Didactic Answers and Research Questions Regarding Transmedia Music: A Necessary Combination in Higher Education

Amparo Porta
University Jaume I

The current expressive and communicative changes in music make it essential to review its research and training in university studies. The purpose of this work is the application of the research carried out on everyday audiovisual music in a university subject through innovation and the study of its results. This work has its roots in the research process developed on the presence of music in the audiovisual field and its educational interest, posing the challenge of finding didactic answers in a subject. The proposal is created based on the PLE, analyzing its learning outcomes and research feedback. The learning outcomes show using conceptual maps and timelines, perceptions of what they know, and their strengths and weaknesses, creation of activity sequences using what has been learned, and building educational audiovisual products (sound and synchronization) from the soundtrack with meaning, sense, and creativity. Conclusion Awakening awareness and introducing learning processes regarding audiovisual music in everyday life with meaning and sense. This work can and should be extrapolated to different areas and contexts.

Keywords: research, innovation, didactic, audiovisual music, analysis, teaching, application in undergraduate studies

INTRODUCTION

Expression and Communication Nowadays

The profile of the university scholar has a double aspect, the researcher and the teacher. This article is focused on the latter and aims to see how both are integrated to offer teaching answers from research aspects and, also on the contrary, how teaching has to be permanently open to research, to that which appears as a question. Or, on the contrary, that once the answer has been found, it needs to be spread in the most valuable part of the research itinerary, that of the results, the answers and the findings, as these are the ones that can provide continuity to the research process, creating a thread of continuity through relays. And, naturally, all of this is added to the search for and permanent updating of knowledge, a core task in university action. Therefore, this symbiosis must revert to both, creating an innovation, research and progress chain that has in its construction and development the strength of its constructive and expressive agents.

From the expressive areas of education, the social, cultural and daily changes of everyday life make it necessary to reflect deeply on what we want to offer from Musical Expression in the academic space, its challenges and achievements. Society, which is always one step ahead of institutions, and research, which often moves away from the reality, its uses and effects, require integration spaces where both, research and teaching, find a meeting point. The same applies to theory and practice, which are often associated with these same assumptions.

Research that integrates both profiles in music education is limited. The most common situations are very practical experiences focused on teaching innovation and its applicability, or, on the contrary, they are focused on experimental or theoretical studies with scarce responses in the university life of teacher training. In this paper we are interested in the place of music as a research object regarding its integration and applicability in the studies of the Bachelor Degree in Education. The audiovisual phenomenon is here to stay, and music is increasingly produced in multimodal spaces in which it rarely appears separated from the moving picture (Porta, 2014b).

The purpose of this work is to study, observe and analyze everyday audiovisual music, bring it closer to undergraduate studies in a theoretical-practical way, create a didactic proposal in a university subject and study the results.

Research Process Origin

The Hábitat Sonoro research group arose from an initial question: What is music today for the average citizen? (Porta, 2008)

In order to answer this question, since 2003 this group has been researching the sound environment to understand its characteristics, effects and dynamic elements. Our work is focused on knowing what is the place of music in people's life, because our music education profile commits us into the context as a constructive and determining factor of the educational action and its goals. Society has set us the task of providing elements of understanding, innovation and transformation of reality from our field of knowledge: Music Education. This field is one of the fields of knowledge classified with code 189 in UNESCO, corresponding to Didactic of Musical Expression. This legitimization of our area of knowledge is what has placed us in the research profile where the questions asked by society are those that we must also question, answer, anticipate or seek, propose and put into practice alternatives so that education can obtain the best possible answers.

The research line employed over these fifteen years uses interdisciplinary elements such as general and music education, sociology and semiotics because finally music speaks from its own language, for everyone and is received individually and privately (Porta, 2007a; 2017b).

The initial approach to research is always inquiring and formative, because we are looking for something for which we do not have the answer, so we will rely on the reviewed studies. In the musical field of language and its meaning are outstanding references (Randel, 1997, Benjamin, 1973). In the educational field we have reviewed different authors in Music Education who are interested in its position in the here and now as well as its implications in daily life. This is the case of the works of Porta (2007; 2007b), Schaeffer (1966), Schafer (1977), and Sloboda (2005). A third contribution comes from critical pedagogy because of its implicit social implication in the whole process, its results and products, and also because music is a highly persuasive emotional language as well as because of its connection with the social imaginary and collective values as stated by Aronowitz and Giroux (1991), and Giroux and Martín (1998). For the cognitive and emotional comprehension of music and its current contexts, the most interesting contributions come from psychology. Especially relevant are the works of Ausubel, Novak, and Hanesian (1976), Hargreaves and North (1999), Medrano, (2008) Perls (1998), Piaget and Inhelder (1981), Vigotsky (1995; 1981), and Wertsch (1988). And finally, from communication, language and semiotics, for their significance and contributions to listening as a discourse that carries meaning to the receiver, we will rely on Eco and Cantarell (1978), Greimas et al. (1973), and González Requena (1992). These would be some of the most important references.

Impact on Education

In the educational space, music is approached from different fields, from the theoretical, to the musicological, interpretative and musical language and also from education, the latter being the one in which we place ourselves from the undergraduate university training in research and also from teaching.

Education laws have always taken music into consideration as a discipline in different areas of knowledge, but its positioning in the curriculum has been changeable. In the initial, mandatory and university stages, the educational laws of the last two decades have placed competences at the core of the

system as the backbone of the curriculum. According to the MEC (2006), competences make it possible to identify essential learning, providing an integrative approach focused on the application of acquired knowledge. These represent a way of learning, found in many of the constructivist approaches, and have guided multiple reforms of educational systems in the last 30 years of the 20th century (Pérez y Delgado, 2012: p27). Its basis consists of relating the new material to the learner's previous knowledge by giving an answer. Our work focuses on the study of musical competence from a comprehensive point of view and its tools of approach, application and change. In this way, the idea is to explore in order to give prominence to its social interests and purposes for its application in society by proposing creative experiences that are socially and culturally committed from the music that is produced and listened to in environments of mass dissemination. From this position we will try to provide a response to these challenges in higher education, and specifically in the studies of primary school teachers who study the specialization in music.

METHOD

Creating Innovation Lines

The innovation lines based on the trajectories and findings of the research groups represent the best basis for creating an academically based teaching innovation at the service of the society from which it originates. In the case of our research group, the commitment is the understanding of the massive contexts where music is produced, almost always in multimodal forms (Porta, 2017). Based on all this, this audiovisual music has been studied, where it is produced as a form of expression and language, a cultural asset and a communicative tool of first level. The process followed for its understanding was initiated in the first decade of life of the research group, studying daily audiovisual music. Then, using the methodology and tools developed, we enter into the cultural and living reality, which is much more complicated and difficult to approach, involving greater complexity for analysis with multiple actions and responses in different directions, overlapping, multiple perspectives, implications and branches. In this complex, sometimes contradictory and sometimes controversial space, it has been of great value being able to work with audiovisual products where the fictional reality is selected, edited and produced. This is the summary we provide in topics and questions, as well as some publications that give evidence of their achievements and can be used as support.

The Research Process and Undergraduate Studies

The course followed has been based on the development and application of three research milestones (Table 1).

Our focus is on getting to know:

TABLE 1
DEVELOPMENT AND IMPLEMENTATION OF THREE RESEARCH MILESTONES

Question	Research tool or product obtained	References
What music is played?	Template 2.0 Template 3.0 Revised Template 3.0	Porta & Ferrández, (2009). Elaboration of a tool to know the characteristics of the soundtrack of children's television programming. *RELIEVE* Porta, Morant & Ferrández, (2015). Template 3.0, a tool to learn about childhood music
Where is it located?	Timelines and sequences	Porta, A. (2014a). Exploring the effects of film music on childhood. *Art, Individual and Society*, *26*(1), 83-99.
What, for what or whom does it represent?	Intentionality	Porta, (2014a). Exploring the effects of film music on childhood. *Art, Individual and Society*, *26*(1), 83-99.

		Porta, (2014b). Modes of television listening. Music and listening in audiovisual genres. *University of Barcelona*.
Critical Analysis	Interpretation	Porta, Herrera, (2017a). Music and its meanings in children's favorite audiovisuals. *To communicate*
Educational assessment of the environment and proposals for innovation and improvement.	Educational response and application	Porta, (2017b). Knowing the social environment of Music, a required condition in Postmodern Music Education. *DEDICA.* *Porta, A. (2007b). Talking about education, talking about music. Euphony*
	Didactic applicability	IN PROCESS,

Didactic Line of a Degree Subject

The teaching application of this process and its didactic application has been developed in the thematic and didactic methodology of the subject.

The understanding of music in audiovisual communication based on the curriculum must be approached at the initial and mandatory levels of education from the point of view of expression and creation. Its field is the soundtrack and its actions are focused on musical production and critical analysis. These creative options have in themselves purposes and effects that from education cannot remain unanswered since they build sound thinking, but not only that, the most important thing is that they influence society. With them, mental and social images of people and groups are created, with which values are built, creating archetypes, stereotypes and biases that produce effects, influences, expectations and values.

Thus, the course we propose will answer to the following general thematic structure, in two differentiated blocks Table 2: Thematic methodology of the subject and didactic procedure. Our questions,

TABLE 2
THEMATIC METHODOLOGY OF THE SUBJECT AND DIDACTIC PROCEDURE

Thematic areas   Didactic topics

Audiovisual communication	**Audiovisual music as part of the curriculum**
Music and audiovisual communication	Audiovisual musical expression and creation
Soundtrack study	Music production
	Critical analysis

How will we do it?
What we will use to do it?
What will we do it for?

The Principles of Didactic Methodology

Based on these principles and responses. The didactic methodology will respond to:

- *How we will do it?*: observing, relating and applying what we have learned by creating designs and products.
- *What we will use to do it?*: using a variety of audiovisual products such as advertisements, films, reports, video clips, etc.

In this way, the most comprehensive part of the subject will be oriented towards
- *What will we do it for*? achieving a reflective, creative and critical attitude towards the possibilities of audiovisual music in education.

PLE

The methodological approach to our topic will use the PLE (RDS) as a way of formative articulation. It is a useful idea about how we learn, created in 2001 and developed in Ireland. It is intended to understand students' learning environments, especially virtual ones, which according to Jordi Adell the PLE (RDS) is in itself an example of this new way of conceiving knowledge in the network, it is a collective and open process (Adell, 2011). According to Adell and Castañeda's definition, a PLE (RDS) is the set of tools, information sources, connections and activities that each person uses on a regular basis to learn (Adell and Castañeda, 2010, p. 23).

Its elements are: 1) reading tools and strategies: the sources of information available to me in the form of an object or artifact (media libraries); 2) reflection tools and strategies: the environments or services in which I can transform the information (sites where I write, comment, analyze, recreate, publish), and 3) relationship tools and strategies: environments where I relate to other people from/with whom I learn" (Castañeda and Adell, 2011). The PLE integrates READ: multimedia, WRITE: Reflect and SHARE: Personal Learning Network (Castañeda, Adell, 2013).

Participants

The experience has been carried out in the elective subject "New Technologies Applied to Music" in two groups of students in the academic years 2017 to 2018, and 2018 to 2019. With a total of 30 students studying the 3rd year of the Bachelor Degree in Education. Specialization in Music 60% of the students attended or were studying the Professional Degree of Music in the specializations of Piano, Clarinet, Violin, Trombone, Trumpet and Percussion, and Bassoon.

RESULTS

Didactic Structure

The didactic structure of the subject will be as follows:

FIGURE 1
THE DIDACTIC STRUCTURE OF THE SUBJECT

R	READ
	Reading and support materials: Recommended articles and readings. Videos & audios.
D	DO
	Activities, exercises, group work.
S	SHARE
	Submit proofs and written products. Peer assessment. Rubric.

Source: own adaptation

- **READ.** *Phase I.* Understanding and studying music from a communicative point of view. This phase requires learning to read in an unknown but very attractive language for them: the language of music in audiovisual communication, analyzing what is listened to, its uses, meanings and effects.
- **DO.** Phase II. To carry out sequences of activities using what has been learned
- **SHARE.** *Phase III*. To create audiovisual products that have the soundtrack as a core element, and creativity, significance, meaning and critical position as constructive elements.

Some Learning Outcomes

READ. *Phase I*. Understanding and studying music from communicative spaces

Activity: To create concept maps: sound in audiovisual environments. Localization of strengths and weaknesses

Students show their perceptions in concept maps, becoming aware of what they know and what their strengths and weaknesses are.

Activity: Analysis of music and audiovisual products (Table 3)

The second activity will be to analyze the music produced by different audiovisual producers through tables that reflect timelines in their rows and sound characteristics in their columns:

TABLE 3
ANALYSIS OF MUSIC AND AUDIOVISUAL PRODUCTS

Product	With/without music	Acoustics		Electronic		Voice		End type
		Popular	Orchestra	Copy	Original	Solo	Several	Cadence/cut

DO Phase II. To carry out sequences of activities using what has been learned

Activity: Using a learned concept or resource and creating a didactic sequence of activities from it (Table 4).

The results are as follows:

TABLE 4
TO CARRY OUT SEQUENCES OF ACTIVITIES USING WHAT HAS BEEN LEARNED

N	TOPICS	POTENTIAL ACTIVITIES
1	**Leitmotiv**	Associating music to characters
2	**Theme music**	Discovering the theme of a song through gestures or movements
3	**Synchronization**	Playing different tempos and having students walk to the beat
4	**Sonorous planes**	One partner sits in the center of the classroom, the others move closer and farther away as they play an instrument, the partner sitting in the center has to perceive if he/she is near or far away.
5	**Figure-background perception**	An audio is played and the students must be able to differentiate the sounds heard as a whole. On the one hand, an orchestra will be played (they will have to identify the instruments that are playing) and on the other hand, a soundscape that they may have experienced on a daily basis will be played
6	**Cut music**	We start the well-known game of chairs, they must notice when the music cuts out in order to know when they have to sit down.
7	**Music and sounds**	Identifying by means of gestures or cards whether the teacher's proposal is music or noise
8	**Inclination to complete the figure (law of perceptual constancy)**	Working on several children's songs and then playing a piece for them in order for them to have to sing along as it would continue.
9	**Cadence**	Card game: 1) Red card: suspensory cadence, 2) Green card: perfect cadence. Balls game: Children have to react according to whether the cadence is suspensive (they keep the ball) and if it is conclusive they lie down.
10	**Musical Phrase**	Playing a song and have them separate it by phrases, give them a sheet of paper with the lyrics, the musical score, or both, and have them point out each phrase.
11	**Variations**	Conducting a jam session where each child will have an instrument. They will start with a base rhythm that will be made up by the child or given by the teacher. Each time the teacher instructs it, a student with different rhythms will be added to the base rhythm, making variations by accumulation.
12	**Ellipsis**	Recording a short film in groups in which ellipses are introduced and then presenting it to the rest of the group. It would be, for example, to make a sequence of photos, creating a musical bridge between them that links them all. Morning scene, afternoon scene, evening scene, etc.

13	**Diegetic - non-diegetic music**	We divide the classes into two or three groups, then we listen to some songs belonging to specific parts of science fiction movies (without the video part, just listen), very differentiated according to their context. And in the groups we must make a theatrical representation based on the period that the music suggests to us.
14	**Tempo-Accent**	We will perform a Dalcroze activity, in this activity the students spread around the classroom will start walking to the music tempo of the song we have chosen, and we will ask them for a different movement when they perceive an accent, such as a clap or a jump. Therefore, every time there is an accent in the song, the students will jump or clap their hands.
15	**Pre-existing incidental music**	We play 3 videos without sound, and then 3 sounds without image, and we will ask our students to relate each sound with one of the videos.

SHARE *Phase III*. To create audiovisual products that have the soundtrack as a core element, and creativity, significance and meaning as constructive elements.

Final activity: Creation of a group audiovisual project.

CHOOSE AN OPTION
- Preparing a class, didactic unit or project using resources learned in the new technologies subject
- Using musical and sound resources from the classroom or from home to create a soundtrack for an audiovisual production.
- Creating a synchronized story

PROCEDURE
- Choice of task
- Presentation of a reasoned script
- Exhibition
- Shared evaluation. Rubric.

RESULTS OF THE SUBJECT EVALUATION AND ASSESSMENT

The subject design and its experimental methodology was of high interest to the students, showing good results and high motivation

CONCLUSIONS AND ANALYSIS

The aim of our work was to study, observe and analyze daily audiovisual music, to create a didactic proposal in a university subject and to study its results. In order to carry it out, we have used our research profile as a starting point, applying our findings and tools to a subject of the Bachelor Degree in Education. Thus, we have given a curricular design form to all of this, studying audiovisual music and its learning from the elementary school curriculum in an optional subject. All this has allowed us to become aware of the need to awaken the awareness regarding sound in audiovisuals and to introduce students to reflective, creative and critical learning processes. We can confirm that this has happened. The didactic procedure used has been the experience, exploration and critical study of the meaning and sense of music in the daily life audiovisual spaces.

The main limitation of this work has been its short life span. Our intention in the middle term is to explore the possibility of creating a corpus of analytical, comprehensive and didactic knowledge of learning environments with the presence of music in daily, cultural, academic and research life. Therefore, it is a work that can and should be extrapolated to different areas and contexts, finding in this process and results its own meaning.

This research line has been interested in knowing what music children listen to in their environment, offering some instruments for its approach and application in some samples. The question that is now being asked and the society is asking us is: What would you do if...? What would you have done? (Navas, 2009).). These are recurring questions for us, and we ask them in each of the projects in which we have participated. Their responses have been produced through two actions that we have implemented with good results in students, and we give evidence of it in this paper we present: 1) Improving diagnostic tools and procedures for the understanding of music nowadays. 2) Looking for alternative actions by initiating training processes that include them. As a summary we can state that we have described the research trajectory of the Hábitat Sonoro research team, its methodological lines and tools, as well as some results, shaping through all of this the training action of the Bachelor Degree in Education, Specialization in Music regarding the subject "New technologies applied to music".

ACKNOWLEDGMENTS

REFERENCES

Adell, J., & Castañeda, L. (2010). "Los Entornos Personales de Aprendizaje (PLEs): Una nueva manera de entender el aprendizaje". In R. Roig Vila & M. Fiorucci (Eds.), *Claves para la investigación en innovación y calidad educativas. La integración de las Tecnologías de la Información y la Comunicación y la Interculturalidad en las aulas.* Alcoy: Marfil.

Aronowitz, S., & Giroux, H.A. (1991). *Postmodern education: Politics, culture, and social criticism.* University Minnesota Press.

Asubel, D.P. (1976). *Psicología educativa: un punto de vista cognoscitivo* (pp. 53–106). México: Trillas.

Ausubel, D., Novak, H., & Hanesian, H. (1976). *Significado y aprendizaje significativo.*

Benjamin, W. (1972). *Discursos interrumpidos I*. Madrid: Taurus.

Benjamin, W. (1973). *La obra de arte en la época de su reproductibilidad técnica.*

Castañeda, L., & Adell, J. (2011). El desarrollo profesional de los docentes en entornos personales de aprendizaje (PLE). In R. Roig Vila & C. Laneve (Eds.), *La práctica educativa en la Sociedad de la Información: Innovación a través de la investigación.* Alcoy: Marfil.

Castañeda, L., & Adell, J. (Eds.). (2013). *Entornos Personales de Aprendizaje: Claves para el ecosistema educativo en red.* Alcoy: Marfil.

Coll, C. (1988). Significado y sentido en el aprendizaje escolar. Reflexiones en torno al concepto de aprendizaje significativo. *Infancia y Aprendizaje*, *11*(41), 131–142.

Eco, U., & Cantarell, F. (1978). *La estructura ausente: Introducción a la semiótica*. Madrid: Lumen.

Giroux, H., & Martín, M. (1998). *La escuela y la lucha por la ciudadanía: pedagogía crítica de la Época moderna*. México: Siglo Veintiuno.

González Requena, J. (1992). *El discurso televisivo: Espectáculo de la posmodernidad*. Madrid: Cátedra.

Greimas, A.L. (1973). *En torno al sentido: Ensayos semióticos*. Madrid: Fragua.

Hargreaves, D., & North, A. (1999). *The functions of music in everyday life: Redefining the social in music psychology*.

Navas, A.L. (2009). Teorías y procedimientos de educación moral en ética y deontología de la comunicación. *Comunicación y Sociedad Communication & Society*, *22*(2), 35–58.

Perls, F.S. (1998). *Dentro y fuera del tarro de la basura*. Madrid: 4 Vientos.

Piaget, J., & Inhelder, B. (1981). *Psicología del niño*. Madrid: Morata.

Porta, A. (2007). Hablemos de educación, hablemos de música. *Eufonía*, (40), 87–98.

Porta, A. (2007). *Músicas públicas, escuchas privadas. Hacia una lectura de la música popular contemporánea*. Aldea Global. Barcelona, UAB, UV, UJI.

Porta, A. (2008). ¿ qué puede aportar la música al ciudadano contemporáneo? *Música, Arte, Diálogo, Civilización*, pp. 379–390.

Porta, A. (2014). Explorando los efectos de la música del cine en la infancia. *Arte, Individuo y Sociedad*, *26*(1), 82–98. http://dx.doi.org/10.5209/rev_aris.2014.v26. n1.40384

Porta, A. (2014). Los modos de escucha televisiva. *Música y audición en los géneros audiovisuales*. Publicaciones Universitat de Barcelona. J. Gustems (Coord), *13*, 53–67.

Porta, A. (2015). *Aprendiendo a ser maestro Didáctica de la Expresión Musical en Primaria*. Docentia UJI.

Porta, A. (2017). Conocer el entorno social de la Música, una condición necesaria en la Educación Musical Postmoderna. *DEDiCA. Revista de Educação e Humanidades*, *12*, 69–82.

Porta, A., & Ferrández, R. (2009). Elaboración un instrumento para conocer las características de la banda sonora de la programación infantil de televisión. *RELIEVE. Revista Electrónica de Investigación y Evaluación Educativa*, *15*(2), 1–18.

Porta, A., & Ferrández, R. (2009). Elaboración un instrumento para conocer las características de la banda sonora de la programación infantil TV. *RELIEVE*, *15*(2). Retrieved from http://www.uv.es/RELIEVE/v15n2/RELIEVEv15n2_6.htm

Porta, A., Morant, R., & Ferrández, R. (2015). La plantilla 3.0, un instrumento para conocer la música de la infancia. *RECIEM*, *12*, 11–28.

Porta-Navarro, A., & Herrera, L. (2017). La música y sus significados en los audiovisuales preferidos por los niños. *Comunicar*, *25*(52), 83–92.

Randel, D. (Ed.). (1997). *Diccionario Harvard de música*. Madrid: Alianza.

Schaeffer, P. (1966). *Traitdes Objets Musicaux*. Paris: Seuil.

Schafer, M. (1977). *The tuning of the world*. Toronto: McClelland and Steward.

Sloboda, J. (2005). Exploring the musical mind: Cognition, emotion, ability, function. the social in music psychology. *Psychology of Music*, *27*(1).

Vigotsky, L.S. (1981). *The instrumental method in psychology*. NY: Sharpe.

Vygotsky, L.S. (1995). *Obras escogidas, tomo III*. Madrid: Visor e MEC.

Wertsch, J.V. (1988). *Vygotsky y la formación social de la mente* (No. 212 WER).