

CREATIVITIES, ASTONISHMENT AND DEMOCRACY:

LEARNING THE UNKNOWN ¹

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Doing and saying something different than what you have seen and heard – that seems to me a minimally sensible request and not at all excessive; very little, therefore, is asked: that the human mind exercises its individual rights in school.

See and listen, do something new – so that I can also see and hear something new – that is a summary of what I think is obvious. The teacher sparks the flame, but the torch is carried by the student to wherever it is they want to go, of course. The difference between being informed and being curious is the difference between carrying a weight on your shoulders or carrying your dream.
Gonçalo M. Tavares, 2023

Abstract. Musical learning is characterized by complex activities that intersect academic, cultural, social, and relational worlds, between different techniques, aesthetics, models of communication and emotions, in addition to ways of (re)existence where possibilities of re-enchantment with real and imaginary worlds are created. However, education and training do not always achieve the development of multi-competencies and conviviality between different pedagogical, artistic, ecological, social and cultural contexts.

Thus, the ecological concern in thinking and acting in relation to art and training requires a complex understanding of action and reality, with a transdisciplinary and interdisciplinary framework that reconnects knowledges, imaginaries, and creativities in the learning the unknown through polyhedral and rhizomatic modalities. Creativities based learning may contribute not only to the reexamination of training and artistic-educational work, reconnecting them more deeply to contemporary art and music-making, but also to the construction of a more cultured and plural school and democracy.

Keywords: creativities; creativities-based learning; polyhedral and rhizomatic learnings; learning the unknown; the ecology of artistic-musical education; democracy.

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Introduction

Artistic-educational thinking and acting find themselves in a time of great complexities, uncertainties and various transformations in which school-based education and training do not always optimize the development of multiple skills and conviviality between different educational, artistic, ecological, social and cultural contexts, connecting worlds and possibilities, with feelings and emotionalities open to the different and to the unknown.

Artistic and musical learning are characterized by their complexity, situated in the confluence of different academic, cultural, social and relational worlds, as a mode of (re)existence where possibilities of re-enchantment with real and imaginary worlds are created, involving different ecologies of learning through non-linear, non-sequential and multicentered modes. The ecological concern in thinking and acting requires a complex understanding of action and of reality, situated in transdisciplinary and interdisciplinary modes, reconnecting knowledges, and englobing a problematic with a dual nature. On one hand, there are different ways of producing knowledges, while on the other, the construction of knowledges is also dependent on networks of sharing, cooperation, and complementarity between these types of knowledges, the subjects, and the communities of meanings involved.

Stimulating democracy, community, restlessness and creativities, through curious practices (Morin, 2014; Paris & Hay, 2020) and “pedagogical encounters” (Freire, 2009) involves constructing a space for polyhedral, rhizomatic and ecological training and learning which is open to discovery (Bruner, 1999), reimagining our futures together (UNESCO, 2021), in an ecology of action that considers the complex, the aleatoric, the serendipitous, the initiative, the decision, the unexpected, the unpredictable, the consciousness of derivatives and transformations, the involvement and participation . Learning and studying together may be considered “the best way of promoting a communal life, a convivial society” (Nóvoa, 2022, p. 42).

Therefore, this text aims to go against the tide in terms of neoliberal educational and creative practices, which have been contaminated by the ethos of the market, conforming to the principles of performability in the form of tests, of exams, of quantification and of the marketability of training work (Adams, 2013). I also aim to challenge the “long tradition of de-politicizing music education” a tradition that advises music teachers not

to consider “all of the societal issues that will always surround music education” (Reimer, 2009, p. 131), and that is built on a universal hierarchy of purely musical values (Swanwick, 2001), which further “guides teachers repertoire choices and frees them from active involvement with societal change” (Karlsen & Westerlund, 2015, p. 383).

At the same time, it is a text that considers learning the unknown and the creativities as processes that are rooted in reciprocity between the individual, the environment, the different contexts in which they operate and the dynamics they establish. This signifies an ecological approach (Barret, 2012; Clarke, 2005; Guatari, 1990, Wakao, 2018). in which thinking about music learning is rooted in multicausal and trans-sectoral phenomena exploring different sonic, sound and musical opportunities, in which the unpredictable, the risk, the incompleteness and the uncommon are bolstered by the surprise and the “enchantment that the things produce in us” (Barros, 2006).

This is a first systemization of a theoretical nature, as yet unfinished, as part of on-going research relating to artistic practices and how to promote modes of participation, creativity, risk management and uncertainty, in multiple connectivities, in conviviality between the different (Vasconcelos, 2020; 2021). This is research that aims to provide an answer to the following question: “In which modes can artistic practices in schools and in education contribute toward the construction of a more inclusive, cultured, cosmopolitan and democratic society?”

This text is divided in three parts. In the first part, “Creativities and Music Teaching: conviviality between the different”, I aim to defend the importance of creativities in promoting the co-construction of Democracy, as a way of living together. The second part, “The unknown and the discovery: around an ecology of musical-artistic training”, focuses on problematizing and defending the argument of the relevance of artistic pedagogies that focus on the work that is unknown, enhancing imaginaries and learnings. In the third part, “Creativities based learning: a polyhedral and rhizomatic perspective”, departing from characteristics of the creative and artistic act, and of the educational act, I aim to explain what I understand by this concept, developing an ecology of artistic and pedagogical action, reimagining worlds of thought and action. I then briefly present some final considerations.

Creativities and Music Teaching: conviviality between the different

For a long time, studies relating to creativity were focused on activities such as composition, improvisation and performance (Hargreaves, 2012, Rinsema, 2023), with the existence of a hegemonic perspective of the value of creativity situated in a certain perspective. However, the concepts of creativity are always historically contingent, coming from social conditions and power configurations in specific moments. Concepts are always politically and culturally constructed (Odena, 2018).

In turn, the different types of transformations in contemporary societies - whether in artistic, social, economic or cultural terms, or in terms of technologies and the digital - have brought complex challenges that are reconfigured in the scope of music teaching and that, apart from access to different artistic-musical genres and the hegemony of determined sonic and musical cultures, have led to the appearance of another type of reflections relating to this type of teaching, exploring the connections between creativity and musical learning in a variety of contexts and environments (Hill, 2018; Randles & Burnard, 2023). This means that different valuations of the concept exist, according to the contexts and the objectives of the creative work.

It is in this transformation “the role of the music teachers was transformed from a teacher centered approach to a student’s-centered”, in which, as state Chen (2023), the role of students changed from a passive learner to an active learner as the student was required to listen attentively to YouTube video clips and play them back on the tablet track by track. Indeed, media culture came to introduce “complex music in children’s head” (Varil, 2023), significantly molding their musical vocabularies and their schemes of musical creation implying transformations in the educational and training design and in the roles of teachers, which has changed, going from a more conservative perspective to perspectives which are more collaborative and facilitating of work and artistic-musical learning. Working the unknown.

Therefore, it is important to contextualize musical creativities (Burnard, 2012). Musical creativities (i) comprise both the relational structures of concepts, with methods for relating these to the empirical world, *and* actors positioned within specific social and historical contexts; (ii) manifest multiple forms of authorship and mediating modalities; and (iii) are social constructions of musical production and consumption as they operate across and between genres. The author explains that this tripartite model helps to distance musical creativity from [the still] dominant ideologies and the mythical belief of the cult

of the genius. “Whether as creative producers or creative consumers of music, whether by traditional or technological means, we are working with social mediations between artists and audiences, listeners and sound systems, musicians and instruments, composers and scores, conductors and orchestras, actions and venues, and social and cultural institutions” (pp. 15-16).

It is important to note that musical creativities are seated in different sonic worlds and that music, as a creative practice (Cook, 2018), is a multifaceted, interactive and participatory activity rooted in shared experiences and emotions (Schiavio & Kimmel, 2021) involving collaborative processes of creation and co-creation in a dynamic of complementarity between the individual and the collective, between technologies, techniques and aesthetics, between different frameworks, between codes and conventions and their transformations, between tradition and innovation, between a diversity of sound words (Burnard & Dargonic, 2014; Hill, 2018; Holmes, 2023; Vasconcelos, 2021).

In this way, “collaboratively working together in enacting intercultural dialogue is crucial if we are to help a globalized world grasp that intercultural translations are co-constructed through collaboration” (Burnard et al., 2015, p. 361) And in this way of collaborative working, it is important to think of schools as “laboratories of knowledge, of culture and of experimentation” (Vasconcelos, 2016), “protected educational sites because of the inclusion, equity and individual and collective well-being they support – and also reimagined to better promote the transformation of the world towards more just, equitable and sustainable futures (...) School architectures, spaces, times, timetables, and student groupings should be redesigned to encourage and enable individuals to work together” (UNESCO, 2021, p. xiv).

And in terms of encouraging collaborative work

“One might ask if schools could not be practically and concretely laboratories of democratic life. (...) Above all, the classroom should be a place where students learn the rules of debate and fair discussion, awareness of necessities and procedures of understanding the other’s thinking, hearing out and respecting minority and ‘deviating’/different voices. Learning to understand others should be a major element in democratic apprenticeship” (Morin, 2000, pp. 112-113)

Thus, the key aspect of how the teaching music may respond to the necessities of a pluralistic society is the degree to which the experiences of giving and receiving are promoted: “social efficiency includes ‘all that makes one’s own experience more worthwhile to others, and all that enables one to participate more richly in the worthwhile experience of others” (Dewey, MW 9, p. 127). And in that sense, democracy is not only a question relating to political institutions and representative procedures, but a “way of life” a “moral ideal” inscribed in the daily life of individuals and communities (Dewey, 1976). The author writes that “democracy is the belief that the process of experience is more relevant than any special result achieved, and thus, special results have a final value only when used to enrich and organize a particular process”. And in this “process of experience” the “expression of difference [...] is a means of enriching somebody’s life experience” just as “cooperating, giving differences a chance to reveal themselves” and this “expression of difference is not only a right for other people, but a means of enriching one’s own life experience. It is inherent to a personally democratic way of life” (Dewey, 1976).

And in this context, as emphasized by Karlens & Westlund (2015), what matters is that “music in schools has a significant role in processes of developing a socially just society and that this contribution takes place through participatory processes and collaborative inquiry that may question any stable views of knowledge and prefer ‘connectedness compatible with innovation’ (Green 1998, p. 436). From the teacher, it requires imagination to break the established social practices that stem from existing musical traditions or school contexts. It also requires tolerance for uncertainty and a drive toward change”. Thus, “for a music teacher, repertoire choices are only a part of the larger process toward what Green (1998) has called ‘deep democracy’ [...]. Culturally diverse school contexts and teachers’ choices when operating within them, may form “a healthy test...in terms of how democracy is enacted and developed in music education’ (p. 226). “The music room could thus constitute an arena for intercultural community-building in which social justice is produced through solidarity practices “in action” (p. 384).

In this way, thinking about relations between creativities, schools and democracy, is thinking of creativities as territories of the imaginary, capable not only of thinking ‘outside the box’ (Glăveanu, 2014) but also with the capacity to generate new and/or reconfigured ideas in a democratic space of conviviality between different (Adams & Owens, 2015; DeLorenzo, 2015). Conviviality in which the participation and

involvement in decision-making may lead to a more diverse range of perspectives and a greater probability of identifying differentiated solutions and for the creative and other problematics that are faced, challenging existing norms and values, promoting critical thinking, and stimulating social change. This may lead to greater diversity and inclusion, in addition to greater cultural understanding and tolerance.

Thus, it appears relevant that the school as a democratic space fosters creativities through providing an environment that supports free expression and innovation. A school and democratic artistic-musical training with a strong commitment to individual and collective liberties, together with human rights, that promotes an ambience of positive learning and support, where children, youths and adults feel safe to take risks, make mistakes and express their ideas freely through the encouragement of divergent thought involving “hesitant knowledges” (Tavares, 2013).

The unknown and the discovery: around an ecology of musical-artistic training²

Artistic-musical learning, creativities, performance, the mobilization of (conventional and non-conventional) instruments, composition and improvisation, sound worlds and involved technologies, are seen as a process rooted in the reciprocal relationship between the individual (the child, the youth, the adult), the environment (natural and unnatural), references and contexts, taking into account the different types of dynamics that are established, as a multi-causal phenomenon.

As music is a participatory activity rooted in the sharing of experiences and emotions, of concepts, techniques, and aesthetics, I am more interested in thinking about learning and musical development and creativities from the perspective of interactions between individuals, environments and contexts than on focusing on internal psychological processes. Thus, the interaction and the interconnectivity that are established involve processes of reciprocal involvement with one or more individuals and these “interpersonal couplings not only benefit creativity in terms of mutual inspiration, by teaching one another, or by amplifying the range of actions possibilities (obviously duets or groups can do together things that no one can do alone). Creativity may literally happen *through* the medium of interaction. The process itself benefits novelty, as

² The first version of the text on this point was an oral presentation entitled “Performing arts and learning the unknown – student engagement through creativity and risk” during the third International Conference of Student Engagement at School: Perspectives from Psychology and Education, which took place at the Instituto de Educação of the University of Lisbon in July 2019, and later published in Vasconcelos, 2020.

individuals together find new pathways in virtue of their reciprocal causality” (Schiavio & Kimmel, 2021, p. 16).

In this context, seeking curricular and pedagogical adaptations that favor a greater involvement of students in learning and knowledges, that increase the creativity of processes and both individual and collective modes of action, entails the construction of training that not only contributes toward the development of cognitive dimensions, but one that contributes toward social dimensions, of learning to live with the other, with the different, and emotional dimensions, in an interdependent and complementary network. Learning to deal with uncertainty and incompleteness (Burnard & Randles, 2023).

Creative learning through discovery (Bruner, 1999), is an important element in thinking about and operating a plural, compelling and significant education, one that mobilizes a diversity of procedures that allow for students to also be considered agents for the construction of knowledges, encouraging them to discover facts and relations between facts in an autonomous manner. This “learning by discovery” requires that the child, the youth and the adult manipulate diverse materials and discover incongruencies. Encourages decision-making, taking risks, negotiating, participating, sharing and cooperating, researching and experimenting, as they are central in creative thinking and inherent to both artistic learning and practices and the common creation of culture and knowledges.

And in this common creation of culture and learning, modes of work appear relevant, which would infer participative and collaborative methods in counterpoint with models centered on the transmission and reception of information. The potential for this kind of work and learning means that “in the first place, the child will make what he learns his own, will fit his discovery into the interior world of culture that he creates for himself. Equally important, the discovery and the sense of confidence it provides is the proper reward for learning. It is a reward that, moreover, strengthens the very process that is at the heart of education – disciplined inquiry” (Bruner, 1979, pp. 123-124).

On the other hand, if considering that one of the principal functions of artistic practices in education is activating the resources of the imaginary, and in particular, stimulating modes of resistance in relation to the closing and the acritical reproduction of pedagogical-artistic and organizational models and modes, this implies developing the imagination, the propensity to challenge and to risk of the unknown. Nevertheless, “when we speak of imagination we are also in the field of contestation [...] of the fixations of a

‘here’ and a ‘there’, of an inside and an outside” in a plural geometry and “amazing (that astonishes and surprises)” (Tavares,2013:32-33), that is open to chance and to the unknown through “distended rationality” (Jiménez,2005:162) based on multiple options.

This valuation of what is not known, takes place in a complex framework that comprises a broad and interdependent range of situations and has two kinds of consequences. The first assumes considering the student as a subject that constructs their own discourse and their own authorship in facing different types of conflicts that allow for the development of personal and artistic thinking in convergence and/or in divergence with existing aesthetic and technical models. The second that the ‘community of artistic practices’ (Kenny, 2016) is plural and diversified, comprising open fields of possibilities for the creation of bridges between different worlds encouraging the ‘experimentation of ideas through improvisation, collaborative composition and discussion’ open to territories ‘of collaborative approaches that connect people, disciplines, and genres’ in a learning environment ‘that connects tradition and innovation’ (Gregory, 2005: 20-21).

The “creation of what is unknown, of what does not yet exist” also involves emotional intelligence and in which the child, the youth, and the adult need to feel challenged, the desire to (re)conciliate the unknown with a system of existing codes and conventions from their frameworks. Generally speaking, the creative process begins with the aim of solving a determined problem, exterior or interior to the individual, in a dynamic between the creation of something new and/or reconfigured, of discovery and of bricolage (Csikszentmihalyi,1996).

In this process, it is vital to be alert and facilitate “a broad range of personality traits” that include “independence of judgement, self-confidence, attraction to complexity, aesthetic orientation, tolerance for ambiguity, openness to experimentation and capacity to deal with risk” (Baer & Kaufman,2006:18). Consequently, the development of training work involves a broad and interdependent variety of situations and “strategic encounters” (Burnard, 2012) that lead to multi-shaped polyphonies with different kinds of technical, aesthetic, and historic-social problems that intersect. These intersections can be understood as “points where reality starts to move away from the science of predictability” que “shuffle, put everything back to the beginning, opening up possibilities” (Tavares,2013:523).

And it is in this “shuffle, put everything back to the beginning” that allows us to think of action through that which I call the “ecology of artistic-musical education”, through four Is.

The ecology of artistic-musical education: the four Is

Reflecting on the ecology of artistic-musical education is to think of a concept that emphasizes the importance of considering the environment and interpersonal relations in the teaching and learning process of the arts in general and of music, in particular, highlighting the need to create an educational, artistic, and relational environment that can be simultaneously balanced and disruptive, in the development of artistic-musical training.

This ecology, traversing the worlds of arts, musics and education, is comprised of a series of interdependent and complementary concepts that can articulately contribute to learning what one does not know, unfolding in a pertinent and questioning manner: individuality, imagination, interdependence and inquiry.

Individuality. Individuality is a collection of characteristics and attributes that define a determined identity. It is what makes a person unique and distinct, including their personality, behavior, competence, values, and beliefs, among other aspects. The construction of individuality is a lifelong process, based on multifaceted and multipolar influences and experiences, a combination of biological, social, cultural and psychological factors, and it is what defines the singularity of each individual. Thus, appreciating individuality is essential to the promotion of diversity and to respecting difference between people and their subjectivities (Galeffi, 2017).

Guattari (1992) states “the only acceptable aim of human activities is the production of a subjectivity that continuously enriches their relationship with the world” (p. 33). And in this production of subjectivity, artistic practices present themselves as a fundamental component in the processes of singularity as a means of resisting the devices that contribute toward the construction of industrialized, massified and accommodating subjectivities.

Thus, this conceptualization of individuality, which is subjective, is allied with incompleteness. Incompleteness as a position of opening, in opposition to closing. Opening and availability to others and to the world. Incompleteness, because it is

unfinished, with conscience coming from the social, cultural, artistic, historic process in which we find ourselves. “It is in our incompleteness, an incompleteness of which we are capable of being aware, that education as a permanent process is grounded. [...] It is also in this incompleteness that we become aware and join the permanent movement of searching on which hope is based” (Freire 2011, p.57), a “permanent social process of searching [...] in which curiosity [...] becomes fundamental to the production of knowledge. Furthermore, curiosity is already knowledge” (Idem, p. 54).

Imagination: Imagination is the skill of mentally creating images, concepts or ideas that, in reality, do not exist. It is a fundamental human capacity that permits us to conceive of things that do not yet exist and to explore possibilities and solutions for real or imaginary challenges. Through imagination, we can create and explore different perspectives, emotions, and situations, creating and trying out different modalities of present and future co-constructions.

In the arts, the imagination is the creative motor that permits artists to explore new ideas, concepts, and forms of expression (Vygostsky, 2004). Through imagination, artists can create imaginary worlds, fictional characters and innovative stories that stimulate the imaginations of performers and of audiences. In education, imagination is deemed relevant as it allows students to develop creativities, mental flexibility, and the ability to see worlds of new and reconfigured perspectives.

As stated by Tavares (2016) “perhaps the arts, by their very nature, have a utopic instinct – it is the definition of alternative reality, even if they are not particularly sunny or happy. The arts can affirm: this or that may have happened. They are hypotheses, possibilities, alternative in relation to a reality that does not satisfy, that is insufficient”. And in this context, “the imagination, the capacity to produce mental images of things that are not staring us in the face” (s.p.).

Interdependence. Interdependence refers to the fact that individuals, groups, or ideas are related to each other in that the action or behavior of one has an impact on others. This means that the actions of one person or group can directly affect other people or groups, and vice-versa. Interdependence is thus relevant as it involves our collective responsibility and the impact of our actions on others.

In terms of art-worlds (Becker, 1982), interdependence is situated in a network of differentiated collaborations between artists, in which each artist contributes with their

individuality, competency and world visions, thus contributing to creating a work that is probably more impactful than what one person alone might achieve. With regard to education, interdependence may be seen in the collaboration between teachers, students, parents and communities in the creation of a complex and cosmopolitan learning environment within collaborative learning (Torres & Irala, 2014).

Collaborative learning in that

“knowledge is socially constructed, through interactions between people and not through a transfer from the teacher to the student. Thus, the methodology of reproducing knowledge, whereby the student is a passive subject in the teaching-learning process, is strongly rejected. Contrary to this traditional teaching approach, which is still ingrained in the day-to-day of schools, these proposals recognize the previous knowledge of each student, their experience, and their understanding of the world. The teaching-learning process is no longer focused on the teacher, and the student plays a crucial role. The teacher acts in the creation of appropriate contexts and environments in order for the student to develop their social and cognitive skills in a creative way, through interactions with others” (Idem: 61).

Inquiry. Inquiry is the systematic process of gathering, analyzing and interpreting information in order to respond to questions or solve real or imaginary problems. There are various kinds of inquiry, including academic research and artistic research. For example, the objective of academic research may vary according to the context, but generally involves aiming of precise and trust-worthy information to form hypotheses, make informed decisions, or better understand a given topic.

In the case of artistic research is a way of qualitative inquiry that uses artistic processes in order to understand and articulate the subjectivity of human experience, use artistic practice as a means of investigation and experimentation that uses a methodology often interdisciplinary and may include a combination of methods, for instance, from the arts, humanities, social sciences (Knowles & Cole, 2020; Leavy, 2023).

Inquiry is fundamental to the advancement of human knowledge and for the resolution of complex problems. It requires method, rigor and intellectual honesty and the result can be used to uphold decision-making and develop differentiated and more substantiated modalities of intervention.

In the artistic area, inquiry can be seen in the exploration and experimentation of new concepts, ideas, and techniques, which - in many cases – permit artistic transformation. For example, an artist may research new means of expression through experimenting with innovative materials and techniques, which can lead to new artistic discoveries. In education, inquiry is a central element, not only to avoid ways of teaching and learning dependent on reproduction and imitation, but above all, because it encourages students to develop their curiosity and seek responses to questions and worries. On the other hand, inquiry can be an appropriate instrument for the development of learning as it allows students to develop research, critical and analytical skills, in addition to a deeper understanding of concepts, encouraging the seeking of creative solutions for complex questions.

Creativities based learning: a polyhedral and rhizomatic perspective

The ways in which I conceptualize creativities-based learning are grounded on what I refer to as polyhedral and rhizomatic learning, concepts that emphasize the complexity and interconnection of existing knowledges in the teaching-learning processes of artistic-musical education and which aim to promote a more creative and artistic approach to the teaching and learning of music in the various contexts in which it is found.

The polyhedral dimension of learning means recognizing that knowledge is comprised of various perspective and different approaches, and that the learning process should embrace all of these perspectives in order to be complete and inclusive. Through this approach, learning is seen as a construction in which knowledge is co-constructed from various points of view, and not as a unidirectional transmission of information.

On the other hand, this dimension is based on the idea that each individual has different strong points and areas of interest, and that it is important to appreciate and explore these differences in order to develop more personalized and meaningful learning. This means that the process of artistic-musical teaching and learning is adapted to the individual needs of the students, taking into consideration their skills, interests, expectations and learning styles, as I have previously mentioned.

In relation to the rhizomatic dimension (Deleuze & Guattari, 1995) “unlike a structure, which is defined by a set of points and positions, the rhizome is made only of lines; lines of segmentarity and stratification as its dimensions, and the line of flight or deterritorialization as the maximum dimension after which the multiplicity undergoes

metamorphosis, changes in nature” (cited by Randles & Burnard, 2023, p. 3). “The idea of the rhizome pushes against the use of binaries, dismantling dualisms”, as “unlike a structure, which is defined by a set of points and positions, the rhizome is made only of lines, lines of segmentarity and stratification as its dimensions, and the line of flight or deterritorialization as the maximum dimension after which the multiplicity undergoes metamorphosis, changes in nature” (Idem).

This reinforces the idea that in a rhizomatic context, each point can be connected without a central reference or hierarchy, which implies the abandonment of dichotomous thought and the assumption of the principle of multiplicity. The context of rhizomatic learning is characterized by connections, heterogeneities, multiplicities understanding and encompassing the different where there always exists openness and space for polyhedral configurations (Lines, 2013; Rodriguez-Quiles, 2018). And in this context, the concept of the rhizome is interesting, as it is not linked to the hierarchy but “presumes multiple possibilities of interconnection, a transversality that opposes verticality and horizontality. [...] It understands discontinuity, ramification and multiplicity of actions as fundamental, condemning the place of power, order, binary organization of the social world and its dualisms” (Santos *et al.*, 2011).

Thus, rhizomatic learnings are

“more than a concept of great intensity to consider other educational landscapes, but are rather self-organized fluxes, subjectivized in the potentials of nomadic and learning subjects virtualizing their own borders, without the preoccupation of reconnecting knowledges and their normative truths. On the contrary, it requires experiencing rupture with the One, with unity and with the seclusion of subjects toward the deviant, the polyphonies of singular assemblages, natives of rhizomatic cognitive [and emotional] ecologies” (idem).

And in these rhizomorphic systems and rhizomatic learnings, reflexivity is a defining element in the construction of educational-artistic action and to reflect “there must be some displacement of oneself. The perception of other subjects, realities and contexts requires an openness that may be stimulated by the educational process and that can rehabilitate us as subjects that construct the present and the future. The interaction with the different and the relationships with the other are the possible paths for our resignification” (Neto, 2017).

Creativities Based Learning

Creativities based learning including both polyhedral and rhizomatic dimensions, focuses on the idea that these learnings are decentralized networks of connections and interactions, without a linear or hierarchical structure which means that they can occur from many different points, which can be amplified through new connections and multipolar and multi-situational associations (Martinez-Rodrigues et al, 2018).

Creativities based learning can be anchored to seven large domains, in a double and contradictory formulation: orientation and disorientation; limits and liberties; formal and informal; discipline and experimentation; individual and collective; the known and the unknown; repetition and difference. These are characteristics which, just as in the ecology of artistic-musical education previously presented, encompass and intersect conceptual dimensions from the worlds of arts and the worlds of education.

Orientation and disorientation. In artistic-pedagogic work, orientation refers to the importance of guiding the child, the youth, and the adult on their creative journey, providing tools, resources, clear methodologies, conceptual maps and specific feedback that can help them to achieve their goals and realize their artistic vision. Orientation can also include helping to allow the comprehension and navigation not only of the complexities of creative processes but also of the complexities of artistic-musical worlds.

Meanwhile, disorientation is a procedure that contributes toward creating ambiguities, unpredictabilities and ambivalences, allowing for the creation of obstacles, deregulation of existing certainties, and leverage of concerns and, in this way, can contribute toward the appearance of new formulations of work. Disorientation can include creative blockages or difficulties in realizing a certain work, but what matters is that these difficulties and blockages can be overcome through an artistic-pedagogical environment that optimizes the confrontation between structuring and un-structuring.

Limits and liberties. In artistic work, limits can be seen as restrictions that impede the free expression of creativity, while liberty allows for the exploration of new ideas and forms of expression. However, artistic and creative practices always deal with different kinds of limits as challenges to their creativity, incentivizing creators to think in different ways in order to overcome real or imaginary obstacles.

In the educational and pedagogical-artistic context, the relationship between limits and liberty has dimensions that allows for the students feel secure on the one hand, and on the other, to explore their interests, creativities and ways of seeing and doing through projects that encompass different kinds of arts and other areas of knowledge (MacDonald & Wilson, 2020).

In another way, limits provide a structure that helps to guide and bring meaning to work, offering security and stability. They establish rules and policies/indications/guidelines so that the artist, teacher, child, and young adult can develop their competencies, ideas and work in order to reach established or envisioned goals. Furthermore, they can help to preserve the integrity of the work and avoid the dissolution of its cohesion and meaning. Conversely, the liberty of artistic and pedagogical work allows for creativities to flow freely, and for ideas to be explored without restrictions, giving opportunities to artists, teachers, children, youth, and adults to autonomously experiment and discover new paths, without external interference.

Formal and informal. Formal work is characterized by the existence of rules and norms whereby activities are planned, systematized, and generally undertaken in formal environments. Informal work is less structured, more flexible, and generally not governed by official norms. It can take place in informal environments, in different real and digital contexts and communities.

The articulation between formal and informal work has its advantages and disadvantages, and the choice between them depends on the specific necessities and objectives of the artist or teacher and the characteristics of the students. Formal work offers more security, stability, and direction, whereas informal work is more creative and flexible, allowing for the exploration of new paths (Bruno, 2014; Ferreira & Vieira, 2013)

The balance between formal and informal work is considered relevant (Green, 2002, 2008), as the advantages of both can be harnessed, and the limitations avoided. For example, it is possible to blend the structure and regulation of formal work with the creativity and liberty of informal work, creating an environment that allows the artist or teacher and the children, youth, and adults to develop their skills and achieve what they set out to achieve (Hess, 2020; Narita, 2015; NG, 2020; Oliveira, 2021)

Discipline and experimentation. Discipline and experimentation are two opposing but complementary approaches, which can play an important role in artistic and pedagogic

work. Discipline concentrates on following and abiding by pre-established and/or co-created rules and procedures, which can guarantee that the work is completed in an organized, structured fashion. Experimentation refers to the desire to explore new ideas and techniques, without following established rules, creating different disruptions. It is important for creativities and may be fundamental to discovering new forms of working and to finding different solutions to the challenges found in artistic and pedagogical work (Daniel, 2020; Morgan, 2022).

Furthermore, experimentation refers to the search for solutions and the exploration of ideas and is thus relevant for both artistic work and the learning of unknown territories and “living with uncertainties in the creative process” (Zielińska & Karwowski, 2022) where creativity and originality are appreciated, but it can also be relevant to artistic-pedagogical work, wherein experimentation can lead to the reconfiguration of teaching and learning.

Thus, it is important to find a balance between discipline and experimentation, to take advantage of the positive aspects of both approaches and achieve success in artistic and pedagogical work. This may include the combination of rigorous procedures with the desire to explore and experiment with new ideas, with the aim of guaranteeing the technical, aesthetic, and social pertinence of the work.

Individual and collective. Individual work is focused on the pursuit of something that is accomplished by one person alone, without the collaboration of others. It is important in the process of creation, as it allows the artist, the teacher, and the student to have time for concentration and reflection. Furthermore, individual work can be useful for the development of competencies such as self-confidence, self-consciousness, and self-management. It is a concentrated, focused process, where a person is responsible for their decisions and choices.

Meanwhile, collective work refers to work carried out by a group of people, working together to achieve a common objective. It is important for artistic and pedagogical work, as it allows for the exchange of ideas, the construction of trusting relationships and the sharing of resources. Collective work can also be useful for the development of social skills, such as teamwork, conflict resolution and effective communication. Work undertaken by a team or a group depends on the collaboration between its members,

entailing different kinds of interactions, communication and task division (McCormick, 2021).

Known and unknown. The known refers to something which has already been tried, interpreted, and understood. It is a safe area, where the expectations are clear, and decisions are based on previous knowledges and experiences. It is a relevant approach when dealing with tasks that require precision, consistency, and safety.

The unknown, however, has not been trialed or understood. It is an uncertain area, where the expectations are not precise, and decisions are based on creativity, intuition, and experimentation. And if in the arts, as in education, not everything can be predicted, where rationality is always limited and contingent, ambivalence is presented as a pertinent element in considering artistic-musical training.

In effect, the predominance of reason, of a certain type of Western rationality, means aiming to “eliminate ambivalence, the possibility of a double interpretation of a fact, different ways of thinking and acting in the world” and seeking to “eliminate the strange, the abnormal” in an “attempt to suppress, to cover up the multiplicity of forces in which the diversity of life is manifested from its ambivalent perspective though static, conceptual and scientific definitions” (Bazzanella, 2012:67).

Well, ambivalence is the “possibility of assigning an object or an event to more than one category” (Bauman, 1999: 9) and in this respect, ambivalence pushes the individual to “a overcome passive attitudes, of mechanical and binary acceptance (passive and active, good and bad, right and wrong) placing oneself in the world according to the realization that perhaps it is inherent to existential human characteristics, contingency, insecurity, ambivalence, and that to exist is an ephemeral exercise that requires daily abandonment of crystalized convictions” (Bazzanella, 2012:75).

Repetition and difference. Repetition is found in the use of the same kind of elements, shapes or patterns relating to artistic-pedagogical work. Repetition firstly contributes toward creating a feeling of order and structure, whilst also reinforcing a message or idea. Secondly, repetition can be mobilized in the field of art, education and creativity to create determined communicative or aesthetic effects.

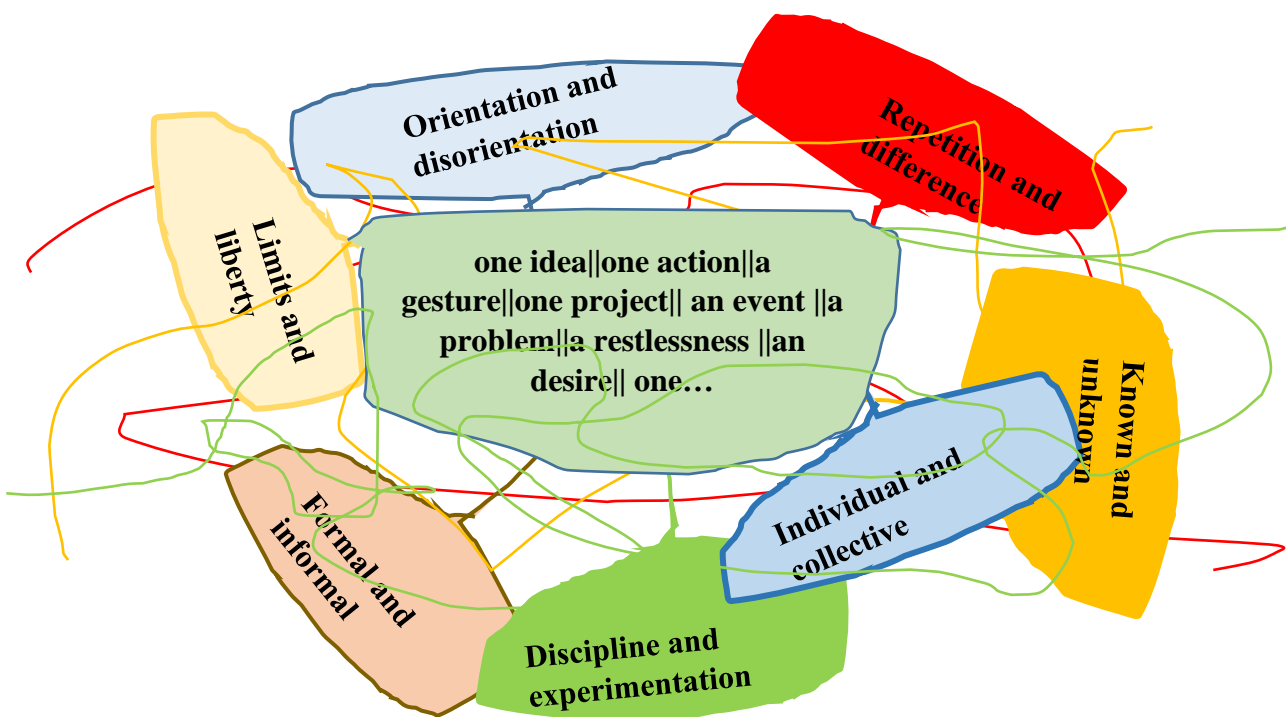
On the other hand, difference refers to variation or changes in elements, shapes or patterns within the work that is developed, whether it be creative or artistic-pedagogical work. Difference can be used to create contrasts and awaken interests and can also be employed

to explore new ideas or solutions for certain real or imagined problems. Furthermore, difference can create surprise or tension, and challenge the child, the youth, and the adult, as well as the viewer, to think in a different way (Cao et al., 2021).

In summary, creativities based learning is an artistic and educational approach that emphasizes the roles of creativities in teaching-learning processes. Polyhedral and rhizomatic learnings encourage (a) experimentation and exploration (b) collaborative work (c) flexible learning centered on knowledges and on students (d) decision-making and risk-taking (e) subjectivity (f) reflexivity and (h) a liking for the unknown.

In this context, the image below, figure , graphically presents the principal characteristics of creativities based learning.

Figure 1. Principal characteristics of creativities based learning



Final considerations

Social, cultural, political, technological, and artistic transformations in contemporary societies challenge music teaching, in its multiple forms, in different ways. These challenges are not compatible with ways of working centered on traditional paradigms (Vasconcelos, 2004), nor with commodification or metrification. On the contrary, it calls for more participatory, co-constructed and ecological processes in the construction of

multi-situated and multi-referential, bringing together tradition and modernity (Ribes & Navasquillo Morant, 2019).

In this context, artistic-musical education tends to “work well when learning is, first, participatory, provocative, communal, and collaborative; and second, when learning is process of constructing meaning rather than receiving (Bruner, 1996: 84) the ultimate end of pursuing knowledge is to develop curiosity as knowledge and culture are not merely the collection and selection of information but rather a process that is constructed in order to find and give meaning, albeit transitional, to different types of individual and collective experiences, in addition to the understanding of real and imaginary worlds.

And in this understanding of real and imaginary worlds, it is pertinent to consider an ecology of knowledges and subjectivities (Vasconcelos, 2016) as a strategic element in the urgent reconceptualization of education and training that questions worlds and helps to construct incompleteness and uneasiness (Burnard & Randles, 2023; Riano Gallán et al, 2021). Creativities based learning, learning the unknown is presented as one of the foundations in the construction of education that contributes toward the co-construction of identities and of knowledge, and for intervening in different personal and professional worlds.

And in this co-construction of identities, knowledges and interventions it is also urgent

“to rediscover the art of astonishment as it is surely from there that everything begins. Astonishment [...] that describes a strong reaction originating from something unexpected and sudden. If we look for synonyms, we find astonish, admiration, surprise. It is the contact (conscious, sparkling, disarmed, yielding) with life great than us, a life that is wide open, not predetermined. In astonishment, the new and surprising expression of life captures our attention in the manner of lightning, an unpredictable tear. We cannot fit it into our usual framework, as its unprecedented nature means that all predictions, knowledges, experiences, labels, maps, and preparations are useless. [...] Astonishment review what we know about ourselves and the world. Obliges us to rebegin, as if being reborn. Certainly, in its process, astonishment messes up and hurts” (Mendonça, 2016).

Thus, in a paradoxical time the challenge is to live in an incomplete, discontinuous and multiple worlds in which new questions are raised regarding ethics, politics, educational, artistic and strategic. These new challenges and openings must, above all, include an

acknowledgement that our differences are only points of departure for new solidarities and alliances in which incompleteness is a dominant characteristic. Considering the different kinds of incompleteness – academic, social, technical and artistic – of the different actors to address the complexity and singularity of the music, the arts and of artistic work in education, it is important that they are articulated in order to inform our different ignorances.

And in these incompletenesses and ignorances, the arts in general - and music in particular - create spaces and territories that do not exist, invent and create events and new realities, create surprises and (re)enchantments. This “utopic instinct”, this construction of alternatives to reality, which does not satisfy, which is not enough, (Tavares, 2016) learning to handle the unknown through creating and promoting cosmopolitan imaginaries are, by all means, a relevant contribution toward the construction of a more cultured and plural democracy.

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