

# Listen, Learn, and Create: (De)constructing Professional Identity through Critical Sound Cartography

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This article presents a structured pedagogical framework focused on Critical Sound Cartography (CSC) as a cutting-edge audiovisual methodology designed to augment knowledge generation and fortify the connections between social and historical contexts in relation to students' professional education. Utilizing attentive listening, CSC enables an in-depth analysis of sociocultural and political aspects, thereby promoting the emergence of innovative cognitive, affective, and potentially actionable perspectives. Moreover, this approach nurtures sensitivities that reveal alternative structures for re-conceptualizing the learning process and examining individual realities. As a result, the proposed framework endeavors to capitalize on CSC's educational potential as an efficacious tool for stimulating critical and reflective interactions with personal and professional domains.

## Discovering our Professional Identity through Critical Sound Cartography

Auditory perception of our surroundings plays a significant role in shaping personal and professional identities.<sup>1</sup> Sound cartography has emerged as a valuable instrument for investigating and scrutinizing sound within social, cultural, and political contexts.<sup>2</sup> Our research aims to challenge students' ingrained auditory experiences and comprehend their influence on identity formation and worldview perception.<sup>3</sup> Sound stimulation engages cognitive, emotional, and social processes, fostering an environment conducive to innovative idea generation.<sup>4</sup> Consequently, Critical Sound Cartography serves as a pivotal tool in assessing the societal impact of sound, particularly in education, where evidence suggests that sound positively contributes to students' cognitive and socio-emotional development.<sup>5</sup>

## Bridging Critical Pedagogy (CP) and Sound Cartography (SC) towards Critical Sound Cartography

In contemporary education, Critical Pedagogy (CP) and Sound Cartography (SC) have emerged as vital approaches that foster active and participatory learning experiences. These educational paradigms facilitate students' comprehension and critical examination of social, political, and cultural environments, equipping them with tools for active engagement within their communities and societies. Moreover, these approaches help students develop critical and reflective skills, enabling meaningful analysis and informed decision-making in their personal and professional lives.

CP is an educational approach that aims to cultivate communication, reflection, and confrontation skills across diverse perspectives by promoting social awareness through education<sup>6</sup>. Its primary objective is to assist students in understanding and analyzing their social and cultural realities while developing skills for social transformation and justice.<sup>7</sup> Widely adopted in both formal and non-formal education, CP focuses on personal and collective emancipation toward a more equitable world.<sup>8</sup> Consequently, CP facilitates the development of critical formative skills, empowering students to analyze, comprehend, and address social and cultural issues in their environments while giving voice to marginalized or excluded contexts.<sup>9</sup>

SC is an interdisciplinary practice that nurtures understanding and sensitivity toward the sonic environment through attentive listening.<sup>10</sup> It involves creating maps documenting the sounds of specific places or environments, which can be employed to investigate the relationships between sound, space, culture, and personal and professional lives.<sup>11</sup> By integrating geography, anthropology, sociology, and technology, SC represents and analyzes soundscapes, proving to be an innovative and effective pedagogical tool for fostering critical reflection. It serves as a means of sensitization and awareness regarding the importance of surrounding sounds and their impact on human life.<sup>12</sup>

This study examines the influence of sound on personal and professional identities and our worldview. A pedagogical intervention was implemented to encourage critical and reflective inquiry into the meanings of sound and music environments. This pedagogical research facilitated dialogue surrounding sound and music in the classroom, exploring their effects on our lives and identities.

After this introduction, the methodology employed in this study is presented. Section 3 will introduce one case of creative work as a practical example of the student's results. Section 4 is dedicated to a discussion that emphasizes the importance of the soundscape approach as a pedagogical instrument that nurtures comprehensive and reflective learning. The text ends with the conclusions that aim to underscore how this approach fosters critical thinking, creativity, and problem-solving skills, which are essential for students' personal and professional growth.

## **Methodology**

Between March and May 2022, a pedagogical tool was conducted across three educational institutions in Spain. Three in-person sessions were held, during which the concept of sound ecology was introduced and explored with students. Over an eight-week period, sound cartographies were created and shared, following guidelines provided during each weekly in-person session.

The primary objective of the project was to account for the metacognitive processes students could perform during the construction of their cartographies.<sup>13</sup> This included revealing their impressions, sensations, learning experiences, and decisions tied to reflecting on their unique sound experiences in relation to their professional education.

The pedagogical proposal consisted of two tasks:

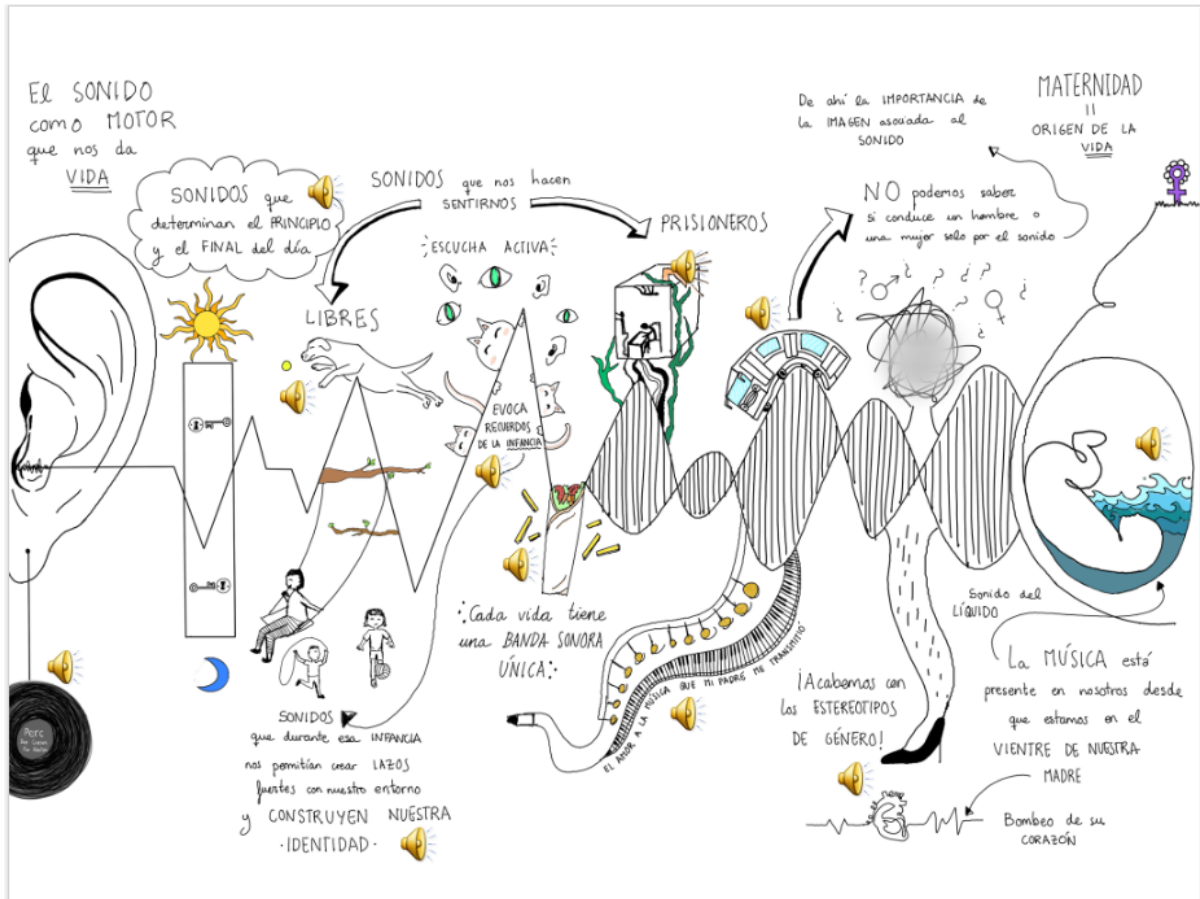
- Individually, students collected sounds based on specific guidelines and created a sound cartography accompanied by a reflective narrative. This task facilitated critical reflection on students' sound environments and their impact on personal and professional identities.
- In pairs, students created a musical piece using fragments from their sound maps. The objective of this task was to develop collaborative work strategies by reconfiguring individual materials into a musical piece that integrated materials from their cartographies. Through this creative process, students shared and constructed knowledge collaboratively.

For this research project, informed consent was obtained from students for participation and potential use of the results in scientific publications and presentations. This process adhered to the ethical principles established by the respective ethics committees of each institution.

### **Experience through CSC**

To exemplify the process, we present a case of a participant who engaged in Critical Sound Cartography (CSC) by collecting sounds based on specific patterns related to their sonic environment and its influence on their personal and professional identity. Students were instructed to gather sounds using a device such as a mobile phone, following guidelines that directed them to explore sounds from their immediate surroundings, familiar spaces, the concept of home, transit zones in their daily routines, preferred or disliked sounds and music, and music connected to their identity.

This task enabled students to critically examine their sound environment and its impact on their personal and professional identities, as suggested by certain elements depicted in Figure 1.



**Figure 1.** Critical Sound Cartography created by Paula Gallardo Izquierdo.

Upon completion of the first task, the teacher prompted students to discuss and share their reflective cartographies with their peers, identifying similarities and differences while examining the impact of their sonic environments on their personal and professional identities. Subsequently, students employed collaborative work strategies to create a musical piece in pairs, utilizing fragments from their sound maps (see Figure 2).



**Figure 2.** Sound composition of the participants' CSC.

In the final stage, the teacher facilitated a class discussion, prompting students to share their reflections on the project, the skills they developed, and the project's impact on their understanding of the sound environment and collaborative work strategies. The sound piece, developed in association with the cartography, was presented to the class.

Subsequently, the auditory composition accompanying the CSC was showcased: Audio.

By engaging in the CSC, participants foregrounded the sonic experience as an integral aspect of daily life. The collections of audio recordings, guided by specific instructions, evoked memories and moments related to pedagogical practice. Moreover, by creating the CSC combining text, sound and image, participants were able to express their thoughts on critical educational topics, heightening their awareness of the underlying factors<sup>14</sup> that mediate visible teaching actions. An excerpt from a participant's reflective journal is as follows:

"Furthermore, it makes me think that in the future, we should carry out activities in the classroom (and outside of it) that allow students to understand the broad meaning of sound and how it can affect their emotions and feelings, thus recognizing the value of this new knowledge. We should present it in the most everyday way they listen to it (in nature) and explore other ways of listening and creating sound." (Student voice)

Through the reflective process stemming from the CSC, the participant emphasizes the importance of sound in our lives and argues that sound experiences should be given more attention in the classroom, as they can generate diverse yet influential learning opportunities. Reflecting on various sound stimuli allows them to connect with present experiences and recall

past memories, enabling them to investigate elements that may be crucial in constructing their identity and shaping their understanding of their future profession.

## **Discussion**

Critical Sound Cartography (CSC) has emerged as a powerful educational tool in fostering social awareness, critical reflection, and deepening students' understanding of their sound environment. By engaging with CSC, participants critically and reflectively explore how sounds interrelate with social, political, and cultural factors, leading to a more profound appreciation of the complexities of soundscapes and their impact on human life and the environment.<sup>15</sup>

One of the strengths of CSC as a pedagogical tool lies in its ability to facilitate the construction of a living cartography of students' personal and professional processes. This living cartography serves as a dynamic and evolving record of students' development, promoting transdisciplinary dialogue between students and teachers, and fostering collaboration and communication across different disciplines.<sup>16</sup>

Through Critical Pedagogy (CP), CSC enhances students' awareness and sensitivity to the importance of sounds and their impact on human life and the environment. This approach enables students to develop essential listening, perception, and sound representation skills while deepening their understanding of the interrelatedness of sound and sociocultural factors.<sup>17</sup>

CSC also fosters transdisciplinary dialogue, as it encourages students and teachers to explore soundscapes, their relationship with physical reality, and their meanings. This collaborative and interdisciplinary approach creates a living record of students' personal and professional development, enriching their educational experience and empowering them to engage with their sound environment more critically and reflectively. Moreover, CSC's focus on reflection and critical thinking can lead to a broader reevaluation of pedagogical practices and societal issues, positioning students as agents of change committed to social and environmental justice and sustainability. As a valuable pedagogical mediator for CP, CSC contributes to students' comprehensive and critical development by fostering social awareness and critical reflection on the realities that surround them.

By facilitating reflective exploration and connection with the sound environment, students develop essential skills that promote interdisciplinary dialogue and encourage active participation in building a more just and sustainable society. Through critical pedagogy processes that involve communication, reflection, and transformation, CSC allows students to become critically engaged citizens, better equipped to navigate the complexities of the contemporary world and contribute to positive social change.<sup>18</sup>

In conclusion, Critical Sound Cartography is a versatile and potent educational tool that fosters social awareness, critical reflection, and a deeper understanding of the interrelatedness of sound and sociocultural factors. By engaging with CSC, students develop essential skills and engage in

transdisciplinary dialogue, ultimately empowering them to contribute to a more just and sustainable society through the lens of critical pedagogy.

## **Conclusions**

Critical Sound Cartography (CSC) serves as an invaluable pedagogical tool that fosters holistic and reflective development in students, empowering them to engage with their acoustic environment in a more meaningful and insightful manner. This engagement fosters awareness and sensitivity to the importance and impact of sound on various aspects of human life, contributing to a comprehensive education while encouraging active participation in the construction of students' personal sound experiences. Furthermore, CSC can be instrumental in cultivating socially and environmentally conscious citizens by deepening their understanding of the connections between sound and various sociocultural factors. Continued exploration and development of this tool in diverse educational and social contexts are crucial for enhancing the overall understanding of acoustics and their influence on human life.

CSC's methodology can be beneficial not only for higher education students but also for learners at different educational stages, as long as the process is adjusted to suit the age and context of each group. Additionally, CSC can be valuable for professionals from various fields beyond education, such as urban planning, architecture, and design, offering unique insights into the acoustic environment and its relationship with human behavior and experience.

In the realm of community engagement, CSC can be employed in outreach programs to raise public awareness about the impact of noise pollution on health and well-being, promoting the adoption of sustainable practices and policies aimed at mitigating the adverse effects of noise pollution in urban environments. Furthermore, CSC can contribute to interdisciplinary research on environmental noise, public health, and social dynamics, enhancing our understanding of the complex interplay between sound and human experience.

CSC also has potential applications in cultural and artistic contexts, such as music, film, and theater. Musicians and sound artists may utilize CSC as a creative tool to explore and compose innovative soundscapes that challenge traditional approaches to sound design and performance. Filmmakers and theater directors can leverage CSC to create immersive auditory experiences that evoke specific emotions and sensations in their audiences, contributing to a more engaging and memorable experience.

Moreover, CSC can facilitate interdisciplinary collaboration among professionals from various fields, fostering innovative approaches to acoustic design, education, and the development of new technologies and methodologies related to sound analysis, representation, and manipulation. By integrating CSC into various domains, we can broaden our understanding of the role of sound in human life, enhance our capacity to address environmental and social challenges, and promote a more sustainable and harmonious relationship between humans and their acoustic environments.

In summary, Critical Sound Cartography can be an innovative, versatile, and invaluable pedagogical tool that extends beyond the educational sphere. It offers a reflective and comprehensive approach to exploring acoustic environments, promoting awareness, sensitivity, and understanding of sound's role in human life. With potential applications in urban planning, community outreach, and the arts, as well as fostering interdisciplinary collaboration and innovative approaches to acoustic design and education, CSC has the potential to make a significant impact on the way we perceive and interact with our acoustic environments.



## Notes

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