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EDUCATIONAL PODCASTS AS RESOURCES THAT CONTRIBUTE TO THE REDUCTION OF THE ACADEMIC AND TECHNOLOGICAL GAP BETWEEN URBAN AND COUNTRY SIDE AREAS

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Abstract: The COVID-19 pandemic has exacerbated the educational gap between students in urban and rural areas in Colombia. One of the main causes of this problem is the lack of access to quality education in rural areas, where students often lack educational infrastructure and limited technological resources.

One of the tools that can help reduce this gap is educational podcasts. Podcasts are audio files that can be listened to anytime, anywhere, and can also be used to teach lessons, review concepts, or simply provide edutainment.

Educational podcasts have several advantages over other teaching methods. First, they are accessible to rural students, who may have difficulty accessing formal education. Secondly, these hearing resources can be personalized to meet individual needs. And thirdly given the theory of multiple intelligences by Gardner (Gardner, 2001). Podcasts reinforce or stimulate the student in their learning and cognitive development.

Educational podcasts are a promising tool that can help the student understand the importance of this resource and this way delve deeper into the concept explained by the teacher. It must be added that with careful planning and execution, podcasts can be an effective tool to improve the learning of students in rural areas, as they are resources that are easy to create and adapt to each context.

Keywords: Rural education, Educational gap, Educational podcasts, Educational adaptation

INTRODUCTION

The COVID-19 pandemic had a significant impact on student learning in Latin America and the Caribbean. The interruption of face-to-face classes between March and July 2020 generated a loss of between 25% and 37% of learning on average (World Bank, 2022). According to the World Bank report, two out of every three students in the region will not be able to read a text and understand it appropriately for their age (World Bank, 2022). The report also estimates that students in the region will suffer a setback of 1.4 years of schooling (World Bank, 2022).

In Colombia, at the beginning of the Covid-19 pandemic, the educational sector was impacted by the isolation measures taken by the government to prevent the increase in infections (GOV Decree 206 of February 26, 2021). For the most part, private schools in general, which have more resources and are closer to cities, managed to quickly adapt to remote classes, thanks to easy access to internet connectivity and electronic devices (tablets, computers, among others). .), avoiding the loss of classes. In contrast, public schools in rural areas were forced to pause their academic days as they did not have the relevant means or resources. According to PISA (Programme for International Student Assessment) data in its 2018 Quality of Life survey, less than 20% of students had access to a tablet or computer and 30% did not have a room to study.

As a consequence, the tests given by the state, from the Colombian Institute for the Evaluation of Education -ICFES-[1], showed that the Covid-19 pandemic accentuated the academic gap between private schools, public schools and rural schools (ICFES, 2022). For example, according to the Sapiens Research report (2020), students in rural areas of Colombia perform lower than students in urban areas on SABER tests.

For example, in the countryside, a third of students will not be able to read a simple text, and half of the students will suffer a setback of more than two years of schooling.

According to the 2020 Sapiens Research report, it indicates that education in Colombia

1. These tests, called SABER tests, are a set of standardized exams that aim to evaluate the academic performance of Colombian students in the areas of: critical reading, mathematics, natural sciences, social and citizen sciences, and English. (ICFES, 2022).

is based on a model that has been maintained for decades, with a uniform structure for all students, regardless of their geographical location or socioeconomic conditions. ICFES test results are a reflection of the quality of education students receive. However, these results do not take into account the differences between the educational and technological tools that students in urban and rural areas have.

The above refers to the fact that students from rural areas, who have less access to these resources, also have fewer opportunities to achieve good results in the SABER tests. Although these inequalities are geographical in nature, the fact that there are differences in quality in education causes gaps given the connectivity or lack of connectivity, the possibilities of access to goods and services, and the well-being of the students.

The COVID-19 pandemic has highlighted the need to make educational institutions more flexible and respond to new learning demands. One of the ways to do this is to incorporate alternative pedagogical resources, such as podcasts; which allow the teaching-learning process to be separated from the classic study contexts and provide greater relevance to exploration and versatility in auditory media.

In this context, this work proposes a process structure aimed at teachers in rural public schools, so that they can generate educational podcasts that contribute to the preparation of students in the understanding of academic concepts (relevant according to the area) that help them. to perform better on the SABER tests.

We intend for the podcast to become a tool with greater impact today, in the classroom the auditory resources will become ideal complements of support for the teacher, becoming a means of communication that is easily accessible, disseminated and created.

THE PODCAST AND EDUCATION

Podcasts are an educational tool that can be used by teachers as a complement to face-to-face classes, becoming used to develop students' cognitive skills, such as attention, memory, reasoning and problem solving, as a valuable tool. to help the student prepare for the SABER tests since they can be personalized to meet the needs of the students, being reproduced at any time and anywhere, and promoting reinforcement in the classroom.

Teachers can use this resource to complement face-to-face classes and develop students' cognitive skills; This resource creates new options for teachers in which structures focused on multiple types of intelligence can be taken into account to reinforce learning in the classroom.

The theory of multiple intelligences is devised by the American psychologist Howard Gardner (Gardner, 2001), who proposed that in human life we develop different types of intelligence that encompasses other types of abilities that are much more complex than the idea of a single intelligence. . Gardner's research (Gardner, 2001) determined eight different types of intelligence: (1) Linguistic intelligence: the ability to master language and communicate, not only referring to oral ability, but also to other ways of communicating such as gesticulation, writing, among others. (2)

Logical-mathematical intelligence: the ability for logical reasoning and mathematical problem solving. (3) Spatial intelligence: the ability to observe the world from different perspectives, ability to devise highly detailed mental images, and sense of aesthetics. (4) Musical intelligence: people linked to musical interpretation and composition. (5) Body intelligence: handling tools or expressing emotions intuitively through the body. (6) Intrapersonal intelligence: people with the ability to control and reflect on their actions, generate introspections on their own thinking

biases to find well-being. (7) Interpersonal intelligence: ability to interpret words or gestures, speech skills, generates the ability to empathize with others. (8) Naturalistic intelligence: detects, differentiates and categorizes aspects linked to the environment such as fauna, vegetation and even natural phenomena. (Gardner, 2001).

> "The ability of students to understand the content shared in class is a very important issue for a teacher to address. Generally, it is related to the intelligence of the students and this, in turn, with the ability to solve mathematical problems or the ease that a person has when memorizing a text. However, it has been shown that it is not its only form of manifestation. Intelligence is not measured by taking into account a person's intellectual capacity, but rather focuses on the different abilities they have to face various everyday situations" (Suárez et al., 2010).

One of the tools that can be used especially taking into account the multiple intelligences studied by Gardner are auditory resources for teaching and learning. These are little or not considered at all in teachers' pedagogical strategies, despite their great potential (Gardner, 2001).

Sound is present in all moments of our lives, we are always subject to learning through different stimuli in our environment (Sarmiento Mariela. (s.f.)). From early childhood we associate and learn from different experiences thanks to these stimuli, generating greater identification, even involuntarily with respect to sound stimuli on repeated occasions (Angel Rolando, 2016). These resources play a fundamental role in educational processes, thanks to their rapid and effective learning results, their power to cover varied topics and the ability to change the student's atmosphere.

They are one of the most used resources in areas of knowledge such as: foreign languages, music education and natural sciences. These types of auditory tools help to train people with physical and visual limitations, to work with students on issues related to feelings and emotions, and to fill students' need for new and significant experiences. (Gardner, 2001)

The podcast as listening resources provides a high level of information in a short time, favoring the processes of understanding, analysis, and academic processes guided by teachers and the association of ideas. However, it also has disadvantages such as: the student remains passive while listening to it, for some students it may be difficult to maintain concentration or they may suffer from an illness related to this, the information retention skills will be proportional to the skills of student listening. (Pérez J, 2023).

Let us remember that the podcast has become a teaching tool that allows students to develop and encourage imagination, interest, creativity and motivation to learn, enhancing intellectual skills and encouraging the manifestation of ideas. For this reason we want to propose the following creation phases: First, planning phase. Second, production phase. Finally, distribution phase.

PLANNING PHASE

Creation choices must be linked to an analysis of the needs of the student and the class.

1. Planning a podcast is defining its objectives and topics. A clear objective is essential to make correct pedagogical and technical decisions.

For this reason, when proposing the objectives aimed at developing skills in students, it is recommended that their intentionality be linked to cognitive objectives such as knowledge and understanding, evaluation, analysis and application (Vásquez Paredes María, 2014).

To define learning objectives, it is necessary

to identify what the student must be able to demonstrate at the end of the learning period. These objectives must be written in a clear and concise manner, and must be categorized into three types: procedural, attitudinal and conceptual. (Asunción Reynoso, Zepeda Isidro, Rodríguez Rosalba, 2019)

Procedural objectives: Focus on skill development. Educational podcasts can be used to teach listeners how to perform specific tasks, such as: Perform a science experiment, solve a math problem, write an essay, or play a musical instrument.

Attitudinal objectives: They focus on the development of attitudes or values. Educational podcasts can be used to promote positive attitudes, such as: tolerance, respect, collaboration or responsibility.

Conceptual objectives: They focus on learning knowledge. Educational podcasts can be used to teach listeners about a wide range of topics, such as: history, science, geography, literature, and art. (Rodríguez Elmina, 2017).

2. In accordance with the above, each teacher must identify the types of intelligence that she wishes to address and the pedagogical strategies that can be projected in the planning of the podcast to achieve our objective. (1) Logical Math: magazine club, problem solving, brain teasers. (2) Linguistics: Debates, Round tables, Questions, Presentations, Guided readings, Self-regulated reading, Description, Review, Summary and Narration. (3) Spatial: Chess, ideograms, mindfacts, concept maps, flowchart or flow chart and drawings. (4) Pictorial: associate objects and colors, outline and model figures in different materials. (5) Musical: couplets and songs (6) Corporeal kinesthetic: Dramatizations, dances, sports and games. (7) Interpersonal: Teamwork, Role Play and Reflection. (8) Naturalist: Field Work, Observation of the environment, natural context and ecological outings. (Gamboa María, GarcíaYenny and Beltrán Marlén Beltrán, 2013)

3. To conclude this first part, it is important to select the most appropriate educational podcast format to meet my objective and pedagogical strategy:

"***Criterion/Purpose. (1) Video podcasts of master classes*:** Recordings of a full lecture that students can view instead of or after attending this lecture. **(2) Enhanced Video Podcasts Sequences:** Video of PowerPoint (or Prezi) slides presented with an audio explanation. **(3) Complementary video podcasts:** They complement the content taught in a subject and may include practical demonstrations, summaries of lessons developed in class, textbook chapters or additional material that can expand or deepen certain aspects of interest to the student. **(4) Video podcasts of solved examples:** They provide video explanations of specific problems that students may need to solve in subjects often linked to the area of mathematics or experimental sciences.

Criterion/Degree of segmentation. (5) Non-segmented video podcasts: Recordings of complete master classes that can be played from start to finish using the controls of a player. **(6) Segmented video podcasts:** Recordings of complete master classes but divided into short sequences in order to speed up the search for those parts that are of interest to the user. ***Pedagogical criterion/ strategy. (8) Responsive viewing of video podcasts:*** It assumes that the learning material contained in any format will be viewed by the student in a relatively passive manner. Therefore, the main pedagogical strategy is the transmission of information. **(9) Video podcasts for problem solving:** Clips designed to explain, articulate and guide students in learning how to solve specific problems in mathematics, science,

engineering, etc. subjects. Although the pedagogical strategy is also based on the transmission of information, the learning objective is more specific. **(10) Self-created video podcasts:** They involve students in planning and designing their own video podcasts. Students learn through research, collaboration, and ultimately developing academic video podcasts. ***Academic criteria/ approach. (11) Practical video podcasts*:** They focus on developing practical skills or solving specific problems. They are usually short or segmented. **(12) Conceptual video podcasts:** They deal with higher order concepts. They are relatively long and may be segmented ¨.

Information taken from (Hernández, J. and Martín, E. (Eds.), 2014). Table 1. Audiovisual pedagogy: Monograph of multimedia teaching experiences.

PRODUCTION PHASE

The teacher, aware of the conditions and context of his students, can take advantage of the benefits of the format to capture their attention through sound. To do this, he can create strategies that include auditory pauses, music, a speaker, characters and environmental sounds. This way, the podcast will become a medium that captures attention and makes the message easier to understand.

Sound is an effective teaching resource for student learning, as it allows the student to generate associations between sounds and images. These associations facilitate the formation of more solid cognitive structures, which allow greater retention of information.

PREPARATION OF THE SCRIPT. Planning the topic you want to explain, taking into account the order in which the concepts you want to cover will be developed, using simple language that facilitates understanding by the student.

RECORDING. The ideal time is to maintain periods of 10 to 15 minutes to obtain the greatest concentration of the student's attention. In cases of extending the topics. It is an option where it is recommended to use the content in chapters and to continue deepening the work in class.

EQUIPMENT, DEVICE AND SOFTWARE. Taking into account the previous recommendations, it is important to have basic elements for this process such as a computer or cell phone that allow the manipulation of the chosen software using the timeline and sound. Complemented by podcast elements of sound effects and music.

The following applications are recommended. Anchor: Make your own podcast, Podcast Studio and podcast maker. Being intuitive and easy to use.

SOUND, MUSIC AND EFFECTS. Based on the previously prepared script, the auditory part that accompanies the narrator is decisive. Managing to obtain greater impact along with the sound effects, generating cognitive associations, due to the stimulation that interacts with the student. (Ordaz María I, 2020). Melody is one of the main elements in music. Being able to evoke emotions and memories with the passage of the notes. Fulfilling narrative functions of anticipation, triggering the student's attention and maintaining attention on the podcast. (Araque Verónica, Marquina Karem, López Valeria, 2022)

DISTRIBUTION AND EVALUATION PHASE

In this phase, it will finally be in charge of measuring teaching-learning performance; this evaluation is essential for the improvement of future creative processes. It is important to take into account technical quality parameters such as audio legibility, diction errors and musicalization.

Once the optimal quality level has been reached, it is important to take into account the distribution methodology of the final

product, in which the social context of our target audience is taken into consideration.

Finally, a didactic evaluation must be carried out, from observation, analysis of performance with respect to complementary activities (Asunción Reynoso, Zepeda Isidro, Rodríguez Rosalba, 2019)

In conclusion, the analysis of the podcast leads us to a great possibility to promote education in rural areas, being a low-cost opportunity for teachers, promoting autonomous learning for students where educational institutions work on developing alternative teaching materials for an improvement towards ICFES tests.

It is important to recognize this educational resource proposal for its direct involvement with the development of oral and written language, generating developments at a cognitive level, improving specific skills involved in the auditory process, phono-articulated capacity and information retention.

Also find in this not only an optimal option to improve ICFES performance in students with different types of intelligence. Also in being inclusive, stimulating through auditory resources students with different pathologies such as: dyslexia, hearing loss, ADHD (Tamayo Lorenzo, S, 2017)

On the other hand, teachers have the duty to be one step ahead of new technologies, finding the necessary spaces for their training in new methodologies, so that their teachings are more practical, enriching, interactive, motivational and accessible to students. students, from all kinds of devices and places.

Although this methodology is found as an individual effort; Collectively, it is almost an entire content production system, in which not only information accessibility could be created for students, but also for teachers.

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