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Adolescents' Digital Game-Related Information-Seeking

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Digital games are a very popular medium among people of all ages. While information related to games is in high demand among adolescents, their digital game-related information-seeking remains an understudied subject. This study explored what kind of digital game-related information adolescents seek, and from what information sources. The data were collected from adolescents' essays (N=91) and analyzed using qualitative content analysis. The results show that adolescents seek information on new games, guidance for gaming, and information on games' development, background stories, and future. Information is sought from internet sources, face-to-face sources, and books. The results offer valuable insights on adolescents' information behavior and practices in a wider context as well as adolescents' perspective on digital game-related information-seeking.

Keywords: digital games, video games, metagame, information behavior, information-seeking

Introduction

Information-seeking is a natural activity for humans. Information can be sought both to improve the quality of decisions and out of sheer curiosity about something (Case & Given 2016). Information has always been sought, but technological advances in recent decades, and especially the Internet, have made information easier to access. On the other hand, however, evolving technology also requires its users to constantly learn new tools and literacies to seek and use information effectively (Leu et al. 2014). The ability to seek information is an important skill for every citizen in today's information society. It is part of so-called 21st-century skills (Voogt & Pareja Roblin 2012) and an important piece of information literacy skills (Catts & Lau 2008). The importance of information-seeking is also emphasized in modern curricula (e.g. Finnish National Board of Education 2014), although there is room for improvement not only in children but also in teachers' information-seeking skills (Saikkonen 2018).

The advancement of technology has also accelerated the development and popularity of digital games, which are nowadays a big part of people's everyday lives. Digital games are played by people of all ages and are also very popular with children and young people (Official Statistics of Finland 2019). In addition to gamers themselves, games and gaming have also long been of interest to researchers. Gaming has been studied from the perspective of their negative effects (e.g. Anderson et al. 2010), but also from the perspective of learning (e.g. Gee & Hayes 2012; Kahila et al. 2019; Lobel et al. 2017). Games are also big business, and the growing game industry needs research to support it. Examples of such existing research include player's preferences for help resources (De Oliveira et al. 2017), effects of gaming video consumption on game-related purchasing behaviors (Törhönen et al. 2020), and the impact of innovations, such as crowdfunding on the gaming industry (e.g. Nucciarelli et al. 2017).

The gaming activities are also not limited to playing the game proper, but there are many other activities related to them, and games are today seen as larger systems, consisting of the game proper as well as other activities outside and alongside the game, often referred to as metagame (Elias et al. 2012; Gee 2011). Gamers, for example, assemble and hack their gaming devices, modify the look and functionality of games with various technical modifications (Sotamaa & Wirman 2015), share their gameplay with others in the form of live game-streams and YouTube videos (e.g. Tammy Lin et al. 2019), and create, produce, and share various game-related content and information on the Internet (e.g. Barr 2014; Wu 2016).

Digital game-related information-seeking is a common metagame activity (Kahila et al. 2020). Wilson (2000, 1) defines information-seeking as "the purposive seeking for information as a consequence of a need to satisfy some goal". Players of digital games recognize the need for information when they are stuck in the game and seek information from external sources (Gumulak & Webber 2011; Steinkuehler 2007). They also take advantage of the information shared by others—for example, when considering strategies for progression in the game (Donaldson 2017; Steinkuehler, 2007) or when trying to find new games (Lee et al. 2016).

This study explores adolescents' digital game-related information-seeking as one of their metagame activities. Most existing studies on digital game-related information-seeking have focused on MMO games mostly excluding other digital game genres. In addition, only a few studies focused on game-related information-seeking have used children or adolescents as participants. Nonetheless, several researchers have noted that there is a need for more research on digital game-related information-seeking (Gumulak & Webber 2011; Harviainen & Savolainen 2014; Sourmelis et al. 2017). Agosto (2019, 116) urged researchers to observe the "serious need of more youth-centered, data-driven research studies that aim to examine youth information behaviors and practices from the perspective of youths themselves." This study contributes to this gap of knowledge by exploring adolescents' digital games related information-seeking from adolescents' perspective. The data consists of essays, which were analyzed by using content analysis. This study aims to identify what kind of information adolescents seek, and from what sources they seek digital game-related information. Hence, the following research questions were addressed:

1. What kinds of digital game-related information do adolescents seek?
2. From what information sources do adolescents seek game-related information?

Previous Research

Information-seeking is a widely researched topic, studied from a variety of perspectives in different disciplines, using different concepts and vocabulary (Savolainen 2016). Research on everyday information practices is increasing (Savolainen 2008) and a body of research on digital game-related information-seeking is also emerging (e.g. Adams 2009; Gumulak & Webber 2011). Following the multidisciplinary tradition of game studies (Mäyrä et al. 2013),

this paper approaches digital game-related information-seeking from a multi-disciplinary perspective, borrowing results and concepts from a variety of fields and disciplinary backgrounds.

There is a great deal of information related to digital games available on the Internet, and many games, especially MMO games, also require players to seek, interpret, and organize large amounts of information (King 2013). Players seek information to better understand the game mechanics and to ease progress in the game (Harviainen et al. 2012). Game-related information has a lot of value within games, information can be traded, or exchanged for services, game items or in-game money (Harviainen & Hamari 2015; Harviainen & Savolainen 2014), and information or the ability to find it can also improve a player's social status in the gaming community (Consalvo 2007; Harviainen et al. 2012; Martin & Steinkuehler 2010). In addition to information related to playing and advancing in the game, players also seek information about new games (Gumulak & Webber 2011). Lee, Clarke and Rossi (2016) found that ratings, rankings, recommendations, and visual data such as screenshots and gameplay videos are valued during the information-seeking process before purchase decisions on new games.

However, not all information is welcome by the players, and there is a risk in game-related information-seeking as too much information can also spoil the gaming experience. Players' views on how much information is too much vary (Consalvo 2007; Harviainen & Savolainen 2014). In addition, information is not always sought intentionally, but found coincidentally, for example, as a by-product of watching game streams (e.g. Sjöblom & Hamari 2017). Erdelez (1997) refers to that as information encountering.

Digital game-related information is sought from a multitude of sources on the Internet and from friends (King 2013; Pellicone & Ahn 2018). Information is sought from official sources such as game manuals, but often players prefer to use unofficial information sources (Adams 2009; Sköld et al. 2015). Popular sources of information include various online resources such as tutorials, walkthroughs, game-related forums, and wikis (Harviainen et al. 2012; Sköld 2017). In multiplayer games, information is often sought in cooperation with other players and knowledge building is a conversational and collective effort (King 2013; Martin & Steinkuehler 2010; Steinkuehler & Duncan 2008). The information found is often discussed further in game forums (Steinkuehler & Duncan 2008). Some research studies have suggested that forum discussions resemble scientific discussions and can foster information literacy skills (Steinkuehler 2007) and informal science literacy skills (Steinkuehler & Duncan 2008). Players sometimes use game-related information sources as substitutes when they cannot play the game (Harviainen et al. 2012). Video tutorials

are watched for their entertainment value (Bullard 2013), and game reviews are sometimes read as a recreational activity (Gumulak & Webber 2011).

Game-related information practices have been shown to contain many of the same elements as information-seeking practices in other domains but have also special characteristics (Harviainen & Savolainen 2014). In information studies, information-seeking has been divided into categories. McKenzie (2003) divides it into four categories: active seeking, active scanning, non-directed monitoring, and information-seeking by proxy. Adams (2009) explored information-seeking in the MMO-game City of Heroes and found that players engage in all of McKenzie's information-seeking categories. Players, for example, asked questions in the game forums (active seeking), browsed the forums for news or interesting new posts (active scanning), and discovered game mechanics and learned game interface by non-directed monitoring. Information was also sought and found when other players or non-player characters directed the player to a source of information (information-seeking by proxy).

Digital game-related information-seeking takes place both within and beyond the game (e.g., Gumulak & Webber 2011; Harviainen & Savolainen 2014; Steinkuehler 2007). Harviainen and Vesa (2016) divide a game's information system into three interconnected information systems. The first, retrieval core, is an information system coded into the game, and the second, social system, is where players share information while playing the game. This study focuses on information-seeking in the third, expanded (metagame) information system outside the game, with the purpose of identifying the main patterns of adolescents' digital game-related information-seeking and use of information sources.

Methods

Participants and Procedure

The current study is part of a larger research program designed to explore children's metagame activities. The participants of this study were sixth- and ninth-grade students from three different schools in Eastern Finland. Because the participants were minors, written permission and informed consent were acquired from the participants' guardians. Out of 194 requests sent, 52 permissions approving student participation were not received and therefore these students were excluded from the study.

The data were collected in September and October 2018 as part of the students' normal school day, one class at a time, over two school lessons. A total of 142 students participated in this phase, of whom 73 were sixth-graders (Female = 31; Male = 42) and 69 ninth-graders (Female = 33; Male = 36). During the first lesson, participants were briefly informed about the study and divided into groups of two to four students. Groups were then instructed to discuss and create a list of any possible digital games-related activities they know, in addition to playing the game proper. Each group then presented their list of game-related activities to others. Subsequently, groups were disbanded, and participants were instructed to create their personal list of game-related activities they had participated in relating digital games. After that, students were given an approximately 20-minute break.

At the beginning of the second lesson, the students were able to complete their list of game-related activities and were instructed to write an essay about other gaming-related activities they engage in, aside from playing the actual game. All 142 participants had participated in at least some digital game-related metagame activity, so all essays were analyzed. A total of 91 adolescents, of whom 48 were sixth-graders (Female = 23; Male = 25), and 43 were ninth-graders (Female = 19; Male = 24) wrote about digital game-related information-seeking and were thus included in the current study; 51 essays not containing data about information-seeking were excluded from this part of the larger study. Data were collected and analyzed in Finnish, and quotations in the following sections were translated by the authors. Before the analysis, all the data were transcribed into electronic form, and participants were given pseudonyms.

Analysis

Data were analyzed using qualitative content analysis, as it is well suited for analyzing written data (Cohen et al. 2011). The analysis used an inductive approach to create categories from the data without a theory-based, predefined categorization (Elo et al., 2014). Atlas.ti 8.4 qualitative data analysis software was used for analysis. Data were first analyzed from the perspective of the first research question concerning the types of digital game-related information adolescents seek, and after that from the perspective of the second research question concerning information sources used by adolescents.

Content analysis followed the description by Cohen, Manion and Morrison (2011). The data were read several times to get a general sense of data. The types of information adolescents sought were coded without predefined codes, and codes were named descriptively. The data were revisited, codes

were merged and renamed several times during the process, and to increase the reliability of the inductive data analysis, the resulting categorization was negotiated between the researchers. At the end of this phase, eleven codes remained. Those codes were aggregated into three main themes: choice of a new game, guidance for gaming, and game backgrounds and future.

The same procedure was applied to the second research question. Data were read again several times to get a general sense from the perspective of the second research question. Data were then coded and re-analyzed several times during the process. At the end, six codes remained, which were then aggregated into three categories. The three main categories of information sources were Internet sources, face-to-face sources, and books.

Types of information sought

This study explored what kinds of digital game-related information do adolescents seek. The information sought by the adolescents was divided into three types: a new game, guidance for gaming, and game backgrounds and future. Table 1 shows the categorization of game-related information sought by adolescents.

Table 1: Types of Game-related Information Sought by Adolescents

Choice of a new game	Guidance for gaming	Game backgrounds and future
Game candidate	Game basics	Game world and lore
Requirements and suitability	Game progress	Production process
Opinions and reviews	Development as a player	Future development plans
Purchasing information	Modifications and cheats	

Choice of a new game

Adolescents were frequently looking for potential new games to play, and much of their information-seeking revolved around that aim. Often adolescents ran into new game candidates unintentionally, for example, in advertisements or in discussions with friends, which can be defined as information encountering. However, as old games started to lose their appeal, interesting new games were also actively sought by adolescents. Ninth-grader Sofia wrote: "I often get bored with games, so if I'm bored, I look for new interesting games in the

AppStore. It often takes a while before you find something interesting…" Some adolescents played the same games for a long time, while others sought new games frequently. Some participants spent a lot of time exploring different options when looking for a new game.

Once a game candidate was found, adolescents also sought more information on the game. Information was sought on a game's technical requirements, such as the gaming platforms it can be played on and games' age ratings. Sixth-grader Jasmin wrote: "I've searched for a game's age rating, what kind of game it is, and if it is suitable for me and a good game." Participants sought information about whether playing the game is possible for them with their gaming equipment and whether the game was suitable for them due to its age rating. Information was also sought about the type of game, and whether it matched their preferences for a new game.

Other people's opinions about the game also interested the adolescents. Participants sought information about the popularity of the game, the reviews it has received, and what players of the game have written about it in the game forums. Ninth-grader Joonatan wrote: "Sometimes, if I'm interested in some game, I might seek information on, e.g. Wikipedia or YouTube. I look at what kind of game it is (e.g. FPS, platformer…). I also look at the popularity level and reviews of the game." The popularity of the game, the reviews, and other players' experiences of the game all contributed to the adolescents' perception of the game.

Once the adolescents had a good enough idea of the game, they often sought information about the price of the game and the cheapest possible place to purchase it. Sixth-grader Livia wrote: "I find the cheapest place to get it. I make lists about the game. I do the same thing if I am going to buy an expansion." Information-seeking on new games differed among adolescents. Many participants used their own money to purchase games and were thus motivated to seek information on prices and budget their purchases. However, while some did quite thorough research on the game before purchasing, other participants purchased and installed the games, especially free mobile games, quite frequently.

Guidance for gaming

After getting a new game, the adolescents learned how to play the game. Some of them immediately went to try out the game, but others first sought more information about the game and its mechanics. In addition to the in-game tutorials and instructions, the adolescents sought information, for example, on the basic mechanics and controls of the game from external videos or text-

based tutorials. Sixth-grader Aurora wrote about reading the instructions as follows: "Reading the instructions is an important phase in knowing how to play. Instructions can be read online, or usually they will be displayed before the game starts." Some participants carefully read the instructions and quite highly appreciated their importance for learning game mechanics.

Adolescents also sought information on how to progress in the game. Often information was sought at difficult points in the game that adolescents could not handle or were not tempted to try on their own. Ninth-grader Elisabet wrote: "Last summer, I got the latest Nintendo Switch as a birthday present, along with the Super Mario Odyssey game. It has been a surprisingly challenging and complicated game, and many times I have had to seek help from websites (such as IGN, Polygon)." Sometimes information on how to progress in the game was sought when not stuck at a difficult point of the game, for example, to expedite their progress or to get some specific game items. Ninth-grader Oliver wrote: "In addition to playing games, I've watched videos and tutorials, for example, on how to get some game items." Participants sought information on how to progress in games at different thresholds. Some of them sought information to help them only when they were completely stuck, while others were quick to seek information and help from external sources.

Sometimes seeking information was not related to progressing in the game but to developing as a player. Especially for multiplayer games, where the progress in the game often is not linear, information was sought on tactics and strategies, character features, advanced game mechanics, and special tricks. Ninth-grader Eemil wrote about his quest to become a better player as follows: "I've been practicing my gaming by watching videos, and I always plan my strategy according to the map." Some participants were eagerly looking for information about games to learn to be a better player and to succeed in games.

The participants were also interested in changing the way the game was played, or the appearance of the game through modifications, hacks, and cheat codes. Modifications, hacks, and cheat codes were sought on the Internet, but also instructions on how to install and use them. Ninth-grader Abel wrote:

> "I've modified the call of duty Black Ops 2. I searched for files on the Internet, then edited them and added them to the game files and transferred them to the Xbox with a USB-stick. With mods, I was able to change the server rules and the behavior of other players within the game. I looked for information and guidance on YouTube and on various websites. At first, modding was very challenging, but in the end, it was successful. I also asked for help from other modders."

When there was a real desire to make modifications work, resources, information, and guidance were persistently sought using multiple resources. Sometimes, in addition to finding correct modding files, getting modifications to work required finding instructions, interpreting the found information, and evaluating, combining, and applying sometimes conflicting information found from various sources. In addition to cheats and modifications, participants sought information about bugs and glitches that can give them an advantage in games.

Game backgrounds and future

When adolescents really liked a game, some of them went to great lengths to broaden their knowledge of the metagame, game world, lore and even the game production process, actors, authors, future patches, updates, and plans for a game's development. Sixth-grader Livia wrote:

> *"I searched for information about the games. When I search for information on the web, I look for information like its year of manufacture and glitches, and what you can do in the game. I also look for information about authors, and where they got the idea for the game."*

The information the adolescents were looking for was not always related to the gaming itself. For some participants, games meant more than just a finished product they can play and they viewed the game from a broader perspective, as a cultural product, seeking information about the background of the game, the reasons why the game has become what it is, and the direction of its future development.

Information sources used by adolescents

In addition to types of information sought, this study explored where do adolescents seek for game-related information. Adolescents' information sources were divided into three categories: Internet sources, face-to-face sources, and books. Table 2 shows an overview of information sources used by adolescents.

Table 2: Information Sources Used by Adolescents

Internet sources	Face-to-face sources	Books
Digital distribution platforms	Friends	Books
Video and streaming services	Family members	
Traditional webpages		

Internet Sources

When the adolescents were looking for a new game, they often read game descriptions, ratings, and reviews from digital distribution platforms. Steam, Apple Store, Google Play, and the PlayStation Store were all important sources of information for adolescents in their quest for new games. Ninth-grader Ida wrote the following: "I've been looking for games from the Google Play application. I have checked which games are on the popular games lists and installed some games. Before installing, I read more about the game. I've watched what the game is about, and what you are supposed to do in the game." Adolescents were not shy about downloading and trying out new games from digital distribution platforms, especially free mobile games, but some information-seeking and qualifying was usually done before the game was installed.

Adolescents sought digital games-related information often by default in the video format and video and streaming services such as YouTube and Twitch were popular sources of information for adolescents. Videos were also experienced as not only useful but also entertaining and adolescents often had established and trusted sources of information that they visited first when looking for information. Sixth-grader Matilda writes: "I've watched the game tips from a YouTuber named Paapa. Although he does not share tips, he makes game videos and if I don't know how to complete some level or find a good game, I usually check Paapa." Participants often wanted to see in practice how things are done or what the game looks like instead of just reading the information, and the micro celebrities on YouTube channels were often trusted sources of information for adolescents. Seeing actual gameplay, usually in video format, was also often essential when making game purchases. Ninth-grader Karl wrote: "I watch some videos about the game, and I buy the game based on whether it looks good". Information was often sought in video format to get the best view for both learning to play the game or making a purchase decision. Watching videos often combined both information-seeking and entertainment, as adolescents enjoyed watching videos for entertainment, even when they were not looking for information.

Although video and streaming services were very popular sources of information for participants, they also made extensive use of traditional, written information sources on the Internet. Information was sought from the game's official and unofficial websites, game forums, game blogs, Wikipedia, and from the game's own wikis. Ninth-grader Hugo wrote the following: "I go to check game information, e.g. read the story of the game, get to know the main characters, find out in what country the game was made or where the game developer is from. It is easy to find information in the various forums or on Wikipedia and much more." Adolescents sought information from text-based sources on the Internet for the same reasons that they watched videos, such as progressing in the game and finding new games. However, text-based sources were also used to find information that is not usually found in video sources, or is naturally presented in textual form, such as the game story, production process information, or game cheat codes and patch notes.

Face-To-Face Sources

Seeking information from friends in a face-to-face context was commonplace. Information was sought on various gaming-related issues, such as installing modifications and cheats and advancing in games. Friends playing the same game were, in fact, often the first information source to search for. Sixth-grader Heidi wrote: "I often ask my friends for opinions and guidance. I will also be happy to help them." The adolescents had a low threshold for asking their friends for help and asking and sharing information was often a mutual practice. Adolescents also shared information about information sources. Sixth-grader Gabriel wrote the following: "We ponder together with friends and share tips about videos with friends to help them improve, and usually friends also share tips to help you to play". The development of friends was seen as a positive thing and it was seen to benefit the entire community. Indeed, game-related information-seeking and knowledge constructing was often social and a collective activity occurring among friends.

In addition to friends, information and help was sought from family members, most often from siblings, but sometimes also from parents. Sixth-grader Julia wrote the following about asking her parents for help: "I also ask my parents for some help with games, for example in strategy games, because in such games they know how to help." Parents were usually not the first sources of information that adolescents relied on, but Julia had noticed that parents can help with certain types of games.

Books

The last category of sources of information was books. The participants borrowed books from the library and purchased them. Book types mentioned were game guidebooks and Guinness World Record books (gamers' editions). Adolescents sought information from books on cheat codes, special tricks, and tactics, for example. Sixth-grader Matilda wrote:

> *"Reading a gamebook is a good idea, as you will also learn about it. If you cannot find anything on the web, you might want to look for a gamebook and look there. Gamebooks have, for example, instructions, tactics, and tips."*

In addition to finding books to be useful sources of information along with other sources, they were also considered as an entertaining activity. Sixth-grader Nooa wrote about reading record books as follows: "I read quite a lot of record books. However, I am more interested in gamers' editions. I like to look at game records and more. It also benefits my reading skills." Participants enjoyed reading digital game-related books and looking for information in them.

Discussion

Previous research on information-seeking related to digital games has often focused on MMO games and often used adults as participants. This study explored the kinds of digital game-related information adolescents seek, and from what information sources adolescents seek game-related information. Data used in this study comprised adolescents' essays on their digital game-related activities. The results show that adolescents seek information on new games, guidance for gaming, and information on game backgrounds and future. This information is primarily sought from internet sources, face-to-face sources, and books.

According to Case and Given (2016), information and entertainment have traditionally been distinguished in information-seeking research, even though these two are often intertwined in practice. This is also true considering the results of this study, with adolescents seeking entertainment-related information, often also in the form of entertainment, such as gameplay videos and game streams. Video and streaming services were popular information sources for adolescents, they were viewed both as entertainment and as useful for find-

ing information, and sometimes it was difficult to draw a line between these two. This result is in line with the study of motivations to watch game streams (Sjöblom & Hamari 2017), which showed that information-seeking is rarely the only motive for watching game streams. The result supports studies showing that well-produced video tutorials are sometimes enjoyed as entertainment even after the information they contain has been adopted (Bullard 2012). Furthermore, the result confirms that some information sources are used as a substitute for games when it is not possible to play them (Harviainen et al. 2012). The results showed that watching game videos was very common when considering new games, confirming Lee et. al´s (2016) result of the importance of visual metadata in making a purchase decision.

The results also revealed that information was often sought, and knowledge was constructed in collaboration with friends or other players, and adolescents readily shared sources of information they themselves found useful. This is similar to research with MMO games (Martin & Steinkuehler 2010) and shows that information is sought, and knowledge is often built in collaboration also in non-MMO-games. However, previous studies (e.g., King 2013; Martin & Steinkuehler 2010; Steinkuehler & Duncan 2008) often highlight the importance of online gaming communities in seeking and constructing information. The results of this study show that adolescents' digital game-related information-seeking often takes place in face-to-face situations. A lot of information is sought from the Internet, but as adolescents' everyday life revolves around school, information is sought, discussed, and shared often during school days. This result coheres with the ideas of Savolainen (2008) on the influence of cultural and social factors on people's information-seeking practices.

One unanticipated finding of this study was adolescents' use and appreciation of traditional books as information sources on game-related information-seeking. Research literature often highlights Internet sources (e.g. King 2013; Steinkuehler 2007), but based on this study it seems that books are also an important information source for adolescents in their quest for digital game-related knowledge. A possible explanation could be the age of the participants, as participants often wrote that they borrowed their game-related books from libraries, which are often visited in Finnish primary schools as a regular part of a school´s activities. As defined by the Finnish National Core Curriculum for Basic Education (2014, 79), the purpose of library activities is to "encourage the pupils in their independent reading and personal choices of reading material, satisfy their need for information, and invite them to find information in different sources and assess sources of information". It may be that the digital game-related books participants reported reading were pupils' personal reading choices during school library activities.

Similar to previous studies (e.g. Harviainen & Savolainen 2014), the threshold for seeking information from out-of-game sources varied among participants. However, participants were often very persistent when looking for information, even when the information was not readily available and they had to interpret and combine information from various sources and media, for example, relating to game modifications. This result confirms previous studies (e.g. Gumulak & Webber 2011; Martin & Steinkuehler 2010; Steinkuehler 2007) showing that players engage in various information literacy practices related to digital games. Indeed, game-related information-seeking seems to provide adolescents with a meaningful and motivating way to practice important skills needed later in working life, often also referred to as 21st-century skills (e.g. Voogt & Pareja Roblin 2012).

As an exploratory study, there are also some limitations. The sample size of this study is relatively small, and the study design does not aim at generalization. Also, while self-reports have their limitations, essays by adolescents provided rich data in the participants' own words and revealed new, useful viewpoints to the phenomenon and variations in how it manifests. In addition, although the adolescents wrote generously about their information-seeking, evaluating information was directly mentioned only in a couple of essays. Because evaluating information is an important part of information literacy skills (Catts & Lau 2008), the lack of data on information evaluation can also be considered as a limitation of this study. Therefore, in the future it is important to study how adolescents evaluate the digital game-related information they find, for example, through interviews. Also, as results revealed that adolescents often look for new games on their trustworthy YouTuber channels, and nowadays it is not exceptional that gaming companies pay popular YouTubers for playing and promoting their products (e.g. Törhönen et al. 2020), it would be interesting to study how well adolescents can recognize and how they deal with product promotion on YouTube gaming channels. One could also study the impact of, for example, adolescents' age, or gender on their information-seeking practices.

This study explored the kinds of digital game-related information adolescents seek, and from what information sources adolescents seek game-related information. The results show that adolescents seek information on new games, how games are played, as well as information about game lore and development. Adolescents use Internet sources, face-to-face sources, and books as information sources in their information-seeking. The results of this study provide an overview of adolescents' digital game-related information-seeking and widen our understanding on children metagame activities, providing good starting points for future research. Because digital games are

an important part of adolescents' lives and they actively seek digital game-related information, the results of this study offer also valuable insights on adolescents' information behavior and practices in a wider context.

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