain why some children did not receive comments on their posts.

Third, our study was not an intervention study, and parents participated only in one workshop. Future research should include interventions providing parents with further guidance and ongoing support once the online groups are opened. This will enable the researchers to evaluate the impact of an intervention that instructs parents on ways to mediate their young children's appropriate online discourse on the children's EF and cognitive empathy. Of further research interest would be following the children's independent online activities when they reach primary school. Possibly, appropriate

parental guidance at a young age may have a long-term beneficial impact on children's online discourse. It will also be interesting to follow the parents and learn whether they continue to be involved in their children's online activities.

4.4. Conclusions

In conclusion, our pioneering study explored young children's online discourse with the support of their parents. Studies show that even in preschool there are seeds of bullying that may later develop into cyberbullying; hence, educating children on ethics on the Internet is important. We found that in our study the posts focused on the children's everyday lives, showed interest in their friends' lives, included empathic expressions, and were respectful. The present study opens a window to a new line of work focused on the ability of parents to engage in online writing forums with their young children as an opportunity to foster empathy and EF skills that were found in previous studies as mediating and reducing variables for cyberbullying. An early start of this type of intervention program may be a window of opportunity for the prevention and reduction of cyberbullying in advance. This study is only a preliminary study, but we hope that it will be an important basis for further studies and for further promotion of children's cognitive and emotional abilities.

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References

1. Turner, A. Generation Z: Technology and Social Interest. *J. Individ. Psychol.* **2015**, *71*, 103–113. [[CrossRef](#)]
2. Kyriakides, A.O.; Meletiou-Mavrotheris, M.; Prodromou, T. Mobile technologies in the service of students' learning of mathematics: The example of game application A.L.E.X. in the context of a primary school in Cyprus. *Math. Educ. Res. J.* **2016**, *28*, 53–78. [[CrossRef](#)]
3. Papadakis, S.; Kalogiannakis, M. Mobile educational applications for children: What educators and parents need to know. *Int. J. Mob. Learn. Organ.* **2017**, *11*, 256. [[CrossRef](#)]
4. Livingstone, S.; Mascheroni, G.; Staksrud, E. European research on children's internet use: Assessing the past and anticipating the future. *New Media Soc.* **2018**, *20*, 1103–1122. [[CrossRef](#)]
5. Aizenkot, D. Cyberbullying experiences in classmates WhatsApp discourse, across public and private contexts. *Child. Youth Serv. Rev.* **2020**, *110*, 104814. [[CrossRef](#)]
6. Campbell, M.; Bauman, S. Cyberbullying: Definition, Consequences, Prevalence. In *Reducing Cyberbullying in Schools*; Academic Press: Cambridge, MA, USA, 2018; pp. 3–16.
7. Festl, R.; Vogelgesang, J.; Scharkow, M.; Quandt, T. Longitudinal patterns of involvement in cyberbullying: Results from a Latent Transition Analysis. *Comput. Hum. Behav.* **2017**, *66*, 7–15. [[CrossRef](#)]
8. König, A.; Gollwitzer, M.; Steffgen, G. Cyberbullying as an Act of Revenge? *J. Psychol. Couns. Sch.* **2010**, *20*, 210–224. [[CrossRef](#)]
9. Smith, P.K.; Steffgen, G.; Sittichai, R.R. The Nature of Cyberbullying, and an International Network. In *Cyberbullying through the New Media*; Psychology Press: London, UK, 2013; pp. 3–19.
10. Jordan, K.; Austin, J. A review of the literature on bullying in U.S. schools and how a parent–educator partnership can be an effective way to handle bullying. *J. Aggress. Maltreatment Trauma* **2012**, *21*, 440–458. [[CrossRef](#)]
11. Alsaker, F.D.; Valkanover, S. Early Diagnosis and Prevention of Victimization in Kindergarten. In *Peer Harassment in School: The Plight of the Vulnerable and Victimized*; Juvonen, J., Graham, S., Eds.; Guilford: New York, NY, USA, 2001; pp. 175–195.

12. Ladd, G.W.; Sechler, C.M. Young Children's Peer Relations and Social Competence. In *Handbook of Research on the Education of Young Children*, 3rd ed.; Saracho, O.N., Spodek, B., Eds.; Routledge: New York, NY, USA, 2013; pp. 33–66.
13. Nordhagen, R.; Nielsen, A.; Stigum, H.; Kohler, L. Parental reported bullying among Nordic children: A population-based study. *Child Care Health Dev.* **2005**, *31*, 693–701. [[CrossRef](#)]
14. Segundo-Marcos, R.; Carrillo, A.M.; Fernández, V.L.; González, M.T.D. Development of executive functions in late childhood and the mediating role of cooperative learning: A longitudinal study. *Cogn. Dev.* **2022**, *63*, 101219. [[CrossRef](#)]
15. Meltzer, L. (Ed.) *Executive Function in Education: From Theory to Practice*; Guilford Publications: New York, NY, USA, 2018.
16. Ott, T.; Nieder, A. Dopamine and Cognitive Control in Prefrontal Cortex. *Trends Cogn. Sci.* **2019**, *23*, 213–234. [[CrossRef](#)] [[PubMed](#)]
17. Zych, I.; Beltrán-Catalán, M.; Ortega-Ruiz, R.; Llorent, V.J. Social and emotional competencies in adolescents involved in different bullying and cyberbullying roles. *Rev. Psicodidáctica* **2018**, *23*, 86–93. [[CrossRef](#)]
18. Ang, R.P.; Goh, D.H. Cyberbullying among Adolescents: The Role of Affective and Cognitive Empathy, and Gender. *Child Psychiatry Hum. Dev.* **2010**, *41*, 387–397. [[CrossRef](#)] [[PubMed](#)]
19. Hughes, C.; Devine, R.T. For Better or for Worse? Positive and Negative Parental Influences on Young Children's Executive Function. *Child Dev.* **2019**, *90*, 593–609. [[CrossRef](#)] [[PubMed](#)]
20. Merz, E.C.; Landry, S.H.; Montroy, J.J.; Williams, J.M. Bidirectional Associations Between Parental Responsiveness and Executive Function During Early Childhood. *Soc. Dev.* **2017**, *26*, 591–609. [[CrossRef](#)]
21. Valcan, D.S.; Davis, H.; Pino-Pasternak, D. Parental Behaviours Predicting Early Childhood Executive Functions: A Meta-Analysis. *Educ. Psychol. Rev.* **2018**, *30*, 607–649. [[CrossRef](#)]
22. Abramson, L.; Uzefovsky, F.; Toccaceli, V.; Knafo-Noam, A. The genetic and environmental origins of emotional and cognitive empathy: Review and meta-analyses of twin studies. *Neurosci. Biobehav. Rev.* **2020**, *114*, 113–133. [[CrossRef](#)]
23. Sarma, U.A.; Thomas, T.M. Breaking the limits of executive functions: Towards a sociocultural perspective. *Cult. Psychol.* **2020**, *26*, 358–368. [[CrossRef](#)]
24. Rega, V.; Gioia, F.; Boursier, V. Parental Mediation and Cyberbullying: A Narrative Literature Review. *Marriage Fam. Rev.* **2022**, *58*, 495–530. [[CrossRef](#)]
25. Wang, L.; Ngai, S.S. Understanding the effects of personal factors and situational factors for adolescent cyberbullying perpetration: The roles of internal states and parental mediation. *J. Adolesc.* **2021**, *89*, 28–40. [[CrossRef](#)]
26. Korucu, I.; Rolan, E.; Napoli, A.R.; Purpura, D.J.; Schmitt, S.A. Development of the Home Executive Function Environment (HEFE) Scale: Assessing its relation to preschoolers' executive function. *Early Child. Res. Q.* **2019**, *47*, 9–19. [[CrossRef](#)]
27. Chen, L.; Shi, J. Reducing Harm from Media: A Meta-Analysis of Parental Mediation. *J. Mass Commun. Q.* **2019**, *96*, 173–193. [[CrossRef](#)]
28. Love, A.; Burns, M.S.; Buell, M.J. Supporting children's emerging writing. *Young Child.* **2007**, *62*, 12–20.
29. Petousi, V.; Sifaki, E. Contextualising harm in the framework of research misconduct. Findings from discourse analysis of scientific publications. *Int. J. Sustain. Dev.* **2020**, *23*, 149. [[CrossRef](#)]
30. Holtz, P.; Kronberger, N.; Wagner, W. Analyzing Internet Forums. *J. Media Psychol.* **2012**, *24*, 55–66. [[CrossRef](#)]
31. Burri, M.; Baujard, V.; Etter, J.-F. A qualitative analysis of an Internet discussion forum for recent ex-smokers. *Nicotine Tob. Res.* **2006**, *8*, 13–19. [[CrossRef](#)]
32. Blum-Kulka, S.; Snow, C.E. Introduction: The Potential of Peer Talk. *Discourse Stud.* **2004**, *6*, 291–306. [[CrossRef](#)]
33. Symeonides, R.; Childs, C. The personal experience of online learning: An interpretative phenomenological analysis. *Comput. Hum. Behav.* **2015**, *51*, 539–545. [[CrossRef](#)]
34. Zadunaisky Ehrlich, S.Z.; Blum-Kulka, S. Peer talk as a 'double opportunity space': The case of argumentative discourse. *Discourse Soc.* **2010**, *21*, 211–233. [[CrossRef](#)]
35. Hindman, A.H.; Morrison, F.J. Differential Contributions of Three Parenting Dimensions to Preschool Literacy and Social Skills in a Middle-Income Sample. *Merrill-Palmer Q.* **2012**, *58*, 191–223. [[CrossRef](#)]
36. Neumann, M.M.; Hood, M.; Neumann, D.L. The Scaffolding of Emergent Literacy Skills in the Home Environment: A Case Study. *Early Child. Educ. J.* **2009**, *36*, 313–319. [[CrossRef](#)]
37. Neumann, M.M.; Hood, M.; Ford, R.M. Mother-child joint writing in an environmental print setting: Relations with emergent literacy. *Early Child Dev. Care* **2012**, *182*, 1349–1369. [[CrossRef](#)]
38. Roberts, M.Y.; Kaiser, A.P. The Effectiveness of Parent-Implemented Language Interventions: A Meta-Analysis. *Am. J. Speech-Language Pathol.* **2011**, *20*, 180–199. [[CrossRef](#)]
39. Zimmerman, F.J.; Gilkerson, J.; Richards, J.A.; Christakis, D.A.; Xu, D.; Gray, S.; Yapanel, U. Teaching by Listening: The Importance of Adult-Child Conversations to Language Development. *Pediatrics* **2009**, *124*, 342–349. [[CrossRef](#)] [[PubMed](#)]
40. Barlett, C.P.; Gentile, D.A.; Chew, C. Predicting cyberbullying from anonymity. *Psychol. Popul. Media Cult.* **2016**, *5*, 171–180. [[CrossRef](#)]
41. Boca-Zamfir, M.I.O.A.R.A. Psychological effects of cyberbullying in adolescence theoretical analysis. *Exp. Appl. Psychol.* **2017**, *1*, 379–383.
42. Kowalski, R.M.; Morgan, C.A.; Limber, S.P. Traditional bullying as a potential warning sign of cyberbullying. *Sch. Psychol. Int.* **2012**, *33*, 505–519. [[CrossRef](#)]
43. Patchin, J.W.; Hinduja, S. (Eds.) *Cyberbullying Prevention and Response: Expert Perspectives*; Routledge: Abingdon, UK, 2012.

44. Arató, N.; Zsidó, A.N.; Rivnyák, A.; Péley, B.; Lábadi, B. Risk and Protective Factors in Cyberbullying: The Role of Family, Social Support and Emotion Regulation. *Int. J. Bullying Prev.* **2022**, *4*, 160–173. [[CrossRef](#)]
45. Feijóo, S.; Foody, M.; Pichel, R.; Zamora, L.; Rial, A. Bullying and Cyberbullying among Students with Cochlear Implants. *J. Deaf. Stud. Deaf. Educ.* **2021**, *26*, 130–141. [[CrossRef](#)]
46. Sam, J.; Wisniewski, P.; Xu, H.; Rosson, M.B.; Carroll, J.M. How Are Social Capital and Parental Mediation Associated with Cyberbullying and Cybervictimization Among Youth in the United States? In Proceedings of the HCI International 2017–Posters Extended Abstracts: 19th International Conference, HCI International 2017, Vancouver, BC, Canada, 9–14 July 2017; Proceedings, Part II 19, pp. 638–644.

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