# Train in values from a virtual environment: the Club Mundos platform

## *Formar en valores desde un entorno virtual: la plataforma Club Mundo*

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**ABSTRACT**

This article discusses whether it is possible to use technology to train democratic values. The response presented is developed through a story detailing institutional experiences in educational innovation. After a literature review on the subject, to identify proposals within various instructional design models, a suitable model was selected and the elements within it that facilitate the design of an educational platform aimed at training children in the values of democracy, participation and peaceful coexistence were identified. It concludes with the adoption of Jonassen's model, which proposes a critical use of technology in educational tasks. Finally, a reflection on the relationship between education, technology and society is offered.

**Keywords**
Education; instructional design; learning theory; virtual platform; educative technology

***RESUMEN***

*En este artículo se estudia la posibilidad de utilizar la tecnología para la formación en valores democráticos, cuyos resultados se presentan a través de un relato que detalla experiencias institucionales en innovación educativa. Tras una revisión de literatura sobre el tema, para identificar propuestas dentro de varios modelos de diseño instruccional, se seleccionó un modelo adecuado y se identificaron los elementos dentro de este que facilitan el diseño de una plataforma educativa dirigida a formar en los niños valores de la democracia, la participación y la convivencia pacífica. Se concluye con la adopción del modelo de Jonassen, el cual propone un uso crítico de la tecnología en las tareas educativas. Por último, se ofrece una reflexión respecto a la relación entre educación, tecnología y sociedad.*

***Palabras clave***
*Educación; diseño instruccional; teoría de aprendizaje; plataforma virtual; tecnología educativa*

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## INTRODUCTION

This article reviews the design alternatives for a virtual learning platform and proposes a practical application of instructional design. In response to the question of whether it is possible to use technology to promote training in the values of democracy, the dilemmas faced, and the choices made when researching the subject in the literature are reported. Thus, a reflection is made that seeks to resolve a practical need: transform the Club Mundos (Worlds Club) program – a proposal for training in values aimed at primary school students – from a face-to-face format and with printed materials, to a hybrid proposal, which combines work in the classroom with the use of a technological platform.

Some of the questions asked were: is it possible to develop a virtual learning platform that helps educate about values? What characteristics should this platform have? How should the process of construction, use and adaptation of this platform be treated? What elements should be considered in the development of this process? This institutional experience is shared as a way to contribute to the necessary critical review of the uses of technology in education (United Nations Educational, Scientific and Cultural Organization, UNESCO, 2023).

As a starting point, it is postulated that technology, although sometimes used to perform instructive, routine and repetitive tasks, is a tool that can also be useful when building environments for experiential learning. Given this, the main question would be: is it possible to learn values through technology? With the purpose of delving into the answer, the process of designing an educational platform, the dilemmas faced and the choices that were made from the options identified after a review of the literature are shared (Cuevas *et al*., 2022).

The first part of this work explains what the Club Mundos program is and mentions some of its background, as well as a discussion on values education (Adell, 2006; Buxarrais and Ovide, 2011; Danel and Calzado, 2014; Duart, 2002; Estrada Molina, 2012). Subsequently, the state of the art is reviewed to identify some institutional design models and select the most useful one for the objectives of the platform to be developed (Londoño, 2011; Muñoz *et al.,* 2023). According to the selected instructional design model, a work methodology and a design proposal for the platform are presented where the benefits of these models are highlighted. To conclude, the use of technology in education is discussed, listing some important elements in the design of a virtual proposal aimed at training in values.

## THE CLUB MUNDOS PROGRAM

The Club Mundos program is a training proposal developed jointly between the Ministry of Public Education (*Secretaría de Educación Pública*, SEP), the National Electoral Institute (*Instituto Nacional Electoral*, INE) and the International Committee of the Red Cross (ICRC), which aims to help children develop skills that allow them to live with dignity and identify and defend their rights even in contexts of violence. The program, through challenges and activities moderated by the teacher, promotes the development of skills for coexistence, the recognition of dignity and respect for human rights.

This proposal converges, on the one hand, with the National Civic Culture Strategy (*Estrategia Nacional de Cultura Cívica*) 2017-2023 (INE, 2016), which seeks to influence the promotion of a culture that strengthens participation and democracy; and, on the other, the Opening Humanitarian Spaces Program (*Programa Abriendo Espacios Humanitarios*), which proposes to reinforce both awareness and humanitarian behaviors of respect and protection of a person’s life and dignity in contexts of violence related to the use of firearms (Secretaría de Educación Guerrero, SEG, 2014). Among its printed material, the program includes a teacher's book, student's book, passport (work booklet) and 3 pins. The books contain 36 worksheets (each one equivalent to a 40-minute session), grouped into three thematic lines named as Worlds: Dignity World (human rights), Extreme World (emotions) and Agreements World (participation and coexistence).

The design of the program began in 2017 with the integration of a joint proposal between SEP, INE and ICRC, aimed at primary education (instead of secondary education, which was the original audience in the ICRC program). In 2018, a pilot test of the developed materials was carried out in selected primary schools and a year later the materials were redesigned according to the results of this test; in 2020, once the printed material with its new design was available, the implementation of the program began in three states: Chihuahua, Veracruz and Guerrero. However, because of the Covid-19 pandemic that occurred that same year, the application had to be suspended due to the adoption of remote work, established to mitigate infections.

In this context, by resuming the Club Mundos program to redesign the contents and align them with the study plans and programs now in force, known as the new Mexican school (Mojica, 2022), the institutional need arises to move towards a hybrid model in which, using technology, the materials are hosted on a virtual learning platform. In this regard, the question arises: can technology help us to offer an educational program that is relevant and appropriate for children studying in Mexican public schools?

In the educational field, technology has been used in various ways. Games that strengthen mechanization by offering virtual rewards according to the number of correct repetitions have been developed, as well as role-playing games with hyper-realistic scenarios and immersive environments in virtual realities, or adventures that pose various dilemmas to the user (Marín *et al.,* 2021). Technologies that allow adaptive learning should also be mentioned, which involves generating an algorithm that automatically manages content according to the characteristics of each user (Hünicken *et al.,* 2021). Without forgetting, of course, the numerous web pages that offer the same contents of a book, but in hypertext format and enriched with various multimedia elements (Cortes, 2020), or the numerous channels on platforms such as YouTube or TikTok, whose video tutorials teach from the correct way to make a cup of coffee to how to repair a car (Collado *et al.*, 2023).

When the use of technology has educational purposes, it is generally required to adapt the materials and integrate proposals through the work of a specialized professional: the instructional designer. The task of this expert is to find the most pleasant way to transmit educational content in virtual environments, so the instructional designer has pedagogical and technological instruction, in addition to training in the specialty intended to teach (Núñez and Escobar, 2012; Morales, 2006; Suárez, 2012; Acosta de Valera and Páez, 2007; in this way, for the case under investigation, an instructional design is required where the purposes of the Club Mundos program are explicit and, based on these, the presentation of the content and its organization on the platform are integrated.

With this in mind, and in accordance with the printed proposal, the purpose of the program is to offer learning situations that provide a reasonable opportunity for children to learn about the values necessary for peaceful coexistence, democratic participation and the exercise of rights. These opportunities must be experiential and reinforce collaborative work with both recreational and reflective activities, mediated by teachers.

## INSTRUCTIONAL DESIGN MODELS

The intention of any pedagogical proposal is to have some degree of certainty regarding the success of the training process. In that sense, at least three central questions must be considered: what do I want to teach? How am I going to teach it? And how will I check if I was successful? By answering these questions, it is possible to observe how aspects of certain learning theories are privileged (Schunk, 2012; Londoño, 2011; Ayarza, 2019; Muñoz *et al.,* 2023).

For example, instructional design proposals that respond to behavioral theory tend to be linear, systematic and prescriptive, and their learning objectives are easily observable and measurable, with clear and specific evaluation criteria (Burton *et al.,* 2004; Cordova, 2002). Other models seek greater student participation in the development of a training activity, proposals that are identified with the systems theory (Vidal *et al.*, 2009), where it is postulated that interaction is what makes learning possible and, in this sense, work is done to make the platform interactive.

In the case of models that respond to cognitive theory, the concern for recovering previous knowledge and building a platform with learning environments that facilitate connections between the new and the old is explicit (Sánchez, 2015). An instructional design with a constructivist approach assumes that, apart from being meaningful, knowledge must be holistic and based on reality, so that learning is conceived as a personal interpretation of the world (Pantoja *et al.*, 2022). From this perspective, knowledge is constructed collaboratively and in interaction with others, so the learning platform should not be prescriptive, focus on content or privilege individual work (Cordova, 2002; Esteban, 2002; Esteller and Medina, 2006; Olmedo and Farrerons, 2017).

As noted, there is a close relationship between the different instructional models and the adoption of a specific cognitive approach. For example, Gagné's model adopts aspects of stimulus-response theories and information processing models (Nevárez, 2018) to assume that teaching in virtual environments must fulfill the following functions:

1) Stimulate attention and motivate
2) Give information about the expected results
3) Stimulate the memory of previous knowledge and skills
4) Present the material to be learned
5) Guide and structure work
6) Provoke the response
7) Provide feedback
8) Evaluate the performance
9) Improve retention and transfer (Sánchez *et al.,* 2005; Dávila, 2017)

Based on this model, there are more proposals and even variants of them, such as that of Gagné-Brigs (Dávila, 2017), which instead of nine functions recognizes four key moments (or levels), which interact to offer a training proposal in fourteen steps. Nevertheless, as UNESCO (2023) points out, there is not much adequate and impartial evidence on the impact of educational technology, since, among other limitations, much of the evidence offered comes precisely from those who try to sell that technology.

Within this framework is also the Dick and Carey model, which offers a methodology for the design of virtual environments based on an instructional approach that is built from reduction. The proposal consists of "breaking" into small components the competencies or skills that the learner must master and establishing a standardized way of achieving this in each of the smaller sub-levels; in this way, by repeating small units of work, mastery of the whole is gradually achieved (Cabrera and Espinoza, 2022). This proposal adopts a mechanistic approach to knowledge, which is mastered through repetition.

Another model is that of Jonassen, which is regularly used in the design of constructivist learning environments, which highlights the role of the learner in the construction of knowledge, that is, learning by doing (Zapata *et al*., 2022). Likewise, we mention the ADDIE model, which is most frequently used in the design of virtual learning environments, since it has some management proposals in the development of virtual platforms that make it attractive (Pacheco, 2020). These last two proposals are considered appropriate for the purpose of the platform intended to be designed, so the following sections will discuss the characteristics that make them preferable over others.

## THE ADDIE MODEL AS A METHODOLOGICAL FRAMEWORK

The ADDIE model, more than a proposal for instructional design, constitutes a kind of guide that, as a checklist or verification, shows the processes carried out by specialists, instructional designers, graphic designers and programmers to integrate a training proposal (Pacheco, 2020). Its name is an acronym for analysis, design, development, implementation and evaluation, each of these words represents a different phase in the platform integration process (Spatioti *et al*., 2022).

For the Club Mundos program, this instructional design model was adopted as a methodological framework with respect to which the tasks should be organized. This article presents only the first two phases: analysis and design, while currently the platform is in the development phase and the implementation and evaluation phases would follow.

The analysis phase seeks to identify the probable causes that explain the learning, instruction and performance gaps, to evaluate whether content development is the solution to close, overcome or address these gaps. In other words, it is essential to determine whether the needs for which the training will be the solution are due to a lack of knowledge and to verify that they are not due, among other things, to a lack of resources or motivation (Losada and Peña, 2022). The proposal that arises from the analysis should focus on the expected learning results and not on the technological contribution or the need to be "updated" in computer terms.

For its part, the objective of the design phase is to integrate a coherent educational proposal with the definition of instructional objectives, performance results, instructional units that are going to be covered, periods or deadlines for each of them, definition and selection of content, as well as evaluation methods and instruments. For this, at least four activities must be carried out (Martínez *et al.,* 2014):

1) Task inventory: specify the performance that students must achieve, organize the contents based on those and identify the learning tasks necessary for the objectives to be achieved.

2) Performance objectives: diagram or guide that will allow each instructional episode to be integrated and associated with the desired performance. The objectives must be congruent with the task inventory.

3) Testing methods: define the necessary activities or tasks to measure and evaluate student performance, in accordance with performance objectives.

4) Return on investment: estimate the cost of the resources or elements to be developed, along with their potential benefits; if there is no favorable relationship between the cost (financial, use, learning, technological, etc.) and the benefit, that resource should not be developed.

Upon completing these tasks, the third phase is attended to: development, where the learning resources are generated and validated, that is, the material, tools, activities and resources that will be integrated into the platform are produced, which are identified as necessary to implement the program. This is followed by the implementation phase, when the platform and its resources are distributed and delivered to users, including all the training processes and services that comprise it: activities, audios, videos, images, tasks, etc. Finally, the evaluation phase concludes, which involves feedback on the proposal and collecting information from users to analyze and identify areas that need to be optimized or reconsider technical aspects of the design (Branch, 2009; Losada and Peña, 2022; Peterson, 2003).

In this way, the ADDIE model consists of a series of logical steps in the design of a learning platform that are not necessarily linear, because although they are ordered in sequence, you can go from one to another with some flexibility (Peterson, 2003). Therefore, this proposal is very useful in the design and development of any virtual learning platform, since, in an orderly, logical and comprehensive manner, it allows you to organize the tasks necessary to start, conclude and evaluate the platform, hence its popularity and recommendation.

With the above in mind, the ADDIE model was adopted for the specific purposes of this project. However, it should be noted that this model does not specifically indicate a way of organizing and presenting the contents according to a learning theory or a pedagogical approach. It is rather a schematic proposal, open to different learning theories (Spatioti *et al.*, 2022), so it can be useful for different purposes, as long as the design phase is carried out according to the assumptions assumed by the learning theory. In other words, it is necessary to review the literature again and find an instructional design model that responds to a learning theory consistent with the objectives pursued.

## THE JONASSEN MODEL

David Jonassen reproaches an uncritical use of educational technology and postulates that computers have traditionally been used as means of instruction, that is, as transmitters of information or as "teachers" of students (Jonassen, 1995). When technology is used in this way, the student-computer interaction is limited to the selection and pressing of a key to continue with the presentation of the information, or to select the option that answers the questions asked (Jonassen & Rohrer-Murphy, 1999).

In this type of instructional design, it is common for information to be "stored" and organized on the device; subsequently, during the "instruction" process and as they "interact" with the technology, students become aware of the stored messages and try to understand them (Jonassen & Rohrer-Murphy, 1999). Thus, cognitive activity is reduced to memorizing and repeating what technology offers: the student learns on the computer, the computing device becomes the source of knowledge and there is no possibility of control over the learning process by students or teachers (Jonassen & Rohrer-Murphy, 1999).

Faced with this, Jonassen proposes learning with the computer, using it as a tool that enhances people's cognitive abilities. The recommendation is not to use technology to teach students, but to use it as a knowledge construction tool (Jonassen, 1995). In this way, students will build their knowledge using computers as "tools of the mind" to interpret and organize reality (Jonassen, 2000a; Jonassen & Rohrer-Murphy, 1999).

When students use technology as a tool of the mind and not as a "teacher" or instructor, they transfer some of the unproductive memorization tasks to the computer, while they build their own knowledge. In other words, they build their knowledge in the interaction with a learning environment, instead of paying attention to the content to memorize it and repeat it according to what the computer indicates (Duffy, 1992; Duffy & Jonassen, 1991; Jonassen, 2010). Some characteristics of the use of computers as tools of the mind would be:

1) Knowledge representation: technology can be used to represent knowledge by generating semantic networks, conceptual diagrams, databases, flow charts, etc.

2) Generalizable: technological possibilities can be used to represent knowledge or content from different areas or subjects; the same can be used in pure science, applied science or math courses, literature, social sciences, philosophy, axiology, health, and even physical education or recreation.

3) Critical thinking: the use of technology allows us to promote deep, higher-level thinking and make it more meaningful than just memorizing or paraphrasing. Technology allows us to motivate critical thinking using various tools: microworlds, expert systems, hypermedia, visualization, communication and collaboration tools, etc.

4) Transfer of what has been learned: skills to use the computer as a tool of the mind are generalizable, transferable and can facilitate reflection in various fields; for example, the strategies we use to learn physics can also help us learn a language or civics.

5) Simple and powerful formalism: computer systems require students to think causally, making logical sense of connections between cause and effect. Computer formalism is simple, but powerful in shaping the mind.

6) Easy learning: the mental effort required to use technology should not exceed the benefits that result from it. The effort to learn about the system should not outweigh the benefits of using it.

Conceptually, this is the model that responds to the needs of this project, and it is considered that the Club Mundos platform should not try to have the computer "teach" children values about peace, democratic coexistence and the exercise of rights, but to offer tools that make it easier for them to build their own knowledge, in addition to allowing them to represent it, encourage critical thinking, transfer what they have learned, be generalizable, respond to a simple formalism and be easy to learn (Jonassen, 1995).

In this case, the task of the instructional designer is to use the processing power of computers as a tool of the mind, to facilitate students to engage in reflective and critical thinking about the ideas and content they are learning. To operate the instructional design approach, Jonassen (2000b) suggests the following steps:

a) The starting point. Every learning project begins with something to do: compare, look for examples, ask or answer questions, solve problems, implement projects. This is an inverse path to traditional education, which begins by giving information or offering concepts to use in solving problems or exercises. Here you start with a problem and to solve it you look for the necessary information that allows you to build some of the possible answers.

b) Support resources. It is necessary to generate and offer a series of resources that will function as support for learning. These can take different forms:

    - Contextualize the problem: provide information to give content to the question, problem or project, referring it to a known environment, situation or circumstance. The context can also include a story that makes the question attractive, interesting and seductive.

    - Give related examples: the use of examples is essential, as they allow understanding, reinforce memory and increase cognitive flexibility in the sense of using and applying various representations to, iteratively, form other more complex representations.

    - Offer sources of information: to build knowledge, information is needed and must be abundant, selectable by the student and useful in the context of the problem they are facing, but not excessive to the point of preventing or complicating its management.

    - Integrate cognitive tools (resources for knowledge elaboration): they are resources to represent, organize or automate thinking. For example, the visualization of a diagram is a representation tool, a mental map is a modeling tool, solving lower-level exercises is a support for automation. In general, they are considered tools for searching, collecting and classifying information that help organize thinking.

    - Offer tools for conversation and collaboration: learning does not happen in isolation but is a product of people working together to solve a problem. Therefore, it is advisable to include collaborative tools in the platform, such as discussion lists, email, bulletin boards, chats, etc.

- Social and contextual support: it is the support from the environment that is required so that the learning purposes are achievable and relevant. It refers to people in the community who, understanding the meaning of learning, can accompany and guide according to what is appropriate for that specific environment.

At this point, it is worth highlighting the teacher's presence as a central part. Teachers must be in charge of motivating students, analyzing their representations, putting themselves in their place, feeding their cognitive processes, responding to their representations, stimulating reflection and their metacognitive processes. All this while guiding the process of carrying out the task and solving problems (Duffy, 1992; Duffy & Jonassen, 1991; Jonassen, 2010).

The most basic and necessary role of the teacher is to provide motivational guidelines, especially in virtual environments where motivation and dropout are closely and inversely linked. Likewise, it is responsible for the control and regulation of performance, provides clues, suggests alternatives and offers feedback. Teachers have a central role as they become the students' conscience by stimulating them to reflect on their representations, questioning them in a Socratic way and inciting and accompanying them when they introduce new perspectives (Duffy & Jonassen, 1991; Jonassen, 2010; Wilson *et al.,* 1993).

## THE CLUB MUNDOS PLATFORM

Based on the elements offered by Jonassen's model, it is proposed to design a virtual learning platform aimed at training in values, as long as it does not intend to teach them as if values were a list of contents that must be memorized and repeated, but rather seeks to generate conditions that facilitate reflection and collaboration to apprehend them (in the case presented here, the values of democracy and peaceful coexistence).

Jonassen's (2000b) model was adopted to complete the design and development phases of the Club Mundos platform, to integrate a gamified platform that, through playful, collaborative and reflective activities, promotes user participation and the construction of their own knowledge. The objective is to offer learning environments and spaces for coexistence where students can feel and experience something that excites them and shakes their indifference, impacting in some way their interior (Adell, 2006; Buxarrais & Ovide, 2011; Danel and Calzado, 2014; Duart, 2002; Estrada Molina, 2012). Below, one of the possible designs of the platform that results from addressing Jonassen's proposals is briefly described.

### *A) The starting point*

The platform is organized around a central challenge or problem that consists of identifying and proposing alternatives for peaceful coexistence. The specific question is: how can we live together in peace? Throughout the program, children reflect on this question and at the end, in a school seminar, they present alternative responses that they found or seem most appropriate to them. The central challenge is to identify and verbalize those collective or individual strategies that allow them to face the problem of violence in their daily lives and build safe environments, with respect for the dignity of people and their rights.

In this way, the adaptation of the printed content of the Club Mundos program has a starting point that will be the trigger to explore the three worlds that make up the training proposal. This tour starts with "adventures", where students must solve challenges, review content and carry out personal, family and team activities, which will provide them with a reasonable opportunity to learn about values for peaceful coexistence. At the same time, the contents of each adventure will be articulated with the work in the classroom and the execution of a project related to the central problem, which requires intermediation of the teacher, family and community.

These three projects offer different angles for students to construct a possible answer to the initial question. Although related to each other, the projects are independent and consist of the following:

- Project 1. Art exhibition (Dignity World): make a collective art installation (collage, music, drawing, facilities, painting, poetry, readings, etc.) where each artist-student expresses his or her agreement or disagreement with the idea that all people are special, unique and equal, and that we are all worth the same.

- Project 2. A special message (Extreme World): generate some introspective product, such as writing a letter, drawing, composing a poem or a song, recording words or a video – to mention a few examples. This product is personal, and the recipient is the author himself/herself, who gives recommendations to himself/herself or sends a personal message to better manage emotions in the face of conflict or to live in extreme situations with hope, respect, assertiveness and resilience.

- Project 3. School manifesto (World of Agreements): here the program promotes participation in a collective work through which the children share a statement about how they want to live together. It does not necessarily have to be a text; the manifesto can be presented in the form of an installation, a mural, a podcast, a video, etc. The important thing is to make it collectively and that each participant can include or represent what most concerns or interests him/her with respect to coexistence.

### *B) Support Resources*

Both the central problem and each project are face-to-face activities, independently of the platform, and entirely require the teacher's mediation. They are the “why”, or the purpose that is present when the adventure or journey through the contents of each world begins. In these, students will find support within a gamified environment: virtual learning objects, videos, dramatized dialogues, texts, interactive activities and tasks to perform. In this way, the teacher's presence is complemented with the use of technology, leaving the instructional tasks, monitoring and recording of progress to the computer, as well as the reflective, motivational and guidance tasks for the teacher.

In each adventure, the starting point is a question and throughout the course the children build an answer. To do this, they have various support resources, sources of information, examples and dramatized situations that generate reflection and promote the use of collaborative tools (Duart, 2002; Estrada, 2012). In addition to the content, each adventure provides a contextualization of the problem and an exemplification, along with abundant sources of information, and collaboration and cognitive tools. The platform can even offer the possibility for parents or guardians to get involved, who would provide social or contextual support.

With this idea, space is designed so that the teacher can strengthen exploration, promote the articulation of knowledge and reflection, allowing them to go deeper into modeling, take charge of motivation, provide tutoring, accompany and regulate, provide feedback and reinforcing actions. At the end of each adventure, a group work session is scheduled with the teacher where the group can dialogue, reaffirm concepts, discuss ideas, participate in playful activities and share reflections.

In these group work sessions, the teacher promotes integration and guides the activity towards the development of the corresponding project. The tools that the platform offers for students (the central objective), parents (such as conversation topics and support in activities) and teachers (monitoring and feedback) are adequate in the cost-benefit ratio, are easy to learn and have a clear purpose. It is considered that teachers often feel unprepared and lack confidence in using technology in teaching and that many students do not have opportunities to practice with digital technology in schools. In this way, the technology that is adopted seeks to be a tool for learning and not its central part, it is regulated and managed by the student, who is the center of the process, accompanied by the community and the teacher, who also has an accessible tool to stay in touch with parents.

In this sense, technology does not replace the environment (particularly the immediate environment, made up of the family) or the teacher, but in both cases, it allows support that reinforces these learning situations and takes them beyond virtual environments (Danel and Calzado, 2014; Duffy, 1992; Jonassen, 2010). In this instructional design proposal, the technology does not teach – it is not a virtual instructor – but rather allows students to construct their own learning by organizing content and making various support resources available (Duffy, 1992; Duffy & Jonassen, 1991).

In this way, we respond to the need of using technology to educate in values, conceiving it as an accessible tool that requires accompaniment (teachers and families) to generate learning environments in which children have reasonable opportunities to reflect, shake their inner selves, experience and live situations in which they must decide whether or not to act in accordance with values related to respect for human rights, democracy and non-violent coexistence (Adell, 2006; Ortega and Fernández, 2014). It is possible to use technology to train in values, if it is assumed that values are learned, not taught; likewise, the computer does not replace the teacher, but is a tool for knowledge, which must have clear objectives and principles to guarantee that the use of technology is beneficial and avoid possible harm.

## DISCUSSION

The debate on the use of technology in education is relevant and current, and the reason is that, in the educational field, as in other areas of human endeavor, there is a fascination with technological advances and innovations.

Castañeda *et al.* (2020) point out: "Radio, cinema, television, computers, internet, artificial intelligence [...] the history of educational technology seems to be made up of cycles of exaggerated expectations, disappointment in the first results and renewal of the faith before the appearance of a new technology that will complete all our expectations" (p. 242). It is a fact that in the last 20 years, students, educators and institutions have widely adopted technological tools. The use of technology in the educational field is a reality that manifests itself in various ways: it is an input, a means of distribution, competition and planning tool, in addition to providing social and cultural context to curricular activities.

Educational technology is a field of research and development that has grown at an accelerated pace in recent years, posing a series of challenges and questions that may have multiple answers (Castañeda *et al.,* 2020).

Specifically, the pandemic situation that was experienced worldwide led educational institutions to generate new teaching and learning modalities that would allow them to continue with training processes from non-face-to-face spaces and develop learning in virtual contexts, promoting the acquisition and availability of resources and electronic devices for the development of training processes (Cuevas *et al*., 2022). Although online learning prevented the collapse of education during the school closures caused by covid-19, it only impacted 31% of students on the planet, as it failed to reach 72% of the poorest people (UNESCO, 2023).

Conceived as a tool, educational technology requires critical use in which expectations are clearly defined and its design corresponds to a broad pedagogical proposal. In that sense, the starting point is a vision of the public purposes of education. In the words of the National Commission on the Futures of Education (UNESCO, 2022), there are three essential questions that must be asked: what should we continue doing? What should we stop doing? And what should be creatively reinvented?

Some educational technologies can improve certain learning modalities in certain contexts, some points must be clarified here: it is unnecessary to be "the most advanced" to be effective, but also that it can have a detrimental effect if used inappropriately or excessively, and even negatively impact the well-being of children. The latter is demonstrated by the fact that 89% of the 163 educational technology products recommended during the pandemic could monitor children without the knowledge of adults. Likewise, 39 of the 42 governments that offered online education during the pandemic encouraged uses that put children's rights at risk or infringed (UNESCO, 2023).

In a broad sense, the use of technology in education requires questioning how it contributes to fulfilling the promise of generating a fairer, freer and more humane world. For example, online content is produced by dominant groups, which affects its access: almost 90% of the content in higher education repositories with collections of open access educational resources has been created in Europe and North America; similarly, massive open online courses mainly benefit students from the richest countries, including 92% of the content of the OER Commons world library is in English, which excludes those who do not master this language (UNESCO, 2023).

In this context, instructional design is a discipline that constantly dialogues with technological advances, but the approach required for better control over the quality and diversity of digital content must be multidisciplinary, so that from different perspectives (such as graphic design, communication, engineering, computer science, psychology, sociology, political science and even philosophy) the complex relationship between technology, education and society can be taken up in a holistic way (Saavedra *et al.,* 2021; Caves *et al.,* 2022).

In this article we have limited ourselves to reviewing literature to resolve a practical need: transforming a face-to-face program into a hybrid format. This research highlights that the use of technology is not a solution per se but can even aggravate some problems inherent to the educational task, such as inequity, exclusion, instrumentalization or trivialization of knowledge, as well as the reduction of learning memorization and repetition, among others (Castañeda *et al.,* 2020). However, it is also possible to attribute a social use of technology to accompany teaching-learning processes that seek to develop with and from schools, institutions and the various practical and policy needs in a community or institutions.

In this hyper-technical digital (or post-digital) society, the public agenda for pedagogy, didactics, education and the use of technology must be open and not reduced only to market forces or the interests of technology companies. A critical use of technology in education, which allows advancing the theory, principles and methods of contextualized educational intervention, is more necessary today than ever, since it is unlikely that education in the future will be relevant without the use of digital technology (Castañeda *et al.*, 2020; UNESCO, 2023).

## CONCLUSION

In the preparation of this work we identified that the ADDIE model is a systematic guide that establishes rules and procedures for instructional design and that allows interaction between all its components or processes in a flexible manner. In that sense, it is a very useful tool to provide a work scheme that allows activities to be divided into differentiated and articulated tasks that contribute to the achievement of the final product. It must be considered that, from this model, the design phase faces different possibilities or learning perspectives, since it is open to the objectives established in the statement of purposes of each educational proposal.

In the literature review to specifically shape the design stage, it was found that educational technology can be used for various purposes; in this way, if we want the person to reflect, participate, collaborate and build their own knowledge, it is proposed that Jonassen's model can be very useful for designing virtual learning environments. From a constructivist approach, in accordance with the pedagogical proposal of the Club Mundos program and the best practices in education for human rights and civic culture, it is assumed that training in values must be dynamic (the student as the doer of activities), meaningful (relate to prior knowledge) and situated (correspond to reality). Based on these premises, the use of the model proposed by Jonassen was adopted.

We consider that in every situation of interaction between people, values are revealed and transmitted. Consequently, a better opportunity to learn about them occurs in environments in which we consciously and explicitly establish educational objectives and create situations that allow children to discover models of behavior, through examples and experiences referring to their daily lives, and in which they must put into action their reflective capacity to interpret different situations and decide. From this perspective, technology should not be used to teach as if it were an instructor, but as a tool that allows generating diverse, attractive and interesting situations or learning environments so that children have reasonable opportunities to learn about the possibilities of peaceful coexistence based on reflection and collaboration.

The Club Mundos platform is scheduled to be implemented and evaluated in the 2024-2025 school year. It will be then, after the implementation and evaluation of the program, that its specific results will be had, and it can be known if this training proposal achieved its goals. It will be the children, teachers and parents who point out the benefits and limitations of the platform. For now, the institutional experience in the design of this training proposal constitutes an input to participate in a broader discussion: which problems technology solves, and which does not, under what criteria the contribution of technology in education is evaluated, who defines the criteria and who performs the evaluations; that is, which technology for which situations.

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