Storytelling: between uses, benefits, and learning

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ABSTRACT
Storytelling is an ancient practice that, when reshaped in contemporary times, takes on new nuances and applications, particularly within the realm of pedagogical processes. This exploratory and bibliographic study aims to analyze storytelling as a didactic resource. In order to achieve this objective, three approaches are outlined: a literature review on storytelling, an analysis of storytelling as a pedagogical practice, and the identification of the benefits of storytelling in learning processes. The results highlight that the use of storytelling as a pedagogical tool not only engages students but also fosters empathy and makes content more accessible, memorable, and meaningful.

KEYWORDS: Storytelling. Learning. Pedagogical Practice

RESUMO
Contar histórias é uma prática ancestral que, ao ser remodelada na contemporaneidade, adquire outras nuances e utilizações, especialmente no âmbito dos processos pedagógicos. O presente estudo, de caráter exploratório e bibliográfico, propõe-se a analisar o storytelling como recurso didático. Para alcançar tal objetivo, três abordagens são delineadas: a realização de uma revisão de literatura sobre o storytelling; uma análise do storytelling enquanto prática pedagógica; e a identificação dos benefícios do storytelling nos processos de
aprendizagem. Os resultados evidenciam que a prática do storytelling como ferramenta pedagógica não apenas engaja os estudantes, mas promove empatia e torna os conteúdos mais acessíveis, memoráveis e significativos.


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Introdução

The act of storytelling is an ancient activity that permeates daily life and contributes to the dissemination of information, knowledge, values, attitudes, and learning. It is a practice that accompanies humanity. Remodeled in contemporaneity, there is storytelling, seen as a set of techniques that utilize narratives as a pedagogical resource to transmit knowledge, information, and retain attention.

Etymologically, the word storytelling originates from the English language, formed by the combination of two words: story and telling.
Therefore, storytelling is a type of communication that involves the narration of stories (which can include facts, events, etc.) with intentions, whether pedagogical or informational.

In recent years, storytelling has been the subject of more in-depth investigation, conceived as a teaching method or a means of building 'bridges' in the relationships between teachers and students. Thus, the application of storytelling is considered a pedagogical resource and practice, mainly for representing or exemplifying content and theories through narratives, whether real or fictional.

The premise of the study is that, whether in elementary or higher education, the practice of storytelling may allow for a better connection between students and certain knowledge, making it more understandable. This resource is potentiated when students can place themselves in the narratives based on their reality and previous experiences.

This is an exploratory and bibliographical research, analyzing the practice of storytelling as a didactic resource. For this purpose, three theoretical and methodological approaches are interconnected. The first is dedicated to conducting a literature review on storytelling. The second approach seeks to analyze, through field studies, how the application of storytelling occurs as a pedagogical practice. The third and final approach focuses on presenting the benefits of storytelling for learning processes.

**Storytelling and narratives: the first research movement**

Narrative and storytelling are related terms; however, there are distinctions in their meanings. Generally, each individual has an understanding of the narrative concept. On a daily basis, we are exposed to various stories, whose manifestations and forms are dispersed in literary works, films, television programs, newspapers, magazines, and, more recently, on platforms and social networks such as Facebook, Instagram, Twitter, and YouTube.
The media produce and disseminate narratives about people, situations, and conflicts. However, as these stories are conveyed, whether in the pages of books, on television news, or on the internet, they configure representations of a possible reality.

In dictionaries, the word 'narrative' is defined as a story, a description of a series of events, or a particular way of explaining or understanding events and situations (real or imaginary) through words. Traditionally associated with literature, a narrative, according to Fiske et al. (2006), is composed of several elements, including: the event itself (what); the time it occurs (when); the place (where); the characters (with whom); the motivating cause of the event (why); the manner in which it occurs (how); and the consequences. According to these authors, a narrative can be subdivided into two correlated dimensions: the plot, represented by the main event, such as the encounter of A with B, which constitutes the substance of a story; and the narration, which refers to the manner in which this substance is presented. The plot represents the core of the story, that is, the sequence of events structured temporally, with connotations of beginning, middle, and end. Narration, on the other hand, concerns the manner in which this story is communicated.

Narratives can take on various forms, encompassing both oral and written discourse, as well as non-verbal expressions such as dance and photography. The variety is so broad that sometimes categorizations may not be precise. For example, detective fiction and epic poems, although they narrate events organized in time, present distinct structures.

The field of narrative studies is extensive and interdisciplinary. Although this paper does not seek a conceptual and literary exploration of the narrative concept, it is relevant to highlight some distinctions between narrative and storytelling.

While narrative refers to the general structure of a story or the account of events, being the way a story is told, organized, and presented, storytelling, on the other hand, is related to the process or forms by which these stories are told. In this case, storytelling involves the ability to communicate, to
relate, or even to create a connection with the audience through a type of narrative. As Frances O'Connell Rust, a professor at the University of Pennsylvania (1999, p. 370), observes, stories and narratives represent "opportunities for discovery, learning, and sensemaking about themselves and their profession".

Storytelling has commonly been associated with the fields of marketing, advertising, and communication. In this study, storytelling is utilized as a pedagogical tool to enhance understanding and make specific learning experiences meaningful for students. The premise is that through the adoption of storytelling, teachers can immerse students in narratives, enabling them to comprehend ideas and concepts from diverse perspectives. This approach aims to establish a connection between educational content and students' lived experiences, thereby broadening the reach and impact of the teaching process.

Following the literature review, Adilson Xavier (2015) in the work "Storytelling: histórias que deixam marcas," (not translated to English) expresses no surprise that the reshaping of the ancestral practice of storytelling is arousing interest in various professions, including teaching. The author employs the term "tecnarte," blending technique and art, with the aim of crafting a compelling story, thus elucidating what storytelling entails.

Following three definitions, Xavier (2015, p. 11-12)⁴ argues:

Pragmatic definition:
Storytelling is the techart of elaborating and linking scenes, giving them a compelling meaning that captures people's attention and allows for the assimilation of a central idea.

Pictorial definition:

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⁴ All quotations and notes originally in Portuguese were translated by the author of this article to be included in the body of the text. Therefore, the translations are subject to the author's interpretations and are open to discussion.
Storytelling is the tech art of shaping and joining the pieces of a puzzle, forming a memorable picture.

Poetic definition:
Storytelling is the tech art of stacking narrative bricks, constructing imaginary monuments full of meaning.

In one sense, storytelling represents a set of scenes that complement each other, captivating the listener and aiming for a better understanding of a central idea, in this case, the narrative's generative idea. A second definition arises from storytelling as a tool, that is, like a well-shaped puzzle where the pieces, when united, form a type of representation. The third and final definition would link storytelling to the detailed construction of imaginary narratives with meanings, equally involving a more poetic definition.

Jonathan Gottschall (2012), a professor of American literature, argues that the act of storytelling has roots in human biological functions. He bases this claim on insights from social psychology, neuroscience, and biology, seeking support for humans' impulse to narrate what happens around them. He states: “We are, as a species, addicted to story. Even when the body goes to sleep, the mind stays up all night, telling itself stories” (idem, 2012, p.XIV). In summary, the author highlights that narratives permeate everyday life, shaping beliefs, behaviors, and ethical aspects that in some way imply the construction and modification of culture and history.

Considering storytelling as a hallmark of ancestry and evolution, Gottschall (2012, p.118) reinforces its relevance by stating that “If you want to burrow a message into a human mind. Work it into a story”. Furthermore, he suggests that storytelling can be seen as a "cognitive play" (ibid, p. 27), an informative medium, or even a form of social cement that “bind us together around common values” (ibid, p. 67). According to Gottschall (2012), the longing for narrative has positive effects, as “give us pleasure and instruction”. They simulate worlds so that we can live better in the real
world. They assist us in forming communal bonds and “in defining our culture” (ibid, p. 197).

The use of narratives, as emphasized by Rodrigo Cogo (2016, p. 113), a storytelling specialist, integrates the fundamental units of human communication and socialization because "people have the need to possess symbols that help them understand and interpret the world." In other words, stories confer and attribute meaning to existence, enabling the expression and representation of thoughts through various means, such as sounds, words, images, and expressions.

Palacios and Terenzzo (2016, p. 113), specialists in narratives, corroborate this perspective by stating that when we narrate stories, "we reveal a little of what we are." Furthermore, by listening to stories, it is possible to understand who we are, guided by the interpretations given to the narratives. Thus, stories not only provide entertainment, as emphasized by Robert Mckee (2006, p. 25), a professor of creative writing, and do not represent a simple escape from reality, but operate as a vehicle that leads us in our quest for truth. Therefore, when reading a book, watching a movie at the cinema, or listening to a story from a colleague or teacher, as Mckee (2006) observes, the longing is not to escape from life, but to find oneself in it.

Stories affect us and transform us, making us think, laugh, or cry. They touch our emotions because, when well constructed, they provoke such a deep emotional involvement that they are capable of reaching the sensory level. This is due to the special power that some storytellers possess: the power of the senses, capable of bringing bodily sensations into the reader. (Mckee, 2006, p. 37)

Thus, storytelling transcends the literal translation of telling stories, focusing on well-crafted narratives structured with elements that can generate engagement and learning. According to the approach of James McSill (2013), a storytelling expert, there is a need for intentional narrative, using techniques capable of establishing connections with the audience.
Therefore, whether in the corporate context or in the educational scenario, the subject of study in this research, what storytelling does is propose a redefinition of meanings, reshaping information, experiences, and consequently, learning processes.

**Storytelling as pedagogical practice: the second research movement**

As a didactic experience of storytelling, allow me to share a brief fictional narrative while explaining the concepts of Id, Ego, and Superego, derived from Sigmund Freud's psychoanalytic theory.

I begin the class by asking students to mentally transport themselves to the front row of a highly anticipated concert. At this moment, after hours of waiting in line and feeling excited to be at the front of the stage, a significant inconvenience arises: an uncontrollable urge to urinate.

The Id, connected to instinctual impulses and the unconscious, would immediately suggest: "Just pee, relieve this tension." This is because the Id operates under the pleasure principle and seeks to avoid or alleviate pain or tension. However, not only the Id is at play in this situation. Other psychic instances, such as the Ego and the Superego, also play roles in this dilemma. The Ego, being a psychic instance closer to consciousness and guided by the reality principle, would weigh in: "I think I can hold it a little longer. I can try to find alternative bathrooms. Maybe I can quickly go to the bathroom and return without causing embarrassment."

Another psychic instance, the Superego, transcends the reality principle and is governed by morality. There would thus be an intervention with an ethical perspective, emphasizing that, according to social norms, urinating in front of others may be considered indecent exposure. In this situation, the Superego would emphasize the importance of following social rules, such as going to the bathroom, washing hands, among other practices accepted by society.
Thus, it was possible to develop narratives around a spectacle, conveying concepts and providing a fictional, informative, and figurative approach to psychoanalytic theory. The creation of stories representing psychological concepts emerges as a strategy to engage students. Each narrative presents a problem situation with which many students can identify. There is an attempt to associate narratives with each topic addressed in the classroom, and as the discipline progresses, these stories emerge as examples for discussion in class. Somehow, this type of story provides an emotional component, engaging students and offering a structure aligned with the natural human propensity for narrative (Gottschall, 2012).

The use of storytelling in the classroom is not a novelty. Case studies, for example, are widely employed in fields such as law, medicine, and nursing, as well as in companies that adopt storytelling for employee training and recruitment. Narratives have a diversified application across various disciplines, and, considering a broader perspective, they hold the potential to enrich learning processes from elementary to higher education levels.

As a pedagogical practice, as highlighted by Daniele Oliveira (2020, p. 26), an author who developed a guide for the use of storytelling in educational settings, attributing meaning to learning represents “an advantage, as narratives have the capacity to contextualize the theme and confer sense to the content, making it more real, intelligible, and perceptible”. To achieve this goal, Oliveira (2020) proposes five elements that teachers can consider in creating good stories: character, conflict, lesson, meaning, and empathy. These elements should not be seen as a formula but as an approach to constructing narratives. Additionally, other ingredients, such as listening and observing the reality of the students, are fundamental to enriching the stories.

Indeed, there are no stories without characters. According to Oliveira (2020), the construction of the character is fundamental to achieving the learning objectives, as it is through the character that the student can identify themselves. “The character in storytelling serves the purpose of
motivating the audience to act. When applied to education, this implies guiding the student to learn with meaning" (ibid., 2020, p. 32).

A second element is conflict. In the author's view, conflict is the obstacle that prevents the character from achieving their goals easily. It is the driving force behind the narrative, being an essential component for generating engagement. Furthermore, Oliveira (2020) states that "the presence of conflict reinforces empathy and maintains the audience's curiosity" (ibid., 2020, p. 33).

The third element is lesson. Stories function as tools for learning, teaching, and motivating. By placing the character in conflict-ridden situations, stories "teach lessons capable of preparing us for moments in personal and professional life" (Oliveira, 2020, p. 36). The lesson refers to the character's own learning, the knowledge extracted from the story, i.e., the lesson learned by the protagonist. This lesson not only transforms but also inspires students to change their way of thinking and acting, actively experiencing the plot.

The fourth element, according to Oliveira (2020, p. 37), is meaning. "One of the functions of stories is to order facts so that they can impart meaning to our existence, to the people and things around us." The meanings present in a story lead us to reflections on human life. As for the last element, empathy plays an important role. For a story to be successful, it needs to engage the audience. This connection occurs through empathy, which can be defined as the "ability to experience the story in the place of the protagonist, understanding their desires and actions" (ibid., 2020, p. 38). Empathy is what sustains the audience's emotional connection with the story.

It is undeniable that many complaints from teachers relate to the difficulty of capturing students' attention, especially in a society permeated by a myriad of stimuli and platforms. WhatsApp, Google, Instagram, Facebook, Spotify, Netflix, to name just a few tools, not to mention online and video games, absorb hours of students' attention. There is a significant disparity in terms of attention retention when comparing students' ability to
focus more effectively on activities outside of school compared to the educational environment.

Advertising, in general, seems to be more sophisticated and effective in retaining attention. As Palacios (2012) observes, stories are crafted in a more captivating manner in cinema and social media than in classrooms. Even considering the distinct characteristics of each medium, which include the use of images, sounds, interaction, etc., it is crucial to understand that, above all, these media products succeed because they tell good stories. We can illustrate this point with an example in the educational field, as reported by Palacios and Terenzzo (2016, p. 182).

One might expect a teacher to enter the classroom and announce, "Today we will explore the causes that led to the French Revolution." However, a storytelling teacher would approach it differently. They would speak of the grandeur of the Palace of Versailles and then contrast it with the poverty of a starving population. They would recount the extravagances of a man who called himself the 'Sun King' and whose life was exposed by many writers. Perhaps they would even take the opportunity to flashback and discuss the Enlightenment that gave rise to these writers. Then, the storytelling teacher would talk about the religious pressure against which the Enlightenment thinkers struggled. Finally, they would narrate the extravagances of Queen Marie Antoinette. Only then, to conclude the class, would they say, "And today we have seen the causes that led to the French Revolution."

Through the application of storytelling, it is possible to enhance attention retention, as stories have the ability to connect us to previous references and experiences. In this regard, the human mind tends to process information more easily, thus expanding the capacity for retention over time. Studies, such as those by Palacios and Terenzzo (2016), Xavier (2015), McSill (2004), among others, corroborate this perspective.
Narratives have the ability to situate experiences in time and space, capturing students' attention (audience) and directing actions that connect them from a specific context. Beyond the simple act of "telling stories," storytelling as a teaching tool presupposes that listeners, in this case, students, play an active role in knowledge construction. It is through the various perceptions and interpretations of the narrative presented by the teacher that students attribute meaning to the content. This pedagogical practice can be seen as a means by which educators can stimulate students' curiosity. Furthermore, storytelling, according to the studies of Marcelo Valença and Ana Paula Tostes (2019, p. 222), is perceived as the use of narratives "with social or cultural significance to promote reflection on concepts and values".

Effective learning and teaching occur when learners can attribute meaning and critically interact with the information. This implies establishing connections between what is being learned and their own experiences, going beyond mere information reproduction (Valença; Tostes, 2019).

Stories are everywhere, from trivial events to personal experiences, media narratives, or accounts from close acquaintances, such as colleagues and family members. In the classroom, there are various ways to incorporate storytelling, ranging from simple anecdotes to movie stories or personal experiences. Case studies, for example, offer relevant narratives, establish empathy with characters, and introduce drama through issues to be resolved. Story elements can be real or fictional, with cases outlining a problem or issue with which students interact, challenging them to think critically until they find a solution. Case studies represent a clear and intentional example of using storytelling as a pedagogical tool.

Stories represent ways of interpreting experiences, and teachers can leverage storytelling techniques to facilitate learning. By viewing stories from a broad perspective, it is possible to intentionally connect narratives and storytelling principles to the concepts and content that educators want
students to learn. From a pedagogical standpoint, through storytelling, teachers can capture students' attention, creating a more social and engaging atmosphere while stimulating cognitive skills such as creativity and reflection.

**Storytelling and its benefits: the third research movement**

This third and last movement of the investigation aims to identify and analyze some of the benefits of storytelling in learning processes. To this end, three elements have been selected to guide the results: the practice of storytelling as a pedagogical tool promotes engagement and, consequently, retains students' attention more effectively; storytelling, when applied in the classroom, is capable of creating a more social and empathetic environment, facilitating the teacher-student relationship; and the practice of storytelling can be perceived as a catalyst for making content more accessible, meaningful, and memorable, i.e., for narratives to remain in memory for longer periods.

**Attention**

Certainly, the phrase "are you paying attention?" is one of the most common among teachers. Paying attention implies directing and maintaining focus on a specific aspect while eliminating or ignoring others that are around. In summary, paying attention means concentrating awareness, directing mental processes to a single main task, and putting others on the back burner.

In dictionaries, "attention" is defined as the process of concentrating mental activity on a specific object. We are attentive in a conversation in a noisy environment; while watching a movie; while driving a car; or to content in the classroom.

This type of action, being attentive, is only possible due to the selective sensitization of a set of neurons that carry out the task and end up inhibiting
others. Thus, attention is a complex cognitive function and, in the context of learning processes, refers to a condition for the individual to be able to perform tasks, solve problems, recognize the world, and adapt to it.

Myers (2012, p. 68) asserts that attention is like a beam of light and that "using selective attention, your conscious attention, focuses, like a beam of light, only on a very limited aspect of everything you experience." As we are "flooded" with information from different sources and in various forms that stimulate our five senses, it is natural for there to be selectivity. In other words, it is challenging to dissociate the notion of attention from new work dynamics, technological advancements, and the diversity of visual stimuli. It is understood, therefore, that our ability to maintain attention is not merely determined by biology or immediate phenomena, but is mediated by our experiences within a specific cultural context, which ultimately shapes our way of directing attention to the world and ourselves.

In the psychological and neuroscientific realms, attention represents a fundamental cognitive process that enables individuals to process relevant information and react appropriately to stimuli.

Thus, drawing a parallel between the practice of storytelling and attention retention, we are alluding to the ability to tell stories in an engaging, captivating manner capable of capturing and maintaining students' attention. The idea is that storytellers seek ways to hold the audience's attention by leading them on an emotional and cognitive "journey" that would keep them engaged from start to finish.

Telling a story is one of the most frequently used strategies to turn a communication opportunity into a meaningful connection. Attention, in turn, constitutes the basic premise of any communication process. By using storytelling in the classroom, the aim is to achieve a level of engagement capable of maintaining attention and increasingly enhancing the learning processes.

Students' attention directed towards information and content has become increasingly scarce, being one of the most common complaints among
teachers. In this scenario, it is argued that well-told stories have the power to attract attention comprehensively, as they stimulate our sensory repertoire. This interconnection between attention and senses is supported by the words of the educational psychologist and professor at the Technical University of Lisbon, Vitor da Fonseca (2016, p. 369), when explaining that "paying attention, being motivated and engaged [...] are functions of the human emotional brain". The brain, therefore, would be capable of analyzing the sensory load of information and evaluating its importance, directing the necessary amount of attention.

In this context, the question arises: how to capture the attention of individuals who are so connected and simultaneously scattered? We can explore an attempt to answer through the application of storytelling, that is, by telling an engaging narrative "that maintains attention, evokes emotions, establishes deep connections with the audience, and unites all elements into a comprehensible narrative" (Xavier, 2005, p. 20).

Empathy

Carl Rogers, one of the foremost psychologists of the humanistic approach, highlights the relevance of empathy in both the psychotherapy process and interpersonal relationships. Empathy represents one of the fundamental elements of Rogers' approach, known as Client-Centered Therapy or Person-Centered Approach.

Rogers (1975) emphasized empathy as one of the three essential conditions for facilitating personal growth and development in a therapeutic environment. These three conditions, known as the "Rogerian Triad," include empathy, unconditional positive regard, and congruence.

Unconditional positive regard refers to the therapist's, and we can extend this notion to teachers, ability to accept the client (student) regardless of their actions, thoughts, or feelings, that is, with their weaknesses and strengths. Acceptance is one of the elements to create a safe environment
where feelings can be explored without fear of judgment. Congruence, also called authenticity, concerns the therapist's, and in this case, the teacher's, ability to act in a genuine and transparent manner in their relationships. This implies, in a sense, maintaining congruence between what the therapist (teacher) feels, verbally expresses, and non-verbally demonstrates.

Empathy, according to Rogers (1975), refers to a type of understanding on the part of the therapist of the feelings presented by the patient, which contributes to the promotion of a friendly environment for therapy or learning. The author understands empathy as the act of feeling the client's (or student's) world as if it were one's own, which implies experiencing the same feelings that the client is experiencing.

Expanding on this, Rogers (1975, p. 73) states that empathy means

To penetrate into the perceptual world of the other and feel completely at ease within it. This requires constant sensitivity to the changes occurring in this person regarding the meanings they perceive, the fear, anger, tenderness, confusion, or whatever they may be experiencing. (...) Being with the other in this way means setting aside, in this moment, our own viewpoints and values, to enter the world of the other without prejudice; in a certain sense, it means putting aside our own self.

Learning is enhanced when students are emotionally engaged. In this regard, teachers can promote such engagement by using their own personal experiences or those of the students to guide objectives, as in the case of this study, through the selection of stories.

Good narratives represent personal, emotional, and simultaneously social endeavors. This involves the stimulation of mirror neurons and identification with the characters in a story. It is worth noting that mirror neurons are a type of neuron activated both when a person performs an action and when they observe another person carrying out the same activity. These neurons play a crucial role in empathy. The ability to "mirror" actions
of others contributes to imitation, learning, and social interactions, including language acquisition in early years of life.

Valença and Tostes (2019, p. 224) assert that storytelling "provides the construction of empathy with other contexts and values." In the authors' view, the narrative of stories creates a learning network that can connect to students' previous life experiences and other environments through which the student has already traversed. Thus, among the benefits of storytelling, Valença and Tostes (2009, p. 234) enumerate a series of points.

These include (i) the empowerment of both the narrator and the audience (undoing the verticalized relationship between the authority that teaches and the spectator who receives the information), (ii) the possibility of highlighting specific aspects for each audience and objective, (iii) the dynamic elements in lesson delivery, and (iv) the contribution that storytelling offers to sustain abstract and/or complex concepts, bringing them closer to the audience and their reality and social context.

The teacher, by assuming the role of the narrative creator, has the opportunity to engage students, allowing them to assist in the construction and resolution of the presented problems. This approach underpins the conception of a horizontal teaching and learning process. Thus, each type of narrative created with specific objectives possesses distinct characteristics, capable of providing entertainment, promoting interactions, and constructing diverse educational perspectives. It can also be asserted that the practice of storytelling has the potential to make the classroom more dynamic by relying on the collaborative process.

Stories have the potential to strengthen the bonds between teachers and students, enhance interactions in the classroom, create a sense of community, improve discussions, and foster respect among students and educators. Oliveira (2020, p.27) further highlights that the practice of storytelling is capable of promoting empathy, as it stimulates "interpersonal relationships,
since you place yourself in the other's shoes within a narrative, understanding their views, desires, and values." Beyond empathy, other elements are activated, such as imagination, creativity, and memory, elements analyzed in the next section.

**Memory and learning**

The word "learning" derives from the Latin "aprehendere" and means to grasp, seize, or take hold of something. Based on this conception, we can understand learning as a process in which the subject "appropriates" or takes certain knowledge, skills, attitudes, values, beliefs, or information for themselves.

Learning implies the incorporation of something new into the set of elements that compose life, thus relating to a change or transformation of already acquired knowledge. Learning is linked to various daily activities and begins in the early years of life, when we learn to sit, stand, crawl, walk, talk, run, identify and pick up objects, among other skills. Furthermore, learning can be understood as a process of behavior modification through experience, considering emotional, neurological, relational, and environmental factors.

There are several concepts of learning, and one classic, presented by Ernest Hilgard (1980, p. 3), an American psychologist, is cited to this day.

Learning is the process by which an activity originates or is changed through reacting to an encountered situation, provided that the characteristics of the change in activity cannot be explained on the basis of native response tendencies, maturation, or temporary states of the organism (e.g., fatigue, drugs, etc.).

From Hilgard's idea (1980), several conclusions can be drawn, namely: all learning involves change, and although it is an internal process, it manifests itself in an observable manner through behavior; there are learnings that generate entirely new behaviors and processes in the
individual; in the processes of learning, not only knowledge and skills are acquired, but also affective contents and attitudes.

However, what would be the relationship between memory and learning? Learning encompasses the acquisition and storage of information, with memory being the element or tool through which this information is retained and subsequently retrieved. The learning process begins with the acquisition of new information, which is received and processed by the senses (vision, hearing, touch, etc.) and then interpreted and organized by the brain. During the consolidation phase, neural connections are strengthened, contributing to the long-term retention of information. However, the effectiveness of learning is manifested when the information stored in memory can be recalled when needed. (Brown et al., 2018)

As highlighted by Brown et al. (2018, p.21), "learning is acquiring knowledge and skills, and the ability to make them available in memory to detect and address future problems and opportunities." In summary, learning demands the presence of memory, indicating that for the elements, contents, and information learned to remain accessible when needed, memory is fundamental.

By articulating learning, memory, and the practice of storytelling, it is observed that when reading or listening to a story, not only are the parts of the brain related to language activated, but also the areas involved in the sensory experience corresponding to what is being narrated. For this reason, we are capable of remembering everything with which we emotionally identify. A notable example is the likelihood of remembering where and what we were doing when we watched the news of the attack on the Twin Towers in the United States in 2001. This phenomenon occurs because memories have an emotional dimension. When experiencing "an impactful feeling, we register the entire context in which we were inserted" (Palacios; Terenzzo, 2016, p. 183).

Events with strong emotional implications tend to be remembered more accurately than routine events. This occurs because memory is part of the
limbic system, a set of interconnected structures that process behavior and emotions. Therefore, stories, by involving emotions, provide intense and unforgettable understanding when associated with emotional factors (Mckee, 2006).

Furthermore, according to Italian neuroscientists Giacomo Rizzolatti and Laila Craighero (2004), individuals are easily captured by emotions. In the realm of neuropsychology, attributing intentionality and emotional aspects to characters involves the hippocampus and much of the cerebral cortex, indicating that stories increase brain connectivity.

The most immediate benefit of using stories in the classroom stems from the fact that, as discussed earlier, we are predisposed to remember stories rather than facts, concepts, and theories. By using stories as pedagogical tools, we are adapting teaching methods to align with our cognitive predispositions. Thus, associating the practice of storytelling with the content that we truly want students to learn can facilitate the learning process.

Final considerations

Upon revisiting the three theoretical-methodological approaches of this study, which consisted of conducting a literature review on storytelling, analyzing the application of storytelling as a pedagogical practice, and exploring the benefits of storytelling in learning processes, it is concluded that its use for pedagogical purposes can prove to be an interesting approach. This practice can effectively engage students, making content more accessible, meaningful, and memorable.

The practice of storytelling, despite having ancient roots, takes on a new configuration in contemporary times, transcending the mere act of telling stories. Treating storytelling as a pedagogical perspective requires the careful crafting of narratives aimed at promoting understanding, reflection, and student engagement. As evidenced in this study, storytelling activates mechanisms and cognitive processes related to attention and memory, acting
as a "bridge" that connects teachers and students. This practice allows students to identify with stories based on their own experiences.

Furthermore, storytelling can contribute to the construction of a more empathetic social environment. This study, conducted in an experimental and exploratory manner, identified some benefits of storytelling as a resource and pedagogical practice, highlighting that it promotes empathy, stimulates memory and creativity, empowering students to attribute meaning to what they are learning.

Narratives, when skillfully crafted, have the power to empower both the narrator (the teacher) and the audience (students), challenging traditional hierarchies between teacher and student. Through this approach, students are encouraged to actively participate in problem-solving and transforming the classroom into a dynamic and collaborative environment. Ultimately, the use of storytelling in education represents a valuable tool for enhancing the learning experience.

Stories have played a fundamental role in our history, dating back to archaic times when early humans recorded their experiences using pigments on rocks and cave walls. As social beings, we interpret our experiences through narratives, using them as a frame of reference. Therefore, the intentional application of storytelling can provide significant benefits, considering that humans are, by nature, "storytelling animals" (Gottschant, 2012).

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