

YouTube videos for young children: an exploratory study

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Abstract

The consumption of videos on the Internet by young children is increasing, and therefore, when they start school, a great part of their knowledge, behaviors, and attitudes will be influenced by the contents they have consumed in social networks such as YouTube, which is considered a third educational agent in childhood, together with families and school. It is thus appropriate to know what types of contents they are consuming, the characteristics of these publications, and their interactions with these channels. The present research will try to provide answers to these questions, with an exploratory and descriptive study with a sample of five YouTube channels in Spanish and Portuguese aimed at early childhood, starting with the category "Made for Kids" from Social Blade. The results of the study allowed us to discover the characteristics of the contents which have an effect on informal learning, favoring the child's creativity and the development of abilities and competences of children. The conclusions stress the persistence of certain risks associated to the inadequate use of YouTube, inviting reflection on the need to broaden research studies on this subject matter, and the promotion of media and literacy training, through the incorporation of adequate values and behavioral rules. Emphasis is placed on implementing true media literacy in schooling during early childhood to develop the children's abilities.

Keywords

Social networks, media literacy, schools, young children, responsible use of social networks.

I. Introduction

Virtuality, interactivity, and immediacy are some of the characteristics of modern society, a context in which screens and electronic devices predominate. Both are utilized by increasingly younger children, as indicated by the ITU-2019 (International Telecommunication Union), a United Nations agency specialized on information and communication technologies, when it states that mobile device subscriptions have grown exponentially worldwide. Thus, it can be affirmed that «the actual media ecosystem is characterized by uncountable devices, screens, social networks, and applications within the reach of individuals who are increasingly younger» (Aran-Ramspott et al., 2018, p. 72). Also, according to the Ditrendia Mobile report in Spain and the World (2021), the use of mobile devices has increased to more than 91 million since 2020, and the mean daily connection time of people to different mobile devices is longer than 6 hours (105 entire days connected). This increased use does not only affect adults, but young children as well, with the latter term, which will be used in the present work, defined as ages between 0 to 8 years old, according to the classification by Chaudron (2017). As shown in the report by Qustodio (2021), which analyzed the usage time and consumption of screens by young children, they consumed content through online videos, social networks, games, education, and communication. In this way, it has been confirmed that during the year 2020, due to the covid-19 pandemic, the activities of young children associated to the screens at home highly increased (Harvard Pilgrim, 2020; Wheatman Hill, 2020), with the children spending most of their time learning, playing, socializing, or exercising through them (Andersen and Nielsen, 2020; Tíscar-González, 2021).

In this sense, these digitalization spaces are offering the possibility to access diverse content, either from public or private sources (Hernández-Serrano et al., 2021; Quintas-Froufe y González-Neira, 2021), favoring digital participation and interaction, along with the presence of values and counter-values which influence and shape the feelings of group and cultural belonging of children and youth (Ballesta et al., 2021).

a. YouTube as an alternative education channel

In agreement with Souza-Araujo et al., (2017), the active presence of children younger than 13 in YouTube has been confirmed. Likewise, it has also been corroborated that most young children utilize it for leisure or entertainment (Holloway, Green & Livingstone, 2013; Blackwell et al. 2014). Therefore, YouTube has become one of the most-utilized platforms for sharing content, a channel which allows bi-directional communication, where users can share their own content on the internet, and interact with other users (Vizcaíno-Verdú, Contreras & Guzmán-Franco, 2019; Sabich & Steinberg, 2017; Sánchez-Vera, Solano-Fernández & Recio-Caride, 2019).

YouTube Kids, a part of YouTube aimed at kids, was created in 2015 based on these technological features. This children's platform allows uploading, viewing, and sharing videos freely, and is considered as "the most popular community of videos online" (Berrocal, Campos-Domínguez, & Redondo-García, 2012). The contents are segmented according to the audience, thereby controlling the access of the younger population to information. More specifically, YouTube, in its legal conditions, alludes to its legal use by those older than 14, inviting the children to use YouTube Kids if it has been previously activated by the father, mother, or legal tutor. Also, emphasis is placed that those who are younger than 18 must have the permission of any of those adults for using it, aspects which are found in the platform and in other studies (Martínez Pastor, et al. 2018; IAB, 2018). However, among some of the negative effects of this platform for the children collective, we find that many of these channels show inadequate contents (Pellicer, 2016), given the lack of regulation and exposure of the private sphere (López-Villafranca & Olmedo-Salar, 2019). Also, the consumption of contents is directly related with the risks associated to the overexposure to information, or the loss of privacy (Hernández et al., 2021).

The classification of the contents from education channels is very diverse and complex as, on one hand, there are many themes that allow users to consult different contents (Vizcaíno-Verdú, &

Contreras-Pulido, 2019), and on the other, the children and youth trust these videos as means for learning and entertainment (Draus, Curran & Tremplus, 2014). However, according to Dubovi and Tabak (2019), the educational videos that are watched by children can be classified into three types of learning: informational learning, related with information search; procedural learning, videos that help to solve specific problems which require to follow certain steps; or procedural-conceptual learning, which focus on the development of intellectual skills, that is the rarest form of YouTube learning

The aim of this study is to determine the skills, abilities or knowledge that could be acquired or developed by young children depending on the channels they consume. Souphan (2018) has pointed out the great difficulties observed in the classification of videos, i.e.: the apparent redundancy in content or the ineffectiveness of the current filters that can be applied. This have led the present study to identify the following themes: i) values such as social responsibility or friendship, ii) the promotion of sustainability, and iii) the description of health professions and the promotion of healthy habits. Likewise, we also ask if these themes can be associated with some of the sustainable development goals approved in the Agenda 2030.

b. YouTube interaction and content: their influence on young children

In this context, a key aspect is not only the production of multimedia materials, but also the role of prosumers, who produce and consume this content (González-Oñate et al., 2020). Without a doubt, the consumption of digital content by young children is socially worrisome (Tur-Viñes et al., 2018), a concern produced in the digital ethosphere, as a cultural environment of digital interactions (Olaizola, 2018; Renés-Arellano, et al, 2021), in which children and youth are the protagonists and feel the need to interact with others and become leaders, that is, subjects who are able to influence others, especially those who are the same age (Aznar et al., 2019).

In addition, behaviors such as reactions (“likes”) are included, from both the content creators and the viewers; as of today, the number of visits, along with the “likes” given to publications in multiple social networks, are key elements for the self-esteem of the content creators. More specifically, YouTube allows the publication and sharing of content related with education, information, sports, entertainment, or musical production (Aznar et al., 2019; Elorriaga & Monge, 2018), becoming a platform that leads the masses through the audiovisual content that it stores and shows, thus having an influence on the attitudes and behaviors of young children (Sáez & Gallardo, 2017).

As a result, this ability to influence young children is associated to influencers, individuals who are able to create engagement, generate a large number of followers, promote interactions, and influence behavior (IAB Spain, 2019). These influencers are classified as nano-influencers, those who despite not being celebrities, have a loyal audience (between 2K and 5K followers); micro-influencers, those who stand out for publishing videos about some type of knowledge they master, and who have become known (between 5K and 100K followers), macro-influencers, those who have a loyal community of followers and who are considered role models for many people (between 100k and 1M), and the mega-influencers, those who have a high level of popularity and content creation (with more than 1M followers). All of this is observed through different channels that belong to YouTubers, or Vloggers, who record videos and become professionals as they obtain a larger number of subscribers (Rego & Romero-Rodríguez, 2016, p.198).

The present study was undertaken to provide parents, representatives, and society in general useful information on the characteristics of the contents consumed by young children. It consisted in the analysis of five channels, which were part of the YouTube list in Spanish and Portuguese, destined to early childhood, starting with the category “Made for Kids” from Social Blade. Following Pérez-Torres et al., (2018) and Castillo-Abdul et al. (2020) three broad dimensions were identified: categorization of contents, visual resources they disseminate, and interactions.

II. Method

The present study utilized an exploratory-descriptive design, and its objective was to delve into the characteristics and the types of content disseminated in the five YouTube channels that were aimed at early childhood, through the use of an interpretive content analysis technique, which allows the processing of relevant data about the production (Martín, 1995; Piñuel-Raigada, 2002). For this, an analysis of YouTube videos in Spanish and Portuguese was performed, with the following sampling criteria:

- 1) Videos published within a three-month period (August, September, October, 2011)
- 2) Videos belonging to the category “Made for Kids” from Social Blade, considering that this platform allows the statistical tracking and analysis of social networks with current data, with YouTube being its main platform analyzed. Thus, it allows us to identify the most popular and far-reaching channels, that is, with a greater number of followers and content that is adequate for children.
- 3) Videos whose audiovisual production have an educational content.

Using these criteria, a total of 185 videos were found from which a sample of 5 videos was selected, considering the recommendations from Andreú Abela (2000) for the proposed methodology.

Thus, considering the criteria listed above, the following channels were selected: Reino Infantil (60 videos), La Granja de Zenón (30 videos), Mashaoso (47 videos) and BabyBus (41 videos) and Mundo Bitá (7 videos), with a similar number of monthly views for all the channels, except for Mundo Bitá (see Table 1).

Channel	Link	Number of subscribers
Reino Infantil	https://bit.ly/3q3Lcm0	46.4 M
La Granja de Zenón	https://bit.ly/3mgn5zp	29 M
Mashaoso	https://bit.ly/3men2UF	21.9 M
BabyBus	https://bit.ly/3p2dxKi	19.9 M
Mundo Bitá	https://bit.ly/3yEFM4L	9.14 M

Table 1. Sample of YouTube channels for kids. Source: created by the authors

For the analysis of the 5 videos selected, which form the study sample in the present exploratory study, each of the dimensions and indicators were defined before the codification process through three broad dimensions: categorization of contents, visual resources they disseminate, and interactions, in agreement with Pérez-Torres et al., (2018) and Castillo-Abdul et al., (2020), to standardize the interpretation of the qualitative analysis. It is important to point out that none of the videos contained legal advisories.

Codification was performed to classify the contents in the cases that the subject was clear and unequivocal. In this sense, starting with the characteristics of the profiles of the channels studied, and based on previous studies (McRoberts et al., 2016), the authors established categories to analyze the educational contents of the channels, and specifically from the final sample. These are: 1) memorization of the contents, through every day subjects and routines, 2) family and social values, and 3) health.

In addition to the audiovisual production, specifically images, animations, and colors, the presence of brands or sponsors were considered (González-Romo & Iriarte-Aguirre, 2020), through indicators such as the presence of sponsored posts.

Starting with the exploration and sampling of videos, the results will be analyzed to additionally discover the potential of the social network YouTube as a source of informal learning, which could favor the children's creativity, and the development of skills and competences that are adequate for their age.

The study conducted met all the ethical standards when viewing and analyzing videos from the YouTube platform (Castillo-Abdul et al., 2020) noticing that it is documentary in nature, so the authors did not need the authorization from the ethics committees from the universities involved in the study.

III. Results

Considering the value of YouTube as a source of knowledge acquisition in early childhood, the 5 most-viewed YouTube channels were analyzed. These were: Reino Infantil, La Granja de Zenón, Mundo Bitá, Mashaoso and BabyBus (see Figure 1). These channels disseminate educational content and have similar characteristics, in the sense that they try to teach young children aspects associated to everyday life in an entertaining manner, which can also be identified with knowledge that is acquired at school in the early childhood education stage. Considering the watching of videos in the three months selected, an example from each channel was extracted based on the number of positive interactions, in this case the number of views, as the channels had the 'like' function disabled, and we were only able to obtain the data related with the number of times the videos were played. These productions are in most cases professional. They are based on cartoons that illustrate the meaning of the songs (Mundo Bitá), or that illustrate everyday life (Mashaoso and Baby). Likewise, it should be underlined that in the case of the channel Reino Infantil, the receivers learn the names of various animals through the music, a key aspect for the target age group, in which memory and learning is promoted through repetition and support. This aspect was also observed in the case of the channel La Granja de Zenon, as the users learn the name of many animals through music, and a chain of animal species is established that is continuously repeated. On its part, in the channel Mundo Bitá, an illustration is utilized of a horse and a trip through the savannah as a manner of contributing to engagement, understood as the ability to create a relationship with the audience, a type of commitment, which in our case it was the viewing of a video, which the child watches and re-watches over and over.

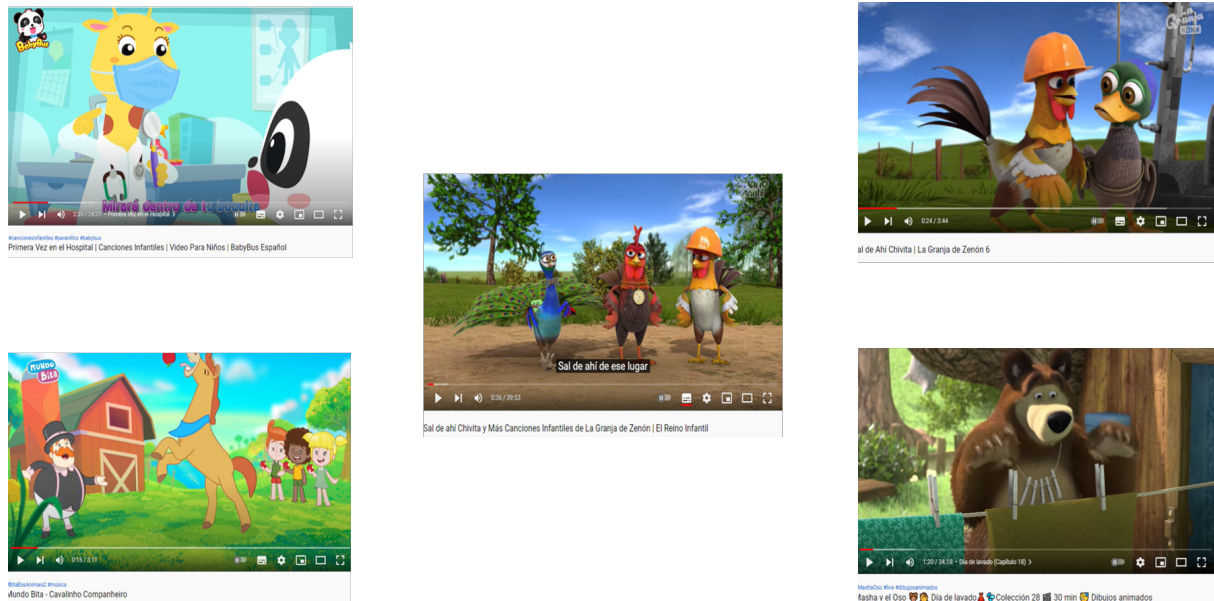


Figure 1. A selection of images from the channels analyzed.

In the case of the different channels, in spite of sharing a theme that is educational in character, slight differences were observed. For example, the channel El Reino Infantil promotes memory and learning, through the teaching of everyday topics, such as: professions or sounds. Therefore, the videos transmit values such as responsibility or collaboration. These aspects are repeated in the channel La Granja de Zenon, where the video with the most 'likes' is the same, thus allowing the authors to deduce that the production of materials, at least in this case, come from the same source. However, in the channel Mundo Bitá, learning is broadened, as it shows the family and places emphasis on its members. Thus, the young children are taught routines and physical characteristics. In the channel Mashaoso, the children learn values such as friendship and caregiving, and emphasis is placed on matters such as personal hygiene. Through the video with the most 'likes' in this channel, it was verified how values such as respect, camaraderie or friendship are transmitted. On its part, the contents from the BabyBus channel teach aspects associated to health or the need to act responsibly. Also, the videos stress the value of honesty and courage when recognizing errors, or the solidary between colleagues and the support that is unconditionally brought by friends and colleagues. Likewise, they underline the importance of working as a team to obtain better results.

Therefore, different categories were found according to the contents and values described, so that in first place, we found interests that could be observed in three of the five channels: animals, their sounds, and behaviors. In second place, the professions were taught in two of the five channels, which, as pointed out, shared the same video, as the one with the most "likes": El Reino Infantil and the Granja de Zenon. In third place, we observed that values were taught in three of the five channels analyzed.

Name of the video	Link	Channel	Number of likes	Type of content in the video	Length of video (min.)
Sal de ahí chivita	https://bit.ly/3PASwBN	Reino Infantil	22244	Every day subjects such as professions or recognition of sounds	3:44
Sal de ahí chivita	https://bit.ly/3p2IVJJ	La Granja de Zenón	28247	Every day subjects such as professions or recognition of sounds	3:44
Día de lavado	https://bit.ly/3p2IVJJ	Mashaoso	96590	Values	6:02
Primera vez en el hospital	https://bit.ly/3dYHfcl	BabyBus	44193	Health and responsibility	5:28
Cavalinho Companheiro	https://bit.ly/3sktIEV	Mundo Bitá	60866	Everyday routines and physical characteristics	3:11

Table 2. Characteristics of the sample of videos. Source: created by the authors.

The regulation which establishes the core curriculum to be taught in the second cycle of Early Childhood education (Real Decreto 1630/2006, de 29 de diciembre) distinguish three areas of knowledge: Knowledge of oneself and personal autonomy, Knowledge of the environment, and Languages: Communication and representation. From the analysis of the videos of the sample we can indicate that, in first place, Area 1 is re-enforced thanks to the content associated to the values described in previous paragraphs. In second place, that Area 2 is re-enforced by the contents which referred to values, as well as the professions and interests which were explained previously. And, in third place, that Area 3 of knowledge is re-enforced with the category of interests and that of values, at the same time providing an answer to the sustainable development goals approved in the Agenda 2030, such as to ensure inclusive and quality education (SDG 4. Quality Education), as well as the goals that promote sustainability (SDGs 13, Climate Action; 11. Sustainable cities and communities; 15. Life on land), ensure personal and social health and well-being (SDG 3. Good health and well-being), and promote common values (SDG 16. Peace, justice and strong institutions).

IV. Discussion and conclusion

In the current digital and media environment, the Internet, with its platforms and social networks, has implied an explosion of the new manners of relating for children, who have begun to increasingly access it at increasingly earlier ages (Aran-Ramspott et al., 2018). More specifically, among the denominated young children (0-8 years old), the increase in their exposure to screens has been more prominent in the last few years due to the pandemic. Along this line, as shown in the present work, YouTube has become the most-utilized platform for sharing contents, a channel in which the dissemination of ideas and habits is linked to audiovisual storytelling (Vizcaíno-Verdú, Contreras & Guzmán-Franco, 2019; Sabich & Steinberg, 2017; Sánchez-Vera, Solano-Fernández & Recio-Caride, 2019) through videos that are consumed through different channels. The present study is presented within this space, in which the children face certain risks that are perhaps associated to the lack of knowledge, parental control, or the absence of digital competence due to their young ages. Its aim is to promote the digital literacy of families, so that the young children

consume safe contents. For this, starting with the category “Made for Kids” from Social Blade, five YouTube channels aimed at children were selected, to delve in the characteristics and the type of content disseminated in them, through the use of an interpretive content analysis technique. As the study is exploratory in nature the following conclusions have to be understood as trends to be confirmed or expanded by other studies.

The channels analyzed were Reino Infantil, La Granja de Zenón, Mundo Bitá, Mashaoso and BabyBus. All of them were aimed at children, although it is important to point out that none of them contained legal notices, and during the period of analysis, notifications about this were not observed in any of the channels.

In the analysis of the channels, children’s interests were observed, such as animals, sounds, and behaviors, as well as professions and values. As for the content analysis categories, all the channels shared their educational aim, and these could be sub-divided in the following manner: 1) memorization of the contents, through every day subjects and routines, 2) family and social values, and 3) health. Thus, it should be pointed out that all of them utilized songs to illustrate everyday life, thus providing an answer to the first category. As for the second category, related to family and social values, El Reino Infantil transmits values of responsibility and collaboration, which were also shared by La Granja de Zenón; Mundo Bitá re-enforce the importance of family values, Mashaoso promotes values such as friendship, respect, or camaraderie, and BabyBus teaches values such as solidarity, honesty, or teamwork. As for the third category, health, Mashaoso and BabyBus promotes personal hygiene among children through their videos.

Considering Agenda 2030 (previously cited), the categories and contents present in the educational YouTube channels analyzed respond, for example, to the goal to ensure inclusive and quality education (SDG 4. Quality Education), as well as the goals to promote sustainability (SDGs 13, Climate Action; 11. Sustainable cities and communities; 15. Life on land), personal and social health and well-being (SDG 3. Good health and well-being), and common values (SDG 16. Peace, justice and strong institutions). Also, the values mentioned are part of Real Decreto 1630/2006, de 29 de diciembre, which establishes the core curriculum for the second cycle of Early Childhood education: Knowledge of oneself and personal autonomy; Knowledge of the environment and Languages: Communication and representation, which allow us to affirm that the contents that were transmitted through the five channels analyzed favor «the acquisition of skills for performing habitual activities with a certain degree of responsibility, autonomy, and initiative» (Real Decreto 1630/2006, p. 476).

Therefore, the categories and contents analyzed in the channels lead us to think that they can be incorporated to the teaching plans in the different educational contexts, especially in the family and school contexts, as these are the scenarios in which the young children spend most of their time. Likewise, with respect to Mundo Bitá, it is important to point out that although it is the channel with the least number of followers, it has the second highest number of ‘likes’ in the sample. In this sense, it is important to highlight that music is not exclusively used to capture the attention of the user, but it utilizes, as previously observed in the data analysis, an illustration that shapes a story. Thus, a greater number of followers does not necessarily mean a greater number of likes. It is thus important to delve into the content analysis of YouTube channels aimed at children, to reflect on the types of educational strategies that are recommended for the adequate use of these contents, and to promote the involvement of families in teaching their children to manage communication processes and contents they consume in this media sphere (Romera et al., 2021).

Considering the limitations present in this study, it is important to highlight that during the period of analysis of the channels, the comment sections were deactivated, so that only one type of reaction could be analyzed, the ‘likes’, without being able to know how many times the videos had been shared. Likewise, it would be interesting to broaden the time period utilized to analyze these channels, and the types of videos watched by the children to delve into them. Even though they

may have a lower number of followers, they could still be consumed by some of the children, and may therefore have a direct influence on their personal development.

As a conclusion, and as a result of the present study, and invitation is extended to keep on promoting adequate codes among the children to avoid risks associated to the consumption of screens, networks, or platforms (Montes-Vozmediano et al., 2017), utilizing dialogue to improve communication between families and children about the contents they consume on YouTube (Morgan & Kristjánsson, 2017), as families are the most important educational agent for young children (Castillo-Abdul et al., 2020; Rumayor, 2016). It is fundamental, for this consumption of YouTube contents to be safe and responsible (Tur-Viñes et al., 2018), to follow the models of the channels analyzed in the present work. During the process of media education and literacy, it is important to focus the analysis on the content that is consumed in these channels (Izquierdo-Iranzo and Gallardo-Echenique, 2020), and to conduct a critical analysis of the values that appear in the digital interactions, which have an influence on the audiences. Therefore, it is necessary to continue research on the effects of the consumption of specific YouTube channels by young children, as these can have an influence on their development (Garduño & Sting, 2017). The educational possibilities of YouTube are broad (Ramirez-Ochoa, 2016), it is a source of informal learning, which favors children's creativity, as well as the development of skills and competences that are adequate to their age. But risks still exist associated to the inadequate use of this platform, so an emphasis should be placed on the need to broaden research studies along this line, and to promote teaching plans on media and digital literacy in which all the education agents can actively participate in the acquisition of competences that allow them to responsibly educate in the media sphere, because the more committed we are the easiest it will be to incorporate values and rules of adequate behavior (Baker & Bilbro, 2017; Renés-Arellano, et al., 2021).

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