

Revised Selected Papers

Accademia Musicale Studio Musica
Michele Della Ventura, *editor*

2020

Proceedings of the
International Conference on
**New Music Concepts
Inspired Education and
New Computer Science Generation**

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Accademia Musicale Studio Musica
Michele Della Ventura
Editor

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Preface

This volume of proceedings from the conference provides an opportunity for readers to engage with a selection of refereed papers that were presented during the International Conference on New Music Concepts, Inspired Education and New Computer Science Generation. The reader will sample here reports of research on topics ranging from a diverse set of disciplines, including mathematical models in music, computer science, learning and conceptual change; teaching strategies, e-learning and innovative learning, neuroscience, engineering and machine learning.

This conference intended to provide a platform for those researchers in music, education, computer science and educational technology to share experiences of effectively applying cutting-edge technologies to learning and to further spark brightening prospects. It is hoped that the findings of each work presented at the conference have enlightened relevant researchers or education practitioners to create more effective learning environments.

This year we received 57 papers from 19 countries worldwide. After a rigorous review process, 24 papers were accepted for presentation or poster display at the conference, yielding an acceptance rate of 42%. All the submissions were reviewed on the basis of their significance, novelty, technical quality, and practical impact.

The Conference featured three keynote speakers: Prof. **Giuditta Alessandrini** (Università degli Studi Roma TRE, Italy), Prof. **Renee Timmers** (The University of Sheffield, UK) and Prof. **Axel Roebel** (IRCAM Paris, France).

I would like to thank the Organizing Committee for their efforts and time spent to ensure the success of the conference. I would also like to express my gratitude to the program Committee members for their timely and helpful reviews. Last but not least, I would like to thank all the authors for their contribution in maintaining a high-quality conference and I hope in your continued support in playing a significant role in the Innovative Technologies and Learning community in the future.

March 2020

Michele Della Ventura



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Contents

New Music Concepts

Analyzing relationships between color, emotion and music using Bayes' rule in Bach's Well-Tempered Clavier Book I	10
<i>Renee Timmers</i>	
Evaluation of Convolutional Neural Network and Four Typical Classification Techniques for Music Genres Classification	22
<i>Hayder K. Fatlawi, Attila Kiss</i>	
Conditional Modelling of Musical Bars with Convolutional Variational Autoencoder	33
<i>A. Oudad, H. Saito</i>	
Intelligent Automation of Secondary Melody Music Generation	40
<i>Nermin Naguib J. Siphocly, El-Sayed M. El-Horbaty, Abdel-Badeeh M. Salem</i>	
A Multidimensional Model of Music Tension	47
<i>Aozhi Liu, Zhaohua Zhu, Zifeng Cai*, Zongyang Xie, Yaqi Mei, and Jing Xiao</i>	
Computational assistance leads to increased outcome diversity in a melodic harmonisation task	61
<i>Asterios Zacharakis, Maximos Kaliakatsos-Papakostas, Stamatia Kalaitzidou and Emiliios Cambouropoulos</i>	
A Study on the Rug Patterns and Morton Feldman's Approach	68
<i>A.A. Javadi and M. Fujieda</i>	
Automatic Identification of Melody Tracks of Piano Sonatas using a Random Forest Classifier	76
<i>Po-Chun Wang, Alvin W. Y. Su</i>	
Detection of Local Boundaries of Music Scores with BLSTM by using Algorithmically Generated Labeled Training Data of GTTM Rules	86
<i>You-Cheng Xiao, Alvin Wen-Yu Su</i>	

Computer Science

Music and the Brain: Composing with Electroencephalogram	98
<i>Rachel Horrell</i>	
3-Dimensional Motif Modeling for Music Composition	104
<i>Shigeki Sagayama, Hitomi Kaneko</i>	

Transferring Information Between Connected Horizontal and Vertical Interactive Surfaces	116
<i>Risa Otsuki, Kaori Fujinami</i>	
Hand Occlusion Management Method for Tabletop Work Support Systems Using a Projector	123
<i>Saki Shibayama, Kaori Fujinami</i>	
A mobile robot percussionist	138
<i>Maxence Blond, Andrew Vardy, Andrew Staniland</i>	

Learning Tools, Learning Technologies, Learning Practices

Educational Design of Music and Technology Programs	150
<i>Susan Lewis</i>	
Sounds and Arts in Transversal Learning: Dialogic Spaces for Virtual and Real Encounters in Time	167
<i>Kaarina Marjanen, Hubert Gruber, Markus Cslovjecssek, and Sabine Chatelain</i>	
Contextual Model Centered Higher Education Course and Research Project in the Cloud	186
<i>László Horváth</i>	
How to Teach Problematic Students in Indonesian Vocational High Schools: Empirical Studies in West Java Province	198
<i>A. Sundoro, G. Jian Jun</i>	
Education through Music Analysis and Mathematics: Chopinesque Melodic Structures in Étude Op. 25 No. 2	209
<i>Nikita Mamedov</i>	
Supporting Music Performance in Secondary School Ensembles through Music Arrangement	218
<i>Jihong Cai, Nikita Mamedov</i>	

Culture and Music

Relation between Swara and Animal/Bird Calls: An Analysis	226
<i>Haritha Bendapudi, Dr. T.K. Saroja</i>	

Poster presentation

The War of the Beatmakers: How non-drummers redefined the function of drums in popular music	234
<i>Tom Pierard</i>	

**Learning Tools
Learning Technologies
Learning Practicies**

Sounds and Arts in Transversal Learning: Dialogic Spaces for Virtual and Real Encounters in Time

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Abstract. Sounds and arts create meaningful, holistic experiences at human societies, cultures and individual lives. In this paper, the connections of musical elements, reflected in prenatal development, to define human learning through multisensory experiences, is being connected with the development higher education. Theories, pedagogies and musical-artistic experiences as an inner human power are explored as a necessity in education comprehension, with examples of research-oriented cocreational networks and projects.

Keywords. Arts, education, experience, music

1 Introduction

EAPRIL The European Association for Practitioner Research on Improving Learning [1] owns the model of clouds, as thematic groups for the development of the association [2] in cooperation with the EAPRIL members. Cloud 9 "Sounds & Arts in Transversal Learning" was initiated and developed by the first coordinators Kaarina Marjanen, Markus Cslovjecssek and Hubert Gruber in 2016. It invites everyone to discuss and collaborate on aesthetics, multisensory experiences and designedly approaches to learning. It focuses on pedagogies and instruction with sound and the arts as grounds for education in five main topic areas [3].

In 2018, discussions to create collaboration between two other clouds, Cloud 3, "Strategies to Improve Teaching and Learning Environments" and Cloud 4, "Innovation in Education," emerged, leading to a seminar/webinar performed in collaboration with Haute école pédagogique Vaud, HEP Lausanne, Switzerland in September 2019 [4]. During this event, grounds for further and deeper collaboration were created. To access this collaboration, and to explain and observe the prior performances to start this kind of a developmental way with an orientation on the integrative qualities of music, some prior important steps were already made, starting in 2018.

The dialogue platform “Musik und Mensch” was developed by Hubert Gruber, conception and platform design, together with Leander Brandl, technical implementation and programming, designed to perform various tasks. Since 2005, it has been working as an internet platform for lectures, talks, colloquia and concerts at the University of Applied and Arts Sciences Northwestern Switzerland, designed and conducted by Markus Cslovjecssek and his team. It also aims to provide impulses and serve as a dialogical space for music integrated learning and teaching interaction. Now this topos-oriented dialogue platform “Musik und Mensch“ has partly been translated into English as "Music and life". [5].

An exchange of learning and teaching in schools and/or Higher Education, should be supported with research-based interaction and discussions within the core orientations and the cocreational processes inside a university, but also via strengthening the research-basis with external networks. An example of this is presented from Switzerland in this paper [26], leading to the pedagogical innovations in exercises, explanations of methods and learning materials.

The realization of so-called Interactive Learning Rooms could create and promote a new quality of learning and teaching along the border of virtual and real experience spaces, as future visions. This all still requires observations for the human nature, to be able to create arts-based models and pedagogies in dialogical-integrative processes [6] as a guiding principle. This has been theoretically described at the model by the title of “The Multisensory Musical Design - MMD” [7]. In this paper, a dialogical-integrative connection is being observed, from the three main MMD phenomena “Faces, Spaces and Timelines”, with their musical connections and grounds. This leads us at first, to observe The Multisensory Musical Design - MMD [7].

2 The Multisensory Musical Design – MMD: a cornerstone for the humanities

The Multisensory Musical Design [7] is constructed on five main factors to qualitatively observe the meanings of musical sounds as an essential part of a human life, starting from the prenatal stage [8]. At the MMD, the five main factors are grounded on:

1. Music as an innate human capacity for wellbeing, interaction and learning, due to the emotional power of music: highlighting the sensitive, social and emotional qualities of a man;
2. The position of the Arts at the Western societies and in education;
3. The recognition of soft sciences and Arts for human societies and human wellbeing experiences in various phenomena, through a variety of models;
4. Tacit Knowledge [9] and the comprehension of knowledge impacted by multisensory experiences; and
5. Flow [10], to support our comprehension of the significance of sound-based experiences.

These main structures lead us to a number of theories on learning, interaction, and wellbeing, with the understanding of the communities of practice [11] and the constructivist

principles of learning [12]. Creativity and a positive, friendly atmosphere, with possibilities for the use of imagination and elements of comfort were found as the core components for children's experience of wellbeing. Children explained these with strings for global questions, such as the wellbeing of the nature, pollution and the adults' responsible activities with directions to the future, and the experience of safety in life and at the surrounding environments. [13].

At the Multisensory Musical Design [7] model, life-span experiences to start from the prenatal phase, are comprehended from the meanings of sound experiences, with the 12 senses of the fetus [14], as a ground for learning processes, supported by social networks. According to the model [7], the impacts of music are being observed as phenomenal for learning, and reflected as imprints in the brain, and in bodily, emotional and cognitive processes to be combined at the limbic system of the brain [15]. The fetal sound experiences are created from the surrounding linguistic and musical cultures and thus leading to a musical-linguistic fingerprint [16] and a tonal center [17-20]. Even when aiming for the high-quality education programs at the university levels, it is important for us to be aware of the human nature, with the significance of the multisensory experiences. Acknowledging this would help us in the development of education models, with their targets for professional expertise, to openly reflect within the cultures and the societies.

Musical experiences effect our comprehension of knowledge, especially to create cultural and generational connections due to Tacit Knowledge [9]. In music, the phenomenal feature of *expectation* can be considered as a core for the human evolution, to lead to deeply rooted human ideals [21]. Expectation can be considered as a core to interact with musical experiences, starting prenatally, in

- Faces: to express and expose ourselves in very define and sensitive ways with our individual voices, as inborn tools. It leads to encountering oneself and the other towards the strengthening of the professional core identities, and the results of education to reflect at the societies;
- Spaces: musical sounds create the grounds for our environmental experiences. It helps us to create the individual and social spaces required, to better respond to the human needs of connectedness; and
- Timelines: music lives in time. The comprehension of time in learning needs to be deeply recognized to create education models towards deep level professional identities. [7.]

Though these core phenomena, the needs of human wellbeing can be supported, starting from the soft-oriented degree programs at higher education. Pitch, tone, rhythm, harmonies, form, duration and tempo are traditionally known as musical and linguistic elements, with an added value of the dimensions of distance and direction [16]. Musical-linguistic elements function as a ground also for the other fields of arts, connected with a syntegegration of the arts -comprehension, to explain a deep-level music integration [21]. Language, music and songs with lyrics can also be observed on a segment, with the musical mode at the first end, and the linguistic mode with language as speech at the second end, to set a song with lyrics in the middle [22] of the segment.

In the MMD model, it is being affirmed that human wellbeing cannot be supported without the multisensory artistic experiences, because of the significance of the elements of music and languages at the core of a human life. For the needs of a general human wellbeing, the creation of the core comprehension from music for higher education is phenomenal, to lead to the models and pedagogies to support it. [7]. Presently, when often designing education with an emphasis on quick learning results, to gain good profit, it may create a bias for the models of education, shown in effects to harm the human wellbeing and societal cultures. The division of musical – and other sounds may be explored in the phenomenon of expectation. With no understanding of time in individual learning processes, or the spaces required, or the power of the sound of a voice in encountering the other, a lot of harm may be caused for positive learning results to remain in the long-term memory. At the end, the financial profit with an understanding of a human nature, may be gained via this other route, from another structure and process. Please find the Multisensory Musical Design in Figure 1 below, to give an idea of the musical-educational dimensions connected.:

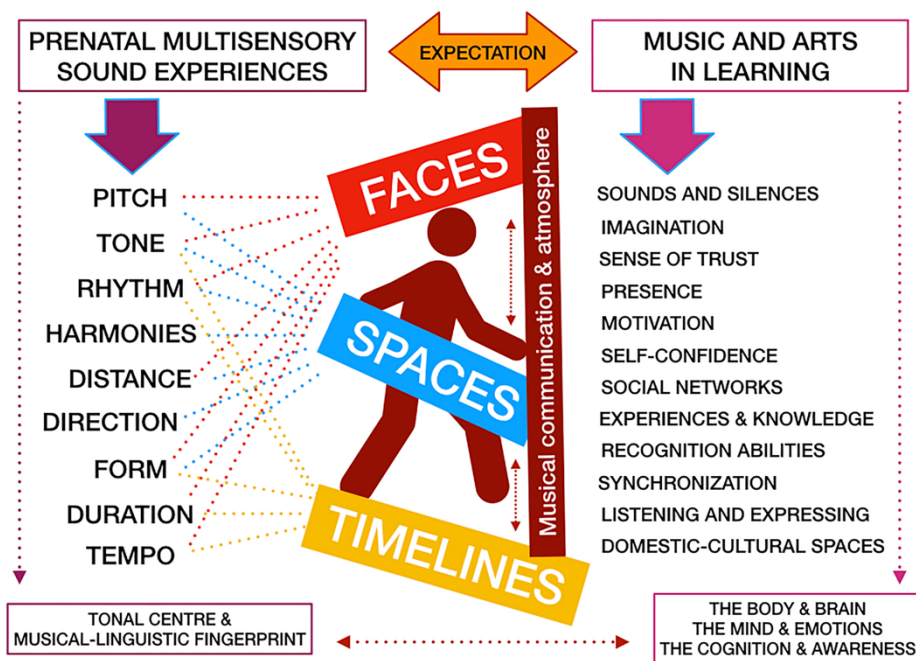


Fig. 1. Learning processes with musical connections to support higher education [7].

3 Networks and projects to reflect the idea of the Multisensory Musical Design – MMD

3.1 The dialog-platform “Musik und Mensch“/ “Music and Life“

The dialog-platform as German and English versions “Musik und Mensch“/“Music and Life“, and are intended to provide a comprehensive view of intentions and objectives [5]. “Music and Life“ is targeted to document presentations, talks and concerts from the School for Teacher Education of the University of Applied Sciences and Arts Northwestern Switzerland FHNW. “Music and Life“ can be observed as a map regarding the following areas: working with classes and teaching, working in specialized and cross-disciplinary school projects and papers, and as a support for interdisciplinary research projects, including general qualifications for university entrance, such as Matura and Abitur, Bachelor and Master theses, and, finally, for transdisciplinary research projects closely related to music and art. The different topics are examined and discussed from theoretical and practical aspects, towards the concrete shape by the means of musical works of art. An essential element for this discussion process is created in the form of concerts.

Various research areas are introduced at the platform, to function as conceptual focal points: “Past and Present“, “Home and Abroad“, “Freedom and Power“, “Remember and Forget“, “Time and Space“, “Affect and Logic“, “Technology and Myth“, “Signs and Forms“ as well as “Reality and Virtuality“. These research areas offer possibilities to delve into the subject matters, supported with experts from various areas of specification. Researchers, teachers and students are invited to contribute to the dialog, with specific approaches to a certain topic, within the scope of practical education. Disciplinary-integrated, interdisciplinary-integrated and transdisciplinary-integrated ways of collaboration have been benefited for the development of an integrated (music) education, with participatory and activity-oriented scopes. This approach maintains a close dialogue with the MMD [7], to draw from the perspectives of theory, practice and art, towards a high-quality education and with a wide-oriented comprehension of knowledge, reflected in arts experiences.

Schools and scholastics are still often guided by disciplinary approaches of science and the arts. Also, fragmentary and unconnected knowledge may be constructed and shared in education, despite of the level of education. The main endeavor of the project “Music and Life“ [5], therefore, is to connect multifarious approaches to knowledge with forms of expression and perception, to combine different fields. Communicating in order to broaden and sharpen the perspectives regarding one’s personal field of interest may be supported this way. The integrated approach not only deepens one’s own cognition and experience, but it also helps to connect associated skills and attitudes with knowledge, and make them applicable. Supported with these integrative dialogical settings, the complexity of the subject becomes more obvious. Simultaneously, both subject-specific and cross-disciplinary approaches and attitudes become more visible. Music in experiences supports exactly this kind of interdisciplinary dialog due to connecting emotional experiences, cognitive processes and social dialogues. The possibilities resulting from

this interconnectedness, with an artistic form given to a subject, helps solving everyday life problems, with something new created.

Music and Life is connected with the following community networks:

1. The Special Interest Group (SIG) "Practice and Research in Integrated Music Education" (SigPRIME), created in 2006 by Markus Cslovjecssek [23]. SIGPrime aims to promote and support the multifaceted forms of learning in connection with the world of sounds, to comprehend sounds in learning. The importance of sounds and music for all areas of life and learning shall be brought to mind in a lasting manner, with no musical prerequisites;
2. The "European Music Portfolio – a Creative Way into Languages (EMP-L) [24], " within the scope of the EU Comenius Project entitled "Lifelong Learning" was performed in 2009-2012 from the integration of musical activities into language education. Diminishing language barriers, support for social integration, promoting self-confidence and articulateness and enhance intercultural understanding were set as targets for the project. Musical activity was thus understood as integrated tool, to discuss with musical-linguistic elements. Materials and models for teaching were developed in collaboration with musicians, music educators, teachers, linguists and language educationalists from all over Europe.
3. Similarly, the elemental relations between mathematics and music education were also analyzed in 2013-2016, within the scope of the "European Music Portfolio - Maths: Sounding ways into Mathematics" (EMP-Maths). This European project gained prizes of a success story and a good practice example. [25.]

3.2 CREAT Lab HEP Vaud

The CREAT (Création et Recherche dans l'Enseignement des Arts et de la Technologie) is a research group working on research and creation process in teaching the Arts and technology. It is co-directed by Grazia Giacco, University of Strasbourg, Sabine Chate-lain and John Didier, HEP Vaud. The aim is to investigate this process in different contexts, for example in higher (artistic) education, such as design, fine arts, architecture, both in compulsory schools and in teacher education. [26.]

How to prepare teachers for the challenges of the XXI century? According to François Taddei [27, 28], the school of tomorrow needs to overcome reproductive practices and needs creators. This perspective leads the CREAT to focus on how to learn to create, with shared interests with the MMD [7]. Research concerns an interdisciplinary approach to the arts and to technology as well a discipline-specific research in each of these subjects.

CREAT privileges qualitative research to investigate projects where learning is fostered by artistic practice, where pupils are involved in projects which stimulates imagination and aesthetic experience in different levels of education. It stimulates collaboration with cultural institutions and with researchers from other disciplines (psychology, philosophy, literature). The aim is to create a dynamic interaction in research *in* and *for* the arts [29], between *research-led practice* and *practice-led research* [30], taking in account inter-and transdisciplinary aspects [31], [32] and epistemological reflections

about the role of the arts for human development. The EAPRIL Three-cloud seminar/webinar [4] was organized in collaboration with the CREAT group from HEP Vaud, Lausanne, Switzerland.

3.3 The EAPRIL European Association for Practitioner Research on Improving Learning, with observations of the Multisensory Musical Design – MMD

EAPRIL is the European Association for Practitioner Research on Improving Learning [1], working in the context of initial, formal, lifelong and organizational learning. EAPRIL has been organizing a conference annually in a chosen European country, starting from Belgium in 2006 [33]. In 2019 [34], the conference was held in Tartu, Estonia. EAPRIL is governed [35] by the EAPRIL office in Leuven, Belgium. As a support for the office, the EAPRIL Executive Board shares the responsibilities. Besides the current Chair, Dr. Martijn Willemse from The Netherlands, and five board members, including the chair elect, with individual responsibility areas, are included in the governing of EAPRIL.

At the mission statement, [36] the association is being described as covering the fields of practitioners, researchers and policy makers, to promote practice-based research in various contexts and across fields, like engineering, medicine, nursing, business and education. The aim is to have EAPRIL to spread wider in various countries. Besides the conferences, the so-called Cloud-system [2] is phenomenal for the EAPRIL in its work models towards the goals set. The Clouds are understood as “thematic platforms for networking and discussion.” New Clouds are being created frequently, and while writing this paper, 14 Clouds [2] can already be found at the EAPRIL homepages [1].

3.3.1 EAPRIL Cloud 9 "Sounds & Arts in Transversal Learning"

The core orientation of EAPRIL was natural for the founding of this new “Cloud”, because both EAPRIL and the idea behind Cloud 9 [3] were set on rich dialogical contexts, to invite people from various backgrounds at the crossroads, to discuss education and professional learning issues. However, at the EAPRIL [1], no other clear and visible connections with arts education can be observed: the founding of Cloud 9 was also grounded on the aims to widen and strengthen the open access for the arts. From the Sounds and Arts point of view, which has traditionally been focusing on the educational sector, it will be interesting to see, if these new kinds of approaches will be invented to collect people from various fields together: music and the arts include qualities to combine people, despite of the field in question. Barriers in arts should be destroyed.

Transversal learning principles, with reference to sense-based learning through holistic experiences, supported with music, are present from the very beginning of our lives [8] and connected with the 21st century skills [37-40]. These holistic grounds may enhance the cloud possibilities to respond to the challenges of institutionalized learning, and the huge amount of knowledge, with an increasing complexity supported by interacting,

merging, or even dissolving of various disciplines. The acknowledgement of aesthetic experience is being considered as a gateway to the world and the society as an educated subject. Research, development and promotion of arts in education at the public, ministerial & municipality levels, and at schools and teaching is supported through the Unesco human declarations (UN declarations), such as The Declaration of the Human Rights [41], The Rights of The Child [42, 43], Arts Education Road Map [44], Seoul Agenda [45], and The Bonn Declaration [46]. They can be found to reflect the development of music education at the European levels through access, quality, and socio-cultural challenges. In a dialogue with the cloud purposes, the framework of the Cloud 9 mission is strongly supported by those declarations, to underline and highlight the meanings of EAPRIL Cloud 9 "Sounds & Arts in Transversal Learning" [3]. The Cloud was initiated by Kaarina Marjanen, Markus Cslovjcek and Hubert Gruber. Currently, the Cloud is coordinated by Kaarina Marjanen and Hubert Gruber, in a dialogue with the core group members. Cloud 9 "invites everyone with interest to discuss and collaborate on aesthetics, multisensory experiences and designedly approaches to learning." Connections with arts education from the UN declarations [41-46], and the focus of the EAPRIL Cloud 9 [3] can easily be found. In Article 1 [41], we are already at the very core of the arts as emotional and social human resources: "*All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood*"; In Article 26, everyone's right to education with full development of personality and respect for human rights is being emphasized to continue with free possibilities to participate the cultural life and community, and to enjoy the arts (Article 27). The entitlement connects with such a social and international order in which the rights and freedom can fully realize (Article 28). Already these simple orders define our justification to fight for the position of the arts at the societies, which could roughly be described as the idea of the current Cloud. At the EAPRIL Cloud 9 statement [3] it is being underlined, that the cloud aims towards the integrated and transdisciplinary approaches, away from the fractioned knowledge, with narrow or especially surface-level subject-oriented performances. This is shared between Cloud 9 and SIGPrime [18]. Reaching to target groups with interests for learning due to many reasons, from any approach, is phenomenal at the EAPRIL statement. The meanings of aesthetics, with multisensory experiences towards the learning processes to include the world, society and various individuals, are considered as being very important for the reaching of the set aims, and supported by a wide theoretical basis [7].

The EAPRIL Cloud 9 focuses on pedagogies and instruction with sound and the arts as grounds for education in five main topic areas:

1. Sensory experience in learning;
2. Sound as a way to access, understand and co-create the world;
3. The art of learning: pedagogical innovations;
4. Research methods for the inquiry of aesthetic experience; and
5. Integrated music and arts education in professional expertise.

These themes and topic areas should be taken under discussions for the learning and wellbeing aims at the societies. Sensory experiences connect one with the whole world, beyond the education context. Thus, we can define the dialogical processes in teaching integration and transversal learning from the evolutionary-ethological-biological framework and the natural human development, individually, but also throughout the history

of mankind. The evolutionary / ethological theories on music explain the connections of evolution, culture and behavior [47-49][16][50-52].

3.3.2 Cloud 9 to connect with other clouds within the EAPRIL

A collaborative, integrative and dialogical learning has to be admitted to overcome the fragmentation of living to support the child's experience of growth, development, well-being and learning [53, 54]. This is also supported by the results of the brain research, to point out the impacts of the arts in our brain, especially dealing with music and dance [55-57]. The Unesco statements support us in the arts education aims, with a special emphasis on the development of the arts education field towards the societal, cultural and wellbeing orientations. The aims of arts education can be observed from a) Human rights to education and cultural participation; b) The development of the individual capabilities; c) The improvement of the quality of education; and d) The promotion of the expression of cultural diversity. These direct us towards the concepts and strategies on education through the arts. [44-45.]

The dialogues on music integration and transversal learning create the basics for the learning activities and aims in a phenomenal way. Music as one of the most immediate forms of creative engagement with place, to readily engage students [58], can be comprehended as the very core of artistic learning, interaction and integration [59]. The comprehension of knowledge is also confronted in this respect, with the connections on Tacit Knowledge [9], Flow [10] and social learning [12][60], supported with our multiple senses [14][61][62]. The musical circle can be described as "leaving the reality", through imagination and mental images [63]. This connects music strongly, as a central concept, and as a special focus of the cloud, when observing a human behavior, either in silences; wordless knowledge, or by the understanding of cultural information, connected with practice-oriented expertise and experiential learning [9][63]. Musical information and human practice-oriented research function in a close mutual dialogue. Musical integration is supported by sense-based processes, and holistic bodily-emotional-cognitive experiences [15], to support the long-term memory functions in learning in general, with connections to well-being, specific needs and inclusion.

The defining of these kind of attempts at the current societies can be seen important, also from the recognition of the traditions of music in education, and arts-connected education as a whole. Research on students' relationship to music revealed the emotional factor of envy as a challenge for music education: traditional ways of teaching and learning music have been oriented on skills and talents. However, a negative feeling of music prior the new experience reflects a feeling of being unsure and insecure in music, with effects to the whole life, to occur especially in the communities with success and competition strongly highlighted [65]. This means, that we did not yet do enough at the arts sector. The feeling of being "unmusical" or having a negative relationship with music, is not a question of real musical talent missing [66], but rather about the music-connected frustrations during childhood [65]. It is phenomenal for us in the arts/music education field to construct a new kind of arts/music education, to support the maintaining of a positive relationship with music, or any field arts. Even negative estimations or comments for one's musical taste has a strong negative impact on one's self-awareness and self-image [67]. Everyone has a right to enjoy the arts.

At the EAPRIL Three-cloud seminar / webinar, “Innovative teaching approaches – EAPRIL clouds in a research-based dialogue” [4] a theoretical approach to strengthen the collaboration between the three clouds was drawn. From the core orientations of the clouds, Cloud 3, “Strategies to Improve Teaching and Learning Environments” [68], and Cloud 4, “Innovation in Education” [69], and the five principles of Cloud 9 [3] aim towards an open, accepting atmosphere, with equality and inclusion supported, and the comprehension of meaning creation via individual voices given for learners [59]. In the form of a workshop, with an active action research adaptation, the core contents of each cloud were observed and reflected in mutual discussions, with targets towards an understanding towards the shared interests between these three clouds. As the cloud core orientations, teaching strategies and collaborative learning (Cloud 3), sensemaking, wellbeing and future of education (Cloud 4) and aesthetic experience and the integration of sounds and arts (Cloud 9) were recognized. Observing and analyzing from these basics, creativity was found as a shared field of interest between clouds 9 and 3, environments were found as a core interest to share between clouds 3 and 4, and holistic learning as a wide phenomenon was found interesting for clouds 4 and 9 to share. Please see below, in Figure 2, for the model co-created as a result of the Lausanne seminar [4].

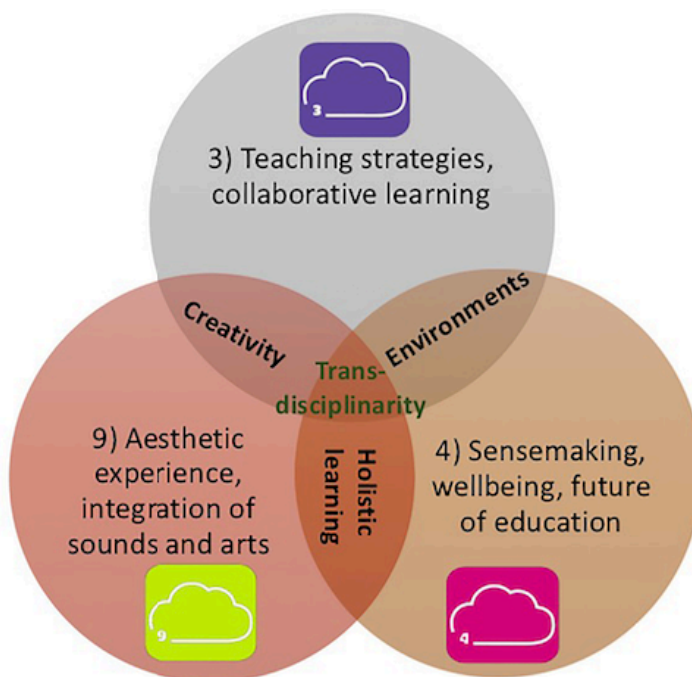


Fig. 2. The grounds and target areas for further Three Cloud -collaboration [4].

Enhancing the appreciation of the arts at the global world, towards the human priorities and values, to make the living better despite of the country and culture in question was found as a wide value-based interest for all the three clouds. As a condition for the reaching of these aims, an open dialogical network is needed, with the interests shared.

Cloud 9, Sounds and Arts in Transversal Learning [3] aims to open these kinds of discussions, by creating further solid grounds from research, methods and processes, the art of teaching, learning and environments & curriculum designing, and to create the open dialogues needed, with warmth and also a comprehension and meaning of humour in life. This can be started from music with life skills, to share and learn [7]. Please see the idea in Fig. 3 below.

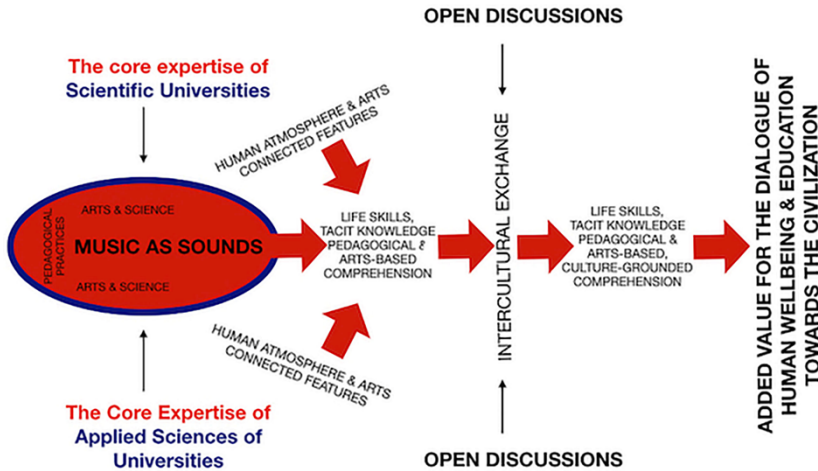


Fig. 3. Open discussions supported by the phenomenon of music as sounds, towards the human wellbeing [7].

4 E-Learning Offers

The meanings and connections with the arts as a tool for professionally-oriented learning may be supported within virtual environments. From the point of view of music, it may feel challenging to create the framework for music learning in virtual learning environments. It is important to maintain the possibility to encounter each other face-to-face, to learn about each other and open a possibility as well to share experiences, which have been found so supportive and important for the wellbeing of individuals, and as a support for inclusion [7].

The models and purposes for E-learning needs to be planned carefully. Everything cannot be performed virtually or remotely – the nature of learning contents and aims, with the nature of the learners and their backgrounds serve us in phenomenal ways to evaluate these kinds of possibilities. However, modern technologies provide us also in music education to recreate new kinds of possible pedagogical solutions, also keeping in mind the nature of music learning to include both intrapersonal and interpersonal fields, towards the holistic, transversal learning experiences [70]. In E-learning possibilities it may be easier to move from the traditional music teaching models, at the orientation of teaching musical skills and knowledge, towards a more holistic way of creating integrated projects to combine several fields of arts, or several targets of interests. Support

the comprehension of Faces, Spaces and Timelines as a part of holistic learning processes, may be reached by the approaches constructed from the meanings of the acknowledging the musical-linguistic-artistic elements [7]. Students can also collaborate, do pair work or group tasks in virtual environments, which is to be underlined, in regard to the needs for socially connecting to learn [7][60].

As a practical example, one of the tasks from the early childhood teacher students, is being presented shortly. In this framework I am sharing a small example of an e-learning –based musical journey. The task was included as a part of the course “The diversity and special nature of early childhood education” (10 ECTS), as a part of the social service’s degree program [71] The task aims were set for learning about describing, expressing and interpreting the arts-based knowledge, with listening tasks connected to various cultures or different genres and styles of music, passing on a message of individuality and equality. As a hypothesis, processing this via the concept of Tacit Knowledge [9] would support deep-level comprehension on the basis of experiences with reflections of music integration, supported with Flow [10]. At the task instruction and formulation (1 ECTS), the students were given a long list of musical samples, representing various cultures and genres, without any information. Their task was:

1. To freely choose five (5) samples and listen them, if possible, with headphones, to ensure the possibility to concentrate. This was performed individually, with no information about the samples given;
2. To then continue, depending on the personal ideas and preferences, in the form of expressing and interpreting each of those five samples, after a break. This might be visual, poem, story, dance, song, or a freely chosen way, to save musical experiences with the support of some chosen data form;
3. To describe their thoughts about diversity in creative writing; about what they understood of it on the basis of the diverse musical samples and the diverse ways of expressing their feelings.
4. To benefit this process further in discussions in an e-learning space, presenting their own ideas, commenting the others’ and learning from each other.

This all was instructed by detail. The process was closed in an E-lecture, with examples and details of the tasks and processes performed, and with information on the musical samples given and chosen by the students. The idea of excluding cognitive information and knowledge out of the task was found out as a support for the students intuitive thinking, motivation and comprehension, with impressive learning results reflected, but to also learn about the musical samples at the end. The majority of the students described their childhood memories coming back towards the forgotten fields of individual strengths, constructed in artistic capabilities.

Other such solutions can be made, with the main lines, main goals and contents, in video examples or other artistic products created of student’s work. In arts, however, a real commitment to the task in question, and a hands-in experience of a small interaction-based activity, is required, to foster presence and sharing possibilities. This is to confirm that the student will be strongly included in a social group as well. These kinds of tasks may also benefit the principles of the Laurea Learning by Developing (LbD) pedagogies [72], supported by the multisensory music-based experience in a dialogue with arts and creativity in general [7]. Currently, a new research program “Laurea LbD-Arts” is being under creation. As a condition for this, the atmosphere of trust [54] creates a very solid ground for the final communication in the internet.

5 Conclusion

Within this paper, the chosen examples to create dialogue and reflection with music, from the ontology and epistemology of music, were presented, to observe the function of music as an innate human tool for the support in life skills [7]. The phenomenon at our focus is huge, but the grounds for rising a higher the level of the general comprehension of music in attitudes and in knowing, with reflecting the research-based comprehension as well, has gained a strong research-based evidence, from various scientific disciplines and paradigms. The fields of music and arts should be payed more attention to, especially towards the needs of qualitative research aims in human sciences, to further explore the structures and inner dialogues as a part of triangulation, and the reliability or confidence of research, with observations for the consistency of the research idea as a whole. This dialogical, integrative and inclusive idea and comprehension of research collaboration can be observed in Figure 4.

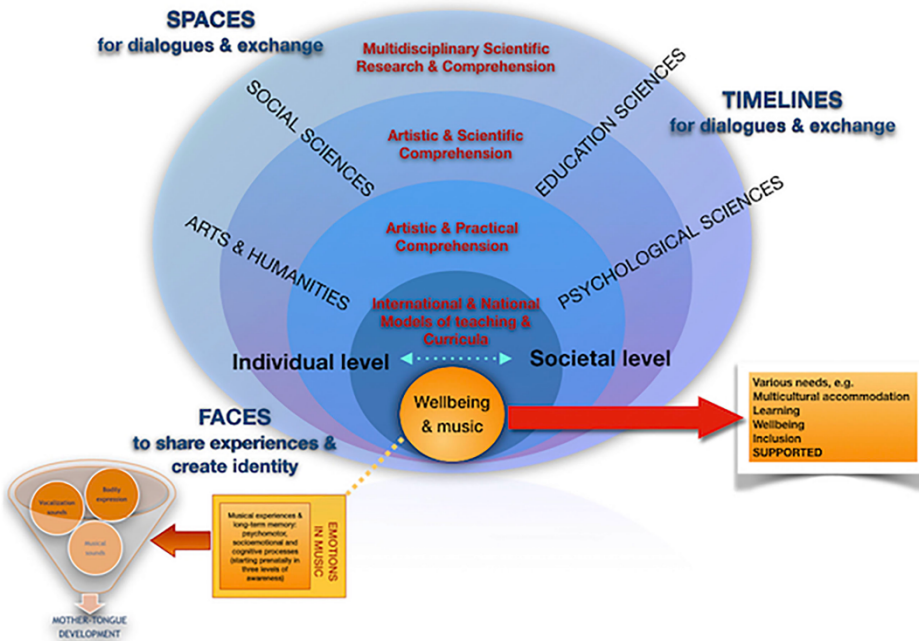


Fig. 4. Music as a core for developing a “Humane General” [7].

The current work will continue in collaboration within the networks and universities, from various countries, cultures and fields of science. The aims are especially set for the comprehension of education through the arts in Western societies, from the deep grounds gained in music as experiences, pedagogies, learning, and interaction to be observed in theoretical evidence and in science. As defined in [7], support for the quality of education can also be defined through arts as experiences in a dialogue with the EQF

levels [73]. Music researchers need a living relationship with music, to understand the holistic reflections of it in a man.

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