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Mapping media practices of children and young people in Portugal

Cartografía de las prácticas mediáticas de niños y jóvenes en Portugal Mapeamento de práticas mediáticas de crianças e jovens em Portugal DOI: https://doi.org/10.32870/cys.v2024.8809

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This paper explores the media repertoires of children and young people between 11 and 19 years old living in Portugal. Based on 1131 responses to an online questionnaire, it seeks to understand the totality of their media uses and whether and how they combine different media in their daily lives. The variables include age, school grade and sex. One of the primary findings of this research is that, although the students in the sample have a wide range of media in their media repertoires, they mostly use mobile phones and the Internet. The two main purposes of their media consumption are entertainment and communication.

KEYWORDS: Children, young people, media uses, media repertoires, Portugal.

Este artículo explora los repertorios mediáticos de niños y jóvenes de entre 11 y 19 años que viven en Portugal. A partir de 1131 respuestas a un cuestionario en línea, se busca comprender la totalidad de sus usos de los medios de comunicación y cómo combinan diferentes medios en su vida cotidiana. Entre las variables se incluyen la edad, el año de escolaridad y el sexo. Una de las principales conclusiones de esta investigación es que, aunque los estudiantes de la muestra tienen una amplia gama de medios en sus repertorios mediáticos, utilizan sobre todo teléfonos móviles e Internet. Las dos finalidades principales de su consumo mediático son el entretenimiento y la comunicación. PALABRAS CLAVE: Niños, jóvenes, usos mediáticos, repertorios mediáticos, Portugal.

Este artigo explora os repertórios mediáticos de crianças e jovens entre os 11 e os 19 anos que vivem em Portugal. Tendo por base um questionário online aplicado a uma amostra de 1 131 participantes, o estudo analisa a totalidade dos seus usos mediáticos e como combinam diferentes meios no seu quotidiano. As variáveis incluem a idade, o ano de escolaridade e o sexo. Uma das principais conclusões desta investigação é que, embora os repertórios mediáticos dos alunos da amostra sejam constituídos por uma vasta gama de meios, os seus usos centram-se sobretudo no telemóvel e na Internet. Os dois principais objetivos do consumo de media são entretenimento e comunicação.

PALAVRAS-CHAVE: Crianças, jovens, práticas mediáticas, repertórios mediáticos, Portugal.

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INTRODUCTION

In recent years, much has been written about the interrelationship of media with everyday life, with a particular emphasis on digital technologies. Floridi (2015), a prominent information philosopher, introduced the concept of *onlife* to describe the connection between online and offline aspects of human existence in the digital age.

The idea of *onlife* underscores the impression that our lives are increasingly shaped by the digital environment, blurring the boundaries between physical and virtual realms. This proposition, that emphasizes the pervasive influence of digital technologies on contemporary life, brings us back to the concept of *media ecology*, a theoretical framework developed by McLuhan (1964), Postman (1970) and others.

Media ecology examines how different media intervene in our daily experiences and shape our understanding of the world, but this is not the only approach. As indicated by Scolari (2015), the ecological metaphor applied to the media presents at least two interpretations: "the media as environments" and "the media as species". The first definition is the most classic, we might say: "the technologies –in this case, the technologies of communication, from writing to the digital media–create environments that affect the subjects" (p. 29). The second refers to the "evolution of communication and socio-economic processes" and "could be defined as the *intermedia dimension of media ecology*. Following this interpretation, the media are like 'species' that live in the same ecosystem and establish relationships among themselves" (p. 30).

The present article concentrates on the second definition, aiming to reflect on children and young people's media uses, including single use and the combination of them. Given the diversity of media options, understanding this combination is particularly important if we consider technologies as more than tools. The apprehension of media as environments that influence the way the public sees the world, and in the current instance, children and young people, highlights the importance of comprehending how media, as a species, are combined and used.

⁵ It is particularly linked to the definition presented by Postman (1970) when he coined the term.

At a time when the media seems to converge to the Internet, especially within youth culture, we aim to understand whether and how children and young people combine different media in their daily lives, seeking an overall view of their media practices. To this end, this paper explores the media repertoires⁶ of children and young people living in mainland Portugal, attending sixth, ninth and twelfth grades in public schools with an age range between 11 and 19 years old. The analysis considers 1 131 responses to an online questionnaire and seeks to analyze how young users combine different forms of media, creating a comprehensive pattern of media use (Hasebrink & Popp, 2006).

MEDIA ECOLOGY:

A COMPREHENSIVE APPROACH TO MEDIA PATTERNS

According to Strate (2008), "media ecology is the study of media as media" (p. 30). In essence, this resonates with the aphorism "the medium is the message" by McLuhan (1964, p. 7), i.e., understanding media requires looking at their role in apprehending reality.

Although explored by McLuhan in previous works, such as *Understanding Media: The Extensions of Man* (1964), the term "media ecology" was applied for the first time in 1968 by Postman (Strate, 2004). The use of the term *ecology* is inspired by the terminology of environmental research models comprising the relationship between structure, content and interaction. In the collective sphere, it reverberates on interpersonal relationships and forms of communication, while on the personal level, on how individuals process information and feelings (Postman, 1970). This definition refers to Scolari's (2015) first interpretation of the ecological metaphor applied to media, "the media as environments" (p. 29).

Media as species, the intermedia dimension of media ecology, is the second interpretation of the ecological metaphor. This definition

The conceptual framework is inspired on Hasebrink and Popp (2006), however, the article does not consider the diversity of empirical dimensions presented by the authors, nor the combination of qualitative and quantitative approaches particularly explored in Hasebrink and Domeyer (2012).

can also be found in media ecology classics (Scolari, 2015) and in Nystrom's (1973) statement that every medium of communication does not function in isolation but affects one another. According to this premise, media are similar to species that cohabit in the same ecosystem and establish relationships with each other.

Today, this coexistence is complexified within a framework of media convergence that implies integrating multiple forms and functions in the same device or platform, offering an integrated experience (Jenkins, 2006). As a result, the expression "and so you can do some things on some media that you cannot do on others" (McLuhan, 2009, p. 245) is somewhat obsolete since a single medium can perform multiple functions to respond to a variety of purposes (Hasebrink & Paus-Hasebrink, 2022).

Hence, the media repertoire approach furthers the understanding of the totality of media practices, by focusing on the multiplicity of uses and combination of different technologies.

MEDIA REPERTOIRES:

COEXISTENCE AND RELATIONSHIPS BETWEEN SPECIES

The idea of repertoires is not new in the context of media studies and is associated with the multiplicity of media choices. For example, in television studies, the term "channel repertoire" (e.g., Heeter, 1985; Yuan & Webster, 2006) was used as "the set of channels watched regularly by an individual or household" (Heeter, 1985, p. 133) or as "the subsets of available channels that viewers actually watch" (Yuan & Webster, 2006, p. 524). The concept of "information repertoire" refers to "the set of sources that a person may select for a topic" (Reagan, 1996, p. 114) given multiple platforms.

The media repertoire approach focuses on a comprehensive perspective by emphasizing extensive patterns of use, instead of analyzing each medium in isolation.⁷ According to Hasebrink and

^{7 &}quot;The basic idea of a repertoire-oriented approach to media use does not specify on which level media use is described. There is just the abstract principle of analysis to search for patterns of exposure, for combinations of media behaviours. Thus, a repertoire can be made up by certain portions

Domeyer (2012), "the media repertoire of a person consists of the entirety of media he or she regularly uses" (p. 758). The selective exposure results in a combination, including distinct patterns of media and content characterized as media repertoires (Hasebrink & Popp, 2006).

This approach is centered on the user (sociocentric), on the totality of media (all variety) and on the relationship between the media, with a focus on the interrelations and functions of each media repertoire component. In this sense, the approach emphasizes the combination of media and not solely on the sum of its parts (Hasebrink & Domeyer, 2012).

There are three reasons presented by Hasebrink and Popp (2006) for opting for this type of analysis: 1) new media do not necessarily replace traditional ones but can rather contribute to functional differentiation; 2) the development of cross-media strategies by the industry, and 3) the effects of the media in a multimedia environment needs to consider the totality of them and not just one.

The creation of different patterns of use may be associated with structural (for example, audience availability) and individual factors, such as preferences (Kim, 2016; Taneja et al., 2012). The possibilities of connection anywhere and at any time do not seem to invalidate the importance of daily routines and media structures (Taneja et al., 2012). Individual characteristics, such as age and education, are also explanatory factors (Kim, 2016; Taneja et al., 2012). Widely interwoven in everyday life, media repertoires are, therefore, complex ecosystems in which different species coexist. According to Schwarzenegger (2020), the analysis of media repertoires includes a combination and availability of different elements, and the intersectionality between individual choices and social contexts. These elements are not fixed and are constantly changing based on

of use of media in general (e. g., TV, radio, newspapers, Internet, etc.), or by certain topics used in any media (e. g., politics, economy, sports, culture, etc.), or by certain genres (e. g., drama, comedy, action, romance, etc.)" (Hasebrink & Popp, 2006, p. 375). The analysis carried out for the purposes of this paper follows the first level of analysis.

multiple factors such as age, personal choices and access. Meanings and purposes associated with each medium that compose the repertoire are also susceptible to change.

In this paper, media repertoires are analyzed based on the media uses of children and young people, whose culture increasingly appears to be an Internet one (Livingstone, 2022). Based on their own perspectives and recognizing that children and young people play an active role in shaping their consumption habits, it was identified the extent of their media usage, and how they combine various media into daily routines.

METHODOLOGY

The study presented in this paper is part of a four-year research project entitled *bYou: Study on children and young people's experiences and expressions of the media*, funded by the Portuguese Foundation for Science and Technology. Carried out with children aged between 11 and 19, attending the sixth, ninth and twelfth year of school in Portugal, it has the following objectives: 1) to present a broad picture of children's everyday media uses and experiences and to analyze the aspects that arouse greater or lesser interest to them; 2) to map the media repertoires of three different age groups that comprise three different levels of schooling: 11 to 12-year-olds (sixth grade), 14-16 (ninth grade) and 17-19 (twelfth grade), and 3) identify preferred media choices, as well as changes according to school year/age.

Based on these objectives, the study is guided by the following research question –borrowed from Hasebrink and Popp (2006)–: "what is the result of different forms of selectivity, how do [young] media users combine their media contacts into a comprehensive pattern of use, into their media repertoire?" (p. 371).

Data was collected from an online questionnaire applied in schools between December 2021 and February 2022. Following a non-probabilistic sampling technique and with the aim of covering the entire area of mainland Portugal, a school cluster was selected in each NUTIII,⁸

NUTS refers to a common classification of territorial units for statistics in the European Union. NUTS are divided into three different levels, 1, 2 and 3. See more at European Union (2023).

(a total of 23), following criteria of convenience and availability of schools. Additionally, three more school clusters were included: one from the Porto urban area (the second largest city in the country); another from the Lisbon urban area (the capital); and another from Braga, the city to which the University of Minho belongs and from which the project is being conducted. After the schools were selected and contacted, the questionnaire was administered online in the classes previously indicated by the school management —one class from each intended school cycle per school cluster. For the selection of schools and the application of the questionnaire, support was provided by the Network of School Libraries of Portugal. The questionnaire was administered with the support of librarian teachers.9

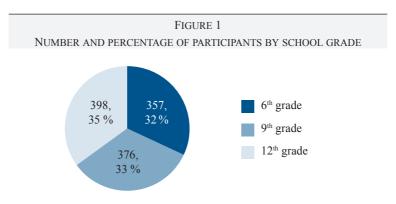
The guardians of all children and young people in the selected classes were given an informed consent form communicating them about the project, its objectives and the way in which the data would be treated. Informed consent was also given to each participant. Questionnaires were only administered to participants who had both consents signed.

The final sample consists of 1 131 children and young people aged 11 to 19,10 from 78 classes (26 from the sixth grade, 26 from the ninth,

The study received a favorable opinion from the Ethics Committee for Research in Social and Human Sciences at the University of Minho (CEICSH 041/2022). The application of the questionnaire was also authorized by the General Directorate of Education (n. 0542500001).

In Portugal, compulsory education consists of four cycles of study. In this study we have included three of these cycles: second cycle, third cycle and secondary education (we have only not included the first cycle, which corresponds to students aged between 6 and 10). The final year of each cycle was selected for the sample: sixth year (final year of second cycle); ninth year (final year of third cycle) and twelfth year (final year of secondary school). We were therefore interested in looking at the specific characteristics of the children and young people in each cycle, but also in looking at the evolution between the cycles and the corresponding ages. Our aim was therefore to study children and young people between the ages of 11 and 18, analyzing their specific characteristics but also what remains

and 26 from the twelfth grade). As presented in Figure 1, of the total sample (N = 1131), 32% (n = 357) attend the sixth grade, 33% (n = 376) the ninth grade, and 35% (n = 398) attend the twelfth grade.



Source: The authors.

The ages between 11 and 12 indicate on average students enrolled in sixth grade. At the time the questionnaires were applied, 65.7% were 11 years old, and 31.2% were 12 years old. However, nine students (2.5%) were 13 years old. Regarding the ninth grade, the average age range is 14-15 years old. According to the sample, 65.1% were 14 years old and 26.4% were 15. The remaining 8.5% represents older students, the majority were over 15 years old. Twelfth grade students are generally between 17 and 18 years old. Among respondents, 64.9% were 17 years old, 30.3% were 18 years old, and 4.8% were aged 19. Four students did not specify their age. Table 1 presents the distribution of the participants by age and school grade.

the same and what changes as they grow and develop. Although each of these cycles corresponds to a certain age group, there are circumstances that mean that there are younger or older pupils in each cycle. That is why our sample ended up extending to 19 years of age, since some twelfth graders were that age when we carried out the study.

Age/	6th g	rade	9th g	rade	12th grade		Total	
Years	n	%	n	%	n	%	n	%
11	234	65.7	1	0.3	0	0.0	235	20.9
12	111	31.2	0	0.0	0	0.0	111	9.8
13	9	2.5	3	0.8	0	0.0	12	1.1
14	2	0.6	244	65.1	0	0.0	246	21.8
15	0	0.0	99	26.4	0	0.0	99	8.8
16	0	0.0	23	6.1	0	0.0	23	2.0
17	0	0.0	3	0.8	257	64.9	260	23.1

0.5

0.0

100.0

120

19

396

30.3

4.8

100.0

122

19

1127

10.8

100.0

1.7

TABLE 1
PARTICIPANTS BY AGE AND SCHOOL GRADE

Source: The authors.

0

0

356

0.0

0.0

100.0

2

0

375

18

19

Total

Although relatively balanced, the percentage of girls in the sample is higher than that of boys (55.2% and 41.8%, respectively). The option "I would rather not say" was selected by 3% of the sample. The low frequency made cross-checking variables unreliable. For this reason, it was not included in the analysis of results. Table 2 summarizes the constitution of the sample by school grade and sex.

TABLE 2	
PARTICIPANTS BY SEX AND SCHOOL GRADE	

Sex	6th grade		9th grade		12th grade		Total	
	n	%	n	%	n	%	n	%
Girls	185	51.8	180	47.9	259	65.1	624	55.2
Boys	160	44.8	182	48.4	131	32.9	473	41.8
I would rather	12	3.4	14	3.7	8	2.0	34	3.0
not say								
Total	357	100.0	376	100.0	398	100.0	1131	100.0

Source: The authors.

Most of the respondents have parents with secondary or higher education (66% of the mothers and 52% of the fathers), who are mainly qualified workers. Two professional categories stand out among the mothers: specialists in intellectual and scientific activities (20%) and personal service, security and safety workers and sales staff (20%). Between fathers, the category of skilled workers in industry, construction and craftsmen is the most prominent (31%).

Statistical analysis was performed using IBM SPSS Statistics software. The coding of open-ended questions was accomplished through categories created afterwards and applied by two project members. The variables of analysis in this study include age, school grade and sex.

To create their media repertoires, participants were asked to rank in order of importance a set of 12 options from a list provided to them. Internet use (browsing) and use of social networks were deliberately separated into two distinct options in order to better understand the significance of these environments in the participants' media consumption. Activities that can be carried out online, such as reading newspapers, are also a distinct category to enable understanding the degree of importance among children's and youth media uses.

Participants were required to indicate the main function performed by each medium in their daily routines, including the most and least used media. The definitions indicated by the respondents were coded and then inter-coded within the totality of answers. For each medium, it was identified the two most mentioned purposes.

In cases where the second function presented a low frequency, i.e., less than 50% in relation to the first most common answer, the response was not included. Based on statistical analysis, the media repertoires for each school grade were identified.

RESULTS

The data gathered for this study presents a systematization of children and young people's patterns of media usage, including their preferred options and motivations.

Children and young people's media access

Children and youth are constantly connected to the Internet. Their media access is associated, among other factors, with a convergence of mobile technologies, where older and newer technologies interact on a regular basis.

Table 3 presents the means/equipment/services they have access to, either for individual or collective use. The data represents the totality of the sample.

TABLE 3					
PARTICIPANTS' MEDIA ACCESS					
	0/0				
Ebook reader	9.4				
Printed or online newspaper	38.5				
Radio	52.1				
Tablet	62.3				
Gaming console	63.1				
Streaming services	71.3				
Spotify or equivalent	75.0				
Television	96.3				
Internet	96.6				
Computer with Internet access	96.8				
Mobile phone	98.9				

Source: The authors.

Responses indicate commonalities among all three age groups and years of schooling, especially regarding access to mobile phones, computers with access to the Internet and television.

Mobile phones are the most predominant among all media (sixth grade, 97.8%; ninth grade, 98.7%, and twelfth, 100%) followed by computers with access to the Internet, mentioned in 95.2% of responses for the sixth grade, 96.8% for the ninth and 98.2%, for the twelfth.

Youth from the twelfth grade present a slightly higher inclination to access streaming services (75.4%) in comparison to the ninth grade (72.3%), while for the younger group only 65.5% access this

type of service. Spotify and equivalent music streaming services are popular among all age groups (twelfth, 78.6%; ninth, 79.8%, and sixth, 65.8%). Videogames are also often chosen in the responses, especially by students from the ninth grade (67.3%), followed by the sixth grade (63.3%) and the twelfth grade (59%). Electronic reading devices such as tablets are accessed by 73.9% of sixth graders, 62% of ninth graders and 52.3% of students from the twelfth grade.

Television was mentioned by all age groups: it was referred by 97.5% of twelfth grade participants, 95.2% of the ninth grade and 96.1% of the sixth grade, while radio and newspapers (online or printed) are present in their daily life but in a reduced percentage. The latter received the least number of answers for all three years of schooling: 41.2% of the sixth grade, 35.6% of the ninth grade and 38.7% of the twelfth grade. Radio is more accessed primarily by twelfth grade students (56.3%), followed by 51.8% among sixth graders and 47.9% of ninth graders.

Considering the variable of sex, the preferred types of media are similar. In regard to mobile phones, the percentage for girls corresponds to 99.7%, while for boys, 97.9%. Secondly, the most frequent answer is a computer with access to the Internet, 97.8% for girls and 95.6% for boys. In relation to television, the percentage among girls is similar to computers, but for boys there is a slight decrease, 94.7%. The highest difference between girls and boys refers to videogames (Xbox, Nintendo, PlayStation, etc.), totalizing 77.8% for boys and 51.8% for girls.

In terms of access, children and young people in the sample are strongly connected presenting a diversified access to media in both traditional and newer formats, although there is a preference for the latter.

Children and young people's media repertoires

As previously mentioned, this study is based on quantitative data and in a media repertoire approach, including variables of age, school grade and sex to identify overall patterns of media use. The questionnaire covered a range of aspects on *how* and *why* children and young people use media for routine activities, aiming to establish a more comprehensive view of the totality of their media practices, including

the combination of different media technologies, both old and new. To identify the media contained in the repertoire of children and youth, we considered those indicated as the most used in their daily routine; and to understand the purposes and complementarity between them, we based the analysis on the two most frequently identified functions for each medium. The following sections map the media repertoires of the sample by year of schooling, age and sex.

Media repertoires by age and school grade

For students enrolled in the sixth grade, the mobile phone is the main species in their repertoire (29.1%), followed by the Internet (19.3%), while books are listed in third (15.1%). Combined, these three options account for more than half of the media repertoire. Among the five most common responses, there are also videogames and social networks, indicating that, aside from books, there is a prevalence of digital media. Other formats defined as traditional media appear in a reduced number of responses, although they can be consumed through digital media.

In regard to motivation and/or purpose for media usage, most are associated at some level with entertainment. The word linked to the Internet other than entertainment is *information*, distinguished from books, ¹¹ as sources of knowledge and entertainment. Newspapers and magazines, although related to sources of information, and radio to information and entertainment, are mediums of little expression in the daily preferences of children between 11 and 12 years old.

Responses of ninth graders' (Figure 3) present similar patterns of media repertoire to the younger group, especially in relation to the preference of mobile phones (37%), followed by the Internet (28.2%). However, the preferences that follow demonstrate a prevalence of digital media. Social networks (8.8%) rank third in preference, surpassing books (sixth position), while video games (8.0%) and computers (6.4%) rank fourth and fifth in children's media repertoire.

Going to the cinema and theatre, watching television, listening to the radio or reading magazines and newspapers are less present among

The questionnaires do not indicate if there is a distinction between books determined by the school curriculum and books in general.

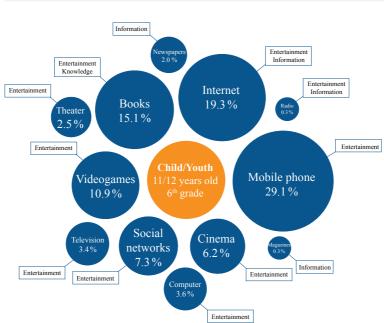


FIGURE 2
SIXTH GRADER'S MEDIA REPERTOIRE

Source: The authors.

this age group. Within the motivations presented by sixth graders, *entertainment* is the most common word associated with each media. The set of media that they define as a source of knowledge are books, newspapers and the Internet, although entertainment is also linked to the latter. For the ninth grade, as well as for the older age group, to mobile phones another function is added: communication through chat.

For the older age group (Figure 4), mostly students between 17 and 18 years old, mobile phones stand out in relation to all other types of media. The pattern is close to ninth graders where the Internet and social networks are listed as the five most frequent answers, although books regain two positions in the order of preference, occupying the fourth position. Television, even though of reduced relevance for all

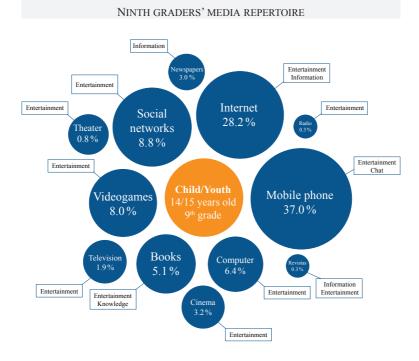


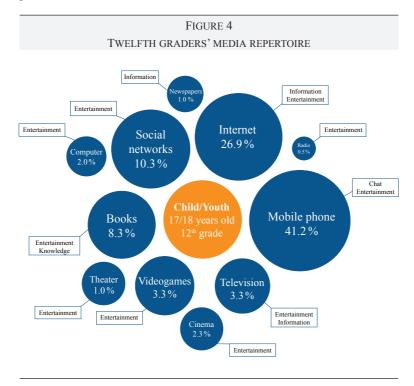
FIGURE 3

Source: The authors.

three age groups in comparison, reaches the lowest percentage (1.9%) among ninth graders, 3.4% for sixth graders and 3.3% for the twelfth grade. Another relevant difference is that for children between 11 and 12, and 14 to 15, television constitutes a source of entertainment only, while for the older age group, information also represents one of its functionalities.

Newspapers and radio are of little significance, and magazines were not included in the media repertoire of twelfth graders. Radio is only associated with entertainment and information for students from the sixth grade, since for the ninth and twelfth grades it is a source of entertainment. Computers reach their lowest expression among the older age group and are characterized as another source of entertainment,

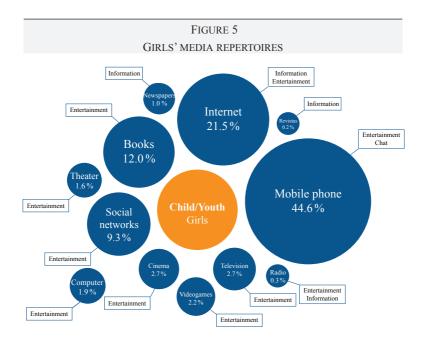
whereas information or knowledge were not cited. Information is linked to the Internet. In turn, the mobile phone has the highest expression for twelfth graders compared to the other years of schooling. Similar to the age group of 14-15 (ninth grade), the twelfth graders associated mobile phones with information and communication.



Source: The authors.

Media repertoires by sex

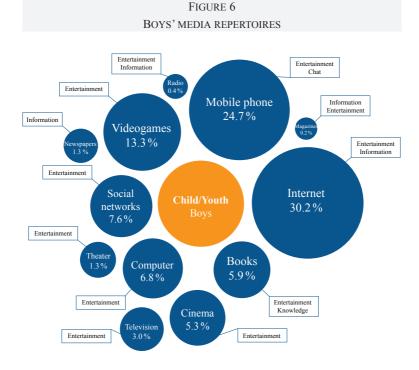
According to Kim (2016) and Taneja et al. (2012), age and education are relevant explaining factors to analyze a composition of media use. The analysis presented in this article also includes the variable of sex differentiation to identify similarities and differences in patterns of media preferences and use in routine activities. Figures 5 and 6 present the participant's media repertoires differentiated by sex.



Source: The authors.

As demonstrated in Figure 5, mobile phones are the most common response as a preferred media for girls. For girls and boys, there is an interpretation of mobile phones as a source of entertainment, including the possibility to watch movies and TV series. The second most cited use of the mobile phone relates to chatting and communicating with friends and family, especially for girls. The use of mobile phones for Internet browsing and searching is prevalent among boys. Mobile phones are indicated by 3.4% of girls as a tool to get information, while for boys the percentage is 2.1%. The use of mobile phones to spend time and relax was indicated by 2.9% of girls, and 2.3% of boys.

Access to the Internet is the second most mentioned media by girls as part of their repertoire, and it comprises an umbrella term to the different forms of accessing the cyberspace; while for boys, the Internet appears as the number one preferred media.



Source: The authors.

Words associated with the Internet varied from *entertainment*, *information*, *chat*, *opening the mind*, *learning* and *passing the time*. For 30.9% of girls and 35.7% of boys, it refers to a source of entertainment. The association with information was indicated by 32.4% of girls and 23.4% of boys. Browsing and searching on the Internet was mentioned among 10.1% of girls and 14.9% of boys, while using the Internet as a means of acquiring knowledge represents 4% of the answers for girls, and 3.6% for boys. Viewing the Internet as a tool for being in touch with family and friends, and chatting is also more common among girls with 11.7%, compared to 7.4% of boys.

Books, on the other hand, were predominantly associated with a source of entertainment, 39.5% for girls and 27.4% for boys. Books

are also related to opening up the mind to new ideas, 19.6% for girls and 19.1% for boys; and a source of information, 11.7% for girls and 18.3% for boys. The response that defines books as a form of distraction and spending time corresponds to 4.8% for girls and 4.2% for boys. And books as boring and/or a waste of time corresponds to 1.6% for girls and 4.2% for boys.

Social networks, including YouTube, Facebook, Instagram and TikTok, among others, are predominantly perceived as entertainment for 56.8% of girls and 53.5% of boys. For the first group, 18% indicated that social networks are a tool for chatting and communicating with family and friends, but the percentage is higher for boys, 21%. Social networks as a tool for searching for information and learning appears in a low percentage, 5.5% and 0.3% for girls, and 3.4% and 0.4% for boys.

Responses that identify television as a source of information correspond to 24.7% for girls and 18.6% for boys, while relaxing and spending time was referred by 3.7% of girls and 4% of boys.

For girls as well as for boys, going to the cinema and watching movies are associated with fun, entertainment and a way to spend time. Fun/entertainment corresponds to 84.8% of girls' responses, and 82% of boys'; to relax and pass the time, 5% for girls, and 5.1% for boys. It also was defined as a source of knowledge and to "open the mind", although this type of response was more common among girls, 3.2% in relation to 2.8% for boys. Associating movies with learning was also prevalent for girls (1.8%) in relation to boys (0.8%), although percentages were reverse for the definition of cinema and movies as a tool to be informed, 1.1% for boys, and 0.3% for girls.

For 82.8% of boys, videogames are defined as a source of entertainment, compared to 79.5% of girls. Associating videogames as a waste of time and/or boring appeared in only 3.5% of girls' responses, and 0.4% of boys'.

Magazines, computers, theatre, newspapers (printed and online) and radio appear in a reduced number of responses, but when it is added into their media repertoire, prevalent associations are information and entertainment. In the case of the theatre, 74.5 % of girls and 62.6 % of boys define it as entertainment. For 3.2 % of girls and 1.5 % of boys,

theatre is a tool for learning and opening up the mind, 4.3 % and 3.8 % respectively.

Magazines and newspapers are perceived as sources of information, although the former are also defined as entertainment. For 77.9% of girls and 62.6% of boys, newspapers are linked to the idea that it shares/produces information. As in the case of magazines, percentages correspond to 45.5% and 36.8%. Magazines are perceived as entertainment by 22.3% of girls and 18.4% of boys. Concerning newspapers, this perception drops to 3.4% and 5.7%.

Computers are used for four main purposes. The first one is entertainment: 49.8% of girls and 62.6% of boys. The second most mentioned purpose for using the computer is to learn (21.3% of girls and 11.8% of boys), followed by access to information (8.5% of girls and 5.3% of boys), and Internet browsing and searching (9.1% of girls and 4.2% of boys).

The responses indicated common patterns between girls and boys, especially to preferred media, i.e., mobile phones and Internet. The motivations are linked to entertainment, communication/chatting and information.

DISCUSSION AND CONCLUSIONS

Gaining more insight into the ways in which children and young people engage with various settings and communicate with one another might help us better comprehend their worldviews and modes of individual and group participation.

Media repertoires encompass a variety of viewpoints, including media convergence, the blending of new and old media, and a multiplicity of usage patterns. This approach enables one to comprehend the ways in which media, viewed as species within a larger media ecology (Scolari, 2015), interact and coexist through everyday activities. Thus, rather than concentrating on a single type of media, we employ the media repertoire approach to highlight a more thorough analysis.

The examination of the data taken from the questionnaires revealed that, in spite of the wide range of media readily available, there are commonalities throughout the three years of schooling, such as the prevalence of mobile phones and Internet access. This data confirms Livingstone's idea that children and young people's culture is increasingly an Internet culture (Livingstone, 2022).

The prevalence of mobile phones has increased over the years, which is not surprising considering other studies comparing the use of smartphones among different age groups (Smahel et al., 2020). The preference for mobile phones combined with access to the Internet can be linked to different factors, such as portability (Silva et al., 2017), multifunctionality and convergence (Jenkins, 2004). Mobile phones are usually for individual use, offering more independence and freedom of choice to access content. Despite the tool's multifunctionality, its uses are concentrated on specific functions. As Smahel et al. (2020) stated, "while the widespread use of mobile devices is associated with an increasing number of online activities, the range of activities taken up is not necessarily more varied. Children still engage mostly in communication and entertainment activities" (p. 34).

While there are a variety of reasons why participants in this study use their phones, they primarily cite communication and entertainment, particularly for ninth and twelfth graders. Sixth graders appear to use mobile phones less frequently for social interaction. The primary uses of the Internet are the search for information and entertainment.

The study also demonstrates that the younger generation's media diet still includes conventional media, despite not having the centrality of the digital. As highlighted by Hasebrink and Paus-Hasebrink (2022), the emergence of new technologies such as smartphones and tablets does not necessarily imply that the previous technologies will become extinct. We should instead discuss functional distinction.

Even if the majority of participants use new media, sixth and ninth graders still view television as a source of entertainment. As they grow older, television also serves as a source of information. Books, which are especially important for sixth and twelfth-grade students, present a decline in responses from ninth graders. For all age groups, books are associated with being reliable providers of information and entertainment. When it comes to gender differences, girls view books primarily as a source of amusement, whereas boys view them as a means of information. Over the course of the three school years, newspapers, radio, and magazines are given minimal weight.

Although children and young people in the sample interact with the media in a variety of ways and for a variety of reasons, all students share a common primary usage of the media: entertainment, followed by communication. Even though the Internet appears to be a source of information, students typically identify it with media that they don't give as much attention to, like radio and newspapers.

The concept of *media repertoires* allows us to consider the assortment of media that children and young people consume and engage with. According to the ecological metaphor, individuals exhibit preference for a small number of species within the media ecosystem, even though they have access to a broad variety of media in their daily lives. In keeping with the idea of technological and cultural convergence, the Internet and mobile phones surely take center stage in the participant's media repertoires.

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Bibliographic references

European Union. (2023, March 24th). Commission Delegated Regulation (EU) 2023/674 of 26 December 2022 amending the Annexes to Regulation (EC) No 1059/2003 of the European Parliament and of the Council on the establishment of a common classification of territorial units for statistics (NUTS). *Official Journal of the European Union*. https://eur-lex.europa.eu/eli/reg_del/2023/674/oj

Floridi, L. (2015). Introduction. In L. Floridi (Ed.), *The onlife manifesto: Being human in a hyperconnected era* (pp. 1-3). Springer. https://doi.org/10.1007/978-3-319-04093-6

¹² https://doi.org/10.54499/PTDC/COM-OUT/3004/2020

- Hasebrink, U. & Domeyer, H. (2012). Media repertoires as patterns of behaviour and as meaningful practices: A multimethod approach to media use in converging media environments. *Participations. Journal of Audience and Reception Studies*, *9*(2), 757-779. https://www.participations.org/09-02-41-hasebrink.pdf
- Hasebrink, U. & Paus-Hasebrink, I. (2022). Long-term trends in children's consumption of media. In D. Lemish (Ed.), *The Rout-ledge International Handbook of Children, Adolescents, and Media* (pp. 41-48). Routledge.
- Hasebrink, U. & Popp, J. (2006). Media repertoires as a result of selective media use. A conceptual approach to the analysis of patterns of exposure. *Communications*, 31, 369-387. https://doi.org/10.1515/COMMUN.2006.023
- Heeter, C. (1985). Program selection with abundance of choice: A process model. *Human Communication Research*, *12*(1), 126-152. https://doi.org/10.1111/j.1468-2958.1985.tb00070.x
- Jenkins, H. (2004). The cultural logic of media convergence. *International Journal of Cultural Studies*, 7(1), 33-43. https://doi.org/10.1177/1367877904040603
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York University Press.
- Kim, S. J. (2016). A repertoire approach to cross-platform media use behavior. *New Media & Society*, *18*(3), 353-372. https://doi.org/10.1177/1461444814543162
- Livingstone, S. (2022). Children's Internet culture. In D. Lemish (Ed.), *The Routledge International Handbook of Children, Adolescents, and Media* (pp. 110-118). Routledge.
- McLuhan, M. (1964). *Understanding media: The extensions of man.* McGraw-Hill.
- McLuhan, M. (2009). *Compreender-me: Conferências e entrevistas* [Understanding me: Lectures and interviews]. Relógio d'Água.
- Nystrom, C. (1973). Towards a science of media ecology: The formulation of integrated conceptual paradigms for the study of human communication systems [Doctoral dissertation, New York University]. ProQuest Dissertations & Theses Global.

- Postman, N. (1970). The reformed English curriculum. In A. C. Eurich (Eds.), *High school 1980: The shape of the future in American secondary education* (pp. 160-169). Pitman Publishing.
- Reagan, J. (1996). The "repertoire" of information sources. *Journal of Broadcasting & Electronic Media*, 40(1), 112-121. https://doi.org/10.1080/08838159609364336
- Scolari, C. A. (2015). Introducción. Ecología de los medios: De la metáfora a la teoría (y más allá) [Introduction. Media ecology: From metaphor to theory (and beyond)]. In C. A. Scolari (Ed.), *Ecología de los medios: Entornos, evoluciones e interpretaciones* (pp. 15-42). Editorial Gedisa.
- Silva, M. T. D., Figueiras, R., Brites, M. J., Amaral, I., Marôpo, L., Santos, S. C., Jerónimo, P., Santo, P. E. & Pacheco, L. (2017). Audiências e cross-media: Estudo de padrões de consumo de notícias em Portugal [Audiences and cross-media: study of news consumption patterns in Portugal]. *Estudos em Comunicação*, *25*, 177-199. https://doi.org/10.20287/ec.n25.v1.a11
- Smahel, D., Machackova, H., Mascheroni, G., Dedkova, L., Staksrud, E., Ólafsson, K., Livingstone, S. & Hasebrink, U. (2020). EU Kids Online 2020: Survey results from 19 countries. EU Kids Online. https://doi.org/10.21953/lse.47fdeqj01ofo
- Strate, L. (2004). A media ecology review. *Communication Research Trends*, 23(2), 1-48. http://cscc.scu.edu
- Strate, L. (2008). Studying media as media: McLuhan and the media ecology approach. *MediaTropes*, *I*, 127-142. https://mediatropes.com/index.php/Mediatropes/article/view/3344
- Schwarzenegger, C. (2020). Personal epistemologies of the media: Selective criticality, pragmatic trust, and competence-confidence in navigating media repertoires in the digital age. *New Media & Society*, *22*(2), 361-377. https://doi.org/10.1177/14614448198569
- Taneja, H., Webster, J. G., Malthouse, E. C. & Ksiazek, T. B. (2012). Media consumption across platforms: Identifying user-defined repertoires. *New Media & Society*, 14(6), 951-968. https://doi. org/10.1177/1461444811436146
- Yuan, E. J. & Webster, J. G. (2006). Channel repertoires: Using peoplemeter data in Beijing. *Journal of Broadcasting & Electronic Media*, 50(3), 524-536. https://doi.org/10.1207/s15506878jobem5003_10

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