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Youth and Media in Special Needs Education: Dutch Professionals' Perspectives and Experiences in Practice

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Abstract

It is known that children with special educational needs (i.e., with physical and or cognitive disabilities, and or conduct or social-emotional disorders) are more at risk for problems resulting from media use at home. Yet, how professionals in special needs education (SNE) deal with these media related problems by their students at school has received little attention. To fill this gap 19 professionals affiliated to 3 primary SNE-schools in the Netherlands were interviewed. At these SNE-schools that addressed children between 4 to 12 years old requiring additional support and adaptive pedagogical methods we explored (a) which online risks and benefits professionals encounter from the kind of media their students use, (b) which children are deemed most vulnerable, (c) how professionals deal with students' online problems when they manifest themselves in school, and (d) what professionals need to address these situations effectively. Qualitative content analysis using Boeije's approach of open, axial, and selective coding was applied to the interview data and revealed that, in accordance with former research, the interviewed professionals mainly saw problems like compulsive gaming, watching and playing (too) violent movies and games, and online arguing and bullying. To a lesser extent their SNE-students also received or sent sexual messages or materials. These problems were typically associated with the students' gender, social-emotional or cognitive limitations and conduct disorders. Moreover, professionals also mentioned that the absence of consistent and involved parenting at home highly contributed to children's problematic media use. Professionals found it difficult to solve or prevent problem-related media use that often had started outside of the school. They lacked knowledge about children and media-effects, appropriate media-literacy lessons, structural support from the schools' management, and knowledge how to involve parents. A customized approach that goes beyond the school borders apparently is needed.

Keywords: special needs education; cyberbullying; game addiction; media guidance; media-literacy

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Introduction

Research has indicated that the use of smartphones, game consoles, laptops, tablets and tv-screens can be very pleasurable for children, but that it may also present challenges for their caregivers (Livingstone & Blum-Ross,

2020; Nikken, 2022), and especially in families with neurodivergent youth, i.e., children with special educational needs (SEN; e.g., Alper et al., 2023; Wissink & Kuipers, 2021). Yet, to what extent children's use of media poses a challenge for professional caregivers in special needs education (SNE) has not been researched very extensively. Therefore, this study explores the experiences and perspectives of these SNE professionals on their students' media use.

Special needs education (SNE) schools in the Netherlands address 4 types of children with an extra need for support which is not provided for by regular education, i.e.: students with either physical disabilities, cognitive disabilities, conduct disorders, and or social-emotional disorders (Rijksoverheid, n.d.). Also, SNE-schools educate children aged 4 to 12 years (primary education) and children aged 13 years and older (secondary education). Since these children, as compared to children without special needs for additional support and alternative pedagogical methods, are more at risk for problems related to their media use such as online radicalization, grooming and sexting (Caton & Landman, 2021; Good & Fang, 2015; Wissink & Kuipers, 2021), it would be logical to expect professional caregivers and teachers at SNE-schools to be engaged in their students' use of media and to possibly support them to avoid online risks. That is, however, probably not the case for multiple reasons. First, media-education at all schools is still rarely implemented in any coherent or comprehensive way (Buckingham, 2020), often because it is hindered by factors as a negative school culture and attitudes towards social media, lacking managerial support, insufficient teacher professional development, a lack of clear learning goals and position in the curriculum, and a high work pressure (van den Beemt et al., 2020). Second, children with SEN are a heterogeneous group with different characteristics and different needs, which may also make it more difficult for professionals in SNE to decide which media-literacy approach will be most beneficial for which students. Finally, when we look at the domain of youth care, preliminary research has already shown that many practitioners find it difficult to guide these children's use of media (Good & Mishna, 2019; Nikken, 2020). Professionals experience a lack of time ("There are so many things to be done") as well as a shyness to act ("I don't know how I can start a talk about media with children") and have difficulty in "keeping up with all the rapid technological developments" (de Groot et al., 2022; Nikken & Büttner, 2021). Thus, although, ideally, there should be room for children's media use within the SNE-curriculum these three reasons lead us to expect that this will be difficult to organize for teachers and other professional caretakers at SNE-schools.

Risks of Media Use Among Children With SEN

Several studies about children with SEN and their media use in the home situation point to various advantages and disadvantages of that media use, as well as to challenges for their caregivers, i.e., usually their parents. According to Domoff et al. (2020) hereby, various interrelated factors may contribute to the development of problematic media use in childhood: i.e., distal factors (e.g., family or technology characteristics), proximal factors (e.g., parent, child or peer characteristics) and maintaining factors (e.g., dyadic parent-child or peer-child characteristics). Hereunder we describe how studies of non-educational media use have led us to an understanding of four main characteristics of students who attend SNE-schools that may lead to unfavorable (i.e., sometimes even problematic) outcomes related to their media use.

Motoric and Physical Disabilities

Children and youth with physical disabilities participate less in leisure activities than their able bodied peers, and their leisure activities tend to be more individual and home-based too (Bult et al., 2011). Therefore, these children could be more susceptible for compulsive media use (Good & Fang, 2015; Mazurek & Engelhardt, 2013), which in turn may lead to associated risks like overweight, bad sleeping habits or lower well-being (Hou et al., 2019).

Cognitive Disabilities

Children with cognitive disabilities, such as a mild intellectual disability, often have difficulties with learning, complicated tasks, or executing multiple tasks at the same time (Henley et al., 2006; van Nieuwenhuijzen, 2010), that may translate to their media use. This is corroborated by professionals who work with these children in youth care and often signal problems among these children with understanding how apps function or with getting the right message from tv-shows or other forms of textual information (de Groot et al., 2022; Nikken, 2020). Children with cognitive disabilities often have more difficulty in comprehending language and in controlling their impulsive behavior and, therefore, have more difficulties with interpreting the credibility of online information and with

being resilient against online risks (Delgado et al., 2019). That might explain why these children have higher risks for believing fake information, being involved in sexting or bullying and in compulsive media use (Mazurek & Engelhardt, 2013; Stiller & Mößle, 2018).

Conduct Disorders

Research among children with externalizing conduct disorders, like ADHD (Attention Deficit Hyperactivity Disorder) or violent behavior, has shown that these children often spend a lot of time with electronic screens and prefer violent games, movies, and tv-shows (Beyens et al., 2020; Poulain et al., 2019; Verlinden et al., 2012). Possibly, these children are vulnerable for compulsive media use because of a less developed self-regulation (Good & Fang, 2015; Mazurek & Engelhardt, 2013). Moreover, their caregivers also often use media devices as a coping mechanism for stress in the family (McDaniel & Radesky, 2020) and are high users of media devices themselves (Poulain et al., 2019). These high levels of media use leave less time for contacts with others, physical exercise and sleep, which increases the risk of overweight, and the risk of accepting inappropriate messages from the media. Finally, children with ADHD are also more often involved in cyberbullying as compared to children in regular schools (Touloupis & Athanasiades, 2022).

Social-Emotional Problems

Regarding children with social-emotional problems, like autism spectrum disorder (ASD), studies showed that these children often find it difficult to correctly interpret (online) information and have difficulties with regulating the effects of information on their feelings (Kuo et al., 2015; Lane & Radesky, 2019; Mazurek, 2013). Because of feelings of loneliness or insecurity (Chadwick, 2019), they are also inclined to engage faster in online friendships and they are more indulgent to online requests, what may result in further online risks like fraud or grooming (Caton & Landman, 2021; Wissink & Kuipers, 2021). Children with social-emotional problems were also found to have more difficulties with empathizing with others, which might explain why these children are more often involved in online arguments with others (Kuo et al., 2015; Touloupis & Athanasiades, 2022), or have a higher risk of jealousy and feelings of loneliness or inferiority, when they compare themselves online with others (Probst, 2017).

In sum, based on the results of the above-described studies, we expect SEN-children to experience more media use difficulties. However, this has never been studied from the perspective of the professionals in SNE-schools, even though these professionals spend a lot of time with the children and, therefore, they may also experience or hear about the difficulties around the use of (digital) media the children encounter.

Professionals and SEN-Children' Use of Media

Thus, so far, we know little about the experiences and the views of teachers in SNE-schools regarding their students' media use, i.e., we know of no other published studies on this subject from the perspective of the professionals. We do expect, however, that their students' media use may pose challenges. First, educating children about sensible media use in schools is an important and actual enterprise, but the concept of media literacy also has dealt with ongoing controversies and challenges in the field (Hobbs, 2019). Therefore, the implementation of media education or media literacy or digital literacy is often not well organized in schools (Buckingham, 2020). In the Netherlands, the government asks attention for digital literacy as a main task in education in the coming years (Rijksoverheid, 2022), but how and how much time schools will devote to these lessons is still up to each individual school. So, basically, it is up to the teachers and other professionals in schools to determine what media-guidance and interventions would be suitable for their students. In SNE-schools it may be even harder to determine what is suitable, because of the heterogeneous student population with all kinds of different needs for pedagogical or educational support. Given these different needs and various experiences with media use in SEN-children (because of their different disorders and characteristics), specific media interventions may be needed.

Secondly, research among professional caregivers in Dutch youth care institutions did show that these professionals have rather ambiguous thoughts about the online world, and what this part of today's society could offer their young clients. For example, professionals who work with clients with mild intellectual disability do mention advantages of media for their clients when helped to think about possibilities, but spontaneously more

often mention all kinds of obstacles (de Groot et al., 2022). Also, in residential youth care settings professionals rather focus on regulating and banning media in order to be sure to prevent online risks instead of helping youth making sensible use of media (Good & Mishna, 2021; Nikken & Büttner, 2021). Although these professionals encounter relatively little serious incidents in their daily practice, their general attitude is that it is better that youth with special needs not use media devices (Nikken, 2020). These findings resonate with research among parents with children with special needs; they too can be rather sceptic about the use of media for their children (Alfredsson Ågren et al., 2020). Also problematic is that youth care professionals usually have little understanding of what young people with special needs do online (de Groot et al., 2022). This is combined with little confidence in their own media literacy skills (Nikken, 2020) and not knowing what media may provide youth in a positive sense, which often leads to a passive stance among many professionals towards their young clients (Nikken & Büttner, 2021). They observe what children do, but find it difficult to discuss the topic or to co-use the media with their clients.

Professionals in schools for children with SNE are comparable with professionals in (residential) youth care institutions as the professionals in both domains focus more or less on the same types of children. At the same time, they also differ in important other aspects. At SEN-schools, for instance, students have a more structured agenda each day, there are clearer learning goals, and there is probably more exchange of experiences between the school environment and the outer context, i.e., the home environment, than in youth care institutions. In order to find what kind of problems are experienced in special needs education schools around the media use of SEN children and how professionals are dealing with these issues, this study focuses on the experiences of professionals in SNE-schools and on their perceptions of their students' media use. Via interviews, we aim to explore four themes that, based on the literature, are deemed relevant to SEN-professionals: (a) professionals' perceptions and experiences of their students' (problem-related) media use, (b) whether media use is perceived to be related to specific characteristics of the students, (c) how professionals deal with media related issues in daily school practice, and (d) what professionals need in order to be able to better support their students in using media. We specifically choose the method of interviews, because qualitative methods offer significant advantages when exploring new research areas or phenomena, particularly in cases where a solid foundation of knowledge is lacking (as is the case). Unlike quantitative research that relies on numerical data, qualitative methods delve into the nuances and complexities of the subject matter. With the use of the interview technique we can gain a deeper understanding of the participants' perspectives and experiences. This approach also allows for the identification of factors that can otherwise be missed and the emergence of unexpected patterns or relationships. Finally, the qualitative research method allows hypotheses to emerge organically from the data as researchers gather richer, more in-depth insights. This flexibility allows for a more exploratory and open-minded approach, fostering a better understanding of the (new) phenomenon under investigation. Also, we focus on professionals in primary education, because they work with children who are still relatively new users of (mobile) media. On average, most children receive their own smartphone and start to explore the internet more on their own when they still attend primary education (Mascheroni & Olafsson, 2016; Rideout & Robb, 2019). Ultimately, with the results of the current study, we wish to contribute to a better approach in dealing with media related issues as they are experienced in primary SNE-schools, possibly (depending on the results) with the cooperation of other systems that are relevant to the children's upbringing, such as the home environment or external organizations that also provide care.

Methods

Participants

A convenience sample of 19 professionals were interviewed (16 females, mean age 36.8 years). The professionals were affiliated with three primary SNE-school communities throughout the Netherlands (in both urban and rural areas). Amongst them were 9 teachers, 5 student assistants, 2 remedial teachers, 1 social worker, 1 behavioral scientist and 1 manager. Professionals mentioned that they worked mostly with children with ASD, ADHD, ODD, mild intellectual disabilities and attachment disorders. As far as we know these are indeed the most prevalent characteristics of SEN-school's population (Smeets, 2007), though more actual figures are difficult to obtain. The professionals worked on average 9.89 years within their profession (*SD* = 8.77).

Procedure

Participants were recruited via contacts within schools in the personal networks of the authors and cooperating master and bachelor students. These contacts asked their colleagues in different functions to participate. Prior to the interviews, the respondents received a letter stating that the collected data would be processed safely and anonymously, that the respondent could stop the interview at any time, and that there were no wrong or right answers. These points were mentioned again by the researchers at the beginning of the interviews. Because of Covid19-measures that were in place during data collection the interviews were held online via *MS Teams*. The interviews lasted between 45 and 60 minutes and were recorded. Respondents also signed a consent form and agreed to not mention specific names to guarantee anonymity of any children to be discussed. The interviews were held between March 26 and April 23, 2021, by one of the authors and three master Pedagogy students of the University of Amsterdam and four bachelor Social Work students from Windesheim University of Applied Sciences. Each student had his or her own research question that was connected to the overall aims of this study. Prior to the interviews all students qualified themselves in interview techniques and held several pilot interviews. The study was approved by the Ethical Commission of the Faculty of Social and Behavioural Sciences of the University of Amsterdam (2021-CDE-13040).

Measurements

A topic list for the interviews was developed in several steps, because there were no usable instruments already available. First, a focus group with three professionals of SNE-schools was held to decide what the most relevant topics were regarding the media use of children with SEN. These exchanges of ideas also lead to the 4 research goals. Next, the authors and students constructed various general and specific questions for the interviews, which were tested in pilot interviews and refined with input of the professionals of SNE-schools. As such, the four themes under investigation—(a) professionals' experiences with students' (problem-related) media use, (b) relationships with students' characteristics, (c) professionals' actions to tackle students' problem-related media use, and (d) what professionals need—were addressed in the resulting and final topic list via six main topics (see Table 1). During the interviews, for discussing the 3rd (differences between students) and 4th topic (dealing with media-related issues), the professionals were asked to focus on a media-related issue that, in their eyes, was quite prevalent (please see the Results section for more information).

Table 1. *Topics, Research Themes and Related Interview Questions.*

Topic (research theme)	Interview questions
Use of media (a)	What are your students usually doing with media? How do you feel about the use of media by your students?
Risks and chances (a)	What chances and risks of media use do you see for your students? Are you aware of problems or issues at school that are related to the students' media use? Which of these are quite prevalent?
Differences between students and their contexts (b)	Do you think that some students are more vulnerable for recurring media related issues than other students? Why is that?
Dealing with media-related issues (c)	Can you tell us how you usually deal with these kind of media-related issues at your school? What is your approach or reaction?
Media-literacy (c)	Do you or one of your colleagues pay attention to media-literacy or media guidance in class or at school? How "media-literate" do you think your students are?
Potential solutions (d)	What is needed in your school to be able to deal with media related issues among your students? Can you tell us if and to what extent you feel supported in dealing with your students' media related issues?

Data-Analysis

All interviews were transcribed as a first step. Next, the interviews were analyzed independently using Boeije's (2009) approach; either via ATLAS.ti or via NVivo. Since we had little information about media in SNE-schools as a ground for our interviews, this meant that we used inductive coding to find interesting concepts in the data.

Boeije's approach is a structured method for content analysis that is used to analyze textual data by systematically categorizing and interpreting its content. This method is focused on describing the content of communication and allows researchers to uncover patterns, themes, and relationships within the data. The method of Boeije involves open, axial, and selective coding. As a first step (open coding) each student first analyzed a set of interviews openly, thereby coding relevant text elements and clustering these when they belonged to a certain topic. Next, during the axial coding phase, categories were made of the (clustered) codes and these codes were ordered in main codes and relating sub-codes. Next, in order to check whether these (sub-)codes were indeed relevant the interviews were then re-read. Finally, during the selective coding phase, the interrelationships between the (sub-)codes and the four research questions of the study were analyzed. At several moments during the coding process, triangulation took place: the (preliminary) findings of the students were discussed by all students and all authors together, connecting them to the goals of this study. Interrater reliability has not been calculated.

Results

The analyses of the interviews with the professionals affiliated to SNE-schools resulted in several interesting insights which are discussed below in relationship to the four research themes.

How is SEN-Students' Use of Media Experienced?

According to the professionals, students from SNE-schools primarily used their media devices to relax or because they are bored. However, professionals also mentioned that they did not always have a really good idea of the students' daily use of media. There was consensus, however, about the idea that media became particularly important for students of ten years and older. Their use of media was a very noticeable part of their development and functioning at school, as shows from the following observation:

> "Actually, they are constantly talking about it, both in class and during the breaks. […] Tiktok, yeah, that is very popular. They imitate it, emulate it all. And besides that, we also use Chromebooks in class, and they are on it every day. And they really like it much more to be on the Chromebook from 8.30 AM to 2.30 PM, than watching at the Digi-screen. So, yes, they are, actually, non-stop involved in media" (R2).

Professionals also saw that their students used media platforms like Facebook, Snapchat, and WhatsApp at school, and suspected that all these applications were also often used underway and at home. Moreover, professionals mentioned that they heard from their students that they did a lot of video gaming on game consoles like Sony PlayStation or Nintendo Switch, and on tablets or mobile phones. Often mentioned games were GTA, Roblox, Minecraft and Fortnite; not all games that are intended for younger players. When asked how the professionals felt about the use of media by their students, they often replied that they did not consider their students to be very media-literate, as is illustrated by these respondents: "I think they do not have enough knowledge, to know […], what or whom they should follow or what they should do. I think they quite easily accept and imitate things from, yeah, people who give a bad example" (R2). "Last year, I was really dealing a lot with solving conflicts on social media on a daily basis, and then I thought: this is really not my work!" (R4).

Though the use of media often led to problems, there were some benefits mentioned as well. Moreover, both the perceived problems and benefits seemed to be related to the children's characteristics (i.e., their motoric, cognitive and social-emotional development, see below).

Motoric Development

With regard to the motoric and physical development of students, the professionals were mainly concerned about their perception that many students spent a lot of time behind electronic screens and that they were vulnerable for game addiction, which could result in sleeping problems and too little physical exercise. One professional said: "When I look at them playing outside, like limping, they do not practice certain motoric skills anymore, because they are only sitting behind their PlayStation" (R19).

Other professionals observed that their students often were fatigued, because they stayed up late at home playing games or using their smartphones at night: "I can imagine that some children are still gaming late at night or on their iPad and therefore are very tired. […] Lately, I had such a child who fell asleep in class" (R9).

Compulsive use of media was not a concern for all children, according to the professionals. However, for many students at primary SNE-schools, and mainly the boys, it was perceived as concerning by the interviewed professionals.

Cognitive Development

In light of cognitive development, the professionals saw several benefits of media, especially for learning. Media, for example, did offer students the possibilities to find information about all kinds of subjects online. Also, specific functionalities of media-devices could provide assistance, like reading texts out loud or adapting the type of letters, as shows from this respondent's observation: "We have many children with dyslexia or motoric disfunctions and for them, assistive media can be very helpful" *(*R10).

At the same time, professionals also mentioned disadvantages of media for cognitive development. Especially gaming was considered as problematic for SNE-students. As mentioned before, the professionals perceived that many children played games with 12+ or 18+ ratings, confronting the children with severe violence and or rude language. One respondent said: "Risk is that they encounter these inappropriate language outings that do not match their age, and that makes them transgress the lines" (R13).

Many professionals expressed that their students copied the rude language or showed the violent behavior they saw in the games at the schoolyard.

Social-Emotional Development

For the students' social-emotional development, the professionals also perceived chances. Many students were outsiders or had little friends, however, according to the professionals, these children could participate or were less different from the rest because of the media: "They can just be there and blend in, as a way of speaking [...] yes, because of their mobile phones, they seem to be part of the rest" (R3).

Moreover, via the media, these students could have online contacts and had the opportunity to make friends, which gave them a sense of belonging. Finally, some professionals mentioned that online contacts could also contribute to the students' social skills*:* "Yes, that would be an opportunity, that they can practice certain social skills via a game, that you have to chat with each other and cooperate, for example" (R17).

This potential advantage was, however, not very often mentioned. On the contrary, professionals more often had noticed that their students had online conflicts. The use of social media had often led to rows and disagreements, but sometimes also to lasting cyberbullying or serious threats, with students both as victims and as perpetrators. In addition, the professionals also noticed that students quite easily had contacts via social media with strangers with wrong intentions, and that they were involved in sending or receiving sexual photos and videos. Afterwards, students often had difficulties with dealing with these contacts in a social-emotional way, and this was a big issue for the teachers, since the results of these invoking contacts also showed at school, as shows in these observations: "The first thing that comes to mind is the WhatsApp contacts and the quarrels that appear and the bullying that is going on there" (R18). "Because they really just don't see the consequences, the dangers [...] They cannot draw their own lines and drawing the line via media is even harder" (R4).

Which Factors Are Involved in (Problem-Related) Media Use?

Regarding students who were involved in specific online problems most often, it turned out that the professionals had two types of characteristics in mind. First, they connected the online problems to the disorders or disabilities of the children (child characteristics) and, second, they also often pointed at contextual characteristics of the home environments of the children (home situation).

Relationships With Child Characteristics

The professionals had noticed that especially students with ASD were more vulnerable to (game)addiction, as illustrated by this citation: "At least, I think that, well autism, that those [students] tend to lose themselves in these online digital worlds" (R1).

Moreover, the professionals also noticed that children with problematic externalizing behavior, in particular, more often engaged in shooting games and movies and that they imitated the behaviors and language of these games. Many professionals confirmed that students with problematic externalizing behavior or with ADHD more often were involved in conflicts. Their impulsive behavior made them more vulnerable for online rows, as shows from these citations:

> "One can see that children with ODD or ADHD, externalizing behavior, are more prone to shooting games, violence, using expletives, cursing, arguing [...]. I think that that disorder has a big impact, because the impulsiveness, doing things online without thinking, the boasting, that is all part of their behavioral disorder" (R13).

Compulsive gaming and hyperactive behaviors in tandem with the children's media use were generally more often observed in boys than in girls.

Cognitive limitations that some students had were not often mentioned to be related to online problems or students' media use. The professionals considered a lower social-emotional development, however, as an especially important factor in the explanation of the troublesome use of social media. Understanding one another and knowing what a message could mean to someone else, could be problematic for these students, increasing the chances of online conflicts: "Many students do show large delays in their social emotional functioning, and I think that that is a big risk for them, considering the possible dark sides of the internet" (R18).

Online conflicts and rows were mostly prevalent among girls, according to the professionals. In addition, students with a lower EQ and with attachment disorders also were more often mentioned to be involved in online conflicts, probably because these students had more difficulties in interacting with others, especially when they perceived less nonverbal cues online.

Online problems that involved sexual videos or photos was also seen as typical for students who were more naïve and impulsive, and therefore easier to manipulate. These were often girls who had troubles with being cautious, according to one respondent:

> "And it is quite dangerous, I think, when you post a just too sexy photo on Instagram, but these girls will do so at a certain moment, and what kind of reactions do you get then? [...] There only has to be one wrong person [...], and I think these girls will fall easily for that" (R4).

Yet, problematic sexting, was not only perceived to be related to limited cognitive abilities (that made it difficult for the students to foresee the consequences of their behaviors). According to this professional, another important motive for the students to be involved in sexting was social-emotionally driven. Many students wanted to be accepted and to feel involved and, therefore, they were easily tempted to share sexual materials of themselves and others with their online contacts: "These girls are mainly looking for attention" (R4).

Relationship With the Home Situation

In general, the professionals thought that the home situation of the students also was an important factor for problems related to their media use. Many children in SNE-schools faced more risks in media use, because they were raised in "lower" social economic status families, according to the professionals' experiences: "Quite a lot of parents are struggling. Just the lower educated, not parents with a high education, you know, that is a given fact for how they raise their children" (R1).

According to the professionals, most caregivers were not very media-literate and especially in single-parent families or in divorced families, students were perceived to show troublesome media use. Children were sometimes perceived to be "spoiled" with media, as illustrated by this respondent: "Especially when divorced parents are fighting each other, then they each want to be the nicest parent for their child" (R4).

Other professionals nuanced this observation and indicated that it was not the marital status or the social economic status that was the root of the problem, but the lower parenting capacities to raise the children. A general lack of parental involvement, possibly because caregivers already had too much to deal with, was considered to be indicative of lower parental skills (among others). Many professionals gave examples of home situations where caregivers had little attention for what their children were doing or of caregivers who had no rules or agreements for their children's media use whatsoever, for example:

> "It is all about parental guidance. The children have too much freedom, yes, children can do anything, parents do not have the code to unlock the [children's] phone, they do not know how to get in to check. Many parents do not check on their children, only some do" (R10).

> "Children are at home, really, just alone with their mobile phone, or I also see that many children from my class, can have some spare time in their bedroom when they are alone with their phone, and then these things can happen and nobody sees what is happening. Then these online conflicts arise. It always starts at home" (R4).

Finally, the professionals indicated that some parents did want to be involved, however, they had difficulties in making and keeping rules to regulate their children's behavior: "When these children grow into adolescence, I notice that they are the one's deciding, and certainly not these parents" (R4).

Too little restrictive mediation and insufficient supervision or involvement with children's media use appeared thus to be important underlying factors that increased the risk for SNE-students to show problematic online behaviors.

How is (Problem-Related) Media Use in SNE Dealt With?

The interviews with the professionals indicated that they undertook both preventive and curative actions in response to their students' (problem-related) media use.

Prevention

An often-practiced approach to prevent problems with media was to take in the students' mobile phones at the beginning of the day. Also, some professionals mentioned that certain websites were prohibited and that there were rules in school about what was and what was not allowed online, as shows from this quote: "We really follow the rule here at school that shooting and fighting games are just forbidden" or "It is not allowed to take photo's at school, and if you do, we confiscate your tablet" (R19).

Another approach was to provide media-literacy lessons. Most professionals took part in the national media-literacy campaign each year in November. The interviews, however, also showed that media-literacy lessons were not a structural part of the curriculum due to a lack of money and time. In practice, therefore, most teachers just tried to make their students aware of the risks of media whenever an incident had occurred in order to prevent more problems. Also, professionals often said that they acted on incidents that were in the news, as shows from these observations:

> "There is a campaign week around media-literacy and we do have discussions sometimes with students, but that's just about it, I think. We do not have a full program or something that is really ongoing and interwoven in all our teaching" (R13).

> "I usually try to find out what has been said [on social media], and then I give them the message that I don't like it that they try to solve a problem via TikTok, that it actually increases the problem, because you cannot 'read' one another's faces, it is just anonymous" (R6).

> "When there is a big issue about sexuality [and social media] in the news, then you try to make use of it, because then it really sticks to their mind, I think" (R9).

Finally, professionals also tried to inform the parents of the children about wise use of media, though without much success, for example, according to this respondent:

> "At a certain point you notice that the same problems occur in multiple families and you want to organize an information session. […] But then the parents who are already involved show up at such evenings, and the parents from lower SES and with less parenting capacities, well, they do not come, so you are targeting the wrong audiences, I think" (R7).

Curation

Next to prevention, professionals mainly acted curatively to help students solve problems with media use. For instance, many professionals just started conversations with the students and talked with them about a problem

as soon as possible when things had happened. Also, caregivers were contacted when necessary and as far as that was possible. Next, gathering input from the social worker, student assistant or a behavioral scientist was often a standard procedure. Contact with other professionals, especially from external youth care organizations was, however, not easily organized, as shows from this observation:

> "The alignment with youth care, yes, that can be much better. But it is also complicated. […] Take, for example, game addiction, that is a pattern, a routine, and then you need the cooperation of both parents and youth care to do a lot together. That is tough" (R8).

Finally, the interviews also showed that solving issues around students' media use was usually "customized care", because each situation and each child with his/her specific background asked for a different approach, for example: "So it is really dependent on the student […] and what the best reaction for that child is. For example, whether you can talk about it in a group session at that time or not" (R3).

Many professionals also noted that each class had its own dynamic and that there were big differences. In the end, problems with students' media use seemed to ask for a lot of attention and involvement of both the teachers and other staff members, and seemed to put heavy burdens on their primary task (i.e., teaching).

What Are the Needs of Professionals?

The interviews indicated that professionals in SNE-schools had two basic needs to handle children's media use adequately. First, they wished for closer contacts with the caregivers. Secondly, they saw several possibilities to improve things within their schools.

Parent Involvement

Many professionals expressed hopes for good relationships with the caregivers of their students, as a cure for the perceived media use problems. Stronger relationships would give them a better view of what the students were doing with media at home and which rules applied and agreements were made. Now, the professionals had no clear vision of what was really going on at the homes, as shows form this respondent: "We do not have a good idea of what is happening at home. It is only what we hear from the children" (R17).

Also, the professionals said that they would like to have more of a say regarding the rules for media use at home. Agreements that were made with the students at school should also be applicable at home and should strengthen the cooperation between caregivers and teachers. A concern according to the professionals, hereby, was that it was not always clear who was responsible for students' media use:

> "These problems also happen at home, so a combi […], a cooperation of school and parents would be good. But then you have to have the same ideas and you have to help each other in the guidance. That is not so easy. Then, you are interfering in the home situation" (R3).
>
> "What are the expectations of the parents towards school and what does the school expect from the parents? […] You have to be connected and you have to start the conversation with each other" (R15).

Professionals thus gladly wanted to guide their students, but they expected caregivers to also take their responsibility and act in tandem with the school, which was often not so evident.

Policy Within Schools

Next to parent involvement, cooperation within the school also appeared to be a prominent issue in the eyes of the professionals. Some professionals said that not all teachers were "on the same level" when discussing and solving media related problems. And even when there were school rules, not all teachers abided these rules in their class, as shows from this respondent: "Regarding policy, that is a challenge or a big step we have to take. Do we think that there should be policy on this? And if so, how are we going to realize that?" (R18).

On the other hand, most professionals felt that they and their colleagues agreed on media issues and wanted to work together as a team.

Structural Attention for Media-Literacy

According to the professionals, structural attention for media-literacy in SNE-schools was necessary, both for the students and for the teachers and staff. First, besides the national campaign for media-literacy, none of the professionals mentioned other adequate teaching material that fitted the needs of these students' characteristics. Each respondent referred to the things they did on the spot and none of these involved evidence- or practice-based media-interventions. Additionally, several professionals noted that it was necessary that teachers could implement media-interventions within their curriculum, for example:

> "It would be helpful to have some kind of adapted lessons. What can we give the students over the years and that appeals to them [...] That is missing, the knowledge of what is available and how to use it" (R13).

Finally, the professionals mentioned that they too needed to improve their own knowledge so that their lessons and advice to students and caregivers could be better, as illustrated by the following quote:

> "Maybe some course to follow or a reflection day to give it attention, or some guest lectures for the students. To hand it over to specialists and learn from them, that would be informative for us, to implement in our work" (R4).

Discussion

As far as we know, there have not been many studies on how professionals in special needs education (SNE) perceive the use of media by their students, how they deal with media related issues that occur in their schools, and what they need to adequately handle these media related issues. Because SNE-students have various disorders or disabilities and need extra support, with this study we tried to fill the gap in knowledge about the kind of support SNE-students get in school for their media use. Below, we discuss a) how SNE-professionals experience their students' media use, b) how they deal with that use in class, and c) what is necessary for the benefit of the students.

First, in line with research among professionals in youth care who work with children with disabilities (e.g., de Groot et al., 2022; Good & Mishna, 2021; Nikken, 2020), SNE-professionals said that they saw their students as very active users of media, which lead to problems, but also had advantages. With regard to the potential advantages, facilitated learning was quite prominent which underpins the importance of research into assistive technology for learning in educational settings (e.g., Schladant et al., 2023). Moreover, media technology was also seen by the professionals as beneficial for students' inclusion in the peer group which may have positive impact on students' competence, adaptability and self-esteem (McNicholl et al., 2023). That said, however, the professionals more often mentioned the disadvantages of media use. Although the professionals often lacked direct knowledge about children's use of media outside school, they heard about it from the children in class and for many teachers their students' media use posed a serious theme. Among the most prevalent media-issues were compulsive gaming and emulating media violence, especially among boys, and online rows or serious conflicts, especially among girls. Also, according to the professionals, some students were already involved in sharing sexual videos or photos at a young age. The perceptions and experiences of the professionals are in line with former research findings that indicated a relationship between the vulnerabilities of the students and troublesome media use in the home environment, like ASD and compulsive gaming (e.g., Good & Fang, 2015), ADHD or ODD and extensive media violence and online conflicts (e.g., Stiller & Mößle, 2018), and between lower social-emotional skills and online rows (e.g., Probst, 2017). However, other media related problems that were mentioned in the literature, like overweight as a result of too much media use and not enough sleep or physical exercise, difficulties in handling (too) many tasks at the same time during media use, dealing with fake news, or insecurity among the children because of the perfect images in the media were less often mentioned. Possibly these issues do not manifest themselves that often at SNE-schools or not yet among primary students. Another possibility, however, could be that the professionals did not think of these problems, even though they may have been present. It is possible that the professionals gave answers in line with the general discourse about children and media-effects and therefore concentrated on themes like aggression and addiction. Nevertheless, our results show that professional caregivers who spend time with children with special needs on a daily basis can tell, at least for well-known media-effects, which children with which disabilities or disorders are more at risk. Moreover, for the professionals the issues they mentioned were serious problems.

A new finding in the reports of the SNE professionals was the perceived relationship between the lack of "good" parental mediation at home and media-related problems. Altough having a child with a does not have to be a stressor on family media use (Alper, 2014, 2021), the experiences of professionals in Dutch SNE-schools point out that in practice it often is. It is a big concern for the professionals that caregivers at home seem to have little sight on what their children who have special educational needs are doing online and that the caregivers find it difficult to set rules and enforce them. Almost all professionals mentioned in some way or another that their students' media use depended on how caregivers at home educated their children in using media (or actually how they seemed to refrain from educating their children). This observation makes sense, because children with a need for extra support, for all kinds of reasons, usually grow up in less advantageous home situations (van Binsbergen et al., 2020; Vonneilich et al., 2016), which apparently also has repercussions for children's media use. It was already known from previous studies that caregivers who are single-parent, feel less confident in parenting, or have children who have health or conduct problems more often use media devices as a babysitter to regulate their children's behavior (Nikken, 2019). Also, parents of young children with poor self-regulation often soothe their fussy infants through screen time as a parent coping strategy resulting in more media consumption over time (Radesky et al., 2014). In that sense, our study contributes to the Interactional Theory of Childhood Problematic Media Use (IT-CPU) as suggested by Domoff et al. (2020), stressing the need for researchers to focus on all kinds of factors that may contribute to and maintain problematic media use in children.

Another main finding of current pilot study is that it became clear that professionals in SNE-schools usually tried to prevent online problems in class, for example by restricting the use of mobile phones or ad hoc media-literacy lessons. The overall image, however, is that this preventive approach is not very effective and that students do not become more media-literate. Therefore, professionals keep being confronted with media-related problems that often have their origin outside the school setting. Many SNE-professionals see this as a difficult task, similar to their colleagues in youth care (de Groot et al., 2022; Nikken, 2020). Our research also strongly points to a structural lack of contact with the caregivers at home about the children's media use. The professionals feel responsible for what their students are taught at school, but have little power over what children do outside the school premises, even though these actions do affect their teaching and the school's climate. More research is therefore needed, in which not only professionals can tell how they experience their students' media use, but which also incorporates the experiences and thoughts of the caregivers and the students themselves. Such studies could give more insight in the relationships between students' personal characteristics, their home situations and their media-related issues at school.

Third, regarding the question of what is necessary in daily practice of SNE-schools to adequately support students' media use, the findings give some relevant directions. First, there is a need for more knowledge about children and media-effects among SNE-professionals. Many professionals said that they were shy to act because they were unsure about children's media use at home and what the conditions were, how and which media fitted the children's specific needs, and especially how they could support the children in class in a structural manner so that the students were prepared for less problematic use. Although there is information from the national media-literacy program about lessons in SNE (Netwerk Mediawijsheid; https://www.mediawijsheid.nl/lesmateriaal/) and most professionals participated in the national media-literacy week once a year, it seems that those lessons do not fully match with the needs of the professionals we interviewed. Possibly, existing lessons are not used in SNE-practice, because professionals have too little time to look for those lessons. Currently, primary education in the Netherlands is faced with a high work load among the teachers and a shortage of good personnel (de Weert, 2023). Many professionals are already occupied with all kinds of tasks, besides solving online problems. Another possibility for the mismatch could be that the existing lessons do not match with the specific needs in SNE-practice. An inventory of what kind of media-literacy tools and lessons do exist for SNE and if they should be adapted to the needs of SNE-professionals could give insight in this. It is conceivable that media-literacy lessons should be tailored to the specific child. For instance, lessons for children with, for example ASD, could focus more on issues like compulsive online behavior, whereas for lessons that target children with external behavioral problems, cyberbullying could be a more important teaching goal (cf. Lane & Radesky, 2019). Also, it could be that the existing media-literacy lessons do not adequately acknowledge how to involve the caregivers of different types of children with SEN. Unfortunately, there is still an important gap in our knowledge about which media-literacy lessons and learning goals are needed and should work for which children (Buckingham, 2020; van den Beemt et al., 2020). Finally, there seems a lack of clear protocols or mission-vision blue-prints for school management. Almost all professionals mentioned the use of Chromebooks and digital school-boards for teaching in class, but there was ambiguity in allowing or not allowing mobile phones in classes or on the schoolyard. Developing a clear vision and policy on media at school may help to have the same rules and agreements in different classes and for all teachers,

which is less ambiguous for the students too. Moreover, this may help in improving the bond with caregivers at home and creating a more shared responsibility for guiding children's media use in and out of the school.

It should be noted that the findings of this explorative pilot study also have some limitations. The sample was confined to only 19 respondents affiliated to 3 school communities. Although we tried to capture as many professionals as possible with different roles in SNE, this was not a random sample representative of all professionals. It could be that certain professionals, i.e., those who often experienced problems, were more apt to cooperate in our study than professionals who experienced no problems. A replication among a larger group of professionals is therefore most welcome. Moreover, future studies can also involve more SNE-schools to give more insight in which good and bad practices are applied in dealing with students' online behaviors. This knowledge will benefit the daily practice of many teachers in SNE. Another limitation relates to the initial data-analyses by the students, who each had their own research focus. It is possible that certain aspects in the interviews and in the content analyses by the students have not been met in full depth as they did not relate fully to the students' focus. The chance that students missed these aspects is, however, rather small, because during the research project regular exchanges of information were arranged between the students and the leading researchers. During these triangulations it was carefully monitored that all important aspects got enough attention from all researchers during the coding process.

So, all taken together, professionals in SNE would be helped with an approach to better cooperate with the caregivers at home regarding students' media use, and to better understand how children use media and what the benefits and disadvantages of media are for children with different characteristics, especially for children with SEN. Important in realizing such an approach is that professionals, students and caregivers contribute all, from their own perspective. Only then, a media use approach will really address the needs of children both when they are at their SNE schools and when they are in their home situations.

Conflict of Interest

The authors have no conflicts of interest to declare.

Authors' Contribution

Peter Nikken: investigation, formal analysis, writing—review & editing, supervision. **Emma Middag:** methodology, data curation, formal analysis, writing—original draft. **Inge Wissink:** conceptualization, resources, formal analysis, writing—review & editing, supervision. **Svenja Kuiper-Buttner:** conceptualization, methodology, formal analysis, supervision.

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