

IMPACT OF DISINFORMATION ON THE PROFESSIONAL PRACTICE OF GEOGRAPHY TEACHERS: FEAR AND INSECURITY IN THE CLASSROOM

Impacto da desinformação na prática profissional do professor de geografia: medo e insegurança na sala de aula

Impacto de la desinformación en la práctica profesional de los profesores de geografía: miedo e inseguridad en el aula



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ABSTRACT

Contemporary society is experiencing a process of information consumption anchored in immediacy and superficiality, overlapping development of critical reading and knowledge production. This process is facilitated by current technological and communicational means, which supported by cyberspace, expand physical space into virtual one, with new interaction ways. In this environment where intense and rapid consumption of information and products is emerging, another problem arises, dissemination of manipulated content, whose intention is to misinform. In this paper, we seek to shed light on problems that arise from this disinformation process, which are the fear and insecurity of Geography teachers in their professional performance. Reflection arises from doctoral research, exposing how teachers experience misinformation in their daily work and what tools they have for confronting it. The theme was problematized through theory of social representations (Moscovici, 1978, 1985, 1992, 2003, 2013; Jodelet, 2001, 2005; Abric, 1994, 1998, 2001), content analysis methodology (Bardin, 2010), and interviews and questionnaires applied to basic education teachers. Findings show that cyberspace (and within it, digital social networks) is a source of information for teachers and students, impacting on teaching professionalism, on teaching-learning process, on knowledge conception, on teacher-student relationship and on work conditions. Among the impacts there are an increase in violence, surveillance and control in teachers' work, generating insecurity and resulting in a reduction in teacher autonomy.

Keywords: Geography Education; School; Disinformation; Fear; Insecurity.

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RESUMO

A sociedade contemporânea vivencia um processo de consumo de informações ancorado no imediatismo e na superficialidade, sobrepondo-se ao desenvolvimento da leitura crítica e da produção do conhecimento. Esse processo é facilitado pelos meios tecnológicos e comunicacionais atuais que, amparados pelo ciberespaço, expandem o espaço físico para o virtual, com novas formas de interação. Nesse ambiente, onde o consumo intenso e rápido de informações e produtos desponta, outro problema se apresenta, que é disseminação de conteúdos manipulados, cujo intuito é desinformar. Neste artigo, busca-se trazer luz a problemas que surgem desse processo desinformativo, que são o medo e a insegurança dos professores de Geografia em sua atuação profissional. A reflexão surgiu de uma pesquisa de doutorado, expondo como os professores vivenciam a desinformação no seu cotidiano de trabalho e quais as ferramentas que eles dispõem para confrontá-la. O tema foi problematizado por meio da teoria das representações sociais (Moscovici, 1978, 1985, 1992, 2003, 2013; Jodelet, 2001, 2005; Abric, 1994, 1998, 2001), da metodologia de análise de conteúdo (Bardin, 2010), e de entrevistas e questionários aplicados aos professores da Educação Básica. Os resultados evidenciam que o ciberespaço (e nele, as redes sociais digitais) é fonte de informações para professores e estudantes, impactando a profissionalidade docente, o processo de ensino-aprendizagem, a concepção sobre o conhecimento, a relação professor-aluno e as condições de trabalho. Dentre os impactos estão o aumento da violência, da vigilância e do controle no trabalho do professor, gerando insegurança e resultando na redução da autonomia docente.

Palavras-chave: Ensino de Geografia; Escola; Desinformação; Medo; Insegurança.

RESUMEN

La sociedad contemporánea vive un proceso de consumo de información anclado en la inmediatez y la superficialidad, que se superpone con el desarrollo de la lectura crítica y la producción de conocimiento. Ese proceso es facilitado por los medios tecnológicos y comunicacionales actuales, que apoyados en el ciberespacio, expanden el espacio físico al virtual con nuevas formas de interacción. En ese entorno, donde surge intenso y rápido consumo de información y productos, surge otro problema, que es la difusión de contenidos manipulados, cuya intención es desinformar. En este artículo hemos buscado arrojar luz sobre problemas que surgen de ese proceso de desinformación, que son el miedo y la inseguridad de los profesores de Geografía en su labor profesional. La reflexión ha surgido desde una investigación doctoral, exponiendo cómo los docentes viven la desinformación en su trabajo diario y con qué herramientas cuentan para enfrentarla. El tema fue problematizado a través de la teoría de las representaciones sociales (Moscovici, 1978, 1985, 1992, 2003, 2013; Jodelet, 2001, 2005; Abric, 1994, 1998, 2001), metodología de análisis de contenido (Bardin, 2010), y entrevistas y cuestionarios aplicados a docentes de Educación Básica. Los hallazgos muestran que el ciberespacio (y dentro de él, las redes sociales digitales) es una fuente de información para profesores y alumnos, que impacta el profesionalismo docente, el proceso de enseñanza-aprendizaje, la concepción del conocimiento, la relación profesor-alumno y las condiciones de trabajo. Entre los impactos se encuentran aumento de la violencia, vigilancia y control en el trabajo docente, generando inseguridad y resultando en una reducción de la autonomía docente.

Palabras clave: Enseñanza de la Geografía; Escuela; Desinformación; Miedo; Inseguridad.

1 INTRODUCTION

School has always been one of the main places where different people meet,

exchange experiences and acquire knowledge. From it, society expects the human and intellectual development of students through scientific, evaluative and attitudinal knowledge that contributes for citizenship education and requirements of the world of work. However, scientific knowledge socialized at school is always confronted with students' experiential knowledge. After all, students bring to school their representations arising from experiences and sociability in physical environments (home, church or neighborhood, for example), as well as those mediated by media, such as TV, radio or printed newspapers, and in recent years, those arising from experiences in online environment. As a rule, information circulating in cyberspace¹ are consumed daily by students based on what circulates in cyberspace and accessed by digital information and communication technologies (ICT²).

This scenario indicates that teaching process may also be affected by ICT, mainly because interactions unfold and always change, in addition to the volume and intensity of information. This means that teachers find themselves facing a range of new challenges, whether due to the need for constant didactic updating or interventions and questions which may arise from students.

In this context that part of the research carried out with basic education teachers is presented in this text to demonstrate how these technological and social transformations impact everyday school life, and with this, the urgency to move forward in debate on changes educational issues and their impacts on teaching professionalism. The objective is problematizing the insecurity process generated by teachers, a consequence of frequent objections they receive regarding the content taught and what circulates on digital social networks as misinformation, as well as the consequences of this process on their professional practice.

The research was carried out with basic education geography teachers who belong to Regional Education Center (NRE in its Portuguese acronym) of Guarapuava, Paraná, through questionnaires and interviews. Data interpretation was based on theory of social representations and content analysis.

The text is organized into three parts. The first one explores what can be considered misinformation, its impacts on the school environment and the challenges inherent to the

¹ Defined by Martino (2014, p. 11) as "interaction space created in the flow of digital data in computer networks; virtual because it is not locatable in space but real in its actions and effects".

² ICT is understood as any electronic equipment that connects to the internet, promoting expansion of communication possibilities between its users (Valente, 2013). Here, understanding of cyberspace goes beyond the limit of computers alone, as networks have virtual space, but today their access is facilitated by various equipment, such as smartphones, tablets and televisions, among others.

quantity and speed of information available to students through ICT. The second details the methodology and exploration of research data. The third and final part explores the findings about consequences of misinformation on professional practice of teachers participating in the research, highlighting the need for collective work that involves not only the teacher, but the entire school community and society in tackling misinformation and its consequences.

2 DISINFORMATION AND SCHOOL EDUCATION: NEW TIMES AND CHALLENGES

The term disinformation emerged from sharing information in virtual spaces, mainly on digital social networks, although after advancement of interaction facilities promoted in cyberspace, the expression that gained notoriety was fake news (the term in English adopted in Brazil and became popular around the world). The expression became popular in a short time and was heavily used in political circles, often distorted from its conceptual context to disqualify information from people or groups (Tandoc; Lim; Ling, 2017, p. 138). In Other words, depending on the interest of those who receive the information, it may be branded as fake news, even if there is no evidence to do so. That's why the expression has been rethought.

About this, D'Ancona (2018) highlights that initial idea of term (fake news) was left aside, precisely because the expression became trivialized. Governments that want to disqualify journalism, for example, use it for this purpose. Another aspect is an understanding that production of manipulated news (partially or completely) is just one way of misinforming people. Thereby, Wardle (2017) and Wardle and Derakshan (2019) indicated the need for replace the use of term fake news and considered that it was necessary involving the 'information ecosystem' and all its possibilities, not just fake news. Then, fake news would be just a part of a larger problem: misinformation. Broader concept that seeks to express the process complexity.

In Michaelis dictionary, misinform is "failing to inform", or even "providing untrue information, intentionally or thoughtlessly"³, while the Brazilian Law on Freedom, Responsibility and Transparency on the Internet⁴ number 2630/2020 define it as "content in part or in whole unequivocally false or misleading, subject to verification, placed out of context, manipulated or forged with potential to cause individual or collective harm, except in humorous or parody terms" (Brasil, 2020, p. 3). This characterization is in line with the

³ Retrieved from <https://michaelis.uol.com.br/moderno-portugues/busca/portugues-brasileiro/desinformar/>.

⁴ Law Project 2630/2020, Brazilian Federal Senate.

definition given by the European Commission (2018, p. 4), in which

Disinformation is understood as demonstrably false or misleading information created, presented and disseminated to obtain economic advantage or to deliberately deceive public, and that is likely to cause public harm. Public harm encompasses threats to democratic political processes and policy-making processes, as well as public goods, such as protection of health of EU (European Union) citizens, environment or security. Disinformation does not cover errors in information communication, satire, parody, or news and comments clearly identified as partisan.

Furthermore, European Commission (2018, p. 1) highlights that “disinformation undermines trust in traditional (and digital) institutions and media and harms our democracies by compromising citizens’ ability to make well-informed decisions”. Consequences affect societies differently, as they depend on several factors, such as education levels, culture, social and economic inequalities, among others that may influence the way in which misinformation affects people or social groups.

From this perspective, Wardle (2019, p. 6) reinforces that most disinformation content “is not even false; it is often genuine, used out of context, and weaponized by people who know that falsehoods based on a kernel of truth are more likely to be believed and shared”, and thereunto, old content is used – rumors, “memes”, [manipulated] photos and videos, but which are shared as new.

This process affects all societies and institutions, including the school, which was traditionally considered a privileged space for acquiring knowledge, but which has now lost its exclusive status, after all, the internet and computerization have expanded access to information. At school, the consequences of misinformation emerge with questions about the authority of ‘scientific knowledge’, and also about who teaches and how it is taught.

Understanding that school may be a place of social reproduction and symbolic violence (Bourdieu, 1970; 1998) cast doubt on its transformative potential, given its strong link with the system that generally privileges the most favored economically and culturally social classes. However, families still see in it possibilities of social mobility for their children, while many educators, even recognizing its contradictions (Freire, 1989; 2001), realize that through it citizenship may be developed, without which it is not even possible to think about social transformation. Regarding criticism of school’s curricula and organization, disconnection between what is taught there, and the student’s life context is denounced, fundamental for any objective of change (Apple, 1982). For Morin (2000), a transformative education should focus on integral development of students, consider the world complexity

and recognize the interconnection of different knowledge, while for Freire (2001) it would be necessary to recognize education as a political act of awareness and possibility of empowering people.

It can be seen from this that there is a long way to go to achieve these objectives, starting with the very conception of education and school in capitalist society, which relies on asymmetries to maintain power relations and economic and social inequalities. However, it is important to highlight that, despite the internet, school is still one of the most conducive spaces for exercise democracy, through problematization of scientific knowledge and different points of view on the same object or phenomenon. This is because representation that students have about different aspects of social, economic and political life, elaborated within their families or through information mediated by the internet or other means of communication, emerge naturally in school debates.

Thereunto, the school could set goals to educate people capable of dealing with information (Lévy, 1999), transforming it into knowledge, as it is through this that social transformation may be achieved. In this regard, Laval e Vergne (2023, p. 11) state that there is a need for democratic and critical education, which makes it possible to educate responsible people who are committed to the world, because desirable transformation must “go towards a society that, in all domains, will expand the political capacity of its members, ensure their social equality and guarantee respect for habitats”.

However, in times of misinformation, education of a critical person is only possible in a democratic school environment, which has in its midst the necessary elements for students find resources, stimuli and habits for education of “democratic mentalities” (Freire, 1973, *apud* Laval; Vergne, 2023). This presupposes creating spaces that favor debate, questioning and checking the sources of information received, aimed at developing critical sense and reflective thinking (Pariser, 2012).

Digital literacy and media education may be allies in this process. These are closely related concepts, but which have differences, where digital literacy is the ability to use digital technologies with a focus on technical skills to understand, use and create digital content. Media education concerns skills for understanding and critically analyzing information that circulates via ICT. Then, digital literacy may enable individuals to actively participate in contemporary digital culture (Jenkins, 2009), while media education may contribute to development of critical and reflective skills of subjects (Buckingham, 2007). Therefore, digital literacy may occur through specific didactic projects that, in parallel, promote media education in a transversal and interdisciplinary way in the curriculum.

According to Carneiro (2013), today's society is surrounded by data, information and knowledge and it is in distinction between these three elements that the problem reveals. For him, data are simple records or observations, seen in isolation. Information is more complex and requires in-depth and logical understanding of data, giving relevance and purpose to this data. Finally, it is through a subjective and personal activity that the individual will produce and alter knowledge, what occurs through reflection, synthesis and contextualization of various information received. Gonçalves (2023, p. 113) clarifies that it is precisely when data is "forgotten or manipulated" that misinformation occurs, as "knowledge without a cognitive basis" is generated". For this author, it is in media education that the possibility of confronting the process of misinformation in contemporary society is glimpsed.

This also involves informal education, but its constitutive premise must be formal education: supporting the educational community in development of critical thinking based on curiosity and scientific investigation. That said, a society would be formed that is attentive to management of information we produce and consume (Gonçalves, 2023, p. 113).

Therefore, the assumption that must form the basis for combating misinformation lies in formal education, based on science and criticism, but also in the student's daily life. At school, autonomous and critical thinking can be awakened, as it is there that the student must develop their critical spirit when faced with information. Thereunto, according to Gonçalves (2023, p. 121), formal education would be the process where "it would not only select information, or be responsible for verifying it, but would support the education of a society of prosumers⁵ endowed with a critical and ethical spirit, focused on the development of knowledge, skills and attitudes", resuming its transformational role.

This transformative education, embedded in the school role, becomes even more essential in times of accelerated consumption of information, whether manipulated or not. It is in the process of analysis and abstraction that the person perceives the interests and discourses that circulate hiddenly in the messages that circulate in cyberspace. It is not enough for the individual selecting the contents that he or she agrees with or not, it is necessary understanding the process by which messages are conceived and transmitted,

⁵ In general terms, a prosumer is a consumer who also produces content. In other words, speaking in a simplistic way, the "pro-sumer" is a producer (pro) and a consumer (sumer). Retrieved from <https://transformacaodigital.com/marketing/prosumidor-o-que-e-isso-e-qual-sua-importancia-na-era-digital/>.

so that one may critically analyze them and from this, form new knowledge with autonomy and awareness. Here, the role played by teacher stands out in developing didactic actions that provide students with reflection. Santos and Leão (2019, p. 1058) highlight it, also citing that:

Lately it has been observed that students arrive at the classroom with incoherent positions, speeches and questions in terms of knowledge, a stance obtained either by not filtering what they read or by simply reproducing what they heard, in such a way that there is no reflection and formation of one's own opinion about information that would lead the student to expected action-reflection-action.

The authors corroborate the idea that it is important students develop information analysis, and from this, be able to generate their own opinion on the subject under debate, a fundamental step towards critical training. Leading the student to action-reflection-action is, therefore, essential for personal development. Libâneo (2013, p. 89) explains that this concerns a process of “[...] perception, understanding, reflection and application that develops with student's own intellectual, motivational and attitudinal means, under direction and guidance of teacher”. Acting and reflecting would then be in tune with developing and reacting to information received. For Freire (2001, p. 39) “[...] The important thing is that reflection is a dynamic instrument between theory and practice”, which can encourage critical reflection and enable a new action to be generated, a transformative (re)act in the environment in which the student is inserted.

Santos and Leão (2019) argue that the teacher needs to be autonomous and prepared. For them, “[...] educator's attitude towards the world must always be investigative, questioning and reflective, as the knowledge he or she deals with in his/her professional practice is constantly changing” (Santos; Leão, 2019, p. 1055), but they recognize the contemporary difficulties, arising from the advent of the internet, mainly due to the speed and intensity with which things happen and change, which create obstacles for assimilation and implementation of pedagogical actions.

Nowadays, information is produced to be consumed at an increasingly faster pace and designed for specific audiences. Furthermore, individuals may be content producers and consumers at the same time. With different objectives, they can propagate various ideas and worldviews. They are active in the communication process, and as a result, develop the ability to influence those who participate in their networks, disseminating their views, values and attitudes about social events. The consumer, in turn, does not produce new ideas,

instead, he or she receives and consumes information, and generally, when he or she agrees or sees meaning in what has been conveyed, he or she shares it, without necessarily evaluating its veracity.

The effect of this is that the network becomes a bubble (Pariser, 2012) that repels new knowledge. A chamber where you only hear the echo of speeches that are accepted by its members (Karlsen et al., 2017), and generally affects not only the way people perceive things in the world, but also the way they act in virtual and physical spaces.

In this open space (but which can give rise to closed groups) of digital social networks, opinions, facts and diverse knowledge circulate, including science. In this aspect, the internet has become a great ally in scientific dissemination, bringing lay people closer to scientists, as well as researchers. It has become an important source for teachers, students and/or any individual interested in scientific knowledge, but misinformation about certain scientific knowledge has also gained strength on the internet, and with this it has brought new challenges to schools and teachers.

Within the scope of school geography, classic geography content such as geological formation and movements of planet Earth, climate change and geopolitics have become targets of misinformation and debates on social media, requiring specific teaching strategies. This is because students, motivated by debate they undertake on networks, take the subject to school and demand a position from the teacher, often generating conflicts between them, as will be presented in the findings.

3 RESEARCH METHODOLOGICAL DIRECTIONS

The research that gave rise to this paper is based on theory of social representations, based on approaches by Moscovici (1978; 1985; 1992; 2003; 2013), Abric (1994; 1998; 2001) and Denise Jodelet (2001; 2005). For Moscovici (2003), representations are like a process that transforms something unfamiliar into familiar, which will add to the concept proposed by Jodelet (2001, p. 22), who defines social representation as “a form of knowledge, socially elaborated and shared, with a practical objective and which contributes to construction of a common reality for a social group”.

Twenty-five basic education geography teachers, belonging to the Regional Education Center (NRE in its Portuguese acronym) of Guarapuava, in Paraná, participated

in the investigation. Of the 25 teachers who voluntarily responded to the questionnaire⁶, seven were selected and subsequently interviewed, using the sample criteria proposed by Levin (1987) for the selection of interviews, who highlights the importance and ways for the researcher to study a small group of individuals taken from the researched population. This author highlights that for finite populations, the ideal is a study with a minimum of 5% of population. In the case proposed here, the aim was at carrying out interviews with approximately 10%, promoting a confidence degree at approximately 90%. In addition to this criterion, considering the answers to the questionnaires, the location of schools where the teachers work was also taken into account. The intersection of these two forms of analysis made it possible to work with teachers at different stages in their careers, but who also work in different locations in the municipality.

Interviews were aligned to have three basic questions, and when necessary, extra questions could be asked for better understanding the research object. Basic questions were: 1) How do you observe, in general, education of geography teachers to understand geographic misinformation that circulates on digital social networks? 2) Do you identify the circulation of content with manipulated information among students? Do you notice if they are affected by this? In what way? 3) Regarding to geographic content that circulates on digital social networks aiming at misinforming, how can a geography teacher act to educate a critical student who is aware of possibility of misinformation in the news disseminated on social networks?

Collected materials were investigated using the content analysis methodology (Bardin, 2010), with support of Iramuteq software⁷. This methodology allows important elements to be highlighted in the research subjects' statements, whether through full words that may be analyzed or through positive or negative direction of words. Therefore, after describing collected data, necessary inferences may be made, so that finally it is possible interpreting these data (Bardin, 2010). However, the author highlights that the methodology she proposes, to infer something through the words that emerge from questionnaires and interviews, has its limitations regarding the work of categorizing words in a frequency repetition system of them. In that regard, it is necessary complementing the work, advancing a structural decipherment centered on interviews, enabling a more in-depth analysis

⁶ Questionnaire available at:

https://docs.google.com/forms/d/e/1FAIpQLScF02zr017etWoJV7img4G4XQk3dl_K-7ydnvVVAxR2uRDKFQ/viewform?usp=sf_link.

⁷ Statistics-based textual analysis software (using statistical software R), which enables links and other textual characteristics to be revealed, as well as the positioning and structuring of words in the text (Oliveira, 2015).

regarding to what was stated by the research subjects. Not that the categorization of words should be discarded, but it is necessary complementing this methodology and this is possible with technical support and other methodologies, such as social representations.

From the treatment of questionnaires and interviews, it was possible to pre-analyze the raw textual corpus through a floating reading, in addition to enabling, from these treatments, the use of Iramuteq software and OpenEvoc program⁸. As a result, four main categories emerged from the analysis, including difficulties and challenges faced by teachers in classrooms. This category brought together the elements evoked by teachers that enable identification of problems they face, and consequently triggers teachers' perceptions of how to position, whether through social and/or didactic action or by ignoring the problem.

To highlight and support the categorization carried out, the principles suggested by Bardin (2010) were used: Mutual exclusion, in which elements are organized so that they are not in more than one category; Homogeneity, which means that the categories are sufficiently comprehensive to encompass other data; Relevance, as they are supported by the scientific research criteria proposed here (concepts related to misinformation, professional teaching practice and school context); Objectivity and fidelity, in which the process encourages other researchers to reach similar results, using methodological procedures similar to that used in this research, thus guaranteeing the objectivity and fidelity of categories; and Productivity, when categories must be constitutive elements in analysis possibilities.

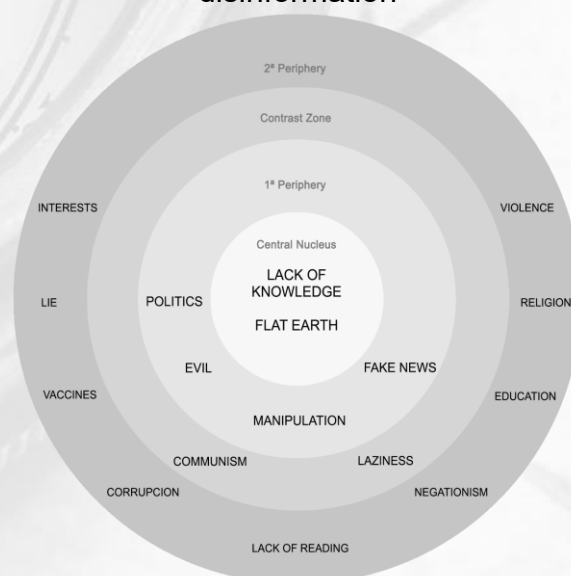
The frequency data collection of teachers' social representation about misinformation was carried out using the OpenEvoc program, which provided exposure of elements that make up the central core and periphery of these representations. In that regard, to obtain results, it was decided using an average frequency of 14 and an average order of evocation (AOE) of 2.5, without discarding any term evoked, which made it possible to identify expressions that made the most sense for respondents. Then, the program generated the words that compose the central nucleus of the teachers' representations.

Based on the assumptions by Abric (1994), the elements of **central nucleus** evoked by teachers (such as: lack of knowledge and Flat Earth) have the function of generating meanings, in addition to organizing them, and are composed of evocations with greatest

⁸ Program for research on structural approach to social representations that assists in construction of frequency table and order of evocation to treat quantitative and qualitative data to organize the elements (Sant'Anna, 2012).

frequency and with a lower evocation order than the average general evocation order. In Other words, they are the first evoked words that come to mind when subjected to the term inductor. Peripheral elements are located around the central core, which will have their presence, value and function defined by the core. In the research, periphery was identified in three parts: first periphery - composed by terms Politics, Manipulation, fake news and Evil, which forms part of representations and demonstrates heterogeneity of the subjects' ideas. Basically, they are remembered by many subjects but not promptly, which is why they are considered less important evocations for subjects; contrast zone - place where the elements with less frequency and lower order of evocation are located (Communism and Laziness), bringing aspects that reinforce terms of maintenance of central nucleus, considered important for a small part of subjects; and second periphery - presents the terms evoked less frequently and with a greater order of evocation (Lie, Lack of reading, Religion, Corruption, etc.), with terms remembered by few subjects and not readily. Furthermore, according to Bardin's theory (2010), it is noticeable that the attitudes of the terms evoked are almost all negative, with only the word 'education' enunciated from a positive attitude. This occurs because education emerges as an important element for teachers, in a sense of possibility of facing misinformation, different from other terms, where representation arises from attitudes devalued by teachers. This entire process becomes more visible from an image representation, as shown in Figure 01.

Figure 01 – Distribution of terms evoked by teachers based on the inductive word 'disinformation'



Source: Nascimento (2023).

Theory of Social Representations demonstrates that peripheral elements are articulated to support the representations located in the central core. This occurs through the elements that appear in the first and second periphery, as well as the contrast zone.

Methodological approach and recognition of structure of teachers' social representations regarding disinformation allowed us to elaborate some interpretations regarding the object of this article, as presented below.

4 DIFFICULTIES AND CHALLENGES FOR TEACHERS IN DISINFORMATION AND POST-TRUTH CONTEXT

Difficulties and challenges faced by teachers in the classroom regarding students, curriculum and their professional practice were mentioned by all of them, whether through responses to questionnaires or in interviews.

The feelings most highlighted by them were insecurity and fear. Regarding this, it can be said that these are also effects of this new era, in which post-truth⁹ and the process of collective disinformation reverberate in hate speeches and an increase in complaints in schools. Besides, teachers' manifestation is indicative of a violence type to which they are subjected and in some cases that takes away their professional autonomy. Regarding this, Fernandes and Silva (2023) explain that violence may manifest in different ways, such as physical, verbal and even psychological aggression. The latter is what has weakened teachers, as fear is one of the points that affects their mental health, such as stress, anxiety, depression and even Burnout Syndrome (a syndrome considered common in professionals who work daily under pressure).

To address this problem, the authors suggest implementing strategies that involve participation of the entire school community. For them, symbolic violence, which may cause moral and psychological damage, is among those that cause most concern, as it does not manifest through explicit violence, but through actions that individual accepts their condition of domination (Bourdieu; Wacquant, 2005, *apud* Fernandes; Silva, 2023).

In that regard, Laval and Vergne (2023, p. 243) highlight that "suffering of teachers is underestimated when they practically no longer find anyone to talk to or act with". For them, "it is too often forgotten that teaching tests the person of teacher, and sometimes

⁹ The term post-truth is linked to the way people deal with the truth, and this may be noticed on the internet, when little by little people put aside their indignation at false information and generate indifference and connivance with this information (Cruz Junior, 2019). It may also be highlighted that post-truth is a process in which people prefer to ignore facts and evidence and opt for their beliefs and personal issues.

exposes him or her to physical violence, and even more frequently to psychological violence” (Laval; Vergne, 2023, p. 243).

Still on this context, it is important to reflect on what Bauman (2008) explains about the meaning of fear, since for teachers it is not only related to threat they may receive from students, but also to a feeling of impotence in face of social changes and their implications at school. For the author, fear is “the name we give to our uncertainty: our ignorance of threat and of what must be done – what can and cannot be done – to stop it or face it, if stopping it is beyond our reach” (Baumann, 2008, p. 8). The author also highlights this complicating factor, stating that “fear is more frightening when it is diffuse, diverse, indistinct, unlinked, unanchored, floating, without an address or clear reasons” (Bauman, 2008, p. 8). He then concludes that this fear is most worrying “when it haunts us without a visible explanation, when the threat we should fear can be glimpsed everywhere, but nowhere can it be seen” (Bauman, 2008, p. 8).

For Bauman (2008), there are three types of dangers that arouse fear in people. The first type involves physical threats to the body and possessions. The second type is more comprehensive, threatening the stability of social order and confidence in it, which are essential, for example, to guarantee a person’s financial security and even survival, in case of disability or old age. Finally, there are dangers that threaten a person’s position in the world, their position in the social hierarchy, their identity (class, gender, ethics, religion, etc.), and more broadly their immunity to degradation and social exclusion. Clearly the three cases may be related to the fears mentioned by teachers in the research, as can be seen in the testimony of below¹⁰:

What we have listened in recent Years is that children are being indoctrinated. So, you must be very careful with this, because the teacher can be sued. And because if they come from home with these ideas and thoughts, you know, when the students take it home when the teacher said this or that, oh, it's the father who comes up, wanting to take satisfaction or even sue you for it. And after you fall into their network and on a social network saying that the teacher did 'this or that', it's very difficult for you to get out of this, right? It will tarnish the teacher's professional career (P5, 2023).

Teacher 5's concern reinforces understanding that teachers perceive this constant vigilance, which may even affect their career, and consequently their physical, and mainly

¹⁰ The questionnaire and interview were organized in order of the teachers' response date, presented as teacher 1 (P1) to teacher 25 (P25) to preserve teachers' identities, in accordance with the Informed Consent and Free Form.

mental health. This process reflects what students experience in the external environment (Fernandes; Silva, 2023) as students and parents may be trapped in bubbles on digital social networks, favoring the conviction that there is only a unilateral view on any subject. Allied to this is denunciation, when students are encouraged to record the teachers' speech (including filming and/or audio recording) about what they do not agree with, and with this 'evidence', they accuse the teacher of ideological indoctrination. This is a strong element for the teacher feeling insecure about certain subjects that compose the geography curriculum. An example is in Teacher 3's testimony:

We are human beings, we do not have this indoctrination bias, we have the bias of opening their minds, of having knowledge, within their capacity, comparing what is best for them. But that's the fear, you're being judged all the time and the fear of being charged by society (P3, 2023).

Here arises the dilemma that afflicts teachers, between carrying out their role and contributing for critical education of citizens and the fear of being judged for themes and positions that may be dissonant with the thinking of the student and their family. As affirms Professor 24: *"surveillance is on top of that too. If you start to delve deeper into a subject and realize that what you are delving into is not in the interests of those in charge: stop!"* (2023). It highlights that, from this, a situation can be created to 'destroy' the teacher. Throughout this process, what may be seen is that there is still insufficient understanding of consequences of surveillance and control at school. In Other words, images, although they have often been evidences that contributes to repressing violence, they are also used to magnify it on others, to intimidate teachers. Dialogue for conflict resolution is replaced by a technical artifact appropriate more for the purposes of speculation and spectacle than for combating violence.

In that regard, Oliveira (2014) emphasizes that the fear and anguish that teachers face occurs precisely because they do not know what can happen in everyday school life, which generates psychological discomfort. Conflicts go beyond the debate in the field of ideas and reflections (where new knowledge could be generated) and advance to something more aggressive and inhumane (Oliveira, 2014). Corroborating this thought, Lira (2013) makes evident that divergences of ideas and debates in classrooms, which should be seen as opportunities, emerge as a problem of coexistence, where divergent opinions and ideas are not accepted.

Teachers' representation of this insecurity that occurs when debating topics with

manipulated information emerged in the speech of six of the seven interviewees (Table 01). Only P21 did not report this insecurity, focused on highlighting ways to present the themes of disinformation.

Table 01 – Elements of teachers’ perception of insecurity in the classroom

| Cited element | Professor who cited |
|---|---------------------|
| • Being misunderstood | P3, P14 |
| • Being accused of indoctrination | P3, P5 |
| • Being judged | P3 |
| • Being charged for something he or she said (society/students’ parents/etc.) | P3, P5 |
| • Facts distortion | P4 |
| • Being film or audio recorded/photographed | P4, P8, P14 |
| • Being exposed on social networks | P4, P5 |
| • Being challenged by students | P4 |
| • Being careful with what is say | P5 |
| • Concerning with ideological issues (political/religious /etc.) | P5, P8 |
| • Being reported/sued | P5, P24 |
| • Having professional career affected | P5, P24 |
| • Having to clarify something said | P8 |
| • Being watched | P24 |

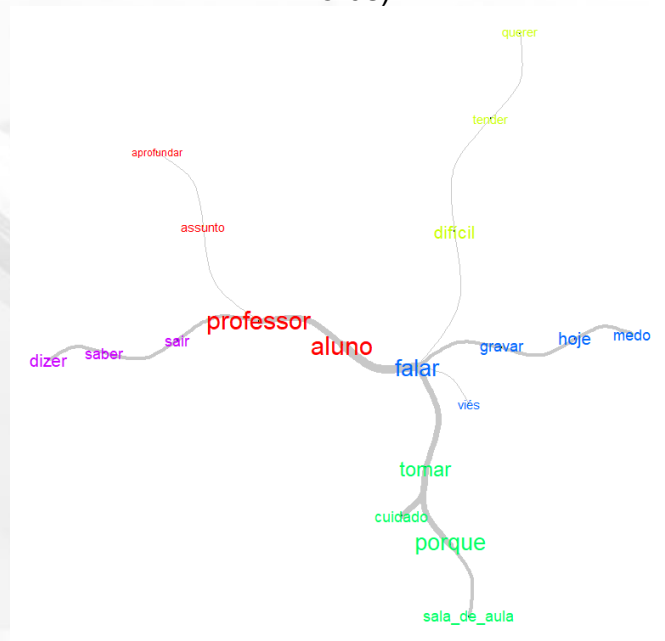
Source: Nascimento (2023).

If the post-truth era presented people who are willing to ignore facts, data and scientific information so that their personal beliefs remain in the imagination as something true, it also brought resistance to contrary and/or different discourse, with the aim of not accept (or analyze) ideas, thoughts and information that do not reinforce what they believe in. This process enters schools and affects the teacher’s work by bringing fear, anguish and a feeling of constant surveillance in the classroom.

To demonstrate how this affects the teacher, in the similarity analyzes (according to figures 02 and 03¹¹) the three words most used by interviewees when it comes to fear and insecurity were exposed and identified: ‘teacher’, ‘student’ and ‘speaking’. Of these, other expressions used branch out, such as ‘fear’, ‘subject’, ‘care’, ‘classroom’, among others. This analysis made it possible to infer the main themes that emerge from the sentences of interviewed teachers.

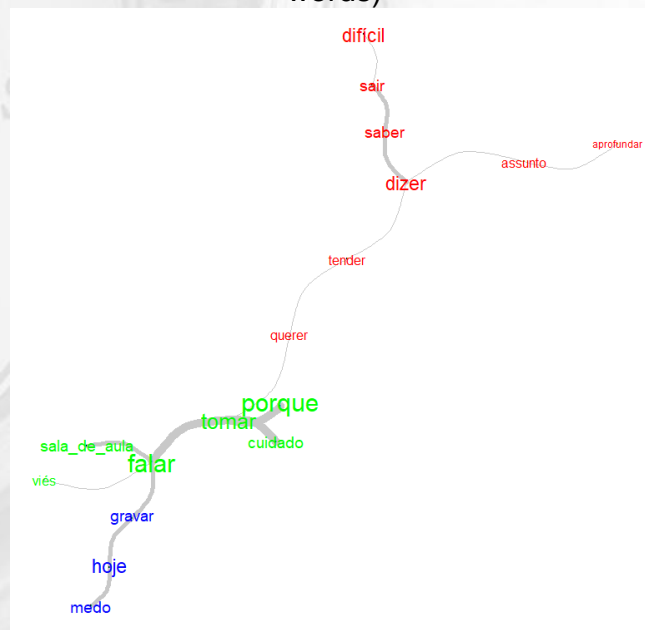
¹¹ It is noteworthy that, initially, the analysis was carried out based on 19 full words brought by the program and considered important for textual analysis of excerpts from interviews that refer to insecurity by teachers. This resulted in Figure 02 as a way of checking the interviewees’ responses from another perspective. The words ‘teacher’ and ‘student’ were removed, and a new similarity analysis was created (Figure 03), but this time, with 17 full words and focusing on representations without the subjects that emerge in the interviews, which makes it possible to visualize how connections are made based on these two formats.

Figure 02 – Grouping by textual similarity on teachers' insecurity in the classroom (19 full words)



Source: Nascimento (2023).

Figure 03 – Grouping by textual similarity on teachers' insecurity in the classroom (17 full words)



Source: Nascimento (2023).

Figure 02 exposes five communities, with elements that reinforce the theories presented so far, that is, insecurity, fear and anguish of teachers. In the similarity analysis, it is demonstrated that 'speaking' is intrinsically linked to all words full of meaning. However,

the community links in blue reflect on the 'fear' due to the 'recordings' (video or audio) that occur nowadays ('today'), and there is also talk with the possibility of ideological 'bias'. At the central core of the rooting of these discourses, in red, are the 'teacher' and the 'student' with the strongest and most connected link, and in community with the 'subjects' that need 'deepening'. Broadly linked to 'talking', in blue, some concerns arise, and this community is linked to the community in green, with teachers' representations about the need to be careful with speech in the classroom. On the other side, in yellow, also connecting primarily to speaking, are the teacher's difficulties in not 'tending' in any direction during the class. Finally, in purple, at the other end of the rooting, are the teachers' representations of 'knowledge', which refers to teaching knowledge that allows the teacher to 'say' it according to what is necessary to avoid problems.

In turn, in the first observation of Figure 03, it is revealed that peripheral connections still maintain a certain similarity with the analysis carried out in Figure 02. However, in this analysis model, only three communities are generated. The community (in green) with stronger roots brings back the social representations of teachers from 'speaking' in the 'classroom', with the need to 'be careful' with what is said based on the questions received. The community in red has as its main source 'saying', being linked to the teacher and his knowledge, his attempts to delve deeper into subjects and ways of not tending to any aspect, and this community is linked to 'taking care'. The third community, in blue, is strongly linked to 'speaking', and just like in the previous image, it refers to the 'fear' that the teacher is being 'recorded'. Teachers' representations are also more easily visualized through meaningful words, which may be seen in Figure 04.

'Speaking' always comes to the fore when analyzing teachers' representations, when the subject is insecurity, they feel when trying to face misinformation in their classrooms. This occurs because fear arises from the different elements that make up teachers' imagination about what to say and how to say it, always fearing that something could happen because of their speech. On the other hand, the speech that comes from the student may often also reverberate in a way that brings insecurity to the teacher.

These analyzes demonstrate how much this process is affecting the work of teachers in classrooms. Furthermore, the importance of thinking about alternatives that promote, at school, an environment of democracy and freedom, as well as autonomy and security for teachers. Only in this way is it possible to think of schools as promoters of knowledge and criticism, as already mentioned by several authors in this research.

Figure 04 – Word cloud referring to the full words of teachers' representations about insecurity in the classroom (17 full words)



Source: Nascimento (2023).

Nogueira (2010), when discussing this fear that exists at school, she explains that this operates to limit freedom. According to her:

In a field of multiple circuits, teachers fit into the educational gear as the most sensitive point in the chain, in which they constantly move to lower levels of appreciation and recognition, from their education to their work at school. By individualizing themselves in a classroom and individualizing their fears as phenomena isolated from the socio-historical context, teachers exempt themselves from their own stories by reducing the existence of each problem and solution to a personal level (Nogueira, 2010, p. 407)

In that regard, with absence of collective action to find ways to face these conflicts, the teacher finds isolated and seeks to individually resolve his or her impasses. Despite the expressions that refer to fear, denunciation and surveillance, it was also possible to identify that they perceive the need to combat disinformation and seek to face this process, without a standard or anything to help them. In that regard, Laval and Vergne (2023, p. 243) highlight that “nothing is more serious for the future of education than this weakening of the ability to think and act together”. This process makes it difficult to analyze possibilities for solving problems, as individual action does not allow progress in collective construction of solution, or at least makes it difficult for this to happen more quickly.

Furthermore, Fernandes and Silva (2023), in their research, conclude that currently strategies to combat violence come from internal initiatives, whether from teachers or management or pedagogical coordination, but there is still a need for external bodies

(secretariat of education, for example) to help in tackling this problem. Therefore, it is necessary that, in addition to private initiatives of teachers, there are institutional actions by schools and bodies linked to education to face this problem, which will ultimately contribute for combat misinformation that circulates in cyberspace.

5 CONCLUSION

In the process that afflicts teachers and the obstacles for combat misinformation, the importance of school is reinforced to provide strategies that aim at structuring an environment of freedom and autonomy for teacher, supporting the action of unveiling manipulated information.

When seeking to understand the social representations of basic education geography teachers regarding misinformation that circulates on digital social networks, as well as whether they affect the teaching strategies developed by them to face the effects of manipulated information in their professional practice, it was found that digital social networks are a source of information for teachers and students. They also have a great influence on teaching professionalism, affecting the teaching-learning process, the conception of knowledge, the teacher-student relationship and the teacher's working conditions. From this, teachers develop (and/or re-elaborate) teaching strategies to cover the content that circulates in cyberspace, investing in critical education of students as mechanisms for deconstructing misinformation. However, they feel insecure with increase in violence, surveillance and control in their work, and consequently their autonomy is reduced.

Insecurity and fear weaken teachers and create obstacles to combating misinformation. To overcome this situation, the school has an important role to play if it creates collective strategies not only for teaching plans, but also for discussions between peers and projects that may allow understand the origin of the problem, whose solution cannot be individualized, and much less responsibility from a single teacher or in the specific subject content. It is a curricular context that must involve the entire school community in a collaborative and critical process, in addition to providing support to the professional.

In view of the above, it is essential to build public educational policies that provide, in the school environment, security, autonomy, appreciation and freedom so that teachers can carry out pedagogical activities that confront misinformation, as well as strengthening the discussion about digital information and communication technologies in professional

education - initial and continuing.

It can be seen, then, that these public educational policies must come from government bodies linked to education with aim at institutionally and interdisciplinary involving content that addresses divergent and controversial social issues as a way of protecting teachers, and above all, highlighting that this is a social issue. In other words, there must be initiatives that promote real possibilities for teachers to work without threats and fears. In the investigation, it became evident that the teacher, when epistemologically and methodologically secure, appropriates the information that circulates in cyberspace to enhance the teaching of geography, and even creates strategies to reduce controversies, as he bets on dialogue and actions that integrate and value students' own knowledge.

Besides, Debates about the role of schools in combating misinformation converge on the importance of a critical, reflective and updated education, capable of preparing students to deal with the challenges of the information society, mainly regarding the traps prepared by those who aim to misinform. Thereunto, they use the possibilities brought by cyberspace, and even more so, by digital social networks.

This work touches on a critical point in the current education system, given the misinformation circulating on the internet. Even if focused on geography teaching, the theme may easily be brought into dialogue with other knowledge areas from an institutional perspective, enabling advances in problematizing manipulation in virtual space in favor of critical and civic education.

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