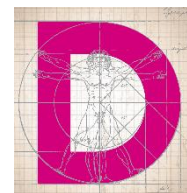


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## MUSICAL IMPROVISATION IN THE CONTEXT OF JAZZ. A STUDY IN PRIMARY EDUCATION

### LA IMPROVISACIÓN MUSICAL EN EL CONTEXTO DEL JAZZ. UN ESTUDIO EN EDUCACIÓN PRIMARIA

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#### Abstract

This study examines the evolution of primary school students' emotions and perceptions during an educational project focused on musical improvisation within the context of jazz. The specialised literature has highlighted the scarcity of research addressing jazz and improvisation learning at this educational stage, as well as the need to incorporate students' perspectives in these processes (Fisk, 2014; West, 2015; Black, 2023).

The study implemented a pedagogical intervention grounded in active methodologies and creative approaches, designed to provide a safe and accessible space in which 98 students aged 10 to 12 could engage in improvisation, despite having no prior experience in jazz or improvisation. The intervention was conducted in a public primary school in Spain.

The methodological design adopted a mixed-methods approach. Qualitative data were collected through open-ended questionnaires, focus groups, field journals, and participant observation. Quantitative data were derived from a multiple-choice questionnaire administered at the end of the project. The results indicate a significant emotional development in relation to improvisation. In addition, improvements were observed in creativity, perceived self-efficacy, and a positive disposition towards error as part of the learning process. The group dimension played a key role in this development, enhancing both motivation and active participation. This study contributes to educational research by providing empirical evidence on how improvisation within the framework of jazz can generate meaningful and emotionally positive musical experiences in primary education.

**Keywords:** musical improvisation; primary education; jazz, musical creation; creativity.

### **Resumen**

Este estudio analiza la evolución de las emociones y percepciones del alumnado de Educación Primaria durante un proyecto educativo centrado en la improvisación musical en el contexto del jazz. La literatura especializada ha señalado la escasez de investigaciones que aborden el aprendizaje del jazz y la improvisación en esta etapa, así como la necesidad de incorporar la perspectiva del alumnado en estos procesos (Fisk, 2014; West, 2015; Black, 2023). En este estudio se implementó una intervención didáctica fundamentada en metodologías activas y enfoques creativos, concebida para ofrecer un espacio seguro y accesible donde 98 estudiantes de 10 a 12 años pudieran iniciarse en la improvisación, pese a no contar con experiencias previas en jazz ni en improvisación. Esta intervención fue desarrollada en un centro público de Educación Primaria en España. El diseño metodológico adoptó un enfoque mixto. Los datos cualitativos procedieron de cuestionarios abiertos, grupos de discusión, diario de campo y observación participante. Los datos cuantitativos derivaron de un cuestionario de opción múltiple aplicado al finalizar el proyecto. Los resultados muestran una evolución emocional significativa con respecto a la improvisación. Asimismo, se observaron avances en creatividad, percepción de autoeficacia y disposición positiva hacia el error como parte del aprendizaje. La dimensión grupal desempeñó un papel clave en este proceso, favoreciendo la motivación y la participación activa. Este trabajo pretende contribuir a la investigación educativa ofreciendo evidencia empírica sobre cómo la improvisación en el marco del jazz puede generar experiencias musicales significativas y emocionalmente positivas en la Educación Primaria.

**Palabras clave:** improvisación; educación primaria; jazz; creación musical; creatividad.

## 1. INTRODUCTION

Jazz constitutes an ideal pedagogical context for the teaching of musical improvisation, as it allows the integration of instrumental practice with creativity and musical expression (Chiuminatto, 2018; Johansen, 2021; Borgo, 2007). Improvisation is not only conceived as an instrumental skill but also as a process for learning and creating music, fostering autonomy, confidence, and student engagement (Black, 2023; Brooke, 2020). However, traditional methods in jazz and general music education tend to focus on memorisation, score reading, and harmonic exercises, thereby limiting opportunities for experiential and creative learning through listening and improvisation (Ferrin, 2023; Renick, 2012).

From a pedagogical perspective, several authors have emphasised the need to develop jazz teaching models that promote active participation, interaction, and creativity within horizontal learning environments, moving away from traditional approaches (Renick, 2012; Goodkin, 2004). This need is particularly relevant in primary education (Brooke, 2020; Black, 2023; Fisk, 2014), where studies on jazz and musical improvisation are scarce, as most research focuses on teacher training or the learning processes of professional jazz musicians. Such studies offer limited insights for research centred on jazz education in schools, and for understanding the teaching–learning processes of this musical genre in children at this educational stage (West, 2015).

The primary objective of this study is to explore and analyse the evolution of students' emotions and perceptions during the process of musical improvisation, paying particular attention to how they experienced and engaged with the educational proposal in both emotional and musical terms. Furthermore, the study aims to provide evidence of how improvisation, practiced in a safe and guided environment, can generate positive experiences that support both musical learning and socio-emotional development.

This approach seeks to contribute to knowledge in a relatively underexplored area of educational research, focusing on students' perspectives regarding improvisation and jazz learning in primary education.

### 1.1. Jazz and its pedagogical approaches in music learning

Jazz is a genre with a rich historical and musical trajectory. As Brooke (2020) notes, the term jazz encompasses a wide variety of musical styles. Similarly, Zagalaz et al. (2010) argue that it is difficult to establish a closed definition of the genre, since “the term jazz encompasses so many rhythms, figures, stylistic variations, and defining concepts, as well as subtle nuances of identity, that it is impossible to summarise such a wealth of musical, aesthetic, and cultural information in a brief phrase” (p. 60)<sup>1</sup>. Nonetheless, these authors emphasise that jazz is a musical art form both because of its concepts and its inherent elements, as well as its evolution, boasting a rich historical tradition and a high

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<sup>1</sup> Original quote: “El término jazz abarca tantos tiempos, tantas figuras, tantas variaciones estilísticas y tantos conceptos definitorios y pequeños matices de identidad que es imposible encontrar una breve frase en la que se resuma tanta información musical, estética y cultural” (Zagalaz et al. 2010, p. 60).

level of aesthetic and musical development. Among the most characteristic features of this musical genre are the figure of the performer–composer or composer–performer, and the centrality of improvisation. From a musical perspective, Zagalaz et al. (2010) identify rhythm, improvisation, harmony, melody, and jam sessions as constitutive elements of the genre, all of which are valuable foundations for music education based on practice, experience, and creation, taking jazz as a pedagogical reference.

Building on these elements, it is possible to link the characteristics of jazz with pedagogical approaches that foster student exploration and creativity. This connection allows for the identification of relationships between musical content and teaching strategies, materialising in an educational proposal oriented towards jazz learning in primary education, where practice and experience become central to the learning process. This educational proposal is not only grounded in the practical experience of jazz, but also encourages the exploration of methodologies that promote active participation and student improvisation from the outset of the learning process. By recognising the links between jazz's musical elements and the teaching strategies associated with these methods, a field of study emerges that connects both areas and invites the development of approaches integrating practical jazz experience with creative and meaningful learning.

In this regard, some contemporary examples of authors connecting jazz with active pedagogical approaches include Ferrin (2023), who links jazz to the stages of *audiation* established by Gordon. Additionally, Goodkin (2004) highlights the relationship between jazz learning and the Orff method, being one of its main references. Ghent (2023) observes that pedagogies such as Orff, Kodály, or Dalcroze provide a solid foundation for a jazz education programme rooted in improvisation, and Williams (2021) notes that spontaneous creation is fundamental both in jazz and in leading active pedagogies, citing Carl Orff, Zoltán Kodály, Jaques Dalcroze, and Edwin Gordon, thereby establishing bridges between the two domains. Of particular note is the approach proposed by Black (2023), who presents and develops jazz as a learning context, applying its principles of group instrumental practice, learning by ear, and improvisation. The author draws on the ethos of jazz bands, conceived as spaces for play, exploration, and experimentation—spaces that are often neglected in schools.

Finally, Goodkin (2004) offers a relevant reflection on jazz learning and its different approaches, emphasising that students who improvise or engage with jazz experientially are closer to the essence of the genre than those who perform a score perfectly:

Some high school players in a jazz band may read well and play with good technique and yet have trouble improvising. How ironic that an Orff student improvising movement or experimenting with vocal sounds may be closer to the heart of jazz than a saxophone player reading the chart to Take the A Train. If jazz becomes just a particular combination of notes played in a certain style, we will have missed its greatest gift- a relentless search to fully express the depth of our feeling (p.14).

### 1.2. Musical improvisation in jazz: perspectives for its development in Primary Education

Regarding the relationship between creativity and musical creation, Tafuri (2015) notes that both composition and musical improvisation constitute fundamental aspects in the study of musical creativity, as both activities focus on the creation of new music. According to Tafuri, drawing on Webster, creativity related to musical creation is understood as “the engagement of the mind in the structured, active process of thinking about sound with the purpose of producing a product that is new to the creator” (p. 40)<sup>2</sup>.

Musical creation is, therefore, a term that encompasses a variety of practices, with some authors making distinctions within it. It is argued that musical creation may include improvisation, composition, and musical arrangements. In this regard, Hemsy de Gainza (1983) defines improvisation as “a projective activity that can be defined as any instantaneous musical performance produced by an individual or a group” (p. 11)<sup>3</sup>. Consequently, the term improvisation refers both to the activity itself and to its product. Although improvisation may appear as a spontaneous, “out-of-nowhere” activity, Giráldez (2015) argues that it actually involves compositions that always refer to acquired musical references and draw on techniques, knowledge, and experiences similar to those required for composing.

Focusing more specifically on jazz, improvisation as a musical procedure of creativity can foster divergent thinking, enabling the generation of distinct or alternative responses to the same problem (Peñalver, 2019). As noted above, one of the constitutive elements of jazz is improvisation. In this sense, Peñalver (2019) states that creativity is one of the fundamental objectives of music education in twenty-first-century pedagogy, and that improvisation in jazz is an essential procedure for its development. Moreover, improvisation is one of the aspects most emphasised in studies that have successfully incorporated jazz into various early educational contexts. De Bruin (2019) proposes a useful framework for analysing teaching and learning experiences in improvisation based on cognitive learning, which involves modelling, scaffolding, training, articulating, and fostering reflective and exploratory processes, followed by the gradual withdrawal of these orientations by the teacher.

One of the most viable approaches for the inclusion and development of improvisation in primary education is that proposed by Black (2023). In her approach, the author applies a differentiation following Campbell (2009), classifying improvisation into three areas: *learning to improvise music*, *improvising to learn music*; and *improvising music to learn*. Black (2023) indicates that while *learning to improvise music* may be included in the specific methods of the genre or in classroom pedagogical methods, *improvising music to learn* is particularly beneficial, as it allows for the development of the individual’s full creative potential. As noted by the author, the development of

<sup>2</sup> Original quote: “La ocupación de la mente en el proceso estructurado activo de pensar el sonido con el propósito de producir algún producto que es nuevo para el creador” (Tafuri, 2015, p.40).

<sup>3</sup> Original quote: “Una actividad proyectiva que puede definirse como toda ejecución musical instantánea producida por un individuo o grupo” (Hemsy de Gainza, 1983, p.11).

confidence in improvisational ability is accompanied by the growth of critical thinking, empathy, creativity, and aspects related to social interaction.

Furthermore, she emphasises that one of the main ways to advance improvisation within the jazz context is through participation in jam sessions, highlighting that improvisation requires stepping out of the comfort zone into a space where there are no correct answers, which demands a joint effort of trust between students and teachers. In this regard, Goodkin (2004) highlights that when a group of students improvises, they collectively create a shared musical experience, fostering a sense of belonging through music:

There were moments where the children stood out, improvising their own melodies on the xylophone and moments when they blended in, joined as one voice in the chorus. Above all, the children were not competing against each other for first chair in the orchestra-they were weaving a new each day the cloth of community (p.11).

### **1.3. Paradigms of informal pedagogy and the didactics of musical creation**

#### *1.3.1. Collaborative learning environments in the inclusion of jazz in Primary Education*

In addition to its main musical characteristics, jazz intrinsically incorporates values such as shared music-making, group learning, freedom in improvisation, and spontaneous creation, making it a particularly suitable context for musical learning in primary education. In this regard, Green (2019) notes that the concept of learning involves the emergence of a cognitive or psychomotor change in the learner, and that such a change is far more meaningful when it derives from an experience associated with teaching, training, or a similar guided activity. Furthermore, Green (2019) emphasises that education should be understood as the generation of something that holds value for the student.

Accordingly, the pedagogy necessary to integrate jazz and improvisation into the school context can be grounded in the concept of *informal pedagogy* developed by Green (2009). *Informal pedagogy* focuses on the importance of the social context for group learning and musical creation, highlighting experimentation, improvisation, learning by ear, and collaboration (Black, 2023). In this vein, Renick (2012) argues that jazz is a democratic art form, in which participation and interaction among musicians within a horizontal structure are essential. Renick proposes orienting jazz pedagogy towards learning communities founded on democratic principles, reflecting the historical roots of the genre. Ferrin (2023) complements this perspective by noting that, prior to the institutionalisation of formal jazz education, learning occurred through listening, imitation, and the exchange of ideas in improvisation sessions and other social situations, thus highlighting the genre's deeply social nature.

#### *1.3.2. Learning through error in educational processes*

Error constitutes a fundamental element in the learning process. Dehane (2019, cited in Elizondo, 2023) argues that when the brain detects an error, it adjusts its internal models to better understand the world. In this regard, Elizondo (2023) emphasises that errors should be considered opportunities for both learning and brain development, as they are an integral part of the educational process and cognitive development. Nevertheless, a traditional perception of error as something negative—often associated with failure persists, particularly in students' attitudes when engaging with musical creation in the classroom. According to Elizondo (2023), it is necessary for teachers to transform this perception by creating learning environments in which errors are accepted and students feel safe and confident to experiment and make mistakes without fear.

Constructing a safe environment that does not penalise errors but instead uses them as a starting point to generate questions that stimulate further thinking, is crucial in brain-based education. Equally important is the feedback provided in response to those errors. Students should regard errors as part of the learning journey, never as a dead end (Elizondo, 2023, p. 63)<sup>4</sup>.

### *1.3.3. Learning and teaching through questioning*

Paynter (1999) provides a clarifying example of the relevance of questioning in the creative process:

Here are many interesting possibilities; perhaps too many; you will have to decide which are best (...) How does the piece begin? How could it end? Can you think of ways to make this idea a very special feature of the piece? (p. 28)<sup>5</sup>.

Such questioning during the creative process, within Paynter's approach, supports group management that promotes reflection as well as the generation of spontaneous ideas. According to Elizondo (2023), drawing on Furman (2022), questions should be conceived as "gateways to knowledge":

McTigue and Wiggins (2016) refer to them as essential questions because they serve as a starting point for exploring broader ideas. These questions, posed at the beginning of a session by the teacher, should be open-ended, inviting investigation, exploration of wider concepts, and knowledge transfer (p. 53)<sup>6</sup>.

<sup>4</sup> Original quote: "Construir un entorno seguro, que no penalice el error, sino que lo utilice como punto de partida para generar preguntas que inviten a seguir pensando, es clave en una educación basada en el cerebro. Igual que lo es el feedback o devolución que hagamos de ese error. Los estudiantes han de contemplar el error como parte del camino, nunca como un callejón sin salida" (Elizondo, 2023, p. 63).

<sup>5</sup> Original quote: "Aquí tiene muchas posibilidades interesantes; tal vez demasiadas; tendrán que decidir cuáles son las mejores (...) ¿Cómo empieza la pieza? ¿Cómo podría terminar? ¿Podéis pensar en cómo hacer para que esa idea se transforme en una característica muy especial de esta pieza?" (Paynter, 1999, p.28).

<sup>6</sup> Original quote: "McTigue y Wiggins (2016) las llamaron preguntas esenciales, porque funcionan como punto de partida para explorar ideas más amplias. Estas preguntas, formuladas al inicio de la sesión por el profesorado, deben ser preguntas abiertas que inviten a investigar, a explorar ideas más amplias, a transferir el conocimiento" (Elizondo, 2018, p.53).

As these authors emphasise, Paynter highlights the importance of the teacher in formulating questions that guide the learning process in musical creation. Inducing learning based on students' prior knowledge, whether through brainstorming or questioning itself, becomes a key pedagogical strategy. Questions act as engines of the educational process, generating new queries, debates, contradictions, votes, and agreements within the classroom. In addition to guiding the process, students' responses contribute to the construction of knowledge and learning. Within this space for exchange and reflection, questions serve as the guiding thread that allows sharing, discussion, and reflection, promoting learning based on students' motivation and interest within the context of musical improvisation.

In this way, questions not only activate cognitive processes but also foster creation and creative connections, driving dynamic learning and generating collectively constructed knowledge. As Elizondo (2023) notes, questions allow teachers to continuously monitor students' understanding, enabling pedagogical adjustments according to their comprehension level and emerging needs. In this sense, questions become a source of information for assessing learning, ensuring that it is meaningful and relevant at each stage of the educational process.

## 2. METHODOLOGY

This research evaluates an educational experience in the context of primary education, focusing on the development of musical improvisation within the framework of jazz, with the aim of exploring the evolution of students' emotions and perceptions throughout the learning process. The study adopts a mixed-methods approach, integrating both qualitative and quantitative analyses to achieve a more comprehensive understanding of the phenomenon under investigation. The use of mixed methods provides a broad and in-depth perspective, as well as richer and more varied data, enhancing the robustness and rigour of the research and enabling more thorough exploration and utilisation of the data (Hernández-Sampieri, 2018). Accordingly, the data collection instruments employed were of a mixed nature.

On the one hand, the qualitative analysis was conducted through the fragmentation and categorisation of data obtained from the open-ended questionnaire items (QO), discussion groups (DG), field journal (FJ), and participant observation (PO). These instruments allowed for an exploration of students' perceptions, emotions, and experiences during the process of musical improvisation. On the other hand, the quantitative data were derived from the closed-ended questions of the questionnaire, designed to analyse students' final impressions regarding improvisation. These data enabled the reporting of frequencies and percentages, as well as the distribution of responses. In this regard, the quantitative component of the study is framed within a descriptive design based on a classroom intervention, in which the teacher assumed the dual role of teacher and researcher.

Overall, the combination of both methodological approaches allowed for the triangulation of information, providing a more comprehensive and rigorous

understanding of the phenomenon, while ensuring alignment between the research objectives and the analytical procedures employed. As Flick (2014) notes, the integration of qualitative and quantitative methods in mixed approaches relies on triangulation to link both approaches, as mixed methods aim to facilitate a pragmatic combination of qualitative and quantitative research.

### 2.1. Description of the sample

The participant sample comprised 98 students from 5th and 6th grade of primary school (see Table 1). The units of analysis corresponded to four class groups from the same educational centre. The study was conducted during the 2023-2024 academic year at a primary school in Andalusia (Spain). Prior to the implementation of the study, informed consent was obtained from the students' families, thereby ensuring voluntary participation and compliance with the ethical principles of educational research.

**Table 1**

*Units and student groups participating in the study*

	5A	5B	5D	6B
Total students	24	22	26	26
Girls	12	11	13	11
Boys	12	11	13	15
Total Sample				98

*Note:* Author's own elaboration.

### 2.2. Design and planning of the didactic proposal

#### 2.2.1. Methodological approach

The educational project developed in this research was designed with the aim of exploring and analysing the evolution of students' emotions and perceptions throughout the learning process of musical improvisation within the context of jazz. To this end, a didactic intervention was implemented to provide a creative, safe, and accessible space in which students could engage with musical improvisation in this genre—a learning experience that had not previously formed part of their education. This project is grounded in a set of pedagogical principles that guided the entire teaching–learning process and constitute the theoretical framework supporting the proposal.

Jazz is conceived not only as a musical genre but also as a pedagogical context that promotes experimentation, spontaneity, and collective construction of the learning process, placing improvisation at the centre of education (Black, 2023). This choice reflects the open, flexible, and communicative nature of the genre, which also encourages exploration and active listening. Furthermore, the project design is based on pedagogical principles associated with creative processes, collaborative work, and the mediating role

of the teacher—elements considered central to contemporary music education (Beineke, 2017).

From this perspective, the methodological design integrated principles from active methodologies and creative methods, adapted to the primary education stage and linked to jazz learning. Students adopted a dual role as improvisers and performers, enabling them to engage with jazz in an active and creative manner. The teacher acted as a learning facilitator, guiding the processes, proposing different improvisational situations, and providing safe spaces for experimentation and exploration.

The proposal conceives musical learning as an active, participatory, and inclusive activity, accessible regardless of prior musical literacy. Musical understanding was approached as the progressive assimilation of a language with an internal logic, acquired primarily through intuition, practice, and direct experience. In line with this, the intervention drew on students' natural activities (singing, reciting, playing instruments, moving, creating) to develop expressive and receptive capacities. Under this paradigm, action always precedes comprehension, ensuring meaningful learning derived from experimentation and lived experience.

This methodological approach aimed not only to develop improvisation as a musical skill but also to foster socio-emotional dimensions such as confidence, reduced fear of error, and enjoyment of music and the creative act—both individually and collectively. Based on these principles, an original and structured learning sequence was designed, progressively articulating different improvisational experiences while simultaneously integrating active listening, instrumental practice, and improvisation in its various forms. This sequence constituted the pedagogical core of the project, allowing observation and analysis of how students constructed new relationships with music and with themselves through practice.

Initially, rhythmic improvisation was addressed through body percussion and the creation of patterns emphasising beats 2 and 4, facilitating internalisation of the characteristic jazz pulse. Subsequently, melodic improvisation experiences were introduced, beginning with simple modifications of the original melody and expanding towards the creation of new melodic lines built upon the formal structure of the studied standard. The process continued with vocal improvisation exercises over the harmonic structure of the standard in a call-and-response format, promoting active listening and musical dialogue. Preliminary improvisation training included imitation games, where the teacher presented motivic cells constructed according to rhythmic, melodic, and harmonic characteristics that would later guide improvisation (Berrade, 2012).

These activities were complemented by various instrumental improvisation modalities: from free practice over the I–III–II–V–I cadence, to guided exercises using the pentatonic scale, culminating in improvisation over the full harmony of the standard, where students integrated the rhythmic, melodic, and harmonic knowledge acquired in previous phases. Regarding the textures addressed during improvisation and musical creation, the focus was primarily on melody-accompaniment textures, with the bass assuming the main tonal functions (I–IV–V). This configuration allowed students to progressively experience the discursive relationship between tension and release—a key

aspect for understanding musical directionality and supporting their own improvisational proposals.

Improvisations performed during the project were recorded, providing a dedicated space at the end of each session for listening, analysis, and collective discussion. These moments served as learning opportunities in which students engaged in self-evaluation, offering critical and constructive feedback. Reflection was also encouraged on group interaction during improvisation, identification of emerging challenges, and recognition of achievements, fostering a deeper understanding of both individual improvisational processes and collaborative work. Instrumental practice and the use of different instruments constituted a fundamental learning tool, allowing students from the outset to explore the sonic possibilities of each instrument and progressively discover the creative potential of musical composition and improvisation. Within this framework, instrumental practice functioned simultaneously as a mediator of learning and a means of musical expression, supporting both the acquisition of technical skills and the development of creative competencies.

### 2.3.2 Project development

In the months preceding the implementation of the project, an initial exploratory assessment was conducted to identify the students' prior musical experiences. The results indicated that previous musical practice had been largely focused on score-based performance using pitched percussion instruments, particularly the xylophone, while experiences related to musical improvisation had been virtually non-existent. This information allowed for the adaptation of the intervention design to the group's starting level, ensuring a gradual approach to creative processes. The educational intervention was implemented over a three-month period, with weekly sessions lasting one hour each.

## 3. RESULTS

Aligned with the objective of this research—to explore and analyse the evolution of students' emotions and perceptions during the process of musical improvisation—the data were organised into analytical categories. These categories encompass different aspects of students' experiences with improvisation: initial nervousness and embarrassment, lack of confidence, increased confidence, reduced concern about mistakes and detachment from perfection, personal growth, and progress in creativity. This analytical structure allowed for a systematic description of the emotional and perceptual changes experienced by students throughout the learning process.

The first category, *initial nervousness and embarrassment*, refers to the predominant emotions experienced by students during their first encounters with musical improvisation. In this phase, practice was approached with nervousness, shyness, and some insecurity, mainly linked to the lack of prior experiences in free musical creation. Early attempts were marked by fear of making mistakes or failing to meet the expectations

of the group or the teacher. As one student stated<sup>7</sup>, “I felt very nervous” (DG\_5A), while another noted, “I was embarrassed and scared (...) that it would go wrong” (DG\_5D). This initial concern about performance also manifested in doubts about playing the correct notes or fear of errors, as one student explained: “at first I was nervous about playing a wrong note, but now it’s better because I more or less understand how the notes work and if I make a mistake, I can fix it as I want” (DG\_5D). Generally, a teacher described the group’s initial attitude as characterised by “shyness, embarrassment, and fear of not doing it well” (FJ\_5B).

The next category, *lack of confidence*, refers to students’ perceptions of insufficiency or insecurity regarding their initial abilities in musical improvisation. A lack of confidence was initially evident in relation to improvisation, largely due to its perception as an unpredictable or unstructured activity. However, over the course of the project, this lack of confidence evolved positively, with students gaining a greater sense of control, security, and enjoyment in the creative process. As one student reflected:

At first, I was thinking, how am I going to play something without planning it first? What am I going to do? How to fit it in? But little by little I started feeling more comfortable... better. And I didn’t mind making mistakes because I knew you can’t really go wrong in any improvisation” (DG\_A15A).

Similarly, another student commented: “I didn’t have much confidence before, and when I started improvising here, I played whatever, but now I think I’m doing it better and, since I know the notes, I play what...” (DG\_A15D).

The following category, *increase in confidence*, concerns the growth or development of students’ self-confidence during the improvisation process. This category is directly linked to the previous one, reflecting how initial insecurity transformed into greater assurance and openness towards creative practice. This positive evolution in confidence is clearly reflected in students’ accounts collected at the end of the project, showing a more relaxed and secure attitude towards improvisation. One student stated, “now I feel calmer and more relaxed. Before it was harder, but now I feel more at ease” (QO\_A15D), while another noted, “I didn’t have much confidence before, but now I think I’m doing better and, since I know the notes, I play what...” (QO\_A15D).

It is noteworthy that, in this learning context, attitudes towards musical improvisation proved “contagious” among students. This phenomenon encouraged those who were initially reluctant to improvise to gradually participate. The group dynamic promoted processes of imitation and shared motivation, enabling even the most reserved students to find a space for expression. As one teacher recounted:

A shyer student came up, but the first time she felt very inhibited. Later she came and said, ‘Teacher, can I try again? I felt a bit shy the first time,’ and she tried again. That is, the learning environment was contagious, and those who had not allowed themselves to

<sup>7</sup> All student quotations were originally in Spanish and have been translated into English for publication.

participate, as happened with this student, were encouraged to take initiative and try again” (FJ\_5D).

This greater openness towards musical improvisation, together with the development of confidence, was facilitated by repeated exposure to improvisation situations generating positive experiences. As one student commented, “at first I was nervous because, I don’t know, but now when I do it, I feel better because I’ve done it many times” (QO\_5A). Another participant added, “we gained more confidence by doing it so many times” (QO\_5D). Having these experiences motivated students to continue experimenting and to maintain interest in learning through improvisation. As one student stated: “Now I feel more relaxed. And now I really want to improvise” (QO\_5D).

The next category, *reduced concern about mistakes and detachment from perfection*, refers to decreased fear of failure and the need for perfection in improvisation. This category connects with the previous one, as increased confidence allowed students to feel freer to experiment without fear of error. Data indicate that this initial concern gradually diminished, and students became more willing to try and explore. One student noted: “Here, if I don’t do it perfectly, it’s okay because I’m calm and know it’s fine...” (DG\_5D). Similarly, another commented: “At first I was nervous about playing a wrong note, but now it’s better because I understand how the notes work and if I make a mistake, I can fix it as I want” (DG\_5D).

The final categories, *personal growth* and *progress in creativity*, capture the changes observed in students regarding their attitudes towards new experiences and their ability to generate original and fluent ideas during improvisation. Personal growth refers to changes in general attitudes, reflecting how improvisation fosters confidence and openness, while progress in creativity focuses on the development of originality and idea generation as practice continues. Students reported improvements in both creativity and personal growth. One student emphasised her enjoyment: “I loved improvising because you do what you feel like and it makes you happy” (QO\_5A). Another commented that previously “I didn’t know how to invent so many things” (DG\_5A), and another stated: “I didn’t have much confidence before, but now I think I’m doing it better and, since I know the notes, I play what...” (DG\_5D).

Regarding students’ final impressions of improvisation, collected via a multiple-choice questionnaire, results indicate a generally positive trend. Specifically, 55.7% of students reported greatly enjoying improvising, while 13.6% felt very comfortable and stated that they enjoyed the activity a lot. Conversely, 26.1% indicated they felt shy, though this did not prevent them from enjoying the experience. Only 3.4% reported that embarrassment limited their enjoyment of improvisation, representing a relatively small proportion. Finally, 1.1% selected “other,” reflecting less common responses. Overall, the data show that most students experienced improvisation positively, with enjoyment and comfort as the predominant sensations (see Table 2).

**Table 2**

*Frequency and percentage of students’ final impressions regarding improvisation*

	Frequency	Porcentaje
I enjoyed it a lot	49	55,7
Very comfortable, I really liked it	12	13,6
Shy, but I liked the experience	23	26,1
I feel very embarrassed, and it keeps me from enjoying it	3	3,4
Other	1	1,1
Total	88	100,0

Note: Author's own elaboration

Overall, the quantitative data on students' final impressions reinforce and complement the findings from the previously presented qualitative analysis categories. The majority of students reported feelings of enjoyment, comfort, and motivation during improvisation, which aligns with the qualitative accounts showing increased confidence, reduced fear of error, progress in creativity, and personal growth. Thus, both the qualitative testimonies and the multiple-choice responses consistently indicate that, despite initial shyness or insecurity, students developed a positive and receptive attitude towards musical improvisation, thereby consolidating the relationship between emotions, perceptions, and learning experiences.

#### 4. DISCUSSION

The development of this project, in which jazz was configured as a musical learning context, generated a space centred on creation and jazz, allowing students to engage in improvisation from the very first session in its various formats, while simultaneously overcoming fear of error and initial feelings of insecurity. Musical improvisation in this project was understood from a threefold perspective, integrating different modes of engagement with musical learning: *learning to improvise*, *improvising to learn music*, and *improvising music to learn* (Campbell, 2009). Within this framework, Black (2023) emphasises that while *learning to improvise music* is addressed in many methods, *improvising music to learn* proves to be a more beneficial approach, allowing students to realise their full creative potential.

This broad understanding of improvisation aligns with theoretical contributions recognising its central role in processes related to jazz and musical creation. Improvisation emerges as one of the most prominent elements in studies that have successfully incorporated jazz into educational contexts, particularly at early levels (Chiuminatto, 2018; De Bruin, 2019; Black, 2023; Goodkin, 2004; Johansen, 2021; Marino & Chinn, 2023). From a pedagogical perspective, musical improvisation can be conceived as a natural act arising from comprehensive listening, when the internal logic of a musical language is grasped (Pérez, 2018). In the framework of this project, improvisation constituted the central axis of the learning process, enabling students to explore, create, and express themselves musically within the context of jazz. The data

obtained indicate a clearly positive evolution in the emotions and experiences reported by participants throughout this creative process.

At the outset, students approached improvisation with some reluctance, primarily motivated by shyness and fear of making mistakes, as most had no prior experience in musical improvisation. This initially generated discomfort and insecurity when faced with the idea of improvising. However, the findings show that the implementation of this educational intervention facilitated a gradual transformation in students' attitudes toward improvisation, fostering greater openness, confidence, and willingness to engage. This process contributed to significant progress both creatively and in improvisational skills, consolidating more active, conscious, and motivated participation in their own musical learning.

A key factor enabling this progress was the creation of a safe learning environment, understood as one in which students could feel comfortable and free to explore, express themselves, and create without fear of judgement or error (Elizondo, 2023). Implementing pedagogical strategies that reconceptualised error as a learning opportunity and a natural part of the creative process proved decisive in fostering this attitude. As a result, students were able to engage in improvisation with confidence, experimenting, making mistakes, and correcting them without fear or hesitation. This shift in perception allowed students to fully enjoy the musical experience, understanding creation and improvisation as dynamic processes of exploration and enjoyment. This evolution was clearly reflected in the final results, where students' responses indicated greater openness to improvisation and increased confidence in their own improvisations. This change can be attributed to repeated exposure to positive improvisation experiences throughout the project, enabling students to consolidate their learning, take creative risks, and perceive error as an integral part of the learning process.

The group component also played a significant role in student development. At the start of the project, more hesitant students were positively influenced by peers who actively participated, providing the class with a model and constructive feedback. As Goodkin (2004) notes, when a group of students improvises collectively, they construct a shared musical creation, fostering a strong sense of belonging through music. These positive experiences and feelings regarding improvisation further reinforced the learning process, motivating initially reserved students to try again and fully engage with the proposed activities.

Furthermore, students expressed a clear awareness of their own progress in improvisation, which became another key factor motivating continued exploration of this form of musical creation. The satisfaction, enthusiasm, and excitement experienced when hearing themselves improvise served as an indicator of the significance of their learning, as the results were a direct product of their own personal and musical expression. In this regard, Yelo Cano (2021) highlights that creativity in the music classroom constitutes the core of music teaching in pedagogues such as Paynter, and that its development through musical creation generates in students a profound sense of achievement, belonging, and authenticity, having produced something perceived as their own and unique.

The findings of this study support the notion that awareness of one's own creative progress enhances motivation and engagement, fostering a more receptive and open

attitude toward improvisation. The positive evolution of students' emotions and perceptions in relation to improvisation demonstrates that when provided with a space for creation, exploration, and expression, students not only achieve significant progress in musical development but also develop a proactive disposition toward learning, characterised by the gradual overcoming of fears and insecurities associated with musical creation.

Conversely, if schools do not provide open spaces for creation or make them accessible to primary education students, barriers persist that reinforce a conception of learning linked to fear of error and the expectation to create "something perfect" or "not to fail." Learning is constructed through imperfections and mistakes, which constitute essential opportunities to advance and develop musical and creative competences in improvisation and musical creation. Creative capacity can be learned and developed (Aróstegui, 2012); however, this requires, first, teachers committed to this approach, and second, the effective implementation of these ideas in classroom pedagogical practices. These inhibitions and fear of error in creation are directly related to traditional teaching methods that remain prevalent, based on memorisation and musical reproduction. In such approaches, students are compelled to memorise and reproduce content accurately in assessments, receiving grades according to the precision of their memorisation. Consequently, there is little room for creation, personal elaboration, or self-expression, and deviations from the established pattern are often penalised.

The results of this study show that when students engage in activities that diverge from these routine learning procedures, they often face uncertainty, insecurity, and fear, expressed in questions such as: "What should I do?" or "What is right or wrong?" This highlights that the assessment of correctness is often dictated by external agents, and schools rarely provide spaces for students to discover, experiment, and learn autonomously, transcending evaluative labels of pass or distinction. For students to gain confidence in creative processes, it is crucial to provide spaces in which they can develop and express musical creativity freely, with the teacher acting as a guide to reinforce personal security and confidence in their improvisations and musical creations. This underscores the importance not only of the teacher's role but also of their pedagogical approach to musical creation in the classroom, and of how students are made to feel and engaged in these spaces of artistic exploration. Fostering students' confidence is essential, as without it they cannot continue to explore or progress in their musical creations and learning.

In this context, emotions play a central role, as they predispose students to learn when the environment is characterised by positive feelings such as joy: "learning through joy generates associations of well-being with learning, contributing to its use and desire to continue developing it" (Bueno, 2019, cited in Elizondo, 2023, p.65)<sup>8</sup>. Furthermore, when students engage in creative tasks, they feel free to develop thematic ideas, which constitutes the most appropriate way to cultivate musical thinking naturally (Aróstegui, 2012).

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<sup>8</sup> Original quote: "Aprendera través de la alegría genera asociaciones de bienestar con los aprendizajes, lo que contribuye a su uso y a querer continuar incrementándolos" (Bueno, 2019 cited in Elizondo, 2023, p. 65).

This study argues that it is essential to create learning spaces based on musical creation in schools, particularly in primary education. For students to fully develop their musical skills, they must be allowed to make mistakes, as error constitutes a foundational and essential form of learning. Accordingly, it is necessary to revitalise music education approaches and open classrooms to artistic proposals focused on musical creation and improvisation (Yelo Cano, 2021).

In this regard, jazz presents itself as a particularly valuable learning context, offering a framework in which musical improvisation can be developed through exploration, shared learning, and lived experience, thereby promoting holistic and creative learning.

## 5. LIMITATIONS AND FUTURE DIRECTIONS

With regard to the limitations of the study, the first aspect to be noted concerns the time available for the implementation of the project, as music lessons were limited to one hour per week. In this respect, time constraints may have restricted the further development of certain learning processes related to listening, musical creation, and improvisation, which often require continuity and sustained practice in order to be fully consolidated.

As for future directions and research prospects, this study points to the potential value of extending the design of the project by implementing it from the very beginning of Primary Education. Introducing musical creation and improvisation at these early stages is not only feasible, but also necessary. Such an approach would allow for the integration of practical, experiential, and meaningful pedagogical approaches grounded in musical creation from the outset of the educational stage. In this way, it would be possible to examine the benefits of these approaches over a longer period of time, with pupils whose musical learning has been shaped by such methodologies from the start of their schooling. This would, in turn, enable an assessment of their impact upon completion of Primary Education.

Furthermore, the longitudinal implementation of the project with the same group of pupils over several years could further strengthen the findings of the present study, particularly regarding the suitability and educational value of this pedagogical approach.

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