Zig Zag radio: the foundations of a public Internet radio for children in Portugal

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Abstract

Children and media are today a reasonably developed the professionals who make this radio, plus the former and objectives that guide the creation and development them and fostering their citizenship. of a public radio for children? Based on interviews with

research field. However, little research has been condirector, is analysed how it is produced, its principal ducted on children and radio. This paper aims to congoals, the criteria that guide its programming, and the tribute to the debate on radio for children in the digital values to which it aspires as a public service broadcasage by analysing Zig Zag, a Portuguese public Internet ter. The results show an effort to produce programmes radio for a child audience aged 5 to 9, launched in 2016. aligned with the public service mission. Zig Zag team is It seeks to answer the question: what are the principles committed with children, concerned with empowering

Keywords: radio; Internet radio; Zig Zag radio; children; public service media

Introduction

adio programmes for children are almost as old as the medium, but research on media and children has largely ignored radio. Aside from research on school radios and their educational potential, there are not many studies on the radio-child relationship (Barbeito Veloso & Perona Páez, 2018). Little is known about the radio listening habits of young children or about how to make, produce, and programme radio for this audience. A search conducted in December 2023 using the Communication Abstracts database allows us to glimpse the lack of research in this area. Using the formula "child* OR young* OR youth* OR adolescen* OR teen*" 41,569 results were retrieved, but when "radio" was added to the formula, this number decreased to 646. Only 199 studies (0.48%) remained after narrowing the search to studies that exclusively address radio (excluding radio advertising). We got 170 results by restricting it to academic journals with peer review and eliminating redundant documents, editorials, interviews, and (audio and book) reviews. Through an exploratory analysis, based exclusively on the abstracts, we verified that most of these results are not specifically or exclusively related to radio and younger audiences (68.24%). As for the remainder, the focus is on publics and audiences, their perceptions, uses, practices, resignifications, and media impact (14.71%). The third-ranked topics (8,24%) are media speeches

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and contents and production practices and policies, a topic within which this article could be framed. Research on youth radio, radio training initiatives, and community radio are among the topics covered in studies on radio programmes with/by children and young people (6.47%). Educational radio, or the use of radio for educational purposes, is also present (2.35%). Radio policies and regulation (1.76%) is less prominent.

This lack of interest from researchers may be due to two factors: first, radio has not generated as many public concerns as television and, more recently, the Internet, such as excessive use or exposure to age-inappropriate content; and second, radio itself has forgotten the youngest over time (Delorme, 2013), as its programming for this audience has reduced or disappeared. Portugal is no exception in this regard, and for a long time, both public and private Portuguese radio stations stopped having children's programmes (Bonixe, 2015). This changed a few years ago with the launch of the private station Rádio Miúdos¹ in 2015 and the public Internet radio station Zig Zag in 2016 (September, 19). Zig Zag is broadcasted by RTP, the Portuguese media public service corporation, and it primarily targets children between the ages of 5 and 9.

RTP started airing radio in 1935 and television in 1957². Currently, RTP radio universe³ includes three national stations (Antena 1, Antena 2 and Antena 3); two internationals; three regionals; and seven exclusive digital channels, that is, web and in many cases in Cable TV services⁴. Zig Zag radio, the first Portuguese public radio station dedicated entirely to children, is one of these digital channels.

This paper intends to examine this children's radio, answering the following research question: what are the principles and objectives that guide the creation and development of a public radio for children? Based on interviews with the former director and with all the professionals who work or worked at this radio, it's our aim to analyse how Zig Zag radio is produced, its principal goals, the criteria that guide its programming, and the values to which it aspires as a public service broadcaster. This discussion is complemented with some of the findings of the programming and programme analysis that was the focus of a previous paper (Mourão & Pereira, 2023).

Radio for children: an old but short story

Children's programming was a constant feature on European stations during the early years of radio broadcasting (Prot, 1997). For instance, the debut of the British radio programme *Children's Hour* took place on December 23, 1922 (Oswell 1998), and it played an important role in "formations and reformations by which broadcast culture was constituted as a public service" (Dolan, 2003, p. 330). This show, which was aired till 1964 (Oswell 1998),

^{1.} Midões (2019) classifies this station as community radio.

^{2.} Before 2004, Radiodifusão Portuguesa (RDP) and Radiotelevisão Portuguesa (RTP), public radio and television companies, respectively, were separate, independent, and distinct legal entities. In 2004, they were restructured and merged into a single public company, providing the public service media – the Rádio e Televisão de Portugal S. A. (RTP). Since then, the acronym RTP has come to designate the entire group of Public Radio, Television and Online. RTP Online began in 1997 (Rádio e Televisão de Portugal, n.d.).

^{3.} As regards RTP Television, RTP held the television monopoly until 1992. Currently, RTP TV has four national channels; two regionals; one international and one dedicated to the Portuguese communities living outside Portugal (Rádio e Televisão de Portugal, n.d.).

^{4.} RTP radio also has "opportunity" channels that take place during special periods of time, as is the case with Antena 1 Brasil200, on the bicentenary of the independence of Brazil (September 22/September 23) or the classic radio to accompany the European and World Cups, as happened in November/December with Antena 1 Mundial. In addition to public radio, a variety of private stations broadcast in Portugal, but there is only one private radio station specifically aimed at kids (Rádio Miúdos), and it is not connected to any mainstream radio. To compare the Portuguese radio universe with other countries, it is worth mentioning that, according to Eurostat (2020), considering population size and the number of radio broadcasting enterprises, in Portugal, we found one of the highest ratios (28 per million inhabitants).

reverberated with the prevalent assumption that public service radio could be employed as a tool to educate the masses. However, threading through that formulation of public service as education were the demands of entertainment. For the BBC, these were not positioned as mutually exclusive aims. (Dolan, 2003, p. 333)

Children's programming was also part of Australian broadcasting almost from the beginnings (in the 1920s). The Australian Broadcasting Commission (ABC) established a federal Educational Broadcasting Advisory Committee, which "planned the first series of school programmes put out on national relay on the ABC, beginning in 1936" (Griffen-Foley, 2019b, p. 189), and, during the Second World War, the educational initiatives expanded (Griffen-Foley, 2019a, 2019b). The closing of the kindergartens in 1942 resulted in the *Kindergarten of the Air* (Griffen-Foley, 2019a, 2019b), a radio programme broadcasted until 1985 and one of ABC's most successful programmes and probably the most successful export (Griffen-Foley, 2019a).

Educational radio is also part of the United States history, where the experiments in this field began in the 1920s (Lamb, 2012). The School of the Air (SOA) movement was particularly important. With a consistent existence from approximately 1929 to 1975 (Bianchi, 2008), defined as "radio programs intended for in-school use", "in their heyday, SOAs reached approximately 2.5 million students nationwide (nearly 10% of the nation's school children) and involved tens of thousands of teachers and children directly in radio broadcasting" (Bianchi, 2008, p. 36).

The role of radio as a political weapon (Hale, 2008) is also a part of the history of this medium that we cannot ignore. In one article about *Children's Hour*, Oswell (1998) argues that "the concern with creating children's broadcasting as a medium for democracy and to produce children as exemplary citizens" (p. 375) was central to the configuration of discourses and practices that shaped children's broadcasting. Portraits of the relationship with propaganda can be found, for instance, in Gómez García's (2011), and, from a different perspective, in Clinefelter's (2019).

In Portugal, the child audience was always present in the first decade of the public radio (1935-1944; Ribeiro, 2005). However, the time for this genre was very scarce and only exceeded 1.5% of the total broadcasting time in the first year (Ribeiro, 2005). *Senhor Doutor* (in literal translation, Mr. Doctor) and *Meia Hora de Recreio* (Half Hour Playtime) were the most popular programmes in the early years, being the last one "constituted by contents meant to be both recreational and educational, fostering civic awareness and solidarity" (Ribeiro, 2005, p. 123). The station broadcasted a variety of contents guided by erudite cultural standards aiming to educate children, so music played by children and moments of reading were part of most broadcasts (Ribeiro, 2005).

Recently, children's radio programming has been disappearing around the world. According to Perona Páez and Barbeito Veloso (2007), mentioning the Spanish situation, radio stations have been more focused on making money than on fulfilling their public service obligations⁵. Due to this, children's items that had "a high pedagogical value" began to disappear (Perona Páez & Barbeito Veloso, 2007, p. 35). In a similar way, Portuguese radio stations have stopped including programmes for children even in the public service (Bonixe, 2015). In doing so, they failed to fulfil universality (European Broadcasting

^{5. &}quot;In Spain all broadcasting stations are obliged and covered by the concept of the provision of a 'public service', which is automatically derived from the conditions under which licences are granted to the respective operators" (Meneses, 2012, pp. 18–19).

Union, n.d.), one of the basic principles of the public service media, according to which public service must serve everyone, regardless of their commercial value. Besides, the existence of a multiplicity of content available, especially online, does not eliminate public service obligations with the young ones.

The Internet as an opportunity?

With the emergence of new technologies, some argue that radio lost its ability to attract young audiences (Albarran et al., 2007; Ferguson et al., 2007). However, that studies are not particularly focused on the younger ones, and this does not mean that the radio has completely disappeared from their media diet (Balsebre et al., 2011; Pedrero-Esteban et al., 2019; Tejkalova et al., 2023). Besides, in this century, radio itself has experienced a process of "mediamorphosis" (Fidler, 1997). Alongside traditional radio, a model resulting from the convergence of radio with the Internet has emerged (Cebrián Herreros, 2008), allowing the provision of new products and formats without a great financial investment.

Thanks to digitalization, broadcasters for children on the Internet are a growing phenomenon (Barbeito Veloso & Perona Páez, 2018) that can bridge the gap in children's radio programming. In Portugal, as mentioned above, two radio outlets were launched between 2015 and 2016: Rádio Miúdos and Zig Zag, respectively. In Spain, four new radio stations appeared between 2011 and 2016: Babyradio, PequeRadio, XL Kids Radio, and Onda Gominola (Barbeito Veloso & Perona Páez, 2018). In France, there has been a radio station of this type since 1998, Radio Junior (Barbeito Veloso & Perona Páez, 2018).

Barbeito Veloso and Perona Páez (2018) analysed 25 radio stations for children on the Internet (especially from Europe and Latin America) and realized that the mission, vision, and values of those radios express their educational and formative vocation, and the need to protect children's rights. These results support an earlier study by the same authors that examined four Iberian radio stations for children, finding that the stations tried to offer programming and recommend activities that "reaffirm the educational potential that has traditionally characterized" the radio (Barbeito Veloso & Perona Páez, 2017, p. 297). In fact, the digital environment offers a diverse edu-web with an endless supply of educational resources, and radio has been able to place in this space as well (Barbeito Veloso & Perona Páez, 2017). As Barbeito Veloso e Perona Páez (2017) conclude in their study:

we are faced with a set of educomunicative platforms involved in a common project in favour of child development and the most basic cognitive capacities, with activities that, independently of the broadcast and what this implies in relation to the promotion of the imagination, stimulate, among others, aspects such as attention, memory, language, or reasoning. (Barbeito Veloso & Perona Páez, 2017, pp. 298–299)

Methodology

This study follows a qualitative methodology based on a case study of the Portuguese Zig Zag, an online and non-live streaming radio. Considering the scarcity of studies on children and radio and the lack of public visibility of radio for kids, the creation of a radio for them, when there is a great variety of media specifically targeting young audiences, seemed to present an excellent opportunity to study this radio station, which operates within the Portuguese radio public service. In the scope of the studies on children and media, alongside the tradition of research on children and television and, recently, the Internet, it is of great academic and social interest to analyse a radio station targeted to children.

The study followed a case study approach since it is "a research plan that involves the intensive and detailed study of a well-defined entity: the 'case'" (Coutinho, 2015, p. 335). This in-depth study requires more than a technique and source collection (Coutinho, 2015). So, the case study conducted involves semi-structured interviews and thematic analysis of the programming and programmes. This article is based on the interviews, guided by the following question: "what are the principles and objectives that guide the creation and development of a public radio for children?".

Based on the analysis of semi-structured interviews⁶ with all professionals who work or worked (at the time of the interviews) at Zig Zag radio, we expect to understand the foundations of this public service radio.

In total, eight professionals plus the former director⁷ were interviewed:

- Pêgo: former director;
- Ferreira: station's manager and content producer;
- Lopes: linear scheduler and playlister;
- Fialho: audio producer and content producer;
- Dias: content producer;
- Silva: content producer;
- Ribeiro: external partnerships and content producer;
- Ligeiro: multimedia and graphics;
- Murta: graphic department.

By focusing this article on hearing the perspectives of this small and interdisciplinary team, we intend to better understand and present the backstage of a radio for a young audience in the digital age, discussing its place and value in an environment of strong competition from other media.

Given the pandemic situation, the interviews⁸ were conducted through an online platform, except the former director's interview, which was conducted by email due to his restricted availability.

The semi-structured interviews were tailored to each interviewee's role and were developed around some key elements: the beginning of the of the radio station, its purposes, its target audience, its characteristics, the programming criteria, the work organisation, and the production method.

The interviews were recorded and transcribed. The categories of analysis were created based on the objectives of the study and determined after reading the transcripts. Five categories were defined: (a) principles/mission; (b) objectives; (c) audience and programming strategic options; (d) programme creation and production; (e) organisation: team and partners.

The beginning

The idea of a radio for children, as stated by the former director, originally came up in 2008 when a strategy to expand public radio based on digital initiatives started to be outlined. Zig Zag radio, however, wasn't launched until September 19, 2016, 8 years later. According to Pêgo, this delay was caused because "a children's radio requires a separate set of criteria and, unquestionably, the organization of a specific staff for the creation of original programming". He remembered that

since the Emissora Nacional's [initial name of public service established in 1935], there hasn't been a regular and constant supply of children's radio programming. There were occasionally programmes [...], but nothing close to what was required for the standard of excellence desired. Of course, the Zig Zag brand on television already existed; nevertheless, the contents (apart from specific cases) could not be modified for the radio project. It took time to create the right conditions. The chance arrived in 2016. And, we believe, it came at the perfect time.

^{6.} The thematic analysis of the programming and programmes served as the focus of a different publication (Mourão & Pereira, 2023). The presentation and discussion of the data are supplemented, whenever pertinent, with insights from that analysis, even though it is not the main topic of this paper.

^{7.} A new director was appointed in October 2021. Our request for an interview was not answered.

^{8.} Informed consents were provided orally by the participants at the beginning of the interviews and were recorded. Informed consent from one of the participants was provided by email. All interviewees gave consent to be identified by their names.

In his opinion, the implementation of the project in 2016 was due to three main factors: the support of the company's structures and the Administration Board; the availability of the professionals; and the innovation that constituted the provision of a children's radio within the scope of digital contents that had been developed since 2008.

This radio complies with the requirements of the Public Service Concession Contract of Radio and Television that the Portuguese State and the concessionaire RTP signed in 2015 and is currently in force. According to this, public radio should have "a national programme service intended for a younger audience, which reflects their different needs and interests, promotes new ideas and projects, and stimulates their critical attitude and engagement in society" (Contrato de Concessão do Serviço Público de Rádio e Televisão, 2015, Clause 15, Article 2 Subparagraph c). This obligation was also foreseen in the Portuguese Radio Law revised in 2010 (Law no. 54/2010, 2010). Along with the reasons pointed out by the former director, the obligations expressed in this agreement will have contributed to the acceleration of this project and its launch.

Strategic options

Portuguese public television has a children's brand called "Zig Zag", with a show called "Zig Zag" that has been on the air for many years on RTP2, the second channel of the public service television. This was RTP's only offer for this audience. Zig Zag radio appears as a branch of this brand, providing continuity to this brand identity.

The TV Zig Zag brand and the radio target audience ended up influencing the graphic design of the radio, as the designer Murta mentioned. When the team started designing the radio's visual, the colours and the graphic identity of the original brand were considered. However, bearing in mind the radio main audience, they looked for a graphic line for the online content that was suitable for the target.

The target audience for Zig Zag was determined considering its goals and the programming needs of a radio station for a young public. It was decided that kids aged 5 to 9 were the primary target. This age group corresponds to the final year of pre-school education in Portugal and the first cycle of basic education. According to Ferreira, this target audience was chosen because "despite everything, it is the most neglected in the public service media". She explained that children 14 or older can find content aimed at them in other RTP stations and that it is challenging to create a 24-hour radio for pre-schoolers because it would only serve as "a music box". She also believes that this target can appeal to both children under and over 9 years old¹⁰.

This audience is volatile, and it is always necessary to obtain new listeners (Lopes). This is a huge daily challenge and Ribeiro recognizes that the radio promotion is one of its Achilles' heels. It is a public service station, not guided by a market logic, but is essential to attract listeners. The promotion has been done gradually by the team, through partnerships, visits to schools and receiving study visits in the studio. There is a lack of investment by RTP in promoting Zig Zag radio on its own television and radio channels, and in means external to the company. In this regard, but not only, as we will see, the station has been confronted with an undefined strategy by the RTP and it becomes difficult to the team to prioritize needs. This difficulty is aggravated by the fact that at RTP, "first you think television, then radio" (Lopes). Besides, RTP's vertical management model, supported by a centralized process in which the obligation to approve any action is always passed upwards, results in little flexibility and autonomy on the part of the team and contributes to some entropy in its work.

^{9.} RTP2 is the public service channel where programming for children is broadcasted.

^{10.} We should say that this idea is also followed in television programming for children (Pereira et al., 2009) and that this age group is also a main target for Portuguese public television.

According to data provided by the team, regarding the RTP Play universe and the App RTP, in 2021, 24,187 different devices connected to Zig Zag radio online and it registered 45,522 acts of listening. It is the on demand streaming which is the preferred way to listen to the contents: in 2021, 75,993 different devices accessed the radio on demand and 145,946 acts of listening were registered.

Principles and objectives

Zig Zag radio has a public service mission. According to Pêgo, it purposes are based on the three traditional pillars of media and a universal public service: to educate, inform and entertain, respecting the commitments that the public service media (PSM) concession contract entails. This is also mentioned by the station's manager and the producers. As Silva said, "the notion of public service is immediately instilled from the first day".

Zig Zag radio "reflects and embraces the PSM ideals, in its essential dimension of service to the community and in the respect for the obligation of universality" (Pêgo). The former director added that, only with the appearance of this station, did RTP start to meet the requirement of universality in the radio component. Despite being an online radio, the team wanted it to reach as many children as possible, offering content that might not otherwise be accessible: "for instance, there are children who have never been able to hear a storyteller or a writer" (Ferreira).

The principle of proximity was also highlighted. Proximity is achieved, for instance, by going to schools and various types of events, to make the radio known to its target audience, but also to adults who work with children, like teachers. The idea of proximity and of engaging with the public was underlined by almost the interviewees.

Ferreira underlined the idea of "empowering children" as an important radio mission of Zig Zag radio:

by giving them information, by opening up the world to them, giving them training, deconstructing, explaining, contextualising, not infantilising, giving them access to safe and accurate information. This is how, in my opinion, they will become more empowered as citizens.

This is an idea advocated by other members of the team: with this radio, "children can broaden their imagination, their vocabulary, the way they hear the world" and "grow with a comprehensive view of what the world is and what day-to-day is" (Dias). The team emphasized the concern to cut prejudice and send a message of respect and inclusion. In summary, as Ribeiro said, the Zig Zag mission is "to open up the world and to give them vision".

The idea of the educational potential is particularly highlighted by the interviewees, who emphasized the importance of not overlapping the school: "the radio does not replace the school, it operates side by side and gives children parallel educational content" (Ferreira). The former director adds:

this radio is characterized by its pedagogical action, recognized by all institutional partners, without wanting to replace school or family, [a radio] where children have an active voice, opinion, express what they feel. It is an inspiring radio for the values of democracy, tolerance, the understanding of the other and, in particular, citizenship, always in a fun register, not forgetting the rigour and safety of the contents.

This educational potential is not opposed to fun. For Fialho, being fun is also one of the goals of the radio, and, for Dias and Ribeiro, entertainment is a very necessary element in children's lives. The combination of those two dimensions is explain:

there is always a practical concern, which is to attract children to listen to this type of content, and for that we use humour and an informal language. Then there has to be a pedagogical component, because we are on public service radio. There is a pedagogical dimension giving children cultural references, stimulating thought and curiosity, but also letting children have fun and promoting their creativity and imagination. (Silva)

We want to be fun, because fun is the good language for children, but within that fun, which is a way of communicating, we want to pass relevant content, which improves them, furthers them, gives them culture, gives them information, which integrates them. (Ribeiro)

Sound literacy was also pointed out as one of the major objectives of Zig Zag radio, an issue that Dias associated with stimulating the child's imagination and Ribeiro with the ability of abstraction and creation.

These interviewees' statements about the objectives of Zig Zag radio and its connection to the principles of public service corroborate the analysis of Zig Zag programming and programmes. The principles of universality, proximity, diversity, and the concern of empowering children are visible in the variety of the programmes. A wide range of subjects is covered, from entertainment (e.g., music, adventures, and challenges) to educational contents (e.g., history, science, mathematics, and world knowledge). In the triad goals of the public service, and as far as information is concerned, journalistic information is the least exploited. There is a programme named *O Mundo Explicado* (The World Explained) that seeks to deconstruct issues such as racism, the World Health Organisation, Media Education, among others, but there is no news outlet for children that explores and explains the main current affairs (Mourão & Pereira, 2023).

Production

In July 2022, Zig Zag radio had 78 programmes available as podcasts and 4,951 original episodes (Mourão & Pereira, 2023). Most of the programmes are brief (ranging in length from 13 seconds to 24 minutes), and their subjects reflect a concern for diversity, as also noted in the interviews. Themes as literature, stories, and philosophy; adventures, challenges, curiosities, and games; science and mathematics; and world knowledge are some of those that stand out. As mentioned, information is not totally absent from the programming, but there is not a news service dealing with current affairs. On the one hand, a small team and a tight budget limit this. On the other, this is not a live radio station: "when someone is listening to a radio station during a particular moment, they are living that moment. This radio is not a live radio. It is not possible to be listening to a news item that is happening" (Lopes). This is also recognized by the radio manager, who talks about the difficulty of making a programme of this type on a non-live radio station and with few human and financial resources. However, given the absence of this type of programmes for children in Portugal (Pereira et al., 2015), a news programme would certainly be an added value for Zig Zag radio. It is at this level that a partnership with the children's programme department of the television or a collaboration with journalists from the other radio stations could make perfect sense. But, as we noticed in the interviews, this collaboration has been difficult to achieve.

Programme production ends up mirroring the radio's mission and the relationship between the objectives and the production of the radio contents can be observed since the early days of this radio. The first step for the programming design was reading the public service media concession contract. A second step was to know the target audience by listening to children of different ages and teachers. As this radio runs in parallel with school, the programmes were defined considering areas that somehow related to the contents of the first cycle of basic education curriculum.

Every day the creation of episodes goes through brainstorming, research (if applicable), and script. Dias describes their daily routine as a "school-playground":

we must be rigorous, attentive, do research, [...] but then all this [has to be] mixed up with the playground, precisely because it is not for us to replace school and we want to hide in our message something that children should learn.

One of the main concerns, referred by all the interviewees, is not to infantilize the radio language and discourse, showing respect for the audience. Members of the team "talk as an older friend, they speak eye to eye, so this is the language for them [the children] to feel more included" and a way for them not to think it is boring (Lopes). This indicates that the language and the vocabulary are carefully adjusted for the intended audience. The team work to simplify the information, dismantle it, and use straightforward language that kids can understand. The person behind the microphone should consider the average 8-year-old child when speaking:

if they think of a 5-year-old child, they will accidentally and unconsciously infantilize the speech, if they think of a child of 10, 11 or 12, without wanting to, they will increase the speech too much [...], if they think of an 8-year-old child on average they will keep a simple, direct speech, neither too childish nor too adult and that will suit everyone. (Ferreira)

The principles of inclusion, citizen education, and child welfare guide the day-to-day work. According to the team, they are inclusive in their work. Some brief examples: they say "adult" instead of "father" or "mother", so they do not exclude any child who does not have them; they highlight relevant women, showing that they are also brave; in the creation of the programmes, they avoid passing along gender stereotypes or any other kind of prejudice. For the team, it is also important to keep children safe. They try to be attentive to the materials and the way some issues are presented. For instance, if in a recipe programme something needs to go to the stove, they always remind the child to call an adult. These are aspects that can be observed from the analysis of the programmes.

Inclusiveness and avoiding infantilization have been present since the programmes' design. The graphics attempted to strike a balance between being neither overtly adult nor overtly childish (Ligeiro). They also aimed to be neither overly simple nor overly complex but must communicate well the reality it represents: if there is a podcast about families, they always take care to represent the diversity of existing families (Murta).

The search for rigour also stands from the interviews. This is a central element for the achievement of two of the objectives of public service: to educate and to inform. The radio has the collaboration of a journalist and has partnerships with public institutions. There are programmes that involve researchers, writers, illustrators, and musicians from the outside of the radio. As Dias and Ribeiro say, it is completely different to having an expert talking or someone who did an Internet search. Besides, "there are subjects that we cannot talk about. We do not want to talk about them, because we want to ensure that the message arrives as it should" (Dias). Among the programmes, 22 were made in partnership with different entities, such as institutions focused-on science, museums, a zoo, and entities linked to culture, to education and to safety. In these partnerships, the content is created by the partners themselves, but there is always a briefing between them and the radio team, who edits and does post-production (Ribeiro).

This search for rigour is also associated with their concern with respecting the public, as stated by Fialho:

we have [...] a lot of content, all of it with a very serious screening on the part of those who write it and there is a respect for the public [...]. Because we are working for children and the information needs to be correct, there must be research from reliable sources so that we can transmit the information in the best way and the most correct information.

For the team, rigour is not opposed to fun. In a History programme, for instance, there is always an attempt to pick up funny elements and use an informal language to capture the child's attention. The

choice of the way the story is told, the highlights, and the words always consider the audience. The goal is not for the child to memorize dates or facts, but to get an idea of what they heard and get them interested in knowing more about it (Ferreira).

Finally, since this is a non-live radio and as we can see through the analysis of the programmes, special attention is paid to the product's quality in terms of sound design. According to Fialho, dealing with children requires a richer approach in terms of sound because the objective is to essentially take the child to a specific universe. Decisive factors are the variety of sounds and the music selection. The audio producer tries to diversify sounds to give the pieces a greater quality. As he notes, the voice is a key component, and the music and sound effects play practically a supporting role. Songs and other sounds appropriate to the screenplay are selected, and all the voices are worked on. The songs are always chosen with the intended audience in mind, but they also try to not infantilize.

Team and partners

All the radio work is done by a small and multitasking team that suffers a constant replacement of its hard core. At the time of the interviews, it was composed of:

- Ferreira is the station's manager, writes the scripts, does voiceover, monitors the production, and does sound design; she combines these tasks with others at Antena 1, the main public radio station;
 - Silva produces content, writes the scripts and does voiceover;
 - Ribeiro mainly supports the station's manager on partnership issues and also produces content;
 - Dias writes the scripts, does sound design and voiceover;
 - Fialho is mainly audio producer, but he also produces content.

This core is joined by a person responsible for linear programming, being also the channel's play-lister, not working exclusively for Zig Zag radio. The sequencing of the various contents created and produced, songs, jingles, and promotions for the channel, is operationalized by another element of public radio, who does the same for six other digital channels of RTP radio. Zig Zag is directed by the director of Antena 1 station.

According to every interviewee, a small team limits the possibility of working on all the themes they would like to and its inconstancy creates some instability at work. The station's manager also recognized that a small team is an interesting way of working: they are always brainstorming and they are always listening to each other's work to notice if there are problems or things to change or improve.

Pêgo admitted that in an ideal plan there should be no significant difference between the budget of a children's radio and that of an adult radio, but he recognizes that there are differences between Zig Zag radio and the other three Hertzian RTP stations. These differences create substantive difficulties, especially if one considers that the kind of production of this radio is very demanding. Pêgo mentioned that Zig Zag radio's team has a particular way of working that "makes it possible to produce such quality, with a modest budget and a small team". He noted that this team works differently from those of other stations because it is a multidisciplinary team: "everybody writes, reads, edits, record and, in most cases, does post-production and sound".

Despite the former director's appreciation, the radio production suffers from the small team size, its mutability, and the multiple tasks that each member must perform. The manager of the station noted that working with a small group is very challenging since they didn't want to create a radio that was just stories and music, they aim to create programming that is diversified and of high quality. Therefore, as she said, everyone doing a little bit of everything was the solution, somewhat of like "an assembly line".

Even though children's radio is a specialized field, it's noteworthy to observe that every member of the team has some sort of prior relationship with this audience and/or the radio. For instance, Fialho and Ribeiro have no prior radio experience, but Fialho has already taught kids and Ribeiro performs in a theatre for children and has worked in the licensing area, with children's brands.

Along with this team, the radio also receives sporadic assistance from other RTP professionals and curatorship from other institutions like Pavilhão do Conhecimento (a science centre) and the Zoo. Occasionally it welcomes new voices, including authors, illustrators, and storytellers.

Discussion and final remarks

In the 20th century, radio for children became a tradition in some countries. It never had the importance and the impact of television, but for some children radio was the main medium they had access to and that "spoke" to them. However, much has changed in the media landscape, which leads us to ask: in the digital era, in which the amount of content for children has increased, does it still make sense to invest in radio aimed at this audience?

As television became more popular, a disinvestment in radio for children has been observed and some radio formats have even disappeared (Bonixe, 2015). However, in recent decades, the proliferation of digital media seems to bring new opportunities. Firstly, with the Internet, radio has adapted and reinvented itself, allowing for the provision of new products and formats without a strong financial investment and, consequently, the possibility of focusing on different audiences, as the youngest. Secondly, it is still important to provide quality services, programmes, and contents for children. This has been one of the main arguments in favour of public service media for children, applied mainly to the golden age of television, but still valid in the Internet age. As noted by Fuchs and Unterberger (2021), "democracy and digital democracy require Public Service Media" (p. 7). Still, within the scope of the academic movement for the defence and revitalisation of PSM, Steemers (2021) asks: "with all children supposedly able to access boundless services, experiences and content online, this begs the question, 'Why should we care about public service media for children?", adding: "there sometimes seems to be an apathy amongst policymakers towards this issue" (p. 12). Action is needed in this area.

In the case under study in this paper, the Public Service Contract signed in 2015 and the Portuguese Radio Law place obligations at this level, broadly fulfilled in 2016 with the creation of Zig Zag. This radio is based on the main pillars that support the media public service. It is in line with the traditional public service media concept, since "their output [...] is designed to inform, educate and entertain all audiences" (European Broadcasting Union, n.d., "What Is Public Service Media?" Section). This is particularly visible in the radio's principles, objectives and production. As stated in the interviews, the Zig Zag purposes are based on the three traditional pillars of the public service, which underlies the creation of the programmes. The educational dimension, without ignoring the entertainment, is particularly emphasised. The information domain, although present, is the weakest one.

While there is no recipe for making children's radio, education and entertainment are guiding principles that have been maintained since the beginning of this type of programming. Like other Internet radio stations for children, Zig Zag radio could also be labelled as an educomunicative platform (Barbeito Veloso & Perona Páez, 2017) and its mission, vision, and values express their educational and formative vocation like other stations of the same kind (Barbeito Veloso & Perona Páez, 2018).

More specifically, the radio public service pillars are:

- *diversity* is expressed in the themes, ideas, voices, and creation of programmes that seek to broaden children's horizons;
- *universality* and *inclusion*, that is, the concern to reach all children in the target audience and also to include diversity within childhood;
- *identity*, which the team seeks to achieve through the brand and investing in the radio's and programmes' image quality;
 - proximity, achieved through visiting schools or attending events;
- *openness to the community*, achieved through various partnerships with institutions such as the Zoo, bringing validated content and diversity of voices;
 - education and entertainment, balancing these two and taking into account that radio is not school;

- *information*, which is achieved mainly through documentary and entertainment formats, but lacking a news programme;
- *discovery* and *knowledge*, with the aim of empowering children, challenging them to broaden their horizons, helping them to begin to be active and engaged citizens.

This set of principles is materialized by a small and multitasking team whose members assume different roles, performing all tasks, from creation and production to post-production. By hearing the interviewees, listening to the radio, and observing the programming grid and the diversity of programmes and themes, one may notice the significant work put forth by this team in the creation of this radio. The interviews revealed how the team work, guided by demand, quality, and rigour, is consistent with the principles of a public service radio station. With the scarce resources available, the radio output seems to be more a result of the determination, dedication, and effort of the team than a committed investment by RTP management. This is not actually a new problem: it is a perpetuated practice when it comes to services and content for children (Pereira, 2007). There is a huge interest in serving this public, but there is no strong investment in this area, neither in material and financial resources nor in human resources. The lack of investment and the undefined strategy of RTP for the children's area (and not only, in fact) is mentioned by one of the interviewees, who states that Zig Zag radio or, generically, the children's audience, is not a priority for RTP:

RTP has reached a moment where it strategically wants and needs to target the children's audience (even to follow the guidance of European PSM stations) but then with global resources and management urgencies so exacerbated, it ends up not focusing on what to do and what resources to put into this content.

Children have become profitable audiences in various media sectors, notably television, mainly with the merchandising of products. But for radio the scenario is different. Children are not seen as a profitable audience from an economic point of view. So, the provision aimed at them ends up being guided more by regulatory and legislative obligation than by the real interest in their education. This topic shouldn't be posed in the public sector the same way it is in the private sector. In the case of Zig Zag, what is observed is that the team assumes its public service mission and works towards it but has little support from the company.

Children assume today an important symbolic value in societies, but the economic value of the audiences prevails. "Serving children is often trumped by other short-term considerations – financial and commercial priorities, and more lucrative adult audiences" (Steemers, 2021, p. 13).

Children have access to a broad range of media experiences, but this does not remove the need for a public media service for them. It increases that need. It is important to recognize the huge impact that media experiences can have on children's development and on how they grow as citizens. They have a very specific culture and particular needs and interests that must be attended to by making and delivering high-quality media content. To make this happen, not only do children need to be taken seriously but their right to universal access to information and communications should be recognized, as laid down in the United Nations Convention on the Rights of the Child. And as Steemers (2021) points out, this is not just a media and industry issue but also a society issue.

In Portugal, the provisional version of the Public Service Concession Contract for Radio and Television, which was placed on public hearing in 2021, made no mention to the provision of programming and information for children and young people by the public service radio. In no part of the contract proposal was there any reference to the continuity, and even reinforcement and extension, of Zig Zag radio (Pinto et al., 2021). The final version of the contract is eagerly awaited, to understand if Zig Zag radio is a project that will continue or if its days are numbered. Looking at the short and medium term, the threats to Portuguese public radio service content for young people are clear. And this will not be for lack of opportunity or public interest. As the frequent use of digital platforms by young people is

well known, as is their interest in consuming music and podcast content, public radio for children could be extended to other ages. And this should be accompanied by a communication strategy. The lack of public promotion of Zig Zag radio was one of the aspects that caught our attention. We know that a good communication strategy is essential to make the project known, not only to children, but also to their families and teachers. Being the public so important, it is necessary to win them over.

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