

Memes, online education and teacher training in digital culture

Kaio Eduardo de Jesus Oliveira^{1*}, Cristiane de Magalhães Porto² and Samuel Francisco Rabelo²

¹Centro de Cultura, Linguagens e Tecnologias Aplicadas, Universidade Federal do Recôncavo da Bahia, Rua General Argolo, 40, 44200-000, Santo Amaro, Bahia, Brasil. ²Universidade Tiradentes, Aracaju, Sergipe, Brasil. *Author for correspondence. E-mail: kaioeduardo@ufrb.edu.br

ABSTRACT. The culture of memes is actualized through the exercise of networked authorship and the playfulness that each individual brings to the communicative dynamics of digital culture. Therefore, it is essential to understand how the language of memes creates learning situations and, above all, how it can mobilize pedagogical practices. Thus, this article aims to analyze the meanings, significances, and digital competencies that internet memes can mobilize in the process of teacher education. The text presents qualitative research of a bibliographic nature and used an online questionnaire as the main data collection instrument, applied via Google Forms to a group of teachers in initial training, linked to a higher education institution in the interior of Sergipe in 2023. The study concludes that memes challenge teacher education as they can stimulate the development of didactic strategies and digital competencies that enable learning situations mobilized by online authorship, content curation, interactivity, and collaborative learning.

Keywords: education; teacher; training; digital culture.

Memes, educação on-line e formação de professores na cultura digital

RESUMO. A cultura dos memes se efetiva pelo exercício de autoria em rede e pela ludicidade que cada sujeito imprime à dinâmica comunicacional da cultura digital. Deste modo, é fundamental compreender como a linguagem dos memes produz situações de aprendizagem, e sobretudo como pode estimular práticas pedagógicas inovadoras. Sendo assim, este artigo tem como objetivo analisar quais sentidos, significados e competências digitais os memes da internet podem mobilizar no processo de formação de professores. O texto apresenta uma pesquisa do tipo qualitativa de cunho bibliográfica e teve como principal instrumento de produção de dados um questionário on-line, aplicado via *Google Forms*, a uma turma de professores e professoras em formação inicial, vinculados a uma instituição de ensino superior do interior de Sergipe no ano de 2023. O trabalho conclui que os memes desafiam a formação de professores ao passo que podem estimular o desenvolvimento de estratégias didáticas e competências digitais que permitem situações de aprendizagem mobilizadas pela comicidade, autoria on-line, pela curadoria de conteúdos, interatividade e pela aprendizagem colaborativa.

Palavras-chave: educação; formação de professores; cultura digital.

Memes, educación en línea y formación docente en cultura digital

RESUMEN. La cultura de los memes se efectúa a través del ejercicio de la autoría en red y la ludicidad que cada individuo aporta a la dinámica comunicacional de la cultura digital. Por lo tanto, es esencial comprender cómo el lenguaje de los memes crea situaciones de aprendizaje y, sobre todo, cómo puede movilizar prácticas pedagógicas. Así, este artículo tiene como objetivo analizar los significados, los sentidos y las competencias digitales que los memes de Internet pueden movilizar en el proceso de formación de docentes. El texto presenta una investigación cualitativa de carácter bibliográfico y utilizó un cuestionario en línea como principal instrumento de recolección de datos, aplicado a través de *Google Forms* a un grupo de profesores en formación inicial, vinculados a una institución de educación superior del interior de Sergipe en 2023. El estudio concluye que los memes desafían la formación docente en la medida en que pueden estimular el desarrollo de estrategias didáticas y competencias digitales que permiten situaciones de aprendizaje mobilizadas por la autoría en línea, la curaduría de contenidos, la interactividad y el aprendizaje colaborativo.

Palabras clave: educación; formación de profesores; cultura digital.

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Introduction

Teacher education is a process that must be widely discussed and constantly rethought in correlation with the sociocultural changes of each era. In the sociotechnical and technopolitical context of digital culture, the speed of transformations produced by our everyday practices, mediated by internet-connected digital technologies, frequently mobilizes new challenges for pedagogical practice and, above all, for education itself.

The multiplicity of languages that have become part of the communicational dynamics of digital culture over the last decade challenges teachers to design didactic strategies that consider online environments and technologies as spaces for teaching, learning, and training. However, beyond the mere appropriation of digital environments for the passive and unidirectional reproduction of knowledge, teacher education must be attentive and committed to the dynamics of authorship, collaboration, and interactivity inherent to digital media and digital culture.

Within this scenario, internet memes, understood as collective representations of our online authorship and interactivity that daily mediate digital communication in different forms and formats, also challenge us to grasp the new educational paradigm sociomaterialized in our time. To understand and appropriate meme language beyond its comic effect, it is essential for teachers to comprehend the processes, challenges, and potentialities inherent to digital culture so they may, consequently, develop pedagogical practices that are critical, reflective, and emancipatory.

The development of digital competencies thus becomes indispensable, to be incorporated into teacher education not merely in an instrumental way but in a manner that enables a broad understanding of the phenomena of digital culture and, accordingly, of how they affect education and educational processes. Furthermore, to foster formative experiences, teacher education must be articulated with the development of competencies such as collaboration, authorship, interactivity, digital content curation, active teaching mediation, and ubiquitous learning. That is, the construction of a repertoire that enables the elaboration of innovative, student-centered pedagogical practices, mediated by multidirectional communication rather than exclusively by the transmission of content.

Against this backdrop, we understand internet memes not merely as online jokes restricted to an image format but as shared experiences of meaning that enable online authorship and interactivity. Thus, to conceptualize meme culture not solely through the superficiality of its humorous and comic effects, but in articulation with the development of teachers' digital competencies, is to recognize the necessity of producing a new relationship between teachers and students, re-signifying the construction of learning in mediation with the phenomena of everyday socio-interactionism.

With the intention of broadening reflections on the online educational experiences mobilized by meme language in our time, the central argument of this study is that memes produced and replicated on the internet construct pedagogies that guide networked interactivity, mediate discursive experiences of online authorship, and generate meanings and subjectivities within teacher education processes. Moreover, their online mediation demands the development of digital competencies, which are not only essential for understanding meme language but can also serve as a didactic repertoire when articulated with pedagogical practice.

This research is grounded on the premise that the discourses and narratives mobilized by memes—due to their capillarity, speed of dissemination, and reach, exist 'inside and outside' formal educational environments, enhancing and expanding communicational interactivity between students and teachers. Such environments may be physical, digital, hybrid, or may not even require materiality to constitute themselves as online educational spaces and sites of ubiquitous learning.

Accordingly, the guiding research question is: What pedagogies are constructed through the language of internet memes, and how do they affect the production of meanings and significations in the process of teacher education? Beyond this central question, the study is guided by additional secondary inquiries: What digital competencies can meme language mobilize within teacher education? What educational practices and formative processes can be developed from meme language?

To address these questions, the general objective of this article is to analyze what meanings, significations, and digital competencies internet memes can mobilize in the process of teacher education. To this end, the research method adopted was qualitative, bibliographic in nature, and descriptive, with the main data collection instrument being an online questionnaire with closed questions, applied via Google Forms to a group of pre-service teachers enrolled at a higher education institution in the interior of Sergipe, during the first semester of 2023.

Thus, seeking to expand spaces of reflection and present research findings, the following sections discuss what internet memes are and how they operate as a language mediated by online authorship experiences within digital culture. Next, we present an analysis of teacher education for online learning, addressing both the challenges and potentialities within the context of digital culture. Finally, we analyze the data, as well as the results and questions they mobilized.

The language of memes, online authorship, and educational practices

Internet memes have become notable for the specific ways in which they are generally used to express humor, social critique, collective engagement, and the comic mediation of public discussion and everyday issues (Chagas, 2020). Beyond their role in generating laughter and playfulness on social media, they can also articulate different narrative and discursive processes that may materialize disinformation and disseminate harmful content. Thus, memes can be used to foster informal learning experiences across different domains and intentions, which require the development of digital literacy for the critical understanding of their meanings.

The polysemy of meme formats and collections can be observed in the capacity of a given word, expression, image, or audiovisual format to acquire a new meaning, or multiple meanings, as it circulates. Polysemy thus establishes a network of meanings among words and expressions with the same semantic load, which convey different significations even when they belong to a similar semantic or imagistic field and share a common discursive framework.

This process, which is not necessarily verbal, does not always require prior knowledge for interaction to occur between subjects and the meanings of circulating memes, nor for meanings to be understood. Although context is defining, it is not always determinant. Often, when one views an image-based meme, connections are made with their worldview and life experiences, drawing on cultural background or repertoires of visibility. This allows certain memes to take on the effect of an ‘inside joke’, comprehensible only within a very specific context.

In this sense, every act of interpretation involves attributing individual meaning or associating its aesthetic values with one’s own reading. Although these artifacts allow for multiple interpretive pathways, they always entail an exercise in correlating meanings. Likewise, when producing and sharing memes, individuals imply approval or disapproval of their meaning, which may or may not be re-signified and carried forward with different intentions through the communicational dynamics of networks.

Thus, the phenomenon of memes as a language of digital culture is intrinsically linked to online authorship, remix, and reconfiguration, which enable each user to perform communicative actions that traverse interactivity, content curation, collaboration, and active mediation. This does not necessarily demand complex technical or instrumental skills but rather critical and reflective abilities for comprehension.

It is important to stress that authorship and networking practices are not always tied to high standards of graphic quality, but often to the representation of the intentions, subjectivities, and experiences of the author or the group around which a collection of memes is articulated. Therefore, the potential for content production inherent in digital environments does not necessarily require concern with style, graphic quality, or aesthetic standards, but rather with communicational intentionality.

Knobel and Lankshear (2019) argue that memes represent a set of experiences that social media users ‘live through’ and that, in order to grasp their meanings, they must be read socially and culturally, which demands digital literacy. Literacy practices in this sense involve not merely technical instrumentality but critical and reflective interpretation of experiences with this type of digital language.

The language of memes on the internet is therefore notable for its potential for capillarity—that is, for the way it reaches audiences and interlocutors who are not always the direct target of the communicative act. This is made possible by practices of sharing and dissemination across various social media platforms and messaging applications such as WhatsApp, in the form of text messages, stickers, audio clips, gifs, videos, and more.

This type of language has become embedded in our modes of representation and expression in online communication, in a unique way within the Brazilian context (Chagas, 2024), shaped by different fields of experience and systems of belief, and mobilizing specific contexts such as advertising, journalism, television content, music, and cultural production. Its genres and formats thus fit into our daily lives within a dynamic of ephemeral information consumption, synthesized and mediated through multiple meanings—often humorous. Memes, therefore, represent a mode of disseminating condensed content, achieved through processes of synthesis or the substitution of phrases and messages.

Bergson (2004) draws attention to the pedagogical function of humor, which is essential for understanding the phenomenon of memes. For him, laughter is a social phenomenon that serves to punish deviant behaviors and pressure individuals to return to socially accepted norms. This helps explain how the proliferation of memes on different themes may operate as a form of popularizing information, even through irony and playful critiques embedded in persuasive narratives across many aspects of daily life.

Such dynamics often occur with an additional factor: communication through shared, reproduced, and re-signified messages in an instantaneous manner. This happens through the authorship of each network user, whether directly linked to the content or in relation to it, facilitated by the characteristics of the digital environment (captions, links to complementary content, editing, reactions).

According to Oliveira (2020, p. 86), “[...] the construction of meme language inserts the subject into an environment of bricolage, where imagetic and semiotic potential can be heightened and becomes fundamental in the construction of meanings.” Thus, we can think of communication through instant messaging or digital media in our daily lives not only from the perspective of digital playfulness but as communication mediated by memes and comic formats derived from remix and reconfiguration of content.

We therefore understand that the construction of meanings with memes generates a semantic experience that, even informally, contributes to educational practices and formative processes. In this way, recognizing that meme language materializes through the decoding of languages from a given audience to others, we now seek to understand how this language impacts the ways we discuss and analyze our social, cultural, and political contexts, and consequently how it affects online education and teaching practices.

Meme culture and teacher education

Given the scenario of digital culture, we emphasize that teacher education is a continuous and unfinished process that must keep pace with sociocultural changes. For this, it is necessary to reflect on the importance of continuing education for the constant updating of teaching practices. In the context of online education, teacher education assumes an even more significant role, as teachers are increasingly required to deal with the specificities inherent to digital culture and the challenges materialized by the communicational dynamics emerging from computational thinking and networked digital languages.

In this study, we draw on the notion of online education as an epistemological approach (Santos, 2019) for the understanding and analysis of educational practices and formative processes that occur through mediation with digital technologies connected to the internet. It is important to highlight that online education is not merely an evolution of the generations of Distance Education, but rather a phenomenon of digital culture.

Thus, it becomes possible to conceive formative processes that are mobilized by the consolidation of cyberspace and media convergence in our daily lives, rather than by the physical and cognitive separation of subjective experiences with digital technologies and online environments. Online education can, therefore, be understood as a set of teaching and learning actions, or curricular acts, mediated by digital interfaces that enhance interactive and hypertextual communicational practices (Santos, 2019). Hence, it is not simply an educational experience with technologies, but a formative process articulated and connected to cyberspace in a generalized way.

From this hybrid and multimodal context of online education, we can identify some challenges that need to be considered in order to implement effective educational practices within digital culture: recognizing the need for mastery of digital technologies, not only from an instrumental perspective but also in a critical and reflective way regarding their challenges and possibilities; being able to develop didactic strategies mediated by digital language and online environments; and considering the sociocommunicational context in which students are immersed, as well as the necessity of implementing a student-centered teaching model rather than one focused exclusively on the teacher.

Considering the relevance of these issues in the process of teacher education for online learning, in 2023 we developed a formative experience based on the ‘Language of Memes’, within the curricular component ‘Educational Technology’, taken by students from the Pedagogy and Language and Literature degree programs, at a private higher education institution in the countryside of Sergipe, Brazil.

This class presented a heterogeneous profile, composed of 22 participants aged between 24 and over 45 years (according to the data collected in the research), who reported using social media for an average of 2 to 5 hours per day. This indicates a significant level of involvement in sociocultural practices mediated daily by the communicational dynamics of the internet. It is important to note that, although the digital environment is present

and integrated into everyday communication for many people, conceiving it as a space for learning, mediation, and teacher education remains a major challenge.

With this profile, the experience was carried out over four weeks in February 2023. During this formative journey, among other component activities, the work was divided into online and in-person meetings addressing the following themes: Meeting 1: 'general conceptions of digital culture'; Meeting 2: 'what are memes in digital culture'; Meeting 3: 'digital literacies and online education'; and Meeting 4: 'pedagogical practices with memes'.

In addition to problematizing issues that challenge education within digital culture, we sought to explore and analyze different discursive and narrative contexts mobilized and mediated through memes in social media. Moreover, in one of the meetings, we explored online environments where memes can be produced, fostering authorship and creativity. Finally, the activity involved designing lesson plans and didactic sequences based on the critical and reflective appropriation of memes as units of information and generative themes for authorship and the development of digital literacy.

After the pedagogical experience, an online questionnaire (Google Forms) was sent via email, consisting of closed-ended questions, and answered by all participants. The responses helped us reflect not only on meme culture in everyday life but also on the relationship between education and digital culture and on teacher education based on authorship, interactivity, active teacher mediation, and particularly the playfulness involved in the critical and reflective appropriation of digital language.

Based on this, in the following pages, we will present and analyze the data collected during the experience. The results serve as outcomes of a formative process for online education grounded in theoretical and practical aspects of teacher education and its modes of appropriation of meme language, while also reflecting how this language affects behaviors, belief systems, and representations within the communicational dynamics of digital networks. Without claiming the universality of the phenomenon, the findings nonetheless provide evidence of how these interactions are materialized.

Therefore, the issues raised from the data collected and analyzed in this study may serve as indicators for decision-making, as well as for expanding repertoires. Likewise, they may guide the planning, imagining, and 'inventing' of new teaching and learning processes within multimodal contexts of digital culture.

Data analysis, or on meanings and significance

Memes are apparently intended for online entertainment. However, beyond this, they have become notable for the diverse ways in which they mediate public debate and political discussion, the repercussions of events, and sociocultural behaviors and trends in our time (Oliveira et al., 2021). As demonstrated above, they can be analyzed through the different ways of teaching and learning they may produce, thereby constructing an important narrative and discursive environment, which, through online authorship and interactivity, can mobilize digital competencies.

Based on the data collected from the experience described in this study¹, it was possible to infer that in the everyday social practices of pre-service teachers, there is a significant appropriation of image-based memes. Specifically, 50% of the research participants reported that image-format memes are part of their daily communicational dynamics. This can be explained by the predominance of memes in this format, which shape public debate through captioned images, almost always synthesizing and simplifying discourses and narratives in instant messaging applications and social media timelines.

The data further suggest that teachers are strongly engaged with the visual and imagetic culture of memes in our time. In this sense, online visual authorship, as well as the analysis and interpretation of images, are fundamental digital competencies for online communication and interactions on social media, which can enhance pedagogical practices. This occurs because such practices replicate and produce discourses materialized through a set of symbols and icons, reconfigured through the processes of synthesis and bricolage inherent to memes and other visual artifacts.

According to Oliveira (2020), internet memes, due to their editable and reconfigurable compositional characteristics, can also be considered products of bricolage that mobilize different imagetic and semiotic experiences. In order to understand their meanings and significances, it is necessary to interpret the symbolisms, colors, iconography, and contexts associated with the artifacts circulating online.

¹ Item VII of Resolution No. 510, dated April 7, 2016 (CEP/CONEP), states that "research aimed at the theoretical deepening of situations that emerge spontaneously and contingently in professional practice, provided that they do not reveal data that may identify the subject," shall neither be registered nor evaluated by the Research Ethics Committee (CEP). In this article, the study is presented in a manner that does not allow the identification of the participants involved. Therefore, the research was not registered.

On the other hand, the data also suggest the need to develop digital competencies, such as reading and interpreting the meanings and significances of memes mediated through images, in a critical and reflective manner. While memes may be wrapped in comedic pieces within audiovisual contexts, the underlying discourses can sometimes trivialize narratives, propagate harmful content, and produce hate speech and misinformation, often through intertextuality and various comedic formats contained in images.

When asked whether they had ever learned about or engaged with political news through memes, the responses indicated the complete mediation of memes in the process of communication and dissemination of political news. These data point to a trend of politically mediated communication through memes, re-signified through online playfulness and discursive humor, which tend to bring society and the political sphere closer, through playful content imbued with ideologies and meanings, while also producing an environment of activism, persuasion, and collective engagement.

One issue to highlight is the misinformation inherent in this model of political communication, as the narratives produced can affect belief systems and generate ‘post-truths’. Bentes (2016) emphasizes that memes can amplify both misinformation and the belief systems of different groups, as well as popular intelligence through humor and irony. Post-truth regimes work not only with facts and information but also with belief systems, worldviews, prejudices, and emotions. Whereas the purpose of lies used to be creating a false view of the world, it now involves reinforcing opinions, prejudices, and emotions, without presenting or analyzing facts.

It is important to note that the synthesis exercised by meme-mediated communication also underscores the need for fact-checking and evaluating the integrity of information in circulation. This can represent an opportunity to use memes as generative themes for authorship and for discussing social and political issues in pedagogical practices. In this way, teachers can also design and implement learning situations focused on fact-checking, research, and investigation as a critical social analysis exercise to promote students' scientific and digital literacy.

When asked about memes as mediators of access to information, 90.9% of the students involved in the formative process reported that memes mediated their access to information during the pandemic in 2020 and 2021. The results indicated a significant role of memes in the communicational scenario, reverberating topics of various kinds and socio-materializing narratives across multiple subjects that affected the prevailing social order. The data also point to the simplification of discourses that meme humor can produce, creating an information locus both in the political sphere and in debates about public health and scientific knowledge, as was the case during the pandemic.

When asked whether they usually share memes solely for their comedic effect, 77.3% said yes, while only 22.7% said no. These data indicate what may be the main characteristic of meme culture: its comedic potential and ability to produce humorous experiences, articulated through different formats of authorship, playfulness, and laughter.

Analyzing memes through laughter and the forms of humor they introduce into our daily communication, we may overlook other inherent discourses and the multiple possibilities of interpretation. On the other hand, we must consider the forms of humor being circulated. According to Bergson (2004), humor as a social gesture—meaning the idea that such a gesture arises—is always accompanied by a certain ‘insensitivity’ of the spirit. In this sense, laughter has no greater enemy than emotion (Bergson, 2004). Laughter seems to emerge only when, for a brief moment, we are indifferent to such feelings. Therefore, comic effect, according to Bergson (2004, p. 4), “[...] ultimately requires something like a momentary anesthesia of the heart. It is directed at pure intelligence.”

Beyond the comedic effect and laughable aesthetics mobilized by memes, the data indicate that memes also function as translators of contexts. For example, 45.5% of participants reported sharing memes that reflect their opinions, while 40.9% said they share memes solely because they are funny. In other words, these are different ways of digitally materializing their interests, meanings, and worldviews in the digital environment.

The integration and way in which meme language articulates and aggregates discursive voices can be observed through the lens of multimodality in which they are produced and replicated online. Multimodality is a term derived from psychology and adopted in language research to designate the integrated use of different semiotic resources in communicative dynamics. In this way, users' intentions, meanings, and significances can be shared in multiple ways and for different purposes online, even implicitly.

The production of different types of memes represents modes of expression of various groups on the internet through narratives, meanings, and discourses that cluster together (Oliveira et al., 2022). Moreover, the representation of intentions and contexts can exert effects across different domains, which can aid in problematizing social and curricular themes and in creating critical and reflective educational experiences.

When asked about verifying the truthfulness of messages propagated through memes in their daily practices, 72.7% reported checking the origin and accuracy of the information. In contrast, 13.6% said they did not, and another 13.6% said they checked only sometimes. However, it is possible to assess that these behaviors are often related to belief systems rather than the production of factual truth. Many circulating memes are produced to align with the discursive and subjective fields of many individuals, even when disconnected from factual accuracy. This creates a locus for contesting narratives of truth through meme language, particularly in the political sphere.

Associated with laughable situations, many memes can materialize processes of misinformation, as different forms of humor and comedy affect us in very particular ways. They can be easily accepted uncritically simply because they evoke amusement and playfulness, yet they decontextualize socially relevant discourses and information that could otherwise be coherent for specific groups.

In this way, pre-service and in-service teachers can develop pedagogical practices and didactic strategies grounded in digital literacy for the critical and reflective appropriation of these languages. Although humorous, many memes operate within the discursive field of harmful content dissemination and misinformation, which has been detrimental to many social groups and to the exercise of citizenship.

When asked about the types of memes they share most often, responses revealed that the majority of participants (40.9%) prefer memes expressing their everyday problems. This behavior indicates that memes have been used as a way to narrate, critically or humorously, the tensions and challenges encountered in daily teacher training. In this context, memes not only entertain but also function as devices for symbolic mediation, capable of articulating emotions, critiques, and reflections on the formative process. Their recurrent use highlights the importance of recognizing these productions as potential pedagogical resources and legitimate expressions of critical engagement with reality.

According to Chagas (2020), memes can also serve a persuasive function by seeking to garner support for a particular ideological current, stimulate collectively performed actions in the flexible and interactive digital ecosystem, or facilitate regular socialization with public debate. This understanding helps recognize that memes circulating across different environments can produce meanings, subjectivities, and singularities regarding issues that directly influence our habitual practices and communicational flows.

Moreover, for most individuals, memes function as representations that synthesize their intentions, feelings, and modes of expression in daily communication. The data further indicated that 68.2% of participants replace phrases and words with memes. These indicators point to the importance of recognizing the growing role of memes as a language that extends beyond social media and, consequently, the need to mobilize didactic strategies for this communicational dynamic, acknowledging both its limitations and the need for critical and reflective problematization.

Developing digital competencies in teachers through engagement with meme language can be essential not only for didactic appropriation of memes but also for creating formative experiences that help understand the effects of misinformation and misleading narratives in digital environments. Critical reading of a meme requires fact-checking and analysis of information to avoid adopting narratives that produce misinformation or deviate from factual accuracy.

Therefore, the ability to critically interpret memes, make intertextual connections, and understand correlated meanings is crucial. Responses showed that 81.8% of participants felt better informed when they understood the meaning or context of a meme. This reinforces that memes are not merely forms of entertainment but also 'means of communication' and information, capable of propagating narratives that generate meanings and significances. To maximize the informational value of memes, pre-service teachers can develop critical reading and translation competencies grounded in digital literacy practices. This involves the ability to identify cultural, linguistic, and contextual references often embedded in online humor produced by memes.

Knobel and Lankshear (2019), Chagas (2024), and Oliveira et al. (2021) emphasize that memes represent a set of sociocultural experiences 'lived' by social media users. Therefore, to understand their meanings, memes must be read socially and culturally, requiring a repertoire developed through media education and digital literacy. Accordingly, the data presented and analyzed in this study are highly relevant for reflecting on

teacher education today, as they highlight the growing significance of meme-mediated communication in contemporary contexts, which is not always integrated into school curricula and pedagogical practices.

From this perspective, through the experience developed with undergraduate students—future teachers—it was possible to observe that memes are integrated into their everyday languages, in their social and recreational uses of digital media. Nonetheless, recognizing them as learning objects, generative themes for authorship, and didactic resources enabling cybercultural inclusion to promote formative processes grounded in authorship and interactivity remains a significant challenge.

Final considerations

Among the main conclusions drawn from the results of this research, we highlight the following: Memes can be used as pedagogical resources that support collaborative learning, authorship, and interaction between students and teachers. Their dynamic and multimodal nature enables the construction of meaning from everyday experience, providing a learning environment that is closer to the students' language and to the digital reality in which they are immersed. Furthermore, the study shows that continuing teacher education is essential for teachers to be able to use memes effectively in their pedagogical practices. The development of computational thinking and digital literacy can enhance teachers' repertoires, enabling the appropriation of meme culture and digital culture as potential pathways for promoting innovative didactic strategies.

Considering the central question of this work, focused on analyzing what pedagogies are constructed through the language of internet memes and how they affect the production of meaning in teacher education, we conclude that memes, as a key language of digital culture, can mediate pedagogies and multiliteracies, serving as a critical approach grounded in a meaningful understanding of the technological, media, and communicational changes that transform modes of interaction in our time. For this to occur, teacher education must move away from a unidirectional model centered exclusively on the teacher and instead address the diversity of languages, interactivity, and multiliteracies, thereby reducing the distance between digital culture, the multimediatic context, and school life.

In addition, the research reveals that memes offer multiple didactic possibilities: they can foster active learning experiences by inviting students to reflect critically and socially on relevant issues through the production of their own content; they can be used to promote interaction between students and teachers, as they represent an informal, accessible, and democratic form of communication; they may also enhance engagement with the school curriculum, functioning as informational units materialized in a format based on synthesis, embedded in playful and humorous experiences; and their informality and wide circulation make them effective tools for promoting democratic communication and for strengthening affective and cognitive bonds between students and teachers.

Nevertheless, these potentialities demand a critical and reflective awareness of the limitations of this language in mobilizing skills and competencies to articulate diverse educational contexts. Despite such limitations, it is possible to conclude that memes challenge teacher education within the digital culture context, while also mediating the development of didactic strategies and digital competences that foster learning situations based on online authorship, content curation, interactivity, and collaborative learning. Therefore, memes simultaneously challenge teacher education and provide concrete opportunities for the construction of innovative educational practices that engage with digital culture and stimulate more interactive, collaborative, and meaningful learning processes for learners in formation.

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INFORMATION ABOUT THE AUTHORS

Kaio Eduardo de Jesus Oliveira: Professor at the Center for Culture, Languages, and Applied Technologies (CECULT) at the Federal University of Recôncavo da Bahia (UFRB). Professor in the Graduate Program in Culture, Languages, and Applied Technologies (PPGCult) at UFRB. PhD in Education.
ORCID: <https://orcid.org/0000-0002-5390-0593>
E-mail: kaioeduardo@ufrb.edu.br

Cristiane de Magalhães Porto: Multidisciplinary PhD in Culture and Society (UFBA). Professor in the Undergraduate and Graduate Programs in Education at Universidade Tiradentes. CNPq Productivity Fellow, Level 2. Leader of the GETIC/UNIT/CNPq.
ORCID: <https://orcid.org/0000-0001-5622-030X>
E-mail: crismporto@gmail.com

Samuel Francisco Rabelo: PhD candidate at Universidade Tiradentes (PPGD/UNIT). Master's degree in Education – UNIT. Member of the GETIC//UNIT/CNPq.
ORCID: <https://orcid.org/0000-0002-4969-9268>
E-mail: samwlabello@gmail.com.br

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Associate Editor in charge:

Terezinha Oliveira
ORCID: <https://orcid.org/0000-0002-9841-7378>
e-mail: teleoliv@gmail.com

Maria Terezinha Bellanda Galuch
ORCID: <https://orcid.org/0000-0001-5154-9819>
E-mail: mtbgaluch@uem.br

Vania Fátima Matias de Souza
ORCID: <https://orcid.org/0000-0003-4631-1245>
E-mail: vfmsouza@uem.br

Solange Franci Raimundo Yaegashi
ORCID: <https://orcid.org/0000-0002-7666-7253>
E-mail: sfryaegashi@uem.br

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