

ORIGINAL ARTICLE

# FROM FACE-TO-FACE INSTRUCTION TO HYBRIDISM: AN APPROACH TO INVENTIVE LEARNING

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## ABSTRACT

The evolution of technologies has profoundly impacted teaching and learning. Information and Communication Technologies (ICTs) have been integrated into education, and active learning methodologies have adapted to different historical contexts, such as wars, socioeconomic changes, revolutions, and, more recently, the COVID-19 pandemic. This period accelerated the adoption of innovative approaches and the use of digital platforms, requiring a careful articulation among technology, education, and public policies to enhance teaching–learning processes. Among active learning methodologies, hybrid learning has stood out for integrating face-to-face and digital practices, fostering a more dynamic and student-centered formative experience. This article adopts a theoretical–argumentative approach, based on the analysis of scientific articles and books that discuss concepts related to learning, knowledge acquisition, and pedagogical innovation. The objective is to examine how hybrid learning, combined with digital media resources and transmedia narratives, can promote inventive and engaging forms of learning in the contemporary educational context.

**Keywords:** Hybrid Education; Active Learning Methodologies; Inventive Learning; Digital Technologies in Education; Post-pandemic Context.

## 1. INTRODUCTION

With the rapid evolution of technology and adaptation to new methodologies, a wide range of solutions for teaching has emerged. This article reviews the concept of hybridism as an effective methodology, examining it from the perspective of inventive learning. The aim is to demonstrate how active learning methodologies—particularly hybrid learning—can innovate educational practices through the creative use of technologies and transmedia resources.

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The impact of narratives on learning, information processing processes, multisensory stimulation, and various active learning methodologies will be discussed. The importance of information and communication technologies for hybrid learning, storytelling as a pedagogical strategy, and the creative use of transmedia narratives will also be addressed.

The relevance of this study lies in the urgent need to rethink education in light of contemporary technological and social transformations. By examining how active learning methodologies—particularly hybrid learning and storytelling—can be enhanced through the creative use of digital technologies and transmedia narratives, this study proposes alternative pathways toward more meaningful, sensory, and inventive learning. In view of the challenges imposed by the pandemic and the consolidation of hybrid education in the post-pandemic context, the study is particularly timely for valuing creativity as a driving force for engagement and knowledge construction. By bridging theory and practice, it contributes to the preparation of educators capable of transforming the classroom into a dynamic, interactive, and student-centered learning environment.

The research adopts a qualitative approach of a theoretical–argumentative nature with an exploratory orientation. The literature review was conducted through the analysis of relevant books and scientific articles in the fields of Education, Communication, and Information Technologies. The selection criteria considered the authors’ theoretical relevance—such as Kastrup and Moran—as well as the alignment of the works with the concepts of inventive learning, active learning methodologies, hybrid learning, storytelling, and transmedia.

The structure of the article is organized as follows: Section 3 explores storytelling as an ancestral teaching practice; Section 4 presents different educational methodologies, including sensory perceptions, multisensory learning, and in-depth discussions of hybrid learning and storytelling. Section 5 addresses communication and its relationship with education, examining the field of educommunication, the use of educational media, and cross-media and transmedia narratives. Finally, Section 6 discusses how the creative use of these technologies and narratives can enhance inventive learning and enrich active learning methodologies.

## 2. METHODS

The present study is qualitative in nature, adopting a theoretical–argumentative approach with an exploratory orientation. Its development is based on a critical analysis of scientific articles and academic books that address the concepts of active learning methodologies, inventive learning, educational hybridism, storytelling, educommunication, and digital technologies applied to education.

The materials were selected through searches conducted in Google Scholar, SciELO, and the Brazilian Digital Library of Theses and Dissertations (BDTD), based on the following inclusion criteria: the authors’ relevance in the fields of education and communication, the recency of the publications (with an emphasis on the last ten years), and their theoretical alignment with the objectives of the study. Priority was given to authors who engage with innovative perspectives on pedagogical practice, such as Kastrup and Moran.

The analysis was conducted through interpretative reading and thematic categorization, aiming to identify points of convergence among the concepts addressed and to construct well-founded arguments regarding the role of active learning methodologies in the contemporary educational context.

This approach allows not only for a discussion of the theoretical foundations supporting the use of hybrid learning and storytelling but also for the exploration of creative connections between technology, narrative, and learning.

By adopting this methodological approach, the study aims to provide a relevant theoretical contribution, connecting different fields of knowledge and suggesting alternative pathways for the transformation of pedagogical practices.

### 3. NARRATIVES

The act of storytelling is closely linked to human evolution and the need for complex communication. Unlike other species, which use simple signals to give warnings or express emotions, humans have developed more elaborate ways of conveying ideas and experiences, as noted by Durham (2003).

The emergence of storytelling likely coincided with the development of speech. However, Ernst Hans Gombrich (2015, p. 23), in *The Story of Art*, suggests that cave paintings may have been humanity's first form of recorded communication, possibly predating the mastery of spoken language.

Cave paintings became increasingly complex over time, documenting aspects of tribal life. According to Gombrich (2015, p. 23), they served as effective forms of communication, overcoming the limitations of speech, which was still developing and confined to small groups.

Telling a story—whether through cave paintings, comics, books, or novels—involves presenting a sequence of interconnected events in written, oral, or visual form. This sequence, which helps contextualize historical or experiential events, is referred to as a narrative.

Roland Gérard Barthes (2011, pp. 103–104), a French literary theorist, philosopher, and semiotician, states in his work *Introduction to the Structural Analysis of Narrative* that narrative has always been present throughout human history. It can be conveyed through written or oral language, static or moving images, and appears in various forms, such as legends, fables, songs, and dramas.

Narrative is constructed from basic elements: the event itself (what), the time (when), the place (where), the characters (who), the motive (why), the manner in which it occurred (how), and the outcome of the events.

Narratives can be conveyed in various ways, but they generally follow a plot structure with stages such as the “introduction” of events, the “development” of the story, the “climax” or “climax and anticlimax,” which present the highest dramatic tension, and, finally, the “resolution.” Flexible and applicable across different media and purposes, narratives are powerful educational tools for constructing, supporting, and transmitting knowledge.

When used as immersive methodologies, narratives organize and structure content to generate arguments and support perspectives. According to Professor Cecília Galvão (2005), educational narratives can serve as processes for inquiry, pedagogical reflection, and professional development.

According to Galvão (2005), an educational narrative can be applied in different processes. In the process of inquiry, it deepens research by considering multiple methods and sociopolitical perspectives. In the process of pedagogical reflection, it analyzes and cross-references information to identify points of convergence or divergence. As a process of professional development, it connects inquiry and training by confronting specific knowledge with particular experiences.

Storytelling, an English term meaning “the art of storytelling,” is an ancient practice linked to the evolution of writing, speech, and narration. Present in education, entertainment, and business, storytelling fosters greater engagement and participation, contributing to enhanced knowledge retention.

In education, storytelling is an effective active learning methodology for engaging students and promoting meaningful learning. It can be implemented individually or collectively, including with the participation of the students themselves.

## 4. EDUCATIONAL METHODOLOGIES

Teaching methodologies are the set of techniques, strategies, and activities used by educators to promote student learning. They are grounded in pedagogical theories that define the conception of learning and the roles of the teacher and the student in the teaching–learning process. According to Bacich and Moran (2018, p. 18), methodology and dialogic education can be defined as the ability to create situations that spark students’ curiosity, allowing them to analyze and reason through solutions, thereby constructing knowledge

There are various teaching methodologies, some of the most well-known include:

- Traditional methodology: The teacher is the central focus of the educational process, transmitting content to students, who play a passive role as recipients. It typically involves lectures, readings, exercises, and exams.
- Constructivist methodology: Knowledge is constructed by the student based on their experiences and interactions. The teacher acts as a facilitator, promoting exploration and inquiry.
- Socio-interactionist methodology: Learning occurs through interactions between students and their social environment. The teacher acts as a mediator, encouraging collaboration and exchanges among students.
- Freirean methodology: Education is viewed as an act of liberation. The teacher poses problems to stimulate critical reflection and the development of solutions to social issues.
- Montessori methodology: Learning is adapted to individual needs. The teacher observes and supports children’s development, providing personalized guidance.
- Active learning methodologies: These place the student at the center of the learning process, promoting active participation through inquiry, problem-solving, and collaborative activities.

The choice of the most appropriate teaching methodology depends on several factors, such as the students' age group, the content to be taught, the school's pedagogical approach, and the teacher's characteristics.

However, before delving deeper into teaching methodologies and the types of active learning methodologies—which are the central focus of this study—we will first discuss how humans are stimulated to learn.

#### 4.1 – Sensation and Sensory Perception

Silva et al. (2014) explore the concepts of sensation and perception through a test in herpetology, the branch of zoology that studies amphibians and reptiles. In the test, photos of four animals are presented, only one of which is an actual snake. Initially, all participants perceive the images as snakes due to physiological responses and automatic associations. However, only the fourth image is truly a snake.

Silva et al. (2014) emphasize that the difficulty in differentiating species stems from a lack of knowledge, which affects perception. An isolated visual stimulus does not allow for the correct categorization of an unfamiliar object, as prior references are necessary to form accurate associations.

A physiological sensation can produce different psychological perceptions in different individuals, as certain information may be interpreted in varying ways due to the associative processes linked to prior experiences.

Additionally, I include an article on sensory stimuli for learning, entitled *Learning Sensory Systems: Our Means of Communicating with the World*, written by Maria Elena Infante-Malachias (2013, p. 3). The article reports that our sensory systems are responsible for perceiving the world around us, transmitting information to the nervous system, and thereby generating perceptions and sensations.

The senses are the primary tools we possess to absorb stimuli, perceive this information, transform it into data, and thereby generate knowledge as well as inferences or predictions based on the external events that surround us.

In early childhood education, a period in which the child is in a phase of discovery, sensory stimuli should be maximized to foster the development of the child's ability to engage effectively with the external world.

The formation and learning process of children rely on distinct sensory systems to enhance their creative and intellectual capacities. According to Pinto (1990), this enhancement of sensory perception should occur not only at school but also in the child's daily home environment, through simple stimuli that help develop the following systems:

- Tactile: Related to touch, it allows the perception of textures, pressure, and temperature.
- Auditory: Essential for learning, it enables the perception of voices, music, rhythms, and rhymes.
- Oral: Responsible for sensing flavors and experiencing sensations through the tongue.

- Olfactory: Detects odors, helping to identify spoiled food or appreciate aromas, such as coffee or freshly baked goods.
- Visual System: Imagery-based stimuli are highly important for associative cognitive learning and the absorption of knowledge.

In addition to the basic perceptual systems, two other systems should be developed, namely:

- Vestibular System: Responsible for balance and the sense of laterality, located in the inner ear. Activities such as jumping rope and playing hopscotch help develop this sensory perception.
- Proprioceptive System: Related to spatial awareness and body control, enabling the individual to relate to space and physical movement.

Early childhood education stimulates several of these systems, enhancing the individual's creativity and intelligence. Another important aspect of these stimuli is that they allow for the early identification of deficiencies or deficits in the child, enabling a more precise and effective intervention.

## 4.2 – Multisensory Learning

Multisensory learning, widely explored in fields such as psychology, philosophy, and design, is also applied in early childhood education. Fabio Ferreira (2020, p. 16), in his dissertation *Learning with Meaning: Multisensory Learning in the Study of Minerals as a Link Between the Earth and Human Health*, states that multisensory methods engage the senses and bodily movements to enhance the retention of experiences during the learning process.

Ferreira (2020) explains that multisensory learning involves stimulating different perceptual channels, such as combining visual and auditory stimuli or tactile and proprioceptive inputs. This approach facilitates faster information absorption, but how does this translate into educational practice?

In the classroom, it is evident that students learn in different ways. According to Natel et al. (2013, p. 142), the manner in which each individual acquires, stores, and uses knowledge depends on their cognition. Some learn by listening, others by reading, while still others combine multiple modalities, adapting learning to their cognitive style.

Moreschi and Barrera (2017) study how multisensory/phonics learning can support the literacy process, defining that a multisensory method allows for sensory exploration and the development of various learner abilities, facilitating the teaching of graphemes and phonemes and thereby promoting literacy.

Maria Elena Infante-Malachias (2013) highlights that sensory integration facilitates learning by neurologically organizing information from bodily sensations perceived in the environment.

Patrícia de Andrade et al. (2016) emphasize that multisensory activities promote the holistic development of the child, encompassing cognitive, linguistic, and socioemotional aspects. This process occurs through the perception and exploration of objects, which stimulate motor and behavioral responses.

Ferreira (2020) concludes that multisensory learning enhances both cognitive and attitudinal competencies, highlighting the importance of its implementation in schools as an effective teaching methodology.

### 4.3 – Active Learning Methodologies

Active learning methodologies emerged to transform the traditional teaching–learning model in both primary education and higher education. Their goal is to ensure that learning does not occur linearly—from teacher to students in a “banking” style of education.

In these methods, learning is collaborative and constructive, with the student as the central agent, sharing and reproducing what they learn. The teacher functions as a facilitator, guiding and supervising the student’s exploratory process. José Armando Valente (2017) defines active methodologies as pedagogical practices that serve as alternatives to traditional teaching, which Paulo Freire criticized as “banking education.”

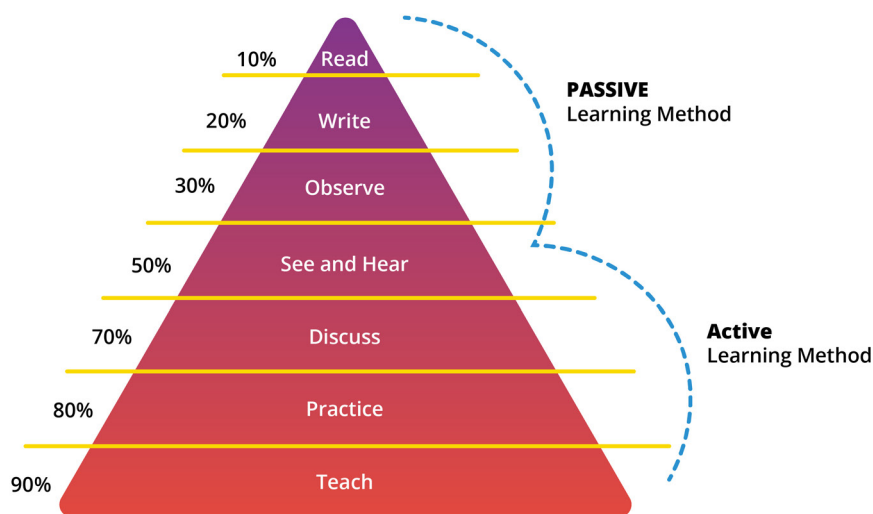
These methodologies foster creativity, fluid comprehension, and knowledge sharing, in addition to developing academic and cognitive competencies. They encourage skills such as self-management, focus, teamwork, socio-emotional empathy, and interpersonal relationships.

A key aspect of active methodologies is technological literacy. Many of these techniques use technology as a tool to capture attention, disseminate information, and facilitate knowledge assimilation.

Continuously evolving, active methodologies offer numerous possibilities for lifelong application. Although their exact origin is uncertain, reports indicate similar practices in the philosophical works of Jean-Jacques Rousseau in the eighteenth century. Later, Piaget and Vygotsky further developed studies on innovative ways of learning and transmitting knowledge.

Figure 1 summarizes concepts of active methodologies in a Learning Pyramid [William Glasser (2013)]. Note that passive learning methods, such as reading, writing, and observing, are positioned at the top of the pyramid, whereas discussing, practicing, and teaching are at the base, indicating that methods with these characteristics lead to greater student learning success.

Figure 1 – William Glasser’s Learning Pyramid



Source: Author’s own work.

Glaser aimed to demonstrate, through the pyramid, the effectiveness of how students can learn. This ranges from passive teaching–learning stimuli, where the student remains a mere observer, to active learning stimuli, in which the student becomes part of the collaborative construction of knowledge, thus assuming a central, protagonistic role.

Throughout the book *Active Methodologies: For an Innovative Education* by Bacich and Moram (2018), several foundations of active methodologies are highlighted, particularly the following principles:

1. **Student at the center of the learning process.** The student is the protagonist, fostering autonomy, critical thinking, and teamwork skills.
2. **Autonomy.** Emphasizes self-directed learning, minimizing dependence on the teacher and the classroom environment.
3. **Reflection on reality.** Encourages the student to think critically, analyzing and evaluating information in different contexts.
4. **Teamwork.** Focuses on collaboration and socio-emotional empathy.
5. **Innovation.** Develops skills in synthesis and creativity for problem-solving.
6. **Teacher as mediator.** The teacher guides the student in seeking answers and exploring knowledge gaps to enrich learning.

Finally, regarding the types of active methodologies that implement the principles listed above, the articles included in the book *Active Methodologies* by Bacich and Moran (2018) highlight:

1. **Problem-Based Learning.** Focuses on solving problems, developing exploration, teamwork, autonomy, and creativity.
2. **Peer Learning.** Originating from Harvard University (Massachusetts, USA) and based on the flipped classroom model, this method promotes paired work with the teacher acting as a mediator.
3. **Gamification.** Employs game dynamics in educational contexts to stimulate creativity, curiosity, cooperation, and autonomy. Gamification also allows for monitoring students' learning progress, either in-person or remotely.
4. **Learning Stations Rotation.** Divides students into groups that rotate through different stages of a problem, allowing all participants to explore each part and identify solutions.
5. **Maker Culture.** Inspired by the “do-it-yourself” approach, it promotes hands-on creation and innovative solutions using a variety of materials.
6. **Field Studies.** Engages students and teachers in debates to foster critical and reflective learning.
7. **Design Thinking.** Focused on problem-solving, it involves students as investigators in a dynamic and collaborative process.
8. **Case Study.** Involves the analysis of real data and information, widely used in higher education.

**9. Project-Based Learning.** Involves the analysis of real data and information, also widely employed in higher education.

**10. Flipped Classroom.** Students access content in advance through virtual platforms, allowing for autonomy and in-depth discussions during class.

In addition to the active methodologies presented, this study will further explore Hybrid Learning and Storytelling, the main themes of this research.

#### 4.4 – Hybrid Learning

Before addressing hybrid learning, it is important to contextualize the social transformations that have occurred in recent years. In Brazil, legislation such as the 1988 Federal Constitution (particularly Articles 208 to 212), the Law of Guidelines and Bases of Education (LDB, 1996), and the National Common Curricular Base (BNCC) were established to expand access to education. The LDB, in particular, has promoted educational expansion through public policies and technological advancements in the field.

The COVID-19 pandemic accelerated the adoption of hybrid teaching methodologies. However, the implementation of distance education (EaD) in Brazil had already been regulated by Decree No. 2,494 of 1998, which was later updated to encompass hybrid learning. During the pandemic, measures such as mandatory remote instruction were introduced, paving the way for a careful transition to the hybrid model, guided by the National Guidelines for Teaching and Learning.

The guidelines for the use of educational technologies, particularly in light of the impacts of the pandemic, emphasize hybrid and flexible education as a viable solution, due to society's increased access to technological devices and connectivity.

Hybrid learning combines face-to-face and distance activities, utilizing online platforms that serve as repositories for digital educational resources. These tools enhance knowledge comprehension through diverse stimuli and promote collaborative learning, enabling interactions among students both near and far, as well as the personalization of work groups, according to Bacich and Moram (2018).

Hybridization is an innovative pedagogical model which, when combined with ICT and the Internet, enables the optimization of learning. The flipped classroom is an example of a hybrid methodology that delegates basic learning to the student, allowing the teacher to dedicate in-person time to deepening the content.

Education is in constant evolution to meet historical and social demands. According to the National Common Curricular Base (BNCC), it is essential to ensure access and equity in learning by developing competencies that integrate knowledge, skills, attitudes, and values to address everyday challenges, citizenship, and the labor market.

## 4.5 – Storytelling as an Active Educational Methodology

Telling stories, or storytelling, is a methodology applied across various fields, including education, religion, entertainment, journalism, politics, and advertising. In religion, it has been crucial for disseminating stories, doctrines, and figures. Joseph Campbell associates storytelling with the “Hero’s Journey,” highlighting narratives of sacrifice and resurrection.

When employed as an active educational methodology, storytelling increases student engagement and enables the transformation of theoretical content into practical and collaborative activities. This approach fosters autonomy, reflection, critical thinking, teamwork, and innovation, positioning the teacher as a facilitator and the student at the center of the learning process, as highlighted by Berbel (2011).

To make the narrative more effective, it is important to adapt it to the students’ age group and to incorporate elements such as music, visual resources, and emotions to create an immersive experience. The use of storytelling in the classroom makes content more engaging by involving students with pedagogical narratives, promoting knowledge construction and the exchange of experiences. According to Teodosio (2021, p. 267), this approach is essential for creating action-oriented and learning dynamics, as observed in the teaching of financial mathematics during the pandemic.

In early childhood education, storytelling plays a prominent role. Storytelling and literacy are interconnected, as stories that are told or read aloud foster children’s knowledge and awareness of the need for literacy. According to Dr. Marianne Bamkin (2011), in her doctoral dissertation, stories are composed of words—some familiar and others unfamiliar—which stimulates curiosity and expands vocabulary.

Dr. Marianne Bamkin emphasizes in her research that, to ensure greater effectiveness of storytelling, the following measures should be observed:

- The book should be visible to all children;
- When telling the story, both illustrations and text on the pages should be pointed out;
- Variations in humor, facial expressions, and vocal tone should be used to enhance immersion;
- Children should be encouraged to repeat words or answer questions about what they have seen;
- Above all, it should be demonstrated that reading is meant to be an enjoyable activity.

According to Teodosio (2021), storytelling promotes engagement, memorization, and attention, in addition to stimulating reading, writing, and values through collaborative learning. As a methodology, it should be leveraged for its inherent capacity to captivate. In the classroom, it makes learning more creative and effective, and when combined with hybrid learning, it strengthens active methodologies, positioning students as protagonists in the educational process.

## 5. COMMUNICATION

After exploring learning and hybridization as an active methodology, it is essential to address communication in order to understand its relationship with educational media and narrative techniques in learning.

Communication involves an exchange of information, whether directly between individuals or through communication channels. Renato Lopes Pereira (2013) defines communication as a complex concept that integrates subjects, objects, language, discourse, interactions, and historical and sociocultural contexts.

The role of communication has been fundamental throughout history, driving social, technological, and cultural progress. According to Pereira (2013), it is widely applied in fields such as journalism, advertising, and education, the latter being approached under the concept of Educommunication.

### 5.1 – Educommunication

Educommunication combines the concepts of education and communication, integrating two essential areas for social development. This educational approach leverages media to promote knowledge construction in a participatory manner, involving students, teachers, parents, and the community in the learning process.

According to Professor Dr. Ismar O. Soares (2011), in his book *Educommunication: The Concept, the Professional, and Its Application*, *educommunication* reflects the evolution of technologies and their integration into everyday life, adapted for educational purposes.

Educommunication can be applied in schools, communities, public policies, and media to promote media literacy, critical thinking, social participation, and the development of a democratic culture.

### 5.2 – Educational Media

“Educational media” or “educational resources”—over time, these terms have evolved or adapted to new realities and needs. Nevertheless, the objective remains to create materials that support knowledge construction and stimulate student interest.

ICTs (Information and Communication Technologies) have evolved and contributed to the learning process. New forms of teaching have been adapting to the emerging realities of the digital society, and integrating technology into classrooms is a necessary step for the development of new educational approaches. Maria Cristina Costa states that it “serves as a stimulus for students to appropriate media and communication technologies in order to produce their own channels and develop their forms of expression” (Costa, 2003, pp. 51–52).

Educational media are files created for pedagogical purposes that enhance student learning and support teachers in conducting lessons. They are reusable and adaptable, but must be aligned with the institution’s educational objectives and contribute to improving classroom dynamics.

Among the resources, we have:

- Videos – They help support content, optimize class time, and allow students to review materials. Platforms such as Vimeo and YouTube are useful in this process.
- Internet and Websites – An endless source of content and entertainment, accessible through various devices, making them a valuable tool for learning.
- Online Games – They provide playful and educational interactions, potentially reducing anxiety, improving reasoning, memory, motor progression, and cognitive development when used purposefully.
- Applications – Accessible across multiple platforms, practical and easy to use, they are tools that assist teachers in various areas of knowledge.

In addition to these resources, there are collaborative teaching platforms, or Virtual Learning Environments (VLEs), which are used to manage media resources, digital resource repositories, or virtual classrooms. The most well-known VLEs include Moodle, Blackboard, Google for Education, MEC RED, AVAMEC, and PLAF.

The use of educational media has become increasingly indispensable, particularly when considering the implementation of more modern teaching methodologies, such as active learning methodologies. Many active learning methods rely on ICTs, educational media, or VLEs to function effectively.

### 5.3 – Cross-media vs. Transmedia

Having defined the concepts of communication and educational media resources, let us now explore the meaning of two technical terms derived from Advertising and Marketing, and how they can be applied in the educational context.

**Cross-media**, translated as “crossed media,” is related to the concept of **Media Mix**, which refers to the set of media, vehicles, formats, and placements used in a media plan. According to Rafael Sampaio (2003), this involves the strategic planning of how and where a campaign will be broadcast.

To illustrate, imagine the launch of a product. The concept of communication is defined to guide the aesthetics across media, including the platforms where it will be broadcast (radio, TV, social media, etc.), and their formats (banners, videos, images). Furthermore, specific placements are determined, such as vertical stories or horizontal banners.

**Cross-media** refers to the use of various media and platforms to deliver the same advertising message, adopting the language, aesthetics, formats, and pace of each communication medium. This concept and terminology emerged in the 1990s within the advertising industry and involves multiple media, as described by Rafael Sampaio (2003).

**Transmedia** (also known as **beyond media**) is a more modern concept, and within advertising, it aims to tell a brand or product story in a more immersive way, often fragmented across different media platforms. This approach generates greater audience engagement through a more interactive and personal relationship.

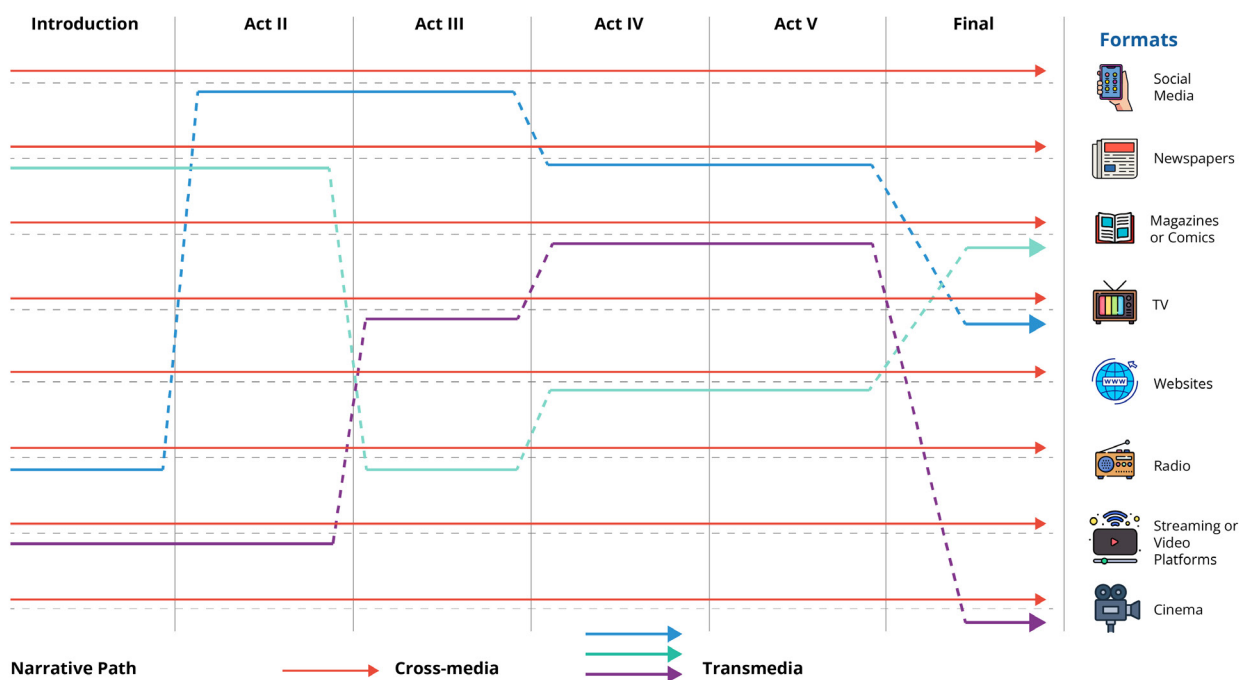
How are **Cross-media** and **Transmedia** associated with education? To answer this, we must consider that both concepts only make sense within the narrative process.

In **Cross-media**, the same story or content is told in its entirety within a single format. However, these media can be different.

In **Transmedia**, different content is used across different media, aiming to generate multiple stimuli and complement the main story.

Graph 1 illustrates the formats that a narrative can follow. In Cross-media, the same story follows the same format from beginning to end, while in Transmedia, the story can start, progress, and conclude across different formats.

Graph 1 – Narrative Paths and Formats



Source: Author's own work.

## 6. STORYTELLING AND HYBRID LEARNING ENHANCED BY TECHNOLOGY AND TRANSMEDIA AS INVENTIVE LEARNING

The concepts of narrative, storytelling, active methodologies, and multisensory stimuli, as well as their applications in educommunication through **Cross-media** and **Transmedia**, have been explored thus far, with the aim of establishing a coherent connection, grounded in bibliographic references, between the use of storytelling and hybrid learning as a narrative tool and a facilitator of learning through **Transmedia**.

In other words, the hypothesis that active methodologies and educational media can facilitate teaching and learning is supported by the engagement power of storytelling and the multisensory stimuli provided by various media formats.

Moreover, the multisensory stimuli generated by different media can cater to a variety of student profiles, promoting personalized learning. **Multisensory learning, active methodologies, storytelling, hybrid learning, and transmedia** all facilitate inventive learning. Kastrup, in his article “*Learning, Art, and Invention*” (2001), elaborates that “Learning is, above all, the invention of problems; it is an experience of problematization.”

We have seen so far that the alignment of techniques, processes, and tools would constitute the perfect formula for ensuring more effective learning, as it enables students to step out of their comfort zone through new forms of stimuli. In his book *Educommunication*, Ismar Soares (2011) states that understanding the construction of media narratives is a complex task with various possibilities for experimentation, both for students and teachers.

Within Kastrup’s (2001) concept of inventive learning, we can bring the following excerpt:

“The experience of problematization is distinct from the experience of recognition. The experience of recognition involves a convergent synthesis between the faculties. In the case of perception, it is the synthesis of sensation and memory: this is my house, the bus I take to go to work, the familiar face of my friend.” (Kastrup, 2001, p.1)

The article by Bizelli et al. (2021), “*Assertive Use of Transmedia Narratives and Information and Communication Technologies as Tools for Promoting Learning*”, concludes that, “transmedia pedagogy allows students and content to flow across media platforms,” enabling students to collaborate in the learning process and allowing the teacher to explore other forms of interaction.

Bizelli et al. (2021) highlight that, in the digital age, knowledge goes beyond traditional institutions and requires skills such as the use of tools and critical thinking. With the vast amount of information available, individuals must synthesize essential content, as reflection is crucial for learning, whereas machines merely process data.

Given such recent and underexplored topics, it is necessary to delve deeper into the subject to enhance the correlations between techniques and modalities, aiming for assertive quantitative responses.

Still focusing on the student-teacher relationship mediated by media, from an innovative perspective, Kastrup (2001) emphasizes that teaching and learning depend on a teacher who understands the cognitive political capacity of the student, so that they can innovate, making students the protagonists of their own learning.

As Kastrup (2021, p.4) states, breaking habits generates learning opportunities, as it forces the search for new paths to make relevant connections, thus enhancing the experience.

The dissociation or re-signification of the sign is a chaotic way of working with new associative processes, generating different approaches to how learning can be approached.

## 7. CONCLUSION

This work gathered texts, articles, and bibliographies that highlight the importance of integrating educational modalities, learning processes, and technological tools to enhance the teaching-learning process. The COVID-19 pandemic accelerated the adoption of experimental active methodologies, combined with digital technologies that reduced the distance between students and teachers, making content more accessible and interactive.

In this context, hybrid learning and storytelling have proven to be effective pedagogical strategies, both during the remote learning period and in the post-pandemic scenario. The analysis conducted allowed for reflection on how these methodologies, combined with digital media resources, can promote more creative, sensory, and meaningful learning – key aspects of inventive learning.

Based on the theoretical framework analyzed, the importance of sensory channels and approaches that integrate communication, technology, and active methodologies in the educational environment is highlighted. In particular, the concept of inventive learning, proposed by Kastrup, emphasizes the role of creativity as a central element in innovative pedagogical practices. More than solving problems, inventive learning proposes the creation of problems that encourage students to explore different paths, fostering exchanges and recognitions in the process of knowledge construction.

We conclude that the integration of active methodologies – such as hybrid learning and storytelling –, educommunication techniques (such as cross-media and transmedia), and technological tools will only be effective if accompanied by a creative and inventive approach from educators. This combination has the potential to transform pedagogical practices, making lessons more engaging, meaningful, and aligned with the demands of the contemporary educational landscape.

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