Animation as a strategic tool for education

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Abstract

Animation is used as a strategic tool in education, it consists of bringing life to lifeless objects. The objective of the research was to systematize the scientific evidence on animation and education in infants worldwide, this was achieved through a thorough review in the ERIC and SCOPUS database, from 2010 to 2020. For this purpose, a system of equations with associated terms such as "cartoons", "films in children's learning", "learning through movies", "movie for children" was also used, as well as the Boolean operators "and" and "or", exclusion and inclusion criteria such as social science theme, access and publisher restrictions. Nine records were identified that answered the question "What is the scientific evidence on animation related to early education, identifying, population approaches, objectives and conclusions? Concluding that there is an abysmal gap in scientific publications worldwide on the subject of animation as a tool for early education. Another key factor in the process is the permanent accompaniment of parents to their children about the hours they are exposed to watch cartoons. Finally, to recognize the pedagogical potential of animation in the formation of the infant since it is the stage where their mental structures are molded.

Keywords: *animation, education, systematic review.*

I.   INTRODUCTION

From a very early age, animation promotes the connection between theory and practice in such a way that it is used as a strategic tool in education. Through animation objects are given life, but being considered an art goes beyond that, which is visualized through reproduction continues to generate the illusion of movement (Gonzales, 2008). Cinema, television, animation or any other audiovisual medium works with stills to give life to stories that merge with images and sounds to explain them (Benito, 2018). For some considered as children's entertainment, it is also often used as an expression against society (Contreras, 2018).

Education uses various strategies, techniques or tools to teach children in different ways. The objective is to develop skills that generate positive effects, developing socialization in children, generating critical thinking from an early age (Chelysheva & Mikhaleva, 2017).

Within the animation are the cartoons, films, cartoons, which are used by teachers, to reinforce knowledge as it facilitates learning, generating interest in them. The teachers use diverse strategies to achieve the development of competences for it requires the support of the parents as strategic allies in the accompaniment and formation, (Herrera-Rivera et al., 2020). Cartoons act as a school in the home, teaching the child what he or she does not acquire from the parents (Habib & Soliman, 2015).

Comics are not exclusive to a specific age, nor to a specific research approach, but are developed in the field of infants, because through them the creative potential of the student body is experienced, thus fostering discussions with diverse audiences (Darnhofer, 2018).

Likewise, it is necessary to have the technology, both for the teachers who elaborate their strategies and for the students, so that they can establish a connection with the real world (Soto-Grant et al.,

2018). Sounds and images attract the infant's attention, teaching them to develop creative ideas and enter the educational system indirectly (Nuñez-Gómez et al., 2020).

There are various investigations in the educational field but few associated with animation as a pedagogical tool. Some investigations stand out, such as those developed in Mexico, where they researched foreign references in animated series and recognized the importance of the cultural codes that are visualized in the series (Cornelio-Marí, 2015).

In the United States, research was done on the effectiveness of comics in guided reading, concluding that preschool teachers have positive opinions about the use of comics (Mcgrail et al., 2017).

Likewise, in Saudi Arabia, teachers recognize that the digital environment is of great importance for the transition from pre-school to primary education. This requires a curriculum with goals, guidelines, lack of parental support, and inefficiency of teachers create obstacles for students to achieve a successful transition (Al-Hezam, 2017).

In Turkey, research on cartoons and mathematical problem solving concluded that cartoons were more effective than traditional teaching methods because they attract attention, enjoyment and positive attitude (Gokbulut & Kus, 2019).

In India, cartoon workshops were developed to enable children to understand the messages of cartoon programs (Bhatnagar Chopra & Trehan, 2019). The challenge for teachers is to develop skills, techniques and achieve critical thinking in them (Monroy & Perez, 2020).

In Turkey, a study was conducted on the effect of an art program on gypsy children, concluding that the levels of creativity in children differ in favor of 6-year-olds (Canan & Neriman, 2020). Being necessary to transcend not only in the technology, also in other aspects, since it prevails scarce information in diverse topics generating uncertainty according to the trilogy science, technology and humanities in Latin America (Paredes-Chacín, Inciarte & Walles-Peñaloza, 2020).

The animation assumes a leading role since the infants are developed with a new perspective, where the information is present in all the tasks of their context. The infant is in a stage where when he enters the study center, he manages to interpret images without reading or writing, that is to say, from his lived experiences he can interpret them. Then, it is necessary to deepen the subject of animation as a nexus in education. That is why it was necessary to raise the following questions that guided the research: What is the scientific evidence about animation related to early education? What are the objectives that are developed? What are the main conclusions? For this it was necessary to develop a methodology through the Systematic Review.

II. METHODOLOGY

A systematic review of the ERIC and SCOPUS database was developed from 2010 to 2020, to ensure that they are peer-reviewed articles whose central theme was animation as a strategic tool used for teaching infants. The search engines were used through synonym equations or alternative terms such as "cartoons", "films in children's learning", "learning through movies" and "movie for children".

Restrictions such as temporality, full text in PDF or with access, early childhood or preschool level, peer reviewed, pre-selected 148 articles were applied. Then, the summaries and the interior of the article were analyzed in order to find answers to the proposed objectives, excluding those that, although they maintained the search equations, were referred to teachers, strategies of secondary school students, and rural town theater, leaving 9 scientific articles, as shown in table 1, annexed section.

The pre-selected articles were included in the Mendeley data manager, forming folders with the code EA (ERIC-Animation) and SA (SCOPUS-Animation), in order to read each of the selected articles. The selection flow can be seen in the Prisma Declaration and in Table 2, section Annexes.
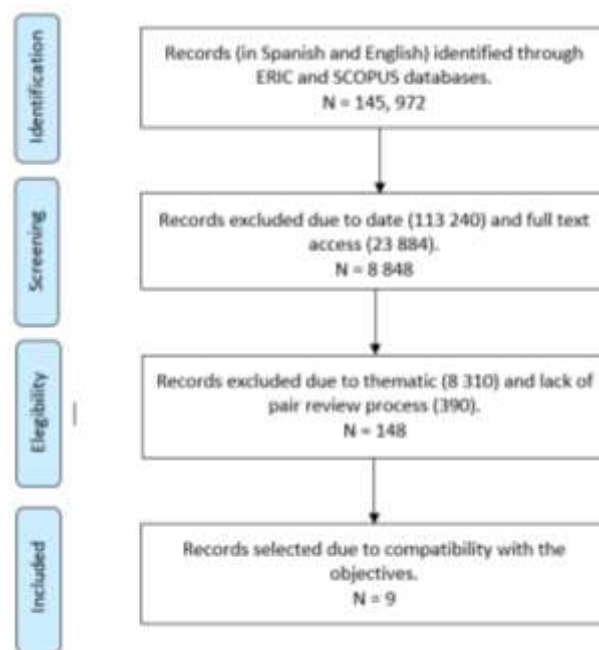
III. RESULTS

Scientific publications come from the countries of Jordan, Turkey, Croatia, Norway, Canada, China, Australia, Sweden and Egypt. Of the 100% of the publications referred to animation and its diverse associated variables, they represent 0.006% at world-wide level. The referred thematic is exclusively to infants of initial education, that is observed in the sample that they have used for the investigations, the ages fluctuate between 3 and 7 years.

Another finding is the approaches developed, there are quantitative (45%), qualitative (33%) and mixed (22%), depending on the proposed objectives, but they are analyzed through various instruments, such as Selective scale of silence for children, Form for the analysis of scientific information, Test "Draw a scientist", Analysis of video readings, questionnaires, video recordings and Surveys. Also, these instruments analyzed, cartoons, caricatures, short videos, recorded readings, frequency of hours on television, digital devices, computers, tablets, smart phones, music players, electronic readers, game consoles, cartoons, group discussion, group memory stimulation, slow motion production, experimentation, and animated films,

Finally, the objectives and conclusions analyzed respond to what was proposed, but always recommending the use of animation in all proposed activities. If the objective was to achieve the effectiveness of a strategy such as cartoons, since it is achieved but recommend the use of cartoon films, other authors raised research on the inclusion of images of science in cartoons, conclude that it is necessary the incorporation of science or related images to increase creativity and research skills at an early age. Since children have a perception of scientists as astronauts or people in laboratories, because they are affected by their environment. Other research proposes the use of digital readings so that the infant can develop successfully in various areas. Another research proposed to identify the relationship between the frequency of watching cartoons on TV and the speed of information processing, concluding that animated movies reinforce the various stereotypes of both the infant and his family.

IV.   CONCLUSION AND DISCUSSION

Scientific publications in databases such as ERIC and SCOPUS represent a visible platform of high impact for the education sector. The findings of the Systematic Review on animation as a strategic tool in education are statistically worrying, only 0.006% worldwide. These findings are far from what Herrera-Rivera et al. (2020) proposed, because being an articulated work it is necessary the development of strategies, strengths and limitations that have to be overcome for the continuous improvement. Another important aspect is the origin of the research, none of which belongs to Latin America. This existing gap has to be overcome with the willingness of professionals in early education, of all educational levels in order to benefit the scientific community. To do this, it is necessary to disseminate information about the accessibility and visibility of educational environments (Paredes-Chacín, Inciarte & Walles-Peñaloza, 2020).

The instruments used by researchers are Scales or Questionnaires, for the quantitative approach, but for the qualitative approach we observe the analysis of films, cartoons, in their great majority to consolidate a knowledge, it is necessary to remember that a child spends a maximum of 12 hours in a week watching cartoons, being responsible for sculpting the human brain that defines the ways of thinking and developing in society (Cardona, 2020). It is suggested that qualitative research that guides the work of teachers and the content of cartoons be dosed and supervised by parents, since they are considered a double-edged sword due to their excessive exposure to programs of violence or sexuality as stated by Habib & Soliman (2015).

Finally, it is necessary to indicate the importance of animation as a pedagogical potential, which is not only for fun but requires discipline, organization, commitment, and its relationship with diverse disciplines to achieve the objectives, position of Monroy & Pérez (2020), in this way, the child enters the space of education without realizing it, as Nuñez-Gómez et al. (2020).

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