Transmedia educommunication method for social sustainability in low-income communities

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In the post-pandemic world, we see the exacerbation of digital connections but also inequalities between countries with higher or lower degrees of access to fast Internet services. Digitization processes enable and intensify global exchanges and yet expand disconnections as they globalize debates and solutions without considering the different levels of accessibility, digital literacy, and Internet infrastructure in less privileged communities. Such discrepancies are reflected in learning levels and, consequently, in the development of social sustainability. As a theoretical-methodological contribution, this paper draws on the concepts of transmedia logic, educommunication, and social sustainability. The original transmedia educommunication method discussed here consists of a week-long gamified intervention in schools with students between 11 and 14 years old, in Portuguese speaking countries. The objective is to give them the tools to distinguish between textual genres and their purposes. The results obtained by the transmedia educommunication projects highlight the importance of thinking about methodologies based on the reality of each community, with their respective cultures and levels of accessibility to different on- and offline technologies.

1. Introduction

In the post-pandemic world, we see the exacerbation of digital connections but also inequalities between countries with higher or lower degrees of access to fast Internet services. Digitization processes enable and intensify global exchanges and yet expand disconnections as they globalize debates and solutions without considering the different levels of accessibility, digital literacy, and Internet infrastructure in less privileged communities. Such discrepancies are reflected in learning levels and, consequently, in the development of social sustainability. Learning processes and social sustainability are increasingly intertwined with complex narrative disputes permeated by information, misinformation, and disinformation.

The semantic universe of disinformation includes, among other aspects, manipulation of the informational context, fabrication of connections between events, and production of misleading content (Wardle and Derakhshan, 2017). From a sociotechnical perspective, the informational distortions that result in misinformation are favored by the expansion of digital connections, which lead to access to information in exponential quantities with enormous variety. What makes this phenomenon typically contemporary is its transmedia dynamics, which expand the social reach of disinformation across digital connections.

The handling of this issue requires designed approaches capable of reaching the smallest off-screen localities covered by the noise of a globalized communication system strongly guided by values and languages unknown in low-income communities especially in the Global South. In this sense, this paper presents a methodology based on transmedia dynamics from a phygital (physical and digital) perspective, which can be applied in different parts of the world, adapted to different languages, in a sustainable way that takes into consideration the local realities. The objective is to provide education to recognize the different narrative nuances that are spread at the global, regional, and local levels. The development of the methodology culminated in the pilot study Confabulating (*Confabulando*, in Portuguese), a project originating in Brazil in connection with Lusophone Africa, and with the financial support of Meedan, a global technology not-for-profit that builds software and programmatic initiatives to strengthen journalism, digital literacy, and accessibility of information on- and offline.

As a theoretical-methodological contribution, this paper draws on the concepts of transmedia logic (Gambarato et al., 2020), educommunication (Martín-Barbero, 2000), and social sustainability (Ketschau, 2015). Transmedia logic refers to the creation of a narrative universe constructed in multimodal formats, which continuously expands toward the collective engagement of audiences generated on- and offline. The contents associated with each other are articulated around a fictional or non-fictional central narrative. Educommunication is a movement that emerged in Latin America in the late 1960s and 1970s and highlights a different radical understanding of communication and education as transformational and liberating interrelated fields. This movement can be considered a South-South initiative that gives special attention to the cultural and political dimensions of educational and communication processes and aims to emerge as an alternative paradigm for reconfiguring power asymmetries, access to communication, and quality education in marginalized communities. Social sustainability is one of the dimensions that constitutes the concept of sustainability, referring to a society that is organized to de-escalate social tensions and promote opportunity redistribution amid issues such as social justice. The concept of social justice assumes that all individuals in a society have equal rights and duties in all aspects of social life. Therefore, the concept seeks to ensure equal access to basic rights, such as health, education, justice, work, and cultural expression.

From the perspective of social sustainability advocated in our approach to transmedia education, social justice is a key aspect for confronting colonial thinking in schools. According to Quijano (2010), coloniality, one of the constitutive elements of the world pattern of capitalist power, is based on social identities—indigenous, black, mestizos, etc.—that emerged from colonialism and the dissemination of geocultural patterns of colonialism in various parts of the world, especially in Latin America and Africa. In line with this vision, we defend as an ideal of social sustainability, transmedia education processes based on the emergence of participatory politics through the integration of the culture of participation and sociopolitical issues. In this sense, we seek to promote cultural exchanges on a global scale based on geolocalized experiences in order to produce social sustainability habits in a transmedia educommunication process.

The original transmedia educommunication method discussed here consists of a week-long gamified intervention in schools. Through this experience, we aim to develop media and text literacy skills in students and teachers. Our objective is to give them the tools to distinguish between textual genres and their purposes. Thus, students can identify misleading and malicious information that is different from that intended for entertainment and the arts. The article details the development and application of this method in two Portuguese speaking countries: Brazil and Mozambique.

2. Transmedia logic

The term *transmedia* describes how contemporary narratives propagate at the intersection of media, although each medium preserves its language autonomy. A transmedia narrative is continuously expandable by the integrated actions of producers and consumers in on- and offline connections. Furthermore, it often establishes sociotechnical conditions for local narratives, alien to traditional media conglomerates, to reach global circulation, and even favors large-scale social mobilization around various topics of general interest.

In the 1990s, Kinder (1991) formulated the term *transmedia intertextuality* in reference to interconnected media products, such as films, toys, fan production, etc. Later, Jenkins (2003) coined the term *transmedia storytelling* to designate media-distributed stories in which each medium contributes to the whole in an autonomous but complementary way.

Jenkins (2009) proposed seven principles of transmedia storytelling: spreadability/drillability, continuity/multiplicity, immersion/extractability, world building, seriality, performance, and subjectivity. In 2010, he revised these principles within the framework of what he called *transmedia education*, a current focus on how teachers in any school subject and at all levels of education can build on the principles of transmedia storytelling to improve the way they foster students' learning.

Recently, the notion of transmedia education has encompassed a semantic universe that includes similar terms such as *educommunication* and *transmedia literacy* (Tárcia, 2019). For Soares (2000), educommunication refers to the use of communication as an element of education in a procedural, mediatic, transdisciplinary, and interdiscursive way. Transmedia literacy, in turn, seeks to deal with the communication practices and processes that emerge from the media ecology of the 21st century. Scolari (2019) considers that digital technologies configure new social practices that are different from traditional educational protocols in schools. According to him, transmedia literacy processes consider the digital dimension of adolescents' social lives, informal learning strategies, and participatory culture.

The perspective of transmedia education that we claim (Gambarato et al., 2020) is part of the historical trajectory of educommunication, involving the contemporary specificities of media ecology on which transmedia literacy focuses. Although the processes of transmedia literacy are noticeably digital, they also integrate any form of expression, digital or analog, that can establish social interactions and promote cultural exchanges on a global scale based on geolocalized experiences. Thus, the idea of transmedia education can be defined as a type of transmedia logic that outlines global networked actions in education based on local social and cultural experiences.

According to Jenkins (2017), transmedia logic designates the intended interaction between consumers, producers, and texts in

relation to the purpose of transmedia planning. For us, transmedia logic outlines communication processes permeated by digital media connections and communication processes that are established in networks, even if they are not mostly digital (Gambarato et al., 2020).

On the one hand, transmedia logic encompasses production processes oriented toward multiplatform distribution of content with circulation driven by algorithms and social expansion favored by network sharing, which are striking aspects of contemporary society. On the other hand, transmedia logic presupposes not only media arrangements in the digital context but also any form of communication that allows the formation of global networks through local, cultural, and social experiences.

The prefix *trans*-circumscribes the communicational process in this heterogeneous media scenario. Van Bauwel and Carpentier (2010) considered that the prefix *trans*- oscillates between continuity and discontinuity, with greater emphasis on the process of change and on the simultaneous coexistence of what is and what has been transgressed and their fluid fusion. This understanding requires openness to languages and formats that are not always conventional.

Therefore, the communicational logic of transmedia dynamics integrates a wide variety of media environments, forming a dense, tense, and diverse network of communication perspectives, including transmedia education that focuses on sustainability. In our view, transmedia education processes aimed at the development of a more sustainable world not only can promote this vision in schools but also can favor the development of more sustainable habits of media consumption.

Moreover, our perspective on transmedia education evokes the notion of transmedia activism (Srivastava, 2009), which designates the way activists use media platforms to expand the local narrative of social interest through collective and participatory work. Jenkins (2016) considers that transmedia mobilization, an aspect of transmedia activism, expands the idea of participation by diversifying strategies for the formation of a shared social agenda in the integrated uses of media. He discusses the emergence of participatory politics through the integration of the culture of participation and sociopolitical issues. Consequently, we argue that communicational planning in transmedia education can trigger aspects of transmedia activism to promote integrated actions in public schools in low-income countries with the purpose of generating social sustainability awareness.

3. Educommunication

In August 2021, Jenkins began writing a series of articles on educommunication that called for dialogues with Latin America, where the movement began, on his blog *Confessions of an Aca-Fan*. In his words, the "educommunication concept has had an enormous impact across Latin America, but is little known in the global North" (Jenkins, 2021). He argues that the COVID-19 pandemic has exacerbated the need to approach the challenges of contemporary education as a complex global ecosystem in which many challenges are common. Knowledge and practices developed in different cultures can contribute to improvements in education and media literacy in different environments and contexts.

Historically, one of the first to use the term *educommunicator* was the Argentinian journalist Mário Kaplun, referring to a volunteer or professional capable of mediating the processes of alternative

journalism and community radio projects (Nepomuceno, 2012). The term inspired the educommunication concept used by Martín-Barbero (2000, p. 18) when considering that the vertical and authoritarian communication model in schools "does not allow it to be open in order to be enriched by the new means of communication languages."

Paulo Freire is another reference for the study of educommunication because he understands education as an activity that depends on the communicative act for the construction of meaningful knowledge. Freire (1972) emphasizes the importance of communication in popular education and expands the concept by seeking the idea of horizontality in these relationships. For him, "liberating education" is more about cognition than about transferring information, which is possible through problem solving and dialogical relations applied to the learning process.

His ways of thinking about education, consolidated throughout the 1960s, are in consonance with the work of Russian linguist Bakhtin (1981). Bakhtin also placed great emphasis on the cultural characteristics of communication, recognizing linguistic diversity and the differences between interlocutors.

Writing for Jenkins' blog, Mateus and Lombana-Bermudez (2021) defend educommunication as a dialogue-based model that assumes that knowledge is a collective process. From this perspective, media "plays a role of mediation or intermediation that does not necessarily facilitate the communicative process, but rather creates new problems and challenges, and demands another type of more complex view" (Mateus and Lombana-Bermudez, 2021).

Before discussing educommunication, Jenkins (2010) faced the challenge of transposing his seven core principles of transmedia storytelling to teaching and learning processes. In making this transposition, albeit in essay form, Jenkins highlighted aspects such as collaborative construction, the expansion of approaches, and the incorporation of multiple platforms, means, and resources. He also focused on student autonomy and narratives as factors that amplify learning universes.

Other studies that followed Jenkins' connection between transmedia and education focused on the usefulness of the characteristics that mark a hyperconnected society (Passarelli and Angeluci, 2017), as it is configured as a layered narrative to promote learning experiences, extending interactions through the use of multiple media channels and promoting participation (Carpentier, 2015). An ambitious project based on this perspective was developed between 2015 and 2018 and funded by the European Union. The objective was to map and bring the sociotechnical practices of young people closer to the educational processes of the countries involved in the research (Scolari, 2019).

Departing from the premises of the Transmedia Literacy project, Ledesma (2019) relates it to other initiatives named *edutopic* such as the One Computer per Student Project, advocated by Nicholas Negroponte at the World Economic Forum in Davos in 2005 (Morales, 2015) and implemented without considering local constraints in Latin American countries, for instance. The critical assessment of these projects reveals that they disregard the fundamental purposes of education and the social and historical contexts in which they develop, in addition to being strongly based on neoliberal initiatives.

The questions posed by the platformization phenomenon (Van Dijck et al., 2018) and social isolation during the COVID-19 pandemic, especially in low-income communities, have exacerbated

contemporary educational problems, such as the need for a critical formation to discuss and confront complex contemporary sociotechnical singularities. The remaining challenge is how to best foster students' curiosity, independence, and creativity that stimulate their need to achieve logical and ethically mediated connections.

Therefore, our proposal emphasizes the need to prioritize educommunication values based on relationships, human connections, and sustainability, whether mediated by digital or analog platforms, as a way to overcome this challenge. The main effort, in our experience, is to know the context in which people are inserted and seek in local cultures the key to stimulating interest in knowledge by exploring the richness of each available window for a true connection and exchange. In that context, we highlight the South-South dimension of this educommunication project, based on the common challenges confronted by the countries addressed. Thus, we understand transmedia educommunication as the critical formation of students for reading and appropriation of narrative constructions from a multiplatform and multimodal perspective. The focus must be on dialogical relations, understanding the flow of communication systems, and strengthening polyphonic communicative ecosystems in educational spaces (Tárcia, 2019), considering their historical and actual struggles and reflections about the educational system.

In this sense, we emphasize the connection between educommunication and sustainability (Gattás, 2015). Educommunication has great relevance for the construction of a sustainable society, as one of its contributions is to build a more open and critical communicative environment. In addition, it is possible to integrate diverse sectors and education in favor of greater sustainable awareness.

Based on this approach, Gambarato et al. (2020) developed projects of communication strategies in transmedia education for low-income communities, such as East Timor, Mozambique, and Brazil, using a multitude of platforms, especially analogical, to promote an active instance in the classroom. "This variety of tools shapes the social agenda and reaches stakeholders through incentives to participate. Cultural behavior shapes the creative use of media platforms and change in behavior is achieved through social engagement" (Gambarato et al., 2020, p. 143).

4. Social sustainability

The sustainability concept originally focused on timber and concerned sustainable forest management, providing a path to the emergence of modern forestry in Germany in the 18th century. Von Carlowitz (2012 [1713]), in his *Sylvicultura oeconomica* (1713), was the first to conceptualize the threefold meaning of sustainability, environmental, economic, and social, foreseeing that a single discipline could not fathom the challenges of sustainable development (Ketschau, 2015). Sustainable development and sustainability are interwoven in the sense that "sustainability is a long-term goal toward a more sustainable world, whereas sustainable development implies the processes to reach this goal" (Wolff and Ehrström, 2020, p. 1).

Sustainability gained traction and entered the political agenda allegedly with the publication of the Brundtland Report by the (World Commission on Environment Development., 1987). Vallance et al. (2011) argue that social sustainability is mainly anchored in

this report, which highlights the pivotal role of the social dimension in connection to the environmental and economic spheres to guarantee development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment Development., 1987, p. 16). Notwithstanding, it is relevant to note that the social dimension has received little attention (Wolff and Ehrström, 2020), is the least addressed in sustainability conceptualization (Ketschau, 2015), and lacks theoretical and empirical research (Eizenberg and Jabareen, 2017).

Although this triadic model of sustainability (Åhman, 2013)—reinforced by Elkington's (1999) Triple Bottom Line concept that considers the environmental, economic, and social dimensions on an equal footing—necessarily involves social sustainability, this aspect arguably "lacks a coherent, clear and utilizable definition" (Eizenberg and Jabareen, 2017, p. 2). Ketschau (2015) states that social sustainability refers to a society that is organized to de-escalate social tensions, while Elkington (1999) derives the social facet of sustainability from the concept of social capital, which presupposes human capital and encompasses public health, social values, and education, for instance. Most importantly, social sustainability must offer opportunity redistribution amid issues such as poverty alleviation, human rights observance, and social justice.

Education, in this regard, takes center stage, as there is "empirical evidence that social inequality is caused by transition processes in the educational system" (Ketschau, 2015, p. 15762). There are multiple factors implicated in this context, including family background, gender-specific differences, and parents' educational levels (Lareau, 2003). Freire's (1972) *Pedagogy of the Oppressed* highlights that education can become a means of enforcing social justice and injustice not only in the early years but also in lifelong learning. Freire assures that language, literacy, and literacy practices are some of the ways in which education can effectively contribute to social justice (Freire, 1985) and, consequently, to social sustainability. In our case, educommunication can also contribute to fighting the dissemination of disinformation and misinformation.

Ketschau (2015) proposed a framework that combines social sustainability, social justice, and education. From his perspective, the normative link between social sustainability and education is social justice:

> Social sustainability and social justice have been assumed to be interdependent if not even symbiotic. The educational sciences are addressing issues of social justice by discussing inequalities in educational possibilities and as a way of promoting educational behavior and opportunities for socially disadvantaged groups (Ketschau, 2015, p. 15765).

Adding to the discussion, Eizenberg and Jabareen (2017) consider the physical and non-physical factors associated with social sustainability, arguing that physical settings/characteristics such as urban planning, accessibility, sustainable transport, decent housing, and greening are insufficient for achieving social sustainability. They emphasize the importance of non-physical factors as "necessary social processes and structures that will emerge within a community and ensure the satisfaction of its needs, which are ever-changing" (Eizenberg and Jabareen, 2017, p. 3) to achieve sustainable development. Dempsey et al. (2011) present a list of non-physical factors, including education and training, social justice, equity,

participation and democracy, quality of life and wellbeing, social inclusion, employment, and community cohesion, among others.

Here, we can reflect on how infrastructure elements (physical factors), such as digitization processes, Internet access, and accessibility to material resources, are not enough to ensure social sustainability. Education seems to be a key non-physical factor in promoting reflexivity, literacy, and capacitation to deal with the ever-changing needs and challenges that societies are constantly exposed to, such as in the case of the spread of misinformation, disinformation, and fake news explored in this paper. Eizenberg and Jabareen (2017) consider income, education, and language skills to be the most important factors for achieving social equity, and Wolff and Ehrström (2020) postulate that education is the route toward social sustainability.

Nevertheless, there are "obvious deficiencies in the implementation of sustainability in education" (Wolff and Ehrström, 2020, p. 2). More than sustainability-related content, education for social sustainability should imply what Rieckmann (2018, p. 56) calls "action-oriented transformative pedagogy": interactive and participative learner-centered teaching with engaged and creative educators. We propose that the transmedia educommunication method offered in this paper fulfills the challenge of promoting social sustainability *via* a transformative pedagogy.

5. Transmedia educommunication method

Since 2017, we have been researching and teaching transmedia educommunication in conjunction with international and local partners, focusing on communication plans for public schools in the Community of Portuguese Speaking Countries (CPLP), such as Brazil, East Timor, and Mozambique (https://www.educacaotransmidia.com.br/, no date). The primary focus of our research is public schools located in low-income communities, usually marked by limited access to digital technologies, which requires thinking about transmedia logic in media settings that are not always online.

Our methodological approach to transmedia educommunication is based on an initial diagnosis phase carried out in each public school, which leads to the proposition of specific actions, considering the social, political, and economic context of each school, as well as the students' media consumption habits. The proposed actions aim to contribute to solutions to educational problems through recreational activities in varied and integrated media environments, as well as to encourage students of these public schools to be multipliers of knowledge in their communities.

More broadly, the aim is to promote the sharing of experiences related to transmedia educommunication between students and teachers at public schools in Portuguese-speaking countries from an intercultural, transnational, and transmedial perspective. By doing that, we also take into account that, although Portuguese arrived in these countries and was used for numerous years as an official means of communication in bureaucratic and institutional colonial contexts, currently "the knowledge of the Portuguese language is fundamental to ensure school success, because it is from the Portuguese language that the entire communicative process occurs in the other curricular disciplines, in all public and private schools" (Mutsuque, 2022, p. 34). Nevertheless, we note that in many of the Portuguese-speaking

countries there are efforts by the education sector to implement a bilingual teaching curriculum nationwide, including some of the main local languages in dialogue with Portuguese. For this reason, the project proposes archives of open content to be translated into different local languages, according to the needs of each community.

Our methodological proposition for transmedia educommunication involves five stages: diagnosis, planning, product development, execution of planned actions, and evaluation of the results. The diagnosis phase involves the following methodological procedures: (1) conducting in-depth interviews with teachers and principals of the partner school, (2) forming focus groups with students, (3) conducting a design thinking workshop for constructing personas to better understand our target group, and (4) performing subsequent script definition for multiplatform proposition of the projected canon narrative. The planning phase corresponds to the strategic and tactical stage of the elaboration of actions and prototypes that would be used in the school, based on the communication problem identified after the diagnosis. From the multiplatform roadmap created, the products that would configure the transmedia educommunicational kit (a set of transmedia products, such as booklets, games, etc.), as well as manuals to assist teachers in the classroom, are developed. The execution of the planned actions phase—encompassing planning, product development, and execution of planned actions—is then carried out by the support team, which includes companies and partners, teachers and students from the chosen school, project coordinators (researchers), and teachers and students from Brazilian and local universities (when the project is implemented abroad).

The planning phase comprises sub-procedures that observe the following dynamics: (1) the immersion phase in the participating school, (2) identification of the educommunicational problem, (3) creation of the project purpose, (4) creation of personas, (5) construction of the central theme, (6) construction of the background and context story, (7) a design thinking workshop for gathering ideas, (8) construction of the synopsis of the main narrative, (9) definition of platforms and insertion points, (10) search for partnerships for product production, (11) definition of required channels and resources, (12) creation of the script, (13) creation of the user journey, (14) definition of engagement triggers, (15) definition of the main events and actions, and (16) definition of the execution schedule (Gambarato et al., 2020).

In the evaluation of the results phase, to track the development of the transmedia educommunication project in the school community and its transnational reverberation, appropriate metrics (such as in-depth interviews with students and teachers from the local community and questionnaires for international users of the method) are chosen to analyze whether the goals have been met (Gambarato et al., 2020). In the post-pandemic context, the focus of our transmedia educommunication research became critical training for textual recognition of disinformation concerning the social sustainability of the communication process. Consequently, we conducted two pilot studies that focused on disinformation. Linked to our research, Jane Alexandre Mutsuque Zefanias, a doctoral candidate in the Graduate Program in Social Communication at the Federal University of Minas Gerais, Brazil, under the supervision of Geane Carvalho Alzamora, performed a pilot study in 2021 at the public school Escola Secundária Ponta-gêa in Beira, Mozambique, to test the applicability of our transmedia educommunication method in connection with his dissertation. The study included 30 students

aged between 15 and 17 years old in the Portuguese Language course. To publicize the experience at the school, a partnership was established with local radio and television stations. With a focus on social sustainability, we developed teacher training material to build local capacity in transmedia educommunication to fight disinformation. The produced material is available for download on the project's website (https://www.educacaotransmidia.com.br/cópia-moçambique, no date).

In this paper, however, we discuss a pilot study conducted in 2022 at a school in Belo Horizonte, Brazil: the Confabulating (*Confabulando*, in Portuguese) project. This pilot study was implemented with students between 11 and 14 years old. Focusing on social sustainability, all the project materials are available for download on the project's website, including a manual for teachers, tutorial videos, and card games (https://www.educacaotransmidia.com.br/confabulando, no date). The project was approved by the Ethics Committee of the Federal University of Minas Gerais (Brazil). Approval is important because the project involves teenagers' participation in middle school. It should be noted that those responsible for the adolescents, the teenagers themselves, and those responsible for the schools involved signed a term of authorization to participate in the project. The research strictly followed the guidelines of the local legislation in relation to projects involving minors. In addition to making participants and their families aware of the objectives of the proposal, we guaranteed confidentiality regarding the identity and data about the participants.

6. The confabulating project

In 2021, we started a collaborative work in partnership with Meedan, a global technology non-profit project that builds software and programmatic initiatives to strengthen journalism, digital literacy, and accessibility of information. They develop open-source tools for creating and sharing context on digital media through annotation, verification, archive, and translation. Meedan's work is anchored in its vision of a fairer Internet, compatible with our goals in transmedia educommunication research, although the company has been more focused on digital technologies.

One of Meedan's programs, called Check Global, supports independent journalism, media literacy, and human rights efforts by providing software, training, and networking opportunities to independent media organizations, journalism schools, and human rights activists in the Asia Pacific, Latin America and the Caribbean, North Africa/Western Asia, and Sub-Saharan Africa regions. Aware of our connection with Mozambique, the Check Global team for Latin America and Africa provided us with financial support to develop a methodology to combat disinformation that could be appropriate to different sociocultural contexts.

Drawing on our transmedia educommunication method, we developed a proposal, the Confabulating project, based on data about Internet access in low-income communities in Brazil and Africa. According to the World Bank Group report (Mahler et al., 2019) on poverty and equity, Sub-Saharan Africa remains a long way from achieving universal Internet access. The report shows that only one person in five in Sub-Saharan Africa used the Internet in 2017. Although Internet access in Sub-Saharan Africa has grown rapidly in recent years, access rates remain well behind the rest of the world.

Internet usage is particularly low in landlocked countries, where the costs of the necessary physical infrastructure are high, and access is more dependent on neighboring countries. In contrast, when looking more closely at the spatial distribution of Internet access, the capital region usually has high levels of Internet access, while other regions tend to lag (Mahler et al., 2019).

In this context, the primary target of the Confabulating project is public schools located in low-income communities, usually marked by limited access to digital technologies. Nevertheless, we continue to work with local universities located in places that have Internet access and can provide assistance to disconnected schools, such as in the case of Mozambique.

The Confabulating project aims to educate about different types of texts that students can find on- and offline. The project presents students and teachers with sustainable tools to differentiate texts of a creative, poetic, or humorous nature from those of a manipulative nature, which are intended to deceive and pass on false information.

In practice, Confabulating is an analog game developed with the intent to raise discussions about fake news and to contrast it with other fields whose texts, if not strictly true, are not necessarily false either, such as poetry and parody, among others. After participating in the project, students would ideally become more able to reflect on and distinguish among the following:

Satire/parody: When a fact or text is poetically or humorously recreated, without the intention of deceiving, but rather of questioning it or making fun of it.

False connection: For instance, when titles, images, and subtitles do not match the content of a news article.

Misleading content: When a piece of information is used (on purpose or not) to mislead the reader/viewer, often causing them to unjustly blame a person or group.

Imposter content: When someone impersonates a genuine source.

Manipulated content: When genuine information or images are manipulated with the intent to deceive.

Fabricated content: When an event or someone's statements are completely invented and passed on as truths.

The target audience of the project is young students (age between 10 and 13 years old). Although it was designed for application in schools in Brazil, Mozambique, Angola, and other Portuguese-speaking countries, nothing prevents it from eventually being presented in countries that speak other languages or dialects after the material is translated. To support the activities and make them more dynamic and playful in a gamified way, four characters—multiple students role-play the characters—were created:

Fabulous: She is the most creative character in the group. Faced with several challenges, she is capable of developing answers that are beyond the expected and proposes imaginative and poetic solutions. Her name refers to the experience proposed by this project, and it is connected to the various meanings of the term "fabulous": fictional, fantastic, admirable.

Journalist: The most curious character in the group, she seeks to understand the context of each event and each situation. To do so, she makes a point of paying attention to everyone's ideas and speeches before drawing conclusions.

Pinocchio: He is the character with the talent and the coldness to deceive people. His cleverness helps him convince others that he is telling the truth. He is named after the famous character created by Italian writer and journalist Carlo Collodi: the wooden puppet who told many lies.

Sherlock: He is the most attentive to details, mysteries, and deceptions. He has a vocation to be a detective and is able to discover the secrets and understand the intentions behind the messages. His name is derived, of course, from the English detective Sherlock Holmes, created by Conan Doyle, who is famous for his ability to make logical deductions.

Confabulating is thus far composed of four playful activities—some competitive, others collaborative—all with the aim of discussing the limits between truth, lies, fiction, poetry, etc., in an engaging and participatory way. The activities can be conducted by the team that created the methodology, with teachers, or by schools using the instructions available for free online.

In the pilot study in Brazil, we worked with three teachers at Colégio Mangabeiras, a school located in Belo Horizonte. 20 students participated in the activities, all ranging from 11 to 14 years old (6–9th grade). They volunteered to participate after the school supervisors sent an invitation to all students, and they signed an agreement authorizing the use of the pilot findings in our project.

Before the activities start (the day before or a few hours before), the teachers engage in a conversation about the game and fake news and other concepts mentioned above. Our research demonstrates that it is important to work with teachers in a cooperative manner to exchange experiences and learn about their backgrounds and the best means of working with particular classes based on their characteristics. This is a stage when we can think together about action-oriented methods capable of building a sustainable transmedia educommunication basis that remains a tool to be explored by the school after our intervention.

In the Confabulating project, the first activity involves *poetic definitions*. Each participant plays as the character Fabulous. The teachers present a series of poetic definitions, created by local writers such as Adriana Falcão, José Carlos Aragão, and Leo Cunha, in Brazil, in order to understand what is meant by poetic definition: a definition that is very different from the ones found in a dictionary but is not necessarily false; it can be lyric, creative, imaginative. Then, the person in charge presents a few words to the players (two to four words, depending on the number of players and the time available for the activity).

Each player must create a poetic definition for each word. Then, the various poetic definitions of that word are presented, gathered, and organized in the form of a collective poem. One poem for each word is presented. For example, in the pilot study, one of the suggested words was "war" (the project was implemented in April 2022, several months after the start of the conflict between Russia and Ukraine), and the resulting collective poem was:

> WAR,
> War is a sea of blood,
> it is Dracula's feast.
> Wars are the selfishness of man,
> revolts resolved through violence,
> differences that hurt.

> In war, the powerful hate each other and send the minors to fight.
> War is the victory of losers,
> it is the dirty world,
> a life in smoke and darkness,
> the gateway to mass chaos.
> War is a drug with no way out,
> it is confusion, sadness, death and that is all.

Each line above was created by one of the students, and the researchers merely helped the group organize the lines in order to compose the collective poem. The resulting text was admired by students and teachers, who felt proud of their collaborative text production. The group then discussed the nature of the text itself: could it be considered true or false, or something else? Was it fictional, was it poetic? Is there a line that separates poetry from truth and from falseness?

In the second activity, all participants assume the role of *Sherlock*. Each round has a leader (who may be the teacher or one of the students) who chooses a little-known word from the dictionary. The less common the word, the better it is for the game. Each player then writes on a sheet of paper a definition of that word, not with the goal of getting the meaning right but to convince the other players that theirs is the real definition. The activity leader mixes the actual definition with the others and reads them all. Then, everyone votes for the one they consider to be the real one. Those who get the true definition right earn points, as well as those who have their definition voted on by other players. This competitive activity brings out the rhetorical ability to bluff and to convince others and shows how a well-written lie can often convince more than the truth. The activity is similar to a board game known in Brazil as "Academia," and in Portugal as "Leréia," and also similar to a game played in several countries called "Word Bluff" (or similar names). The main difference is that "Academia" provides cards with several unusual and little-known words, while we provide the players with a dictionary and each player chooses a word that they believe is unknown by the others.

In the pilot study, one of the suggested words was "*grogotó,*" a very uncommon word in Portuguese that means "it's over," or "now it's too late." Among the 20 players, one was the leader who chose the word "*grogotó,*" and the other 19 created their own fake definitions. The real definition got 5 votes and 6 different definitions received between 1 and 6 votes. The winner of the round was the student who created the most voted fake-definition. Students were impressed to see how the wording of a phrase (even a dictionary definition) can be misleading and/or convincing.

The third and fourth activities are more directly linked to fake news. Both demand that participants, after hearing news headlines (some are false, some are true), vote on whether each headline is true or false. In these activities, the characters in action are the Journalist and Pinocchio. One difference between the third and fourth activities is that the latter involves a group discussion before voting, while in the third activity, the vote is individual.

The fourth activity uses cards with news headlines printed on them. The players are divided into two groups, and each one receives a pile of cards. Half of the cards have fake news, and the other half have real news. On the cards with fake news, the context and

explanations are read after the vote. For instance, one headline reads: "Scientists have discovered a stone called *chrysocolla*, which is capable of curing diabetes. A diabetic person will be healed after wearing a bracelet with this stone for some time." After the other team votes whether the news is true or false, the first team reads the rest of the card: "This is fake news. The truth is that there is no energy-based treatment for diabetes, and people must strictly follow their doctors' instructions."

The pilot study was very successful in engaging students and teachers according to the evaluation. The action plan intended to tackle the sustainability of a transmedia educcommunicational path gave them diverse resources to discuss different texts that students can find on- and offline in a fun, participatory, and collaborative way.

During the process, it became clear that an attempt to engage students in a formal context within regular class hours was a limiting agent for the proposal of a more elastic transmedia strategy. However, through the creation of an emotionally positive environment and the co-design path, we worked with students collaboratively. The project activities involving listening and empathy, even beyond media-centric teaching practices, had a significant impact on students and created an effective bridge between their interests and the school's aims.

It is crucial for the project that teachers are present and participate in mediating and learning about the method. Therefore, we have been investing in providing training for teachers not only about the Confabulating project specifically but also about the potential of transmedia educcommunication possibilities and challenges.

Thus, in addition to our primary audience, composed of teachers from public schools, we adopted the strategy of training replicator agents at the postgraduate level. To date, this training has taken place in Brazil, within the discipline on Transmedia Strategies, inserted in a free course at the prestigious Federal University of Minas Gerais, a public university dedicated to the training of professionals specialized in public dissemination of sciences.

7. Final considerations

Transmediality—an umbrella term describing the practice of involving multiple media technologies and formats to developcontent—is primarily associated with commercial practices, especially those connected to the entertainment industry and implemented digitally. However, the entertainment nature and digital formats are not the only way to conduct transmedia projects. Freeman and Gambarato (2019) emphasized that transmedia practices have evolved and spread across different sets of disciplines, encompassing education, journalism, and activism, among others, and varying formats from analog to digital.

In the transmedia educcommunication realm, it is important to think about alternative formats and technologies for different realities, such as in low-income communities that do not have optimal accessibility to Internet infrastructure. These alternatives must be sustainable from a social and pedagogical perspective as a way to be transformative and continuous and make a true difference.

We see transmedia educcommunication and its ramifications as relevant for learner-centered teaching with engaged and creative educators. The transmedia educcommunication method offered in this paper fulfills the challenge of promoting social sustainability in low-income communities, usually marked by limited access to digital technologies *via* a transformative pedagogy, as demonstrated by two pilot studies—one in Mozambique and the other in Brazil.

The results obtained by the transmedia educcommunication projects thus far highlight the importance of thinking about methodologies based on the reality of each community, with their respective cultures and levels of accessibility to different on- and offline technologies. Transmedia educcommunication is a process to be held in a dialogical and sustainable manner, based on collaborative, participatory, and creative initiatives. This implies a more flexible and liquid perspective, contrary to the "banking education" considered bureaucratic by Freire (1972). In the banking approach to education, students are not viewed as active participants in the learning process, but as passive recipients of information. They are treated as empty vessels, in which teachers *deposit* information. In this context, students are denied the right to think for themselves and are expected to accept what the teachers tell them. The banking approach to education has been criticized for its lack of engagement with students' prior knowledge and experiences. It has also been criticized for its lack of emphasis on critical thinking and its reliance on rote learning.

In the case of the Confabulating project, the engagement generated by the playful dimension of the proposed game expanded the understanding of the different textual strategies, showing that disinformation is a textual strategy. Confronting the phenomenon of disinformation involves the development of text interpretation strategies based on social engagement. Our research on transmedia educcommunication continues in terms of further developing the method and implementing additional diversified projects, such as Confabulating, to contribute to the formation of participatory communities capable of achieving social sustainable development.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

LT contributed to the conception and design of the experiment and the article, responsible for the parts related to the introduction, educcommunication, and Confabulando Project and the conclusion. GA contributed to the conception and design of the article, responsible for the part related to transmedia educcommunication method and the conclusion. LC contributed to the conception and design of the article, responsible for the part related to the Confabulando Project and the revision of the texts written by other authors. RR contributed to the conception and design of the article, responsible for the part related to social sustainability and the conclusion. Revision of the texts written by other authors.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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