





Case study: Observing the World Music School Helsinki as a social ecological system to enhance community connectivity and resilience

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Abstract

The World Music School community is a Non-Government Organisation (NGO) that teaches music and organises events internationally around dance and music activities. This case study investigates community connectivity and resilience development in the World Music School (WMS) Helsinki community of practice and the Shanghai WMS community of interest. Using a social ecological system approach, the community structures and relationships were explored and supported by the literature. In particular, the research focused on the feedback loops at different levels within each community structure. The WMS core activities are viewed as inclusive and human connectivity enhancers. Focusing on human connectivity, the research investigated the 'what' and 'why' of the NGO's involvement in building its community structure as it revealed what is essential for community resilience. This research discusses how connections between shocks and disturbances within the community systems were identified and the various outcomes when identifying and approaching acute weakness within the community structures. This case study examines how the WMS communities enhance community resilience across a complex social system starting at the individual level and then extending to physically close environmental relationships. These complex community structures provided a lens to focus on identifying the initial stages for resilient community connectivity. Observing these connections provided a basis for developing a synthesised model based on discussions in previous literature reviews. The processes involved with the model development included the critical roles, impacts and evolution of the World Music School community. This article argues that systemic change can happen when small but fundamental changes are longitudinally obtained through bottom-up approaches. The WMS communities have displayed the potential to make a difference towards connectivity and subsequent community resilience, beginning with the individual and extending to the overall social ecological system level.

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KEYWORDS

community, community resilience, social ecological systems, systemic approach, systemic design

1 | INTRODUCTION

The World Music School (WMS) Helsinki is a dance and music community ecosystem founded in 2015 as a non-profit association based in Helsinki, Finland. Its main aim is to ‘teach music as a mother language’ (WMS, 2021). The WMS approach focuses on the proximity and relationships between individuals and their environment. This approach enables the WMS to highlight possible acupuncture points (self-calibrating impact points)¹ (both theoretical and practical) to improve community cohesion and resilience. Instead of adopting a short-term panacea to the problem of individual isolation and social disconnection, the WMS approach has, in a sense, exposed the quality of long-term connectivity in action. This approach emphasises the significance of implicit and explicit components within the community as essential elements to resilience development at its focal level.

In a human-centred paradigm, it was observed that the disconnection of the social individual and their community significantly reduced the individual and their community’s capacity to operate as a resilient system. The varying degrees of proximity to our environment, and links between human beings, seem to suggest an emergent result of disconnection. This raised the question, what emergent combination of various conditions was responsible? From an overall perspective of humans and non-humans, this disconnection or disintegration simultaneously weakened the social ecological system (Aldrich & Meyer, 2015; Berkes & Ross, 2013; Robinson & Berkes, 2011; Walker & Salt, 2012a; Wenger, 1998).

This article argues that systemic change can happen when micro but fundamental changes are longitudinally obtained through bottom-up approaches. The WMS communities have displayed the potential to make a difference towards connectivity and subsequent community resilience, beginning with the individual and extending to the overall social ecological system level.

2 | COMMUNITY RESILIENCE

2.1 | Resilient community: A definition

Definitions regarding resilient communities vary. Norris et al. (2008, p. 128) argue that

A community is an entity that has geographic boundaries and shared fate. Communities are composed of built, natural, social, and economic environments that influence one another in complex ways.

We are now living in a world where communications and interactions among community agents are no longer necessarily bounded by spatial division; proximity can be achieved virtually thanks to emerging communication technologies that instantly dissolve physical constraints. Other relevant literature discussed the observation of communities that emerged based on choices from a designerly and social perspective, describing them as ‘... a new contemporary form of community ... that exists by choice, one that has been consciously or unconsciously designed and built ... with characteristics of voluntary, light, and open ...’ (Manzini, 2019, p. 2). Criticism has been made about this choice-based community, claiming that ‘... this way of seeing the political possibilities that design can afford seems so very quickly undercut by the arrival of social media ... (Tonkinwise, 2020, p. 90)’.

To put the resilient community definition into some context, it needs further expansion. Norris et al. (2008, p. 128) stated, ‘the geographic boundaries’ from a systems constraint view are comparable with the WMS activities. Connections are available to physically local or close residencies. At the same time, the virtual boundaries enable virtual communities over distance, with fewer chances of physical engagement but with more attractors that can trigger greater cascades of influence on an international level (Nousala & Hall, 2008).

With regard to the WMS communities, these definitions can also be interpreted as ‘mutual happiness’ based on their initial choices (or free will), trust and compassion (or empathy) for one another, gained through rounds of progress (iterations) during the

¹‘Acupuncture Points’ implies the meaning of ‘self-calibrating impact points’ where the decision to change is left for the system to make and not telling a social ecological system what to do.

WMS activities (Manzini, 2019). There is also the underappreciated interpretation of such choice-driven fluidity aligning to the core of the communities forged by the WMS. This fluidity is critical and empowers the WMS communities with novel pervasive characteristics, including time and experience shared (Manzini, 2019).

2.2 | Reviewing community disconnections: The gap

Wenger (1998) discusses Community of Practice (CoP) concepts, the types of relationships and their contribution to community resilience. The concepts and theory behind developing community resilience are further supported by Robinson and Berkes (2011), Berkes and Ross (2013) and Walker and Salt (2012a).² Although Walker and Salt referred to non-human community resilience, there are similarities among this resilience literature that are worth special attention. They note the similar effects of resilience within Non-Governmental Organisations (NGOs) and the CoP concept. Aldrich and Meyer (2015) noted that these relationships have a transformability effect on communities and community resilience.

The development of the digital age during the last decades has dramatically increased our overall communication capacity and reduced the depth of these exchanges (Twenge, 2013). For example, the various forms of the digital divide have exchanged quantity for quality. Our levels of digital interconnection have never been higher, yet nevertheless weaker. In a global village where worldwide travel or relocation circumstances have increased, the number of people belonging to the various diaspora³ has also increased (United Nations, 2019). Correlations between the disruption of the individual and their community networks should be given special attention. This special attention includes the reduced level of stronger connections of the system's new components and the digitally connected diaspora's connectivity in their new place of residency and settlement.

However, the observations between the immediate environmental links, namely, individuals and their current communities, suggest an emergent trending result, one of disconnection and loneliness (Holt-Lunstad et al., 2015). Digital ecosystems, such as Facebook, are considered necessary services for individuals to socially sustain

themselves and their sense of belonging (Vaidhyanathan, 2018). However, despite these online connections, some individuals have (to some degree) cognitively severed themselves from their immediate environments (Kesebir & Kesebir, 2017).

In addition to this phenomenon, Nousala and Marlowe (2020) observe that individuals can be isolated from their peers, engaging in increasingly superficial connections and relationships and fewer deep interconnections. These interconnections are typically operated at different paces and speeds, which may also show intriguing clues towards more profound effects and quality interactions. Consequently, the systemic social networks showed signs of acute weakness in their resilience towards shocks and disturbances. It was observed that sets of characteristics emerged and that the less connected were also the weakest components (Walker & Salt, 2012b). These characteristics will be further discussed in the following sections.

Community network disruptions are essential concerning community resilience. In a human-centred paradigm, the disconnection of the individual, and that of its community, significantly reduces (collectively) the capacity to operate as a resilient system. This resilient system can adapt and recover from these disruptions. The quality of the longer-term connectivity and components, both tacit and explicit (Nousala & Hall, 2008; Popper, 1979), are of great importance. From an overall perspective, this disconnection simultaneously weakens the social ecological system it is connected to or belongs. This may seem obvious, but if system components only have dysfunctional connections, it is not only a hindrance, but it is a longitudinal detriment for the entire system.

Social isolation, in physical terms, increases the mortality rate. In its wake, a batch of psycho or somatic-related illnesses and dis-ease follow. The surrounding society, including the health care system, is impacted, including the lack of quality connections for the disconnected individual (Eisenberger, 2012; Nousala et al., 2020). As a result, the increased disconnection of these individuals contributes to the decreased resilience of the whole system.

2.3 | Toward the social ecological system: A 'biological' perspective

We are all part of some type of *system* consisting of humans and nature (social ecological systems). Walker and Salt (2012b, p. 1)

The WMS is a nonprofit organisation whose communities display a non-linearity and unpredictability typical of social, ecological and complex communities. These behaviours were observed during WMS practical

²Ecological resilience.

³Diaspora in this article refers to a group of people who spread from one original country to other countries, or the act of spreading in this way (<https://dictionary.cambridge.org/us/dictionary/english/diaspora>). In this case study, 'diaspora' refers to the foreign ethnic groups living in Helsinki.

interactions and performances, highlighting different or uncertain knowledge or behaviours of the organisations' individual members (Nousala & Hall, 2008).

When a social ecological system shows acute weakness, such as disconnections during the system process, the impact of such undesirable features might be latent or inexplicit because they are longitudinally deterministic. It might also become prominent due to external or internal disturbances that are significantly larger in magnitude, reaching beyond the threshold of a system's adaptability, failing the system from returning to a state of equilibrium homeostasis (Norris et al., 2008). Given the nature of the social ecological system, as Biggs (2015, p. 9) argues, 'change is not uniform and continuous, rather, periods of gradual change can be interrupted by rapid, sudden and often unexpected change'.

This is where resilience shows its significance. Resilience is one of the three attributes of social ecological systems that govern system dynamics and determine their future trajectories. The remaining two attributes are adaptability and transformability (Walker et al., 2004). It could be argued that a social ecological system, even as an organisation, has its own 'personality' (or characteristics) (Nousala & Hall, 2008). We argue that the system dynamics can therefore be seen from a 'biological' perspective (McKelvey, 1997, 2003; Nousala & Hall, 2008; Salthe, 1985; Salthe, 1993). This perspective becomes critical when viewing such a complex system. These dynamic characteristics have been observed during the WMS case study through its related communities and subsystems. Within the overall social ecological system, these perspectives add to system dynamic understanding, showing the mechanisms that contribute to the nurturing of community resilience.

2.4 | The resilience of the WMS communities: A synthesis

With regard to the WMS community, three key issues impacting the definition of community resilience are raised here:

- What is meant by community resilience for the WMS?
- Why does community resilience matter for the WMS?
- The WMS as a community is resilient to what? (Carpenter et al., 2001).

2.5 | What is meant by community resilience for the WMS?

The term 'resilience' was originally rooted in physics and mathematics. The concept of community resilience is

'complicated by variation in the meaning of community' (Norris et al., 2008, p. 128). There are other community resilience concepts within various contexts elaborated by literature. For example, a dynamic input—process linkage might be characterised as

- Change — remains within critical thresholds (Berkes & Ross, 2013)
- Disturbance —retains essential function and structure (Walker et al., 2004)
- Uncertainty, unpredictability and surprise — thrive in an environment (Magis, 2010)
- Adversity—recovery of the individual (Buikstra et al., 2010)

Informed by systemic thinking (Holland, 1996; Meadows, 2008; Mitchell, 2009; Varela et al., 1974), the 'input' is the disturbances (external or internal forces) to a system; the 'process' follows the imperative of a system. To better scope it, Berkes and Ross (2013, p. 6) argued that '... two strands of targeted literature regarding community resilience were evident, focusing respectively on the social ecological system scale and individual scale'. An integrated approach was subsequently proposed to seek opportunities of mutual enrichment, given the overlaps and complementarities between these two scales.

For the WMS, the analysis of this research modifies community resilience and adopts these suggested models of integration, '... addressing the significance on two critical aspects, agency and self-organising ...' (Berkes & Ross, 2013, p. 11). These points are critical for generating community-level resilience.

2.6 | Why does community resilience matter for the WMS?

Robinson and Berkes (2011) argued the role of NGOs as bridging organisations with adaptive capacity, especially in putting together knowledge from different sources (Armitage et al., 2011) to make a new synthesis and co-produce knowledge at regional, national and international levels. Community resilience is therefore considered a particular characteristic with a capacity within a social system that '... works toward a communal objective' (Berkes & Ross, 2013, p. 6). NGOs can facilitate multilevel interactions through networks, deliberation and inclusivity, leading to social learning and resilience building (Robinson & Berkes, 2011). The resilience fostered by the WMS communities has subsequently catalysed adaptability, which is further deterministic to the trajectories of the overall social system.

2.7 | The WMS as a community is resilient to what?

Regarding the question of resilient to what? (Carpenter et al., 2001; Folke et al., 2010), it is essential to know first and foremost what a resilient community can cope with or, more specifically, what the system has to deal with in terms of disturbances. Disturbances are the inherent features in a community due to the dynamic nature of the social ecological system. Walker and Salt (2012a) categorised these disturbances by their longitude and magnitude scale, describing them as ‘... characteristic disturbances, large, infrequent disturbances, and unknown shocks’ (Walker & Salt, 2012a, p. 48). The ‘unknown shocks’ raised discussions around ‘specified resilience’ and ‘general resilience’.

The ‘specified resilience’ asks the question of whether ‘resilient to what’ (Carpenter et al., 2001) may have better performance in particular situations. To increase efficiency (by optimisation) for one form of resilience is to bare the risks of becoming too focused, limiting the system capacity to respond to unforeseen shocks and disturbances, and can lead to a reduction in other forms of resilience, or loss of resilience in other ways (Walker & Salt, 2012b). This suggests that resilience thinking needs to go beyond managing specific variables and specific disturbances to ‘respond to unforeseen shocks and disturbances’ (Walker & Salt, 2012b, p. 121).

Such discussions shift the attention from ‘specified resilience’ to ‘general resilience’, which deals with all kinds of shocks and stresses (Folke et al., 2010). The fundamental argument behind these differences is that disturbances can also be treated as ongoing opportunities for renewal and improvement (Biggs et al., 2015), by buffering shocks and adapting and reorganising in response to change (Folke et al., 2010; Walker et al., 2004). Therefore, general resilience is critical in opening opportunities for reorganisation. Walker and Salt (2012b, p. 121) identified three critical factors in maintaining general resilience ‘... diversity, modularity, the tightness of feedbacks’. These factors aligned with the eight commandments for environmental management proposed by Levin (1999).

Norris et al. (2008) also argued, ‘... a similar dichotomy exists in the system adaptability regarding different domains. For example, the engineering resilience versus ecological resilience ...’ (Norris et al., 2008, p. 130). This interacts with the argument by Gunderson (2000) ‘... The former addresses the ability to return to one pre-designed state after disturbances, while the latter embraces a multitude of desired possibilities that match the environment ...’ (Gunderson, 2000, p. 31). Resilience nurtured by the WMS communities is the emerging result of social

ecological system dynamics, which are intrinsically social and ecologically structured rather than mechanistically. Therefore, the state of the system, such as ‘pre-designed’, ‘pre-defined’ or ‘optimised’, does not fit into the notion of a systemic (non-humancentric) perspective. Hence, an integrated approach regarding general resilience is probably the relevant one for human communities, organisations and societies. Therefore, an integrated approach regarding general resilience is relevant for human communities, organisations and societies (Norris et al., 2008), as in this case, for the WMS communities.

2.8 | The functioning and thinking behind the World Music School Approach

Within the WMS community ecosystem, two main practical activities are as follows:

- Activity 1. Online and local music teaching
- Activity 2. Monthly folk dancing events

The online and local music teaching was delivered by teachers from all over the world and experienced by participants through online courses in a reciprocal format. The WMS did not dictate or influence the teachers’ teaching methods, so that they could remain independent and autonomous regarding teaching. However, content and teacher guidelines were always available.

In addition to the one-on-one music courses, the WMS monthly events introduced folk dancing to the public. Each event combined two distinct cultures, for example, Kurdish and Irish from the local community. For learning continuity, the students who completed the online music courses (Activity 1) were asked to participate in the folk dancing events (Activity 2). In this way, the students were both folk dancing participants and the musicians accompanying the dance teachers. Students in the same location should play at the WMS events, while the teachers can be from anywhere. The WMS also publish music, dance and cultural content on interactive online platforms that the community and the public can access to allow for constant improvements, as seen in Figure 1.

The WMS educational methods are not the traditional ones. The WMS approach fills the gap between the many high-level teaching institutions and the informal music sessions available around the country. This approach explores and incorporates musical traditions from across the world. Feedback from the participants suggests the experience also increases the participants’ knowledge of different

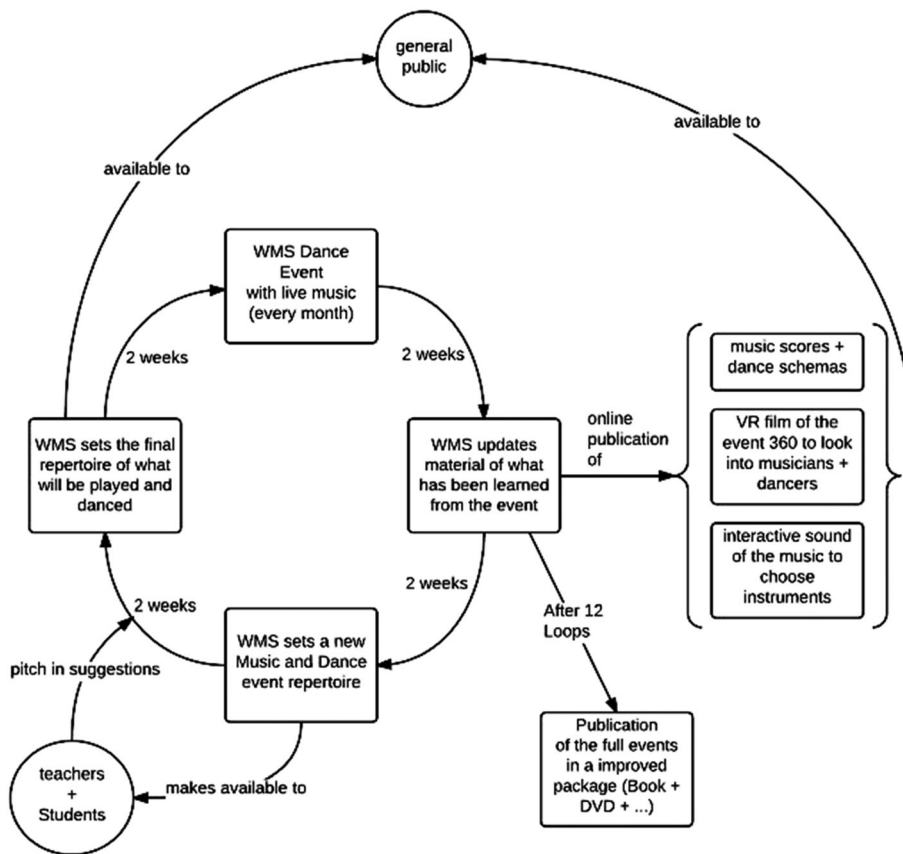


FIGURE 1 The organigram of the world music school available online: <https://worldmusic.school/> (accessed on 25 June 2021)

cultures whilst also strengthening the participants' cultural traditions.

2.9 | The WMS communities: Actions and impact

Since the inception of the WMS in 2015, many WMS-based communities have been formed, expanding into three other continents. In 2017, the expansion included China and West Africa. From 2018 to 2021, the Shanghai WMS community of interest was formed. The intent was to evolve the Shanghai WMS community of interest into a community of practice and engage public participants from a wide range of ages and backgrounds.

The impact of the WMS organisational approach can be observed via the systemic scales within the community ecosystem. Knowledge and experience have been generated using the WMS practice, influencing connected international communities (Hall et al., 2012; Nousala et al., 2009). The local transformational change led to feedback effects improving resilience, adaptability and transformability at the level of the whole system (Walker et al., 2009).

During WMS casework, a particular phenomenon was observed where disconnected individuals operated

in silos. This observation highlighted issues of disconnection and possible lack of linkages (both practically and tacitly) needed to provide resilience within the community context (Nousala et al., 2009; Twenge, 2013).

The WMS communities also demonstrated ways to improve practical understanding of connectivity and subsequent community resilience by focusing on the individual and their environments. Systemic changes were observed between fundamental micro changes (which were also longitudinal) and supported by bottom-up level approaches. This suggests systemic change can happen when micro, but fundamental, changes are longitudinally obtained through bottom-up approaches.

3 | THE IMPACT ANALYSIS OF COMMUNITY RESILIENCE

3.1 | Characteristics of resilience nurtured by the WMS communities

Based on feedback loops and observation, three key iterations occurred among the WMS communities' overall interactions (see Figure 2). Iteration A refers to the WMS internal interactions through online and local music

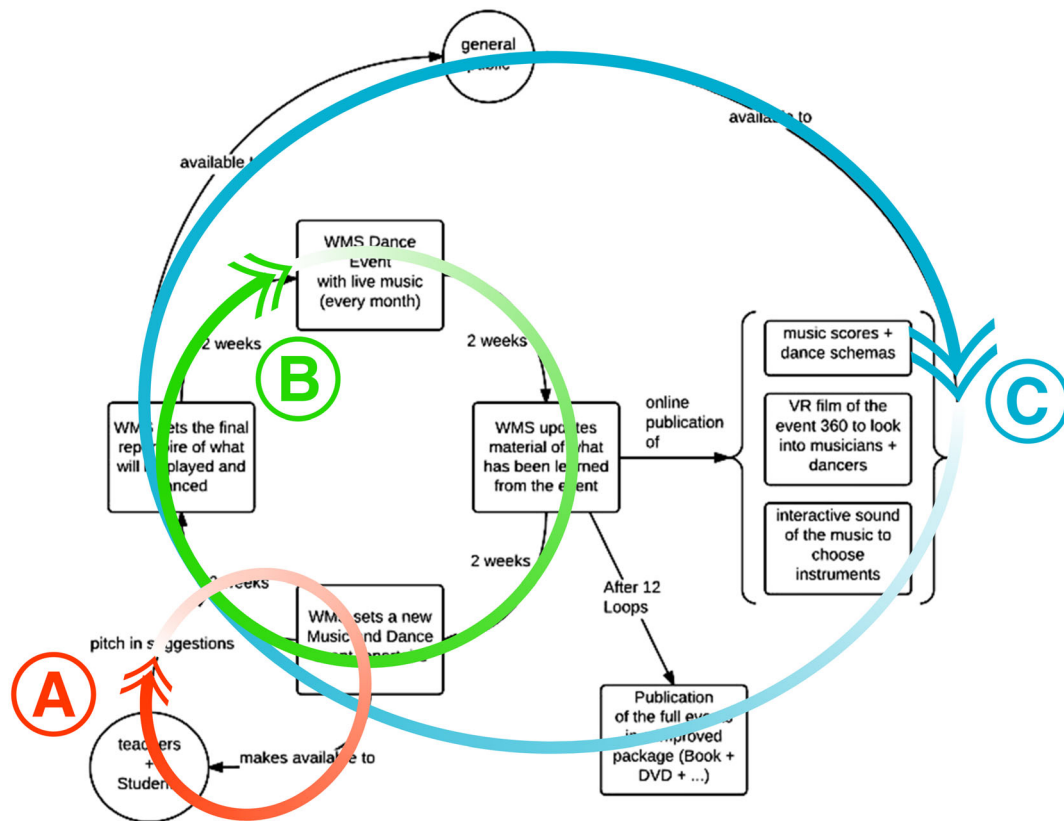


FIGURE 2 Three key iterations (A, B and C) occurred within the overall interactions in the WMS communities (modified based on Figure 1. The organigram of the World Music School) [Colour figure can be viewed at wileyonlinelibrary.com]

teaching, with participants including the WMS students and teachers; Iteration B refers to The WMS interaction with diaspora through monthly folk dancing events, engaging participants from a closer physical environment. Iteration C refers to the external interactions with the public including publication activities that gained social impact.

- A: The WMS internal interactions (as referred to the WMS Activity 1)
- B: The WMS interaction with diaspora (as referred to the WMS Activity 2)
- C: The WMS's external interactions with the public (as referred to as its social impact)

Due to these iterations, a series of critical characteristics regarding the WMS communities emerged, which led to the emergence of community resilience.

Berkes and Ross (2013) discussed an integrated approach to community resilience by exploring two strands of literature on community resilience. The first strand paid attention to '... feedback, nonlinearity, unpredictability, scale, renewal cycles, drivers, system memory, disturbance events, and windows of opportunity ...' The

second strand emphasised '... people–place connections, values and beliefs, knowledge and learning, social networks, collaborative governance, economic diversification, infrastructure, leadership, and outlook ...' (Berkes & Ross, 2013, p. 5) Such an integrative approach seated in the complex adaptive system and ecological understanding can incorporate the identification of explicit social strengths and connections to place, activated by agency and self-organising.

Given the integrated approach, a synthesised model was modified and then adopted to analyse emerging characteristics nurtured by the WMS communities, addressing the significance of agency and self-organising in community-level resilience.

Initiatives, Emerging Qualities and Longitudinal Impact.⁴

Category 1: Initiatives

- Values and beliefs
- Knowledge, skills and learning
- A positive outlook

⁴Note that the categories, or the order in which they are presented, do not suggest any linear causal relation of these emerging characteristics.

Category 2: Emerging Qualities

- People–place connections
- Social networks
- Empowerment

Category 3: Longitudinal Impact

- Polycentric governance
- A diverse and innovative economy
- Community Infrastructure

3.2 | Initiatives: Social engagement and connectivity

3.2.1 | Values and beliefs: The choices of free will

The WMS's purpose is to *teach music as a mother language*. Values and beliefs represent the individual's absolute freedom to participate because of a quality in the WMS they value, which they can hold on to and commit to believing in, for example, music. This aligns with the notion of fluidity driven by choice discussed previously. Values and beliefs such as mutual happiness, trust and compassion towards one another within the communities are considered and echo the notion of a 'shared fate' (Norris et al., 2008, p. 128). These cohesive forces explain why there is a community at all.

What sounds appealing to the participants here is that their values and beliefs can be further enhanced not by any individual but by the sensation rendered by togetherness. This feeling of togetherness requires joint and collective actions during interactions that work on both micro and macro scales. Time and space are shared, made possible by synchronicity, whether physical or virtual, at all scales. The power of the individual artistic process enhances any community when their processes are shared. Communications and meaningful encounters (Manzini, 2019) emerged and then matured.

3.2.2 | Knowledge, skills and learning: From resilience to adaptability

To be a school is to teach, share knowledge and produce new knowledge. Communities fostered by the WMS are preliminary learning communities. Knowledge is initially preserved in tacit ways, different from codified (or explicit) knowledge, which exists independently of living things (Nousala & Hall, 2008; Popper, 1979). Similarly, knowledge of music is not only explicitly stored, for example, in

musicology theories or music sheets, but more significantly in historical, cultural even emotional aspects embedded in a piece or a genre of music during its invention and performance. Such performances are the point of music and the WMS. This is the tacit end of the music knowledge spectrum, which deserves special attention.

Such dynamic ways of learning are essential to community resilience regarding the notion of a system's adaptive capacity, that is, 'the capacity of actors in a system to influence resilience' (Walker et al., 2004, p. 5), which '... often operates through social networks and learning communities' (Berkes & Ross, 2013, p. 15). 'Community adaptive capacity to deal with change relies not only on existing cultural adaptations but also on the ability to put together knowledge from different sources to make a new synthesis, co-producing knowledge ...' (Berkes & Ross, 2013, p. 9). Therefore, the WMS communities bare the potential to not just combine different kinds of knowledge but can also go beyond resilience, reaching system level adaptability.

3.2.3 | A positive outlook

The key for the WMS communities is to build and maintain a healthy and positive outlook and support a diverse approach at the individual level and in the learning process. Such levels of diversity foster various hybrid learning communities.

The WMS as a fluid entity attracts participants from the local, diaspora or peripheral levels, fostering dynamic communities where participants are not fixed, thus keeping the WMS communities from gradually turning inward. In contrast to tribalism, whose xenophobic structure means less flexibility and less resilience to endure disturbances, the more variations available to respond to a shock, the greater the ability to absorb the shock. A lack of diversity limits options and reduces your capacity to respond to disturbances. Increasing efficiency (optimisation) inevitably leads to a reduction in diversity.

3.3 | Emerging qualities

3.3.1 | People-place connections

The correspondence between people and place plays a critical role in the emergence of social networks. Berkes and Ross (2013, p. 10) argued that '... a resource-dependent or an indigenous community that affiliates culturally with a local environment that relies heavily on local resources can be treated as a social ecological

system'. The connections to a place have an increasing beneficial impact on the individual's resilience. This suggests an obvious interdependence between the health of the people and the health of the land. In a broader context, resilience is about ecosystems and people as integrated social ecological systems in which social systems and ecosystems are recognised as coupled, interdependent and co-evolving (Berkes et al., 2000; Folke, 2006). Therefore, the people-place relationship binds people within their physically close environments as a social ecological subsystem, generating resilience during the systemic process (Lu, 2010; Lyon, 2014).

Thanks to the WMS communities' physicality, locality and fluidity, participants from the local, diaspora and even peripheral areas came together. The participants brought their own knowledge and made connections within a closer environment. These experiences nurtured community resilience that intrinsically fed on such connections. As Berkes and Ross (2013, p. 13) argued, 'community resilience concepts can be best applied to place-based communities'. Note that the emerging communication technologies, such as the virtual teaching applied during online WMS activities, highlight the need for semantic expansion regarding the term 'place' including both physical and virtual aspects (Maida, 2007).

The awakening of people-place connections within the WMS communities also aligned with the core value of deep ecology, which considers all living beings as members of ecological communities and is bound together in networks of interdependencies (Capra & Luisi, 2014). People-place connections versus the anthropocentric (or mechanistic) values highlight the view of the spiritual experience: '... that nature and the self are one ...' (Capra & Luisi, 2014, p. 14). Although it might sound metaphysical, it gains its full meaning when viewing the community and its environment as a whole. In this way, the social ecological WMS system can be considered as subsystems of the overall unified one. Otherwise, these social entities might be only mechanically juxtaposed or even detached.

3.3.2 | Social network

'A collection of resilient individuals does not guarantee a resilient community' (Norris et al., 2008, p. 128). The integration of the social and ecological systems is critical when focusing on community resilience and social networks. Such networks have been evident through observing the WMS communities and their practices. Due to the initial engagement activated by the WMS activities, the teaching subject gains its full importance as the creation of a higher level of connectivity,

reflected in the term 'teach music as a mother language' (WMS, 2021). The experience is shared through sensory means. It enables a connection beyond simple words that goes through physical contact, sharing the same space and going for the same rhythm at a particular level (Nousala et al., 2018). As Wenger (1998) expressed it, the events of the WMS communities fit into the notion of a joint enterprise. Since the dance is a shared activity, the connectivity is further improved (Hall et al., 2012; Nousala et al., 2009; Nousala & Hall, 2008).

Though the participants are limited to an average number during each WMS activity, a social ecological system shall keep its function if a certain threshold is reached. This is because the behaviour of a social network depends not necessarily on size but fundamentally on its elements and the way they are connected. Yet this does not downplay the system's power, scope and size. The key is to nurture systemic diversity, one of the critical attributes of general resilience.

3.3.3 | Empowerment

The data collected show the underlying connectivity among the social networks that have spread in different directions. First, the students enrolled as musicians are themselves attracting their own friends and family that come to see them perform. Second, people from the general public have been participating. Third, depending on the different countries selected for the events, diaspora members of the country selected are also attracted. Finally, the WMS's own connections and teams are also attracting more participants. Based on these observations, the spreading of such a pattern can be approached via a system building on modularity. The way the components make up a system are linked and act as highly connected systems, with shocks and changes that tend to travel rapidly through the whole system. The components within the system are modular, stemming from the three pervasive attributes of general resilience, with two other components being diversity and the tightness of feedback loops. With regard to this case study, the better the networks are connected, the better the modularity. In turn, the more resilient the WMS communities will be.

3.4 | Longitudinal impact on governance, economy and infrastructure

The WMS activities become a series of connectivity-enhancing events because of these emerging qualities

discussed in previous sections. Inter-connectivity has been responsible for strengthening participants' community networks over the years. The impact of the WMS is in the form of a connectivity platform that fits the notion of community resilience, underpinned by emergent phenomena at the community level. It is a motor for resilience since two-thirds of the participants were digital diaspora, the remaining one-third physically local. The result is the creation of a 'glocal' community of practice sharing their interest in the dance. From a system's perspective, the entity developed by the WMS is a highly resilient, social, complex, adaptive, community system. Various subsystems involved are also responsible for the increased connectivity, anchoring its components within its physically close environment, impacting the entire social ecological system.

4 | CONCLUSION

This research identifies the key elements to create a synthesised model based on literature (Berkes & Ross, 2013). It also analyses the WMS community case and its resilience characteristics. These characteristics address the significance of agency and self-organising (Berkes & Ross, 2013), which activate community-level resilience. To summarise, three key characteristics have emerged from the research. These categories can be described as initiatives, emerging qualities and longitudinal impact.

The first characteristic, *initiatives*, which includes *values*, *knowledge* and *outlook* aspects, are predominantly shaped thanks to the social engagement and connectivity activated by the WMS communities. These initiatives laid the very foundation of the WMS communities as a community of practice, defining the WMS communities. The second characteristic, *emerging qualities*, include *connections*, *networks* and *empowerment*, enhancing community resilience on a strategic level to tackle the issue of disconnection. These qualities emerged from rounds of iterations within the WMS communities, including the three key iterations. These emerging qualities influenced the immediate social ecological environment around the WMS communities. The third characteristic, *longitudinal impact*, includes *governance*, *economy* and *community infrastructure*. This category identified influence on WMS communities through the social ecological subsystem within its overall system. Such impact has been significantly empowered by the system dynamics within the WMS communities (including the emerging qualities previously discussed, such as values, knowledge, outlook, connections, networks and empowerment).

These categories have acted as community resilience acupunctural remedy points. These acupuncture points highlight the acute weakness within the community's resilience through the shocks and disturbances. This is where the WMS communities reached their maturity. The communities began to function as incubators that nurtured community resilience to its fullest being, triggering adaptability for the system to remain at a threshold, for transformability that leads to system, and systemic, change.

Our study aimed to expose various elements of connectivity within systems and sub-systems that can be redeveloped and created under specific conditions. This phenomenon displays a set of characteristics that increase the resilience of its close environment and subsequent societies. The development of connectivity-enhancing structures such as the WMS Helsinki is interesting phenomena to pursue.

5 | FUTURE DIRECTIONS

Further observable phenomena over a more extended period would yield more understanding of critical behaviours. There is a need to extend and develop the knowledge gathered here for new models and expansion of resilient characteristics.

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