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# Inverted Classroom with Learning Landscapes in the Teaching of Music

## Valia Del Carmen Fajardo Hernández

Unidad Educativa Cristo Rey, Portoviejo, Manabí, Ecuador

Corresponding author email: [valiafh1978@gmail.com](mailto:valiafh1978@gmail.com)

## Marcos Alejandro Yáñez Rodríguez

Pontificia Universidad Católica del Ecuador, Portoviejo, Manabí, Ecuador

Email: [myanez@pucem.edu.ec](mailto:myanez@pucem.edu.ec)

## Yeneri Carolina Rivas

Pontificia Universidad Católica del Ecuador, Portoviejo, Manabí, Ecuador

Email: [yrivas@pucesm.edu.ec](mailto:yrivas@pucesm.edu.ec)

**Abstract---***The new methodological paradigm of recent decades in the area of Education, promoted by the impact of ICT, has imposed a cognitive change that involves considering innovative teaching methods in classrooms, promoting student motivation and curiosity in their learning. This scientific article proposes to demonstrate that the Inverted Classroom Model with Learning Landscapes is a methodological strategy that significantly contributes to the teaching-learning process of students and to deal with the demotivation of students, as well as optimizing the time of the subject of Music due to the few weekly frequencies of the same. It seeks to achieve digital skills, learn to learn, and values; through a proposal that focuses on the protagonist of the student and the construction of knowledge.*

**Keywords---***ICT, inverted classroom, learning landscapes, music, teaching.*

## Introduction

Ecuador is immersed in a process of change, which affects all aspects of social life. Regarding the teaching of music, the year 2009 was decisive. In fact, with the publication of ministerial agreement No. 0611-09 referring to the Basic General Education Curriculum (EGB) and the General Baccalaureate (BG), the subject of Music in the Artistic Cultural Education area is included in the study plan. Such a decision leaves the teaching of Music to the free will of the Institutions, which is why, for many music teachers, this decision has not been fully accepted, as well as the weekly workload, which is one hour, which makes it impossible to strengthen the subject (Aguilar, 2018) write the following:

By establishing the subject of cultural and artistic education as a guideline for the different artistic branches - dance, theater, drawing, music - in the social environment, music education is left in the background and is considered as a special or optional subject. Over the years, this curricular approach caused a notable problem, which is formulated as the absence of social awareness regarding the benefits of music in the integral development of students. (p.3).

About the integration of ICT in the educational system of Ecuador, many actions have been deployed through various organizations: National Interconnectivity Commission, Educar Ecuador, [maestr@s.com](mailto:maestr@s.com), Fund for the Development of Telecommunications in Rural and Urban Areas (FODETEL), and the National Telecommunications Council (CONATEL). Large resources were allocated to improve the quality of teaching in students and establish connectivity through Tele-Health, Electronic Commerce, Tele-Education, and Infrastructure with community

telecentres, although to date there are still problems in terms of the sociocultural appropriation of technologies. Faced with this situation, many public and private institutions started projects based on ICT, to improve the quality of their educational offer and improve the quality of teaching and, therefore, optimizing the academic performance of students, very especially in the field of music teaching, in this sense (Gordon et al., 2018) describes the following:

Music starts from a series of stimuli where visual, auditory, and emotional information is received, analyzed, structured, and processed, alluding to the sensations of the receiver, evidently this process develops and enhances skills and abilities. Music provides a series of emotions and sensations in the human being and therefore becomes a factor of vital importance for the teaching-learning process. (p.3)

The inclusion of music teaching as part of the Artistic Cultural Education area generates a problematic situation characterized as follows:

- Very low weekly workload.
- Poor student motivation.
- Poor academic performance of students.

From this, the following question arises, what didactic strategies could be promoted to optimize the only weekly hour dedicated to teaching music, motivate students with a greater variety of activities, and, therefore, improve their academic performance? To this end, it is proposed to opt for the educational model flipped classroom and learning landscapes supported by ICT. This allows students to be exposed to a wide variety of activities that they carry out outside the classroom, such as those they carry out later in the classroom with the teacher, which allows them to better adapt them to their needs and inclinations to also improve their motivation. which should have a positive impact on their academic performance.

## Methods

The research design, which has been used is descriptive, initially, the keywords for the search for information in different databases, both national and international, were established to demonstrate that the Inverted Classroom with Learning Landscapes is a methodological strategy that contributes significantly to the teaching-learning process of students. The inductive-deductive method was used in discourse, as well as bibliographic research and direct observation.

## Results

### *The teaching of music in the Ecuadorian school*

Historically speaking, the teaching of music took a long time to prevail, since (Guerrero, 2016) affirms that: The teaching of music in Ecuador “is not appreciated as it should be”(p.1). When it was proposed to integrate it into the study plans, it was the subject of much controversy, in such a way that it was not until 1955 that the subject Music appeared in the study plans, in obedience to an agreement signed by the Inter-American Music Council. by Ecuador and other countries. Despite everything, (Guerrero, 2016) mentions that music education in the country has not left any kind of evidence about its quality, and that, in many schools, it was simply not taught.

Consequently, it will be necessary to wait until 2006, for it to become an integral part of the Cultural and Artistic Education area, with three hours a week. However, as the new curriculum is raised from an interdisciplinary approach, music has the educational purpose of enjoyment, creativity, and meaningful experiences. The Curriculum is also structured in "four axes that help define skills with performance criteria: a) observe, b) explore and express, c) inquire and investigate, and d) coexist and participate." (p.57).

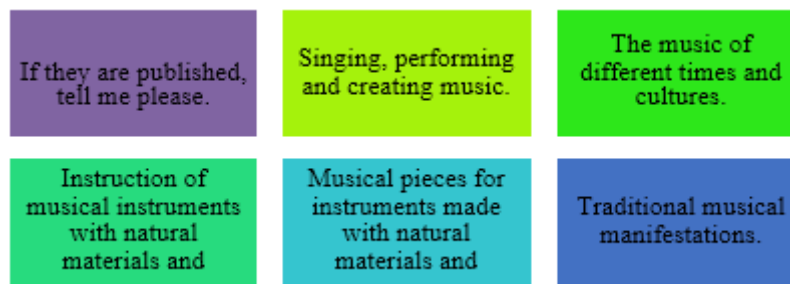


Figure 1. Music content in the EGB study plan

These contents are divided into other more specific ones, which the teachers materialize based on the work projects of the Campus and the classroom.

### *Music didactics*

The dominant didactic trend observed is that of relying on practice to reach understanding and eventual elaboration. This approach is very well reflected in the assertions of [Esposito \(2017\)](#), when he states that: “Music has to be learned by making music” (p.217), which he then develops as follows: “And as music sounds, I start with listening, fixation, reproduction, apprehension of elements, expression, analysis and ability to elaborate musical objects. ” (p.221). The sequence is clear, there is no doubt about it, says the author: “We have to go from repeated practice, from observation to conceptualization, to the acquisition of tools. With them the ability to understand, contextualize and elaborate”(p.224). To this end, the author insists on the importance of group work. Turning now to the didactic theorists who dedicated part of their work to the application of their knowledge to the teaching of music, a review of the main contributions is presented, in a table based on the authors referred to by [Gomez & Gallego, \(2010\)](#).

### *Gamification*

Its name comes from the Castilianization of the word *gamification*, which is derived from the noun *game*: a game in English. Some Spanish-speaking authors refer to this strategy as gamification, however, through the bibliographic review, the term most used in Spanish continues to be gamification, so for this research, it is the one that will be used. Gamification, therefore, has to do with the game [Aretio \(2016\)](#), points out that “in childhood, play favors the conceptualization of reality, symbolization, the capacity for abstraction, the acquisition of skills, abilities, and competences, enculturation and socialization” (p.4). Everything mentioned by the author has a direct influence on brain development and maturation. Games provide challenges and practice for skills and self-regulation throughout child and adolescent development. Games must increase their complexity in terms of the activities and challenges they provide for the development of their cognitive abilities. When a child plays for fun, his brain benefits from the cognitive tasks and challenges of the game. In this way, digital games can have positive effects on the brain, whether through video games, applications, or any other creative technology, these tools stimulate cognitive skills in the same way as traditional games do ([Esposito, 2017; Berenguer, 2016; de Arenosa, 2017](#)).

The pedagogical use of the game proposes an attractive learning strategy, using the principle of learning by playing; at the same time, the evolution of recreational experiences in the hands of the digital age, offer opportunities to develop training proposals focused on the achievement of skills through activities focused on digital games or video games. [McGonigal Aretio, \(2016\)](#) affirms that in the digital age, video games are changing how children, adolescents, and young people conceive of reality. This is what leads us to think about the use of the principles of the game to achieve educational objectives and competencies, as is the case with *serious games, game-based learning*. These strategies based on digital games and videogames used for pedagogical purposes, which, if planned and structured thinking about the educational needs of a subject or group of individuals, can channel certain interests of the participant, motivating their learning, making this experience much more attractive and pleasant ([Aretio, 2016](#)).

To refer to gamification, it is necessary to establish the definition of gambling as an “activity that is generally carried out for fun or entertainment and in which some capacity or skill is exercised”, as well as a “physical or mental recreational activity in which they compete two or more people submitting to some rules” ([Dictionaries, 2017](#)). Therefore, the definition of gamification refers to the game of the noun *game*. Gamification has been revolutionizing education, conceived as it has been insisting, it is a strategy that consists of using the elements and

mechanisms of video game design in non-playful contexts, to increase the motivation, interest, and commitment of those who practice it (Deterding et al., 2011; Al-Azawi et al., 2016).

Al-Azawi et al., (2016) point out that the use of gamification in education provides a better learning experience and environment, provides instant feedback, promotes a change in behavior with the design of gamification experiences according to different learning needs. Likewise, it has been investigated how motivation for learning and the search for desired changes in behavior are aspects that must be taken into account in a playful experience, especially in those activities in which students are unmotivated and little committed to the process of learning, as is often the case in some subjects such as music, in which little motivating strategies are used, gamification stimulates interest in students, making this a satisfying and fun experience based on play, also knowing that children can present greater moments of attention and control when they are carrying out activities that are significant to them, such as video games, whose elements also include challenges, reward systems for expected behaviors and activities achieved, motivation and permanence; which could be directed towards the end of improving their skills in school performance.

### *The inverted classroom or flipped classroom model*

The word inverted classroom, originally coined by Lage et al., (2000) as an inverted classroom (FC) or (Flipped Classroom) is defined as:

Inverting the classroom means that the events that have traditionally had a place inside the classroom, now take place outside the classroom and vice versa. The use of learning technologies, particularly multimedia, provides new opportunities for students to learn, opportunities that are not possible with other media. (p. 56).

This definition is expressed from the methodological use of the classroom, the concept managed from the Sams et al., (2014), prints a notion from learning, so it is conceptualized in this way:

It is a pedagogical approach in which instruction moves from the dimension of group learning to individual learning, transforming the remaining group space into an environment of dynamic and interactive learning in which the facilitator guides the students in the application of the concepts and their creative involvement with the course content. (p.1)

Today the flipped classroom tends to provide greater coverage of the educational offer, since it is used within the Blended-Learning modality or mixed learning, it is also being characterized as a tool for the exchange of knowledge, as well as connection with learning communities. In the concept of the flipped classroom, the importance of pre-class preparation by students is highlighted, in such a way that they present themselves at the face-to-face moment already prepared to tackle the different activities or strategies that the teacher has planned. The strategy is based on self-learning, the clarification of doubts through questions, the discussion of the videos, and from there the intervention of the teacher with a very short time that allows establishing an open, pleasant dynamic; Group work is proposed to end with new ideas and cooperative work.

The incorporation of ICT encourages the search by students for support resources outside the classroom, so it fits within the models influenced by technology. Bergmann & Sams (2014), disclosed the strategy in 2012, calling it Flipped Classroom Model, and it can be said that the expression was widely used in Basic Educational Education in the US (Coufal, 2014; Talbert, 2014). This model supports the student-centered approach and the teacher, a guide or tutor who, without leaving aside their teacher profile as such, is a student's learning planner, which must be done in a creative and above all motivating way, it is not about to subject the student to a visual transposition of a master class (Zeichner & Wray, 2001; Martínez et al., 2001).

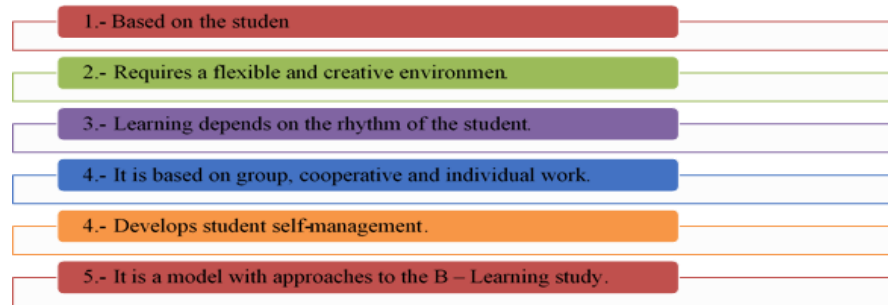


Figure 2. Characteristics of the inverted classroom or flipped classroom model  
Source: Own elaboration

It should be noted that the objectives, goals, subject programming, previous preparation of the model, give rise to the advancement of the group at individualized measures and, preferably, assessments adjusted to the progress of each student. This scheme gives the student a variety of circumstances to explain in practice, the interpretation of the topic. The model implies a change in the functions carried out in the traditional classroom (Parker & Hess, 2001; Bergmann, 2012).

#### *Inverted classroom methodology*

There are various methodologies to implement the Inverted Classroom, including that of Bergmann & Sams (2014), which contains the following aspects: in the initial session, let the students know what the Classroom model is about. Inverted, the class scheme, the points to be discussed in each unit, and even recorded demonstrations related to the agreement of schoolchildren who have already tried it, as well as announcing the representatives. In subsequent sessions, instruct students on the proper way to view multimedia materials. These sessions should range from exhortations to prevent distractions to prompts to take notes.

This activity provides information on some misunderstood material, statement of misconceptions, observation of the argument, and compliance with the exploration of the resource. After the questions, activities are established to take advantage of them in small groups. Re-plan the classroom specifically to support rotating work in small groups, providing technological tools to the interior to facilitate student projects. Subsequently, carry out a formative evaluation so that the learning process is evident and carry out summative evaluations with demonstrative arguments of a stipulated task, through computerized evaluations because they give immediate deductions and feedback.

Nowadays, with technological advances, the flipped classroom has developed new action strategies, such as: a) more flexible environment in which students can choose when and how they want to learn; b) as learning is centered on the student, the teacher manages time with greater flexibility, to take advantage of it in deepening their knowledge and in creating more creative experiences. Hence, the classroom becomes a knowledge construction process; c) the content is directed, both by the teachers, who invest more time in the search for more creative strategies and at the same time the students are serving as content curators; and d) the teacher becomes a true facilitator, supporting, motivating, clarifying and guiding. From a technological point of view, the teacher has to keep up with the advances to take advantage of it in terms of this new way of teaching-learning.

#### *Advantages and limitations of the inverted classroom*

According to Martínez et al., (2014), the advantages offered by the inverted classroom are observed in terms of satisfaction regarding time, administration, and distribution thereof, such as the impact obtained or felt to performance of the teacher, the students of the institution, and all those people who have had to do with the implementation of the model. Berenguer (2016), for his part, makes a series of indications inherent to the teacher and the student. To the teacher, it is essential that the teacher act as a true guide, exercising his leadership, designing a good educational proposal since otherwise, it would be a great disadvantage. According to the development of the country, it is necessary to have a robust network and internet, to carry out a good educational practice that does not diminish, to avoid school failures and therefore teachers. The strength of a good flipped classroom project is mounted on good planning and where a type of dynamic evaluation is reflected (Cobeña & Rodríguez, 2019).

### *Learning landscapes learning*

Landscapes can be located in what has been called strategies of the schools of the future, schools of the XXI century, due to the creativity that is printed so that learning is carried out differently from the traditional one. where the teacher goes from being the center of the pedagogical dynamics to having a less face-to-face role, but equally important, to a very creative being, since he must continue to continue with his role as planner, but not for him, but for the students develop their cognitive strategies, learn to make decisions, be able to regulate their self-management, emerge their creativity and feel comfortable in the new school, the one that allows them to play-learning, learn with meanings and above all share with their peers and their teacher, to provide solutions to the problems that must be faced. This is what has been called the personalized school.

In this regard, we must turn to [García \(2005\)](#), since he has left an important legacy to personalized education. For this author, who wrote, debated, and worked on this concept, it is essential to remember what personalized education meant for him, understood in what idea of a person corresponds as the human being and the nominative of person implies dignity, hence states that the person "is the reality of a specific entity, with a way of being of its own" (p.11) to show that personalized education seeks for man to achieve the perfection of his acts and the school tries to promote said acts so that he can perform them. For this author, it implies that personalized education "would be a path by which the intelligence and will, constitutive of man, are perfected in parallel". (p. 11).

By establishing a relationship from this quote, very significant aspects are extracted to the foundations of personalized education which is identified with Ignatian principles, the search for a change in the current school to reach the deepening of that school of the XXI century, that is not born out of nowhere, that you have roots in those referring to educational philosophy, expressed by said author, aspects such as: dignity, personality, the learning style of each student, understanding that each one is their being and "Which is expressed in conscious and free acts", where the new and creative school seeks for the student to achieve their learning through the search for perfection ([Mero, Pazmiño & Rodríguez, 2019](#)). That is, personalized education has its purpose in the development of the individual, but not only accompanied by others but also in keeping with the pace of progress and this case with the contributions of today's technologies. For his part, has been working on Learning Landscapes and mentions that the use of this model or didactic strategy transforms the school classroom into a disturbing and motivating space for learning, using the cognitive strategies of each of the students as They are to analyze, discover, organize and help change the context around them. The Learning Landscapes help both the student and the teacher to become challenging people because, on the one hand, the teacher by becoming creative of innovative educational actions will allow each student to find their way of learning. After all, as this author says "the teacher is a designer of learning experiences (p.47). Learning will take place in many parts and many pedagogical ways ([Calvo, 2016; Avalos, 2011](#)).

The methodology of learning landscapes in the implementation of personalized education takes into account individualities and diversity, to take advantage of the imagination of students through educational activities, that is, the inclusion of cultural content, but to in turn planned in such a way that the student can be surprised and motivated in each landscape encountered, which allows them to motorize their creativity to achieve their learning. This new pedagogical approach makes the classroom become a place full of emotions, to learn, discover, organize and transform the current world. For this reason, it is necessary to make that classroom a fun place that promotes emotion, effort, the challenge to get out of that repetitive, memory, forgetful, annoying, painful model, and move to a creative space, with meaning and facilitator of learning. . The Learning Landscapes make the teacher a creator of educational scenarios where the classroom is a collective learning space, both for students and teachers who learn. They become a didactic tool to build personalized classrooms, and for each student to play in symbolic worlds to take advantage of their imagination and learn better, understanding what that knowledge will serve them for. Hence, the evaluation completely changes the evaluation processes, for this reason, game activities are proposed, which seek to show evidence and that will allow evaluating the understanding of the contents and therefore the student's learning ([Postareff et al., 2007; Eisner, 2002](#)).

### *Learning landscapes methodology*

The methodology of this approach is characterized by being based on personalized education, but taking advantage of the socialization that the 21st-century school faces today, applying cooperative learning, with group work, promoting communication, the respect, and appreciation of each of the members of the classroom. It also assumes the mixture of different activities related to each other and planned using Bloom's taxonomy and multiple intelligences to generate activities of different complexity, which allow activating the imagination of students in the educational process ([Telefónica, 2016; Smolen et al., 2002](#)).

The use of games as strategies in search of challenges are activities that generate creativity, problem-solving and decision-making, motivating activities that allow the use of visual thinking. The methodology involves the creation of itineraries for the student to explore and create their learning with outings to several new activities that can be integrated into their symbolic world. These itineraries resemble mind maps, which, with the teacher's creativity, are transformed into visual maps. With the formulation of graphic organizers, students are motivated to seek and select information, express them in writing, or through various theatrical assemblies, adventures, which implies that the student has to create their ideas. These itineraries of activities for the achievement of learning must be planned from the simplest to the most complex, is to design learning experiences where the content is structured and graduated (Li & Huang, 2017; Domínguez et al., 2017).

Another relevant aspect of these Learning Landscapes is project-based planning, where the student, through collaborative learning, designs and executes the activities. For which the teacher is required to build a design matrix based on 48 cells where the horizontal axis and a variety of activities are placed based on multiple intelligences, and the cognitive strategies classified in Bloom's taxonomy are placed on the vertical axis. This allows you to create different activities harmoniously. The horizontal axis guides the style of each activity, the materials or the representation of learning, rewards, observations, challenges; while the vertical axis using the verbs of the taxonomy directs the objective, emphasis is placed on the evaluation and the necessary cognitive strategies reflectively and consciously. The evaluation of learning is present in each activity, either formative or summative, using demonstrative exercises that allow assessing the personal understanding of each student and may have representations of reality. Likewise, self-evaluation must be present, to generate in the student the reflection of personalized education.

#### *Relationship between the inverted classroom and learning landscape*

The existence of a direct relationship between both models is indisputable. First, they are based on the paradigm of personalized education, both models are based on making education a pleasant activity for students, accentuating in them the freedom and awareness of what they learn they build by themselves, but also with the support of others. The principles of self-management, creativity, learning to learn, are immersed in the philosophy of both models. On the other hand, they use the contributions of technology to transform traditional educational schemes, as each day the new generations are more impregnated with them, which leads to the school having to renew itself with other different ways of working in the classroom. On the other hand, just as the flipped classroom seeks to turn the classroom around, the learning landscapes are unconditional support for it and vice versa. Todo ello porque un cambio en la manera de “hacer la clase” obliga en ambos modelos a buscar un tiempo diferente para revisar los materiales, textos, herramientas tecnológicas, vídeos, cuentos, fábulas que puedan ambos modelos requerir. La creatividad está presente, los trabajos, las ideas, los juegos demandan un sentido de querer hacer, para cambiar la clase con mucha antelación.

Social work is evidenced in both models, which is why they promote collaborative and cooperative work between the students themselves and the teacher-students. Coexistence, sharing, listening to others, accepting the ideas of others are strengthened. Both make good use of multiple intelligences to strengthen different learning styles in the classroom. And creating diverse ways of approaching knowledge makes the classroom a place where you want to be. From planning, the use of Bloom's taxonomy is to give this author back the place he deserves, having devised this taxonomy from cognitive strategies, these models enhance them, without waiting for the student to memorize the cultural contents, but rather with the use of various strategies are achieving the most complex learning and through play, the use of reason, learning and living in a happy school.

Flexibility as the maximum principle of the curriculum is present in the implementation of both models. Hence, evaluation loses the sense of qualifying and takes on another meaning: to value effort but to demand quality. On the other hand, the use of multiple intelligences and the amount of materials of strategies and learning objects that exist on the Internet to develop them is a positive value for having active, recreational, and pleasant classrooms for both students and teachers. Well, they all strengthen creativity and the different bits of intelligence that can be found in a classroom, converted into a space to think, recreate, live and share (Maba et al., 2018; Chávez & Quijije, 2018).

#### **Conclusion**

The educational innovation proposal with the Inverted Classroom model and the Learning Landscapes for the teaching of music, improves the quality of learning, with greater personalization of the teaching process, the planning of activities that allows the teacher to play a new role. , promote new ways to access the content of the music subject

by students, and create content with the support of technologies, improving: a) demotivation, creating strategies and activities for students, based on gamification, b) the little time dedicated to teaching music, applying the Inverted Classroom, optimizing time and c) improving poor academic performance by proposing the Inverted Learning methodology and Learning Landscapes that promote cooperative learning, problem-solving, personalization of learning and decision-making by connecting perfectly with each other of the same minimizes tedious classes, to enjoy a classroom full of sound, creativity, and collective work, also including teachers so that they can join and feel part of this process (Chandra & Patkar, 2007; Ghavifekr et al., 2013).

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