

The Hybrid Didactics for the Inclusive School in the Near Future

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Abstract: The learning quality is one of the central issue of the contemporary inclusive school. Digital storytelling represents a fundamental moment for the multiple development of unexpressed potential of every student. AI storytelling is a further step that completely changes learning, as it enhances the ability to solve problem situations by developing the creativity of each individual.

Combining analogue and digital methodologies with Artificial Intelligence could represent the new turning point for an inclusive school based on the personalized teaching. We can define this approach hybrid didactics, which can be involved not only in the concept of Multiple Intelligences, but in the new paradigm of the Infinite Intelligences. Our research will focus on the possibility of connection of traditional methodology with the innovative teaching methodologies, including the use of Artificial Intelligence.

Keywords: Traditional Didactics, Digital Storytelling, AI Didactics , Hybrid Didactics for the Inclusive School.

1. Introduction

Today we are facing a new paradigm of the digital revolution.

We can define it as a revolution because since the launch of GPT chat, Artificial Intelligence could become a point of reference of the contemporary educational debate. Artificial Intelligence is making a great progress in the applications in medicine. Nowadays we have a great interest of education to apply to the school this technological innovation.

In digital school, the learning of knowledge and, especially in primary school, the strengthening of basic skills can only take place through a close link to be built between traditional and innovative methodologies.

Digital and Artificial Intelligence must necessarily refer to the traditional methodology with the aim to ensure that students can develop a broader visions of the future which is very linked to the use of AI.

Learning processes will evolve with Artificial Intelligence.

The theme of narration is fundamental as an ancient Jewish novel states.

“God created man because He loves stories” (Eli Weisel) .

This quote contains a concept very meaningful with symbolic implications.

First of all, it must be stated that among all the creatures existing in this world, none has ever been able to tell stories before man.



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Storytelling is a specific aspect of the human species by now.

In fact, we can say that a new situation is emerging in which the ability to create stories can be shared with someone else - or something else: artificial systems. The ability of machines to do storytelling is demonstrated with a small human input. Robots can write newspaper articles, narrative works, film scripts, advertising texts, political speeches.

For developing these talents, is fundamental to implement the software with a wide textual database to generate new texts.

Artificial systems today are capable of writing texts of all kinds because they have the ability to receive and work out infinitive textual data.

Systems usually operate by evaluating the statistical probability that one word follows another or a set of other words.

This leads the machines to detect patterns, i.e. paths more or less systematics, and the hierarchy between them. (Luger, Stubblefield, 1993)

By learning these rules, the machines are able to produce new texts or stories.

Our idea is to analyze a hypothesis that can link different methodologies to increase the qualitative level of the learning process.

The technological challenge will permit to find a system that can link Artificial Intelligence to traditional teaching.

2. Materials and Methods

The traditional role of the image is to illustrate and communicate to the students with another way of expression, towards a specific integrated multi-modality didactics that develops learning and deuterio-learning. The image provides an exemplary value to the textual discourse. It also opens up a scheme to allows us a new methodological approach particularly in a dynamic visualization dimension.

In the first half of the twentieth century, John Dewey, an influential American philosopher and educator, affirmed the idea that art was the most suitable means to use, in a constructive way, the creative energy contained in the child. (Spadafora, 2015)

In Dewey's conception, art must be related to the psychology of individuals and to the socio-cultural realities.

The philosopher underlines how the ultimate goal of the child's creative activity must be an observation of skills, mnemonic skills and imagination, which art helps to develop and give the individual good critical and problem-solving abilities.

The recognition of the self-image is a matter of great interest from the point of view of development psychology, as the progressive ability to recognize oneself is considered a manifestation of the genesis of self-awareness in the child. (Dewey, 1980)

When the student is invited to describe what he sees in the image, it is fundamental importance that the adult draws attention to what is depicted in it. In this way there is the possibility of finding in the image everything that is capable of provoking the student's attention.

Only when this opportunity is guaranteed, what is depicted in the image is characterized as an open story, which can be analyzed thanks to the sensitivity and personal experience of each individual.

The use of the image can also represent a valid integrative tool for Philosophy for Children, as Lipman intends it, i.e. a teaching method that aims to develop complex thinking.

In this perspective, theories of intelligence have emerged from this didactic process.

Gardner, for example, in his theory of multiple intelligences, underlines the fundamental role of what he calls spatial vision intelligence.

For this reason, in the didactic field, emphasis has been placed on the need to stimulate the greatest possible number of sensory channels to encourage creative learning. (Gardner, 2022)

This is why the theme of the centrality of images, as the teaching tradition of Kamishibai could be useful in the contemporary teaching, particularly in primary school, representing a meaningful aspect of the student's learning. (Say, Allen, 2005)

Starting from this traditional teaching tool linked to narration we can insert into our new learning environment the digital device that will strengthen the basic and digital skills and a possible connection with AI.

Artificial Intelligence will be considered as a support on which we can refer for new theories and opportunities for cultural growth.

Mixed teaching that can involve the various sensory dimensions in a digital perspective and, in particular, linked to artificial intelligence constitutes a decisive moment for developing the student's creativity. (Giannini, 2023)

The theme of distance education is therefore linked in this context to the development of creative learning that develops tradition in the characteristics of the digital world and Artificial Intelligence.

From this perspective we can better understand the question of inclusion. In the school of autonomy, in fact, the differentiation of learning and didactics is fundamental. (D'Alonzo & Monauni, 2021)

A solution, therefore, of an inclusive school model would consist in the fact that everyone's talent should be enhanced while maintaining the diversity of learning and training processes.

Today, inclusion is an extremely difficult school model to implement which should determine equity and merit, as some sociological studies have recently highlighted. (Benadusi & Giancola, 2020)

For these various reasons analyzed it is necessary to design a hybrid didactics that links traditional images on paper, as highlighted in Kamishibai, with digital storytelling and AI tools.

3. Results

To implement this hybrid didactics model it is necessary to give items teachers, through a significant sampling that allows to express the characteristics of teaching in the particular situation of the school.

This experimentation could be developed in the primary school, where the use of traditional teaching tools is required to improve the teaching-learning process and therefore improve standards. of school learning. Once we analyze the characteristics of the teaching, we can try to build a hybrid didactics.

Our proposal is therefore based on hybrid didactics.

All this could be the key for an inclusive future in the school of autonomy that guarantees the achievement of educational success for every single student.

Hybrid didactics. Some aspects

- Use of traditional methodology
- Use of digital devices
- Artificial Intelligence support

1. The kamishibai is a storytelling tool through images, the teaching approach through the use of this tool allows to create inclusive and personalized works.

The story-telling will involve the class group according to the key principles of the laboratory school.

2. The digital device supports our work, thus moving to the digitization of what has been created previously; the active protagonists of this transition are the students who will be involved in the transformation of a story-telling into digital story-telling; (Fabiano, 2020)

3. Artificial Intelligence will be used to create a comparison between what humans can achieve with creativity and curiosity and what the machine creates by inserting simple prompts.

This process of comparison between the analogue method and the use of Artificial Intelligence can take place at the end of the work or the opposite path can be created.

Starting from an artificially created story, it is reconstructed using the most varied traditional methodologies.

Figure 1. Kamishibai, traditional teaching tool



Table 1.

TRADITIONAL TEACHING	DIGITAL TEACHING	INTELLIGENCE ARTIFICIAL
Write a story	Digital tool helps in the digitization process	Aid of Artificial Intelligence as a stimulus to increase creativity

Tablet (a)

Intelligenza artificiale (b)



(a)



(b)

INTELLIGENCE ARTIFICIAL	TRADITIONAL TEACHING	DIGITAL TEACHING
To develop a story with little data using creation programs with Artificial Intelligence	To rework the story created by strengthening basic skills	To use digital devices to create e-books, thus increasing digital skills.

4. Discussion

The ability of machines to do storytelling has reached the point where, with a small human input, robots can write newspaper articles, narrative works, film scripts, advertising texts, political speeches.

To acquire these talents, the method is to feed the software with a wide textual database, and then ask them - starting from an starting stimulus and suggesting a writing genre - to go on to generate new texts.

Artificial systems today are capable of writing texts of all kinds precisely because they have the ability to receive infinitive textual data.

Systems usually operate by evaluating the statistical probability that one word follows another or a set of other words.

This leads the machines to detect patterns, i.e. paths more or less systematic, and the hierarchy between them.

By learning these rules, the machines are able to produce new texts or stories.

The quality of the texts is currently average, many texts manage to pass the Turing test, leaving the reader uncertain whether it is the work of a machine or a human being.

In some cases, excellence can be achieved.

A few years ago a novel written by Artificial Intelligence won second prize in a literary competition in Japan.

It is a novel written by a robot, with the help of a team of scientists, and was among the finalists of the Nikkei Hoshi Shinichi Literary Award.

The story is called “Konpyuta ga shosetsu wo kaku hi”, or “The day a computer wrote a story”, a not very original title for an extraordinary undertaking.

In fact, the writer robot (or rather software) managed to produce a novel that even misled the prize jury. In fact, no one has ever suspected that there was an artificial mind behind it, despite the Nikkei Hoshi Shinichi award stipulating that the works can also be created by "non-humans".

About the interactive storytelling, the most significant progress is taking place in the field of video games. The ability of some games to determine the development of stories in a co-creative way (i.e. with the active contribution of the user) is already very advanced.

The topic of AI creativity is at the center of public attention, the process absolutely requires typically human forms of intelligence and sensitivity.

However, there are numerous opinions of those who think the opposite, that is, that artificial systems are already producing works - whether in fiction, music, painting or design - that have nothing to envy of those produced by human ingenuity. (Bozzano, 2021)

Ultimately, human creativity also arises from taking into account a number of stimuli taken from the personal or collective past. Artists rework these materials in new ways, inspired by the latest trends, and this can result in works that are deemed creative. Machines can do the same.

What are the risks?

Stephen Hawking, before his death, declared that Artificial Intelligence could destroy our civilization.

With this technological innovation the danger exists.

Hawking was not referring in particular to storytelling, but it is not difficult to understand that if machines are able to produce and diffuse texts of all kinds without control, could create many problems.

In technology the amount of data that can be processed changes, so we will have great potential to manage with critical thinking (absent in robots) and awareness.

The important role of the school will be decisive in the coming years. First of all it is necessary to consider the idea that many activities will no longer exist tomorrow.

There are many opportunities for Artificial Intelligence.

Many analysts address these issues by explaining how robots can become fantastic storytelling assistants.

That is, support systems capable of cooperating with human beings in devising new stories, collecting materials, developing ideas of possible developments, suggesting alternative final turns.

A practical example of mixed teaching are prepared in our experimentation proposal just to define a new model of hybrid didactics.

5. Conclusions

The first conclusion is based on the necessity to build a hybrid didactics to create a balancement between traditional methodology, digital didactics and AI didactics. In this paper we tried to propose a model of hybrid didactics based on the connection between Kamishibai method, digital storytelling, AI storytelling. The narration is a didactic system central to develop creativity in every student and to permit that every student can discover and develop his/her embedded powers. This hybrid didactics could be considered in the near future a point of reference for the construction of the model of inclusive school.

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