

IMPACT OF MUSICAL TRAINING AS A LEISURE ACTIVITY ON LISTENING LEVELS. RESULTS OF A PROGRAMME WITH SENIOR CITIZENS

IMPACTO DEL OCIO FORMATIVO MUSICAL EN LOS NIVELES DE ESCUCHA.
RESULTADOS DE UNA INTERVENCIÓN CON PERSONAS MAYORES

IMPACTO DO TEMPO DE TREINO MUSICAL AO NÍVEL AUDITIVO.
RESULTADOS DE UMA EXPERIÊNCIA COM PESSOAS MAIS VELHAS

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ABSTRACT: The goal of this study consisted of analysing whether educational intervention by means of a Musical Training as a Leisure Activity programme had any significant impact on sensorial, affective and analytical listening levels among senior citizens who had and had not previously studied music. To do so, we designed our own measurement scale and applied it to a sample of 37 students over 50 years of age at the University of Deusto (Bilbao, Spain). Both the scale as a whole and each of the subscales of the different listening levels presented adequate reliability, with Cronbach's alpha values greater than 0.8. The questionnaire was administered in the classroom on the first and last day of class, after hearing the same piece of music. The measurements before and after the educational intervention were compared by applying a Student's t-test for paired samples. The research concluded that the only listening level to have been significantly affected by the Musical Training as a Leisure Activity programme was the analytical level, and when examining this in greater detail, it is noted that the impact was only prominent among members of the sample who had not studied music before.

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PALABRAS CLAVE: ocio educación música niveles de escucha	RESUMEN: El objetivo de este estudio consistió en analizar si la intervención educativa a través de un programa de Ocio Formativo Musical tenía un impacto significativo en los niveles de escucha sensorial, afectivo y analítico en personas mayores con y sin estudios musicales previos. Para ello, se diseñó una escala de medición propia y se aplicó a una muestra de 37 estudiantes mayores de 50 años de la Universidad de Deusto (Bilbao, España). Tanto la escala en su conjunto, como cada una de las subescalas de los distintos niveles de escucha mostraron una adecuada fiabilidad, con valores de alfa de Cronbach superiores a 0,8. El cuestionario fue administrado en el aula el primer y el último día de clase tras la audición de un mismo fragmento musical. Las mediciones anteriores y posteriores a la intervención educativa fueron comparadas aplicando el estadístico de la t-student para muestras relacionadas. La investigación concluyó que el único nivel de escucha afectado de manera significativa tras la intervención de Ocio Formativo Musical estudiada fue el analítico y, afinando más, el impacto solo fue destacable para los individuos de la muestra sin estudios musicales previos.
PALAVRAS-CHAVE: lazer educação música níveis de audição	RESUMO: O objetivo deste estudo foi analisar se a intervenção educacional através de um programa de lazer de treino musical teria um impacto significativo nos níveis de audição sensorial, afetiva e analítica em idosos com e sem estudos musicais prévios. Para este fim, desenhamos e aplicamos uma escala de auto-medição a uma amostra de 37 alunos com mais de 50 anos de idade da Universidade de Deusto (Bilbao, Espanha). Tanto a escala total como cada uma das subescalas dos diferentes níveis de audição apresentaram confiabilidade adequada, com valores de alfa de Cronbach maiores que 0,8. O questionário foi administrado na sala de aula no primeiro e último dias de aula depois de ouvir o mesmo fragmento musical. Os efeitos da intervenção educacional foram comparadas usando a estatística t-student para amostras relacionadas. Os resultados permitem concluir que o único nível de audição significativamente afetado pela intervenção de treino musical estudado foi o analítico. Além disso, o impacto foi notável apenas para os indivíduos da amostra sem estudos musicais prévios.

1. Introduction

Musical Training as a Leisure Activity (hereinafter MTL) is a three-way (humanistic, educational and aesthetic) construct designed to facilitate a valuable leisure experience (Cuenca, 2014) involving training in classical music. MTL was conceived within the framework of non-formal education, as it arose from the quest to create alternative forms of musical education, as opposed to the inherently academic or school methods, the intention being to educate learners through programmes with the specific purpose of fostering conscious listening to music (Albaina, 2015). Although MTL can target any educational group, this study focuses on people over 50 years of age, an increasingly more relevant segment of the population (Abellán & Ayala, 2012), who are going through a stage of life in which leisure starts to become especially important and can contribute to an active and satisfactory ageing process (Cuenca-Amigo & San Salvador del Valle, 2016).

One of the greatest mysteries and treasures of musical language is the fact that the same composition can provoke different and even opposing reactions among listeners. For Small (2006:38), “the listener’s experience of the music is essentially private”. This variability is even possible in the same listener in different contexts or times of their life. The subjective nature of responses to musical stimuli has led many authors to consider that the meaning of music must be sought in the ears that hear it, rather than in the music itself (Cámara, Cañada,

Albaina & Larrinaga, 2012; MacDonald, Hargreaves & Miell, 2012; Sloboda, 2012; Szendy, 2015). Along these lines, Horowitz’s (2012) theories explain both the way in which sound affects us, and our capacity to learn to manipulate it, leading to the conclusion that we are what we hear.

Many authors also consider the importance of people’s attitudes to music (Delalande, 2013; Schafer, 2013). Swanwick (2006) relates these attitudes to its power to evoke significant experiences in us. For Bonds (2014:19-20), listeners play decisive roles in the transformation of attitudes towards music and he sustains that all variations in listening are “the product of a far broader change in attitudes toward the very act of perception itself, the way in which a subject (the listener) apprehends an object (the musical work)”.

But there are other individual factors that determine the way in which people listen. Some of these are directly associated with music, such as the ability to identify and connect musical parameters, musicality, auditory memory, listening education, coaching, and tastes and preferences for each style of music. Others have an indirect influence, such as, for example, age, socio-cultural factors and even personality (Ball, 2010; Blacking, 2006; Dahlhaus & Eggebrecht, 2012; Drösser, 2012; Levitin, 2011; Sacks, 2015). From the perspective of MTL, it is important to consider that these differences exist, especially when designing didactic approaches, in order for listening to music to be a satisfactory experience for as many people as possible (Albaina, 2015).

One of the starting points for this research was the recognition that music is susceptible to being captured by people on three complementary listening levels: the sensorial, the affective and the analytical (Copland, 2008; Delalande, 2013; Sloboda, 2012; Swanwick, 2006; Willems, 2001).

The sensorial level corresponds to the physiological plane and is essential for accessing the other listening levels. It is studied from the field of perception and has been a matter of major interest to researchers in several areas of knowledge, such as physiology, physics (in the branch of acoustics), medicine, psychology and, naturally, music. Even based on the premise that MTL's area of action is tangential to the aforesaid areas, it is important to understand the psycho-physiological mechanisms that are involved in the processes of perceiving music, in order to understand listeners' reactions and thereby design effective didactic strategies. Many authors have focused their attention on understanding how musical perception works, for educational or aesthetic purposes (Ball, 2010; Boulez, Changeux & Manoury, 2016; Levitin, 2011; Sacks, 2015; Sloboda, 2012; Small, 2006; Szendy, 2015). For Bonds (2014:21), it is crucial because "we may or may not believe what we see, but we routinely see what we believe. The same holds for listening as well. We perceive in music what we are predisposed to perceive".

The affective level, which can occur at the same time as the sensorial level, corresponds to the emotional plane. Willems (2001:55) states that "if auditory sensoriality is the starting point, the very basis of musicality, affective-auditory sensitivity might be its centre". For Swanwick (2006), after a first impression of sounds on a sensorial level, people are affected by the expressive quality of music associated with a frequently subconscious psychological process that he calls 'imitation'. Other authors prefer to use the term 'identification', rather than imitation, to explain the origin of the emotional impact of music on people. According to Alvin (1997), music expresses feelings that arise from a situation and that are not necessarily imitative. She alludes to Aristotle when she mentions the iso-principle, in which "the similar acts upon the similar" (Alvin, 1997:109). Benenson (2011) also uses the iso-principle to explain how, within a complete mosaic of sounds, there is a series of structured patterns that permit a communication channel on an affective level in the process of listening to music, because for him every human has a characteristic sound identity that makes them different from other people. For Blacking (2006), what really moves people is the human content of humanly

organised sounds. Gabrielsson (2011) researched reactions to music from a psychological perspective and coined the term 'strong experiences with music' (SEM) to distinguish those listening experiences that take us from being neutral auditory observers (which we are when we can more or less objectively describe a sound, on the basis of perception), to being subjects that are emotionally implicated through listening to or, what is the same, being affected by music.

Many researchers have studied affective responses to music on the basis of listeners' verbalizations or the analysis of certain types of physiological response (Drösser, 2012; MacDonald, Hargreaves & Miell, 2012; Sloboda, 2012) and have reached the conclusion, among others, that both the listener's expectations and contextual factors can benefit emotional experiences with regard to music. These manifest themselves in the elderly mainly in two ways. One of them refers to the relief of psychic tensions thanks to the induction of emotional catharsis through musical listening. The second considers the affective-emotional dimension from the perspective of human spirituality and concludes that the leisure experience, as contemplated by MTL, is associated with the spiritual well-being of the person.

MTL programmes, and didactic strategies designed to provide guidelines for listening, can help to raise expectations with regard to what is happening in the organisation of a piece of musical discourse, thereby being able to stimulate the affective level.

The analytical level corresponds to the cognitive plane. In this regard, MTL programmes, with their educational profile, consider how providing the listener with points of reference will help him/her to engage in a series of cognitive processes that will raise their awareness of sound elements and their organisation to thereby attribute them a meaning and enjoying listening to them (Albaina, 2015).

The meaning of music is an issue that has been studied from a variety of areas of knowledge: philosophy, musical aesthetics and psycho-musicology, to cite the most relevant (Boulez, Changeux & Manoury, 2016; Levitin, 2011; Sloboda, 2012). The listener can try to extract a specific meaning from what they hear on the basis of analysis, although it is true that their approach to music on this listening level may draw attention towards the emotional components of a piece of musical discourse, or towards components that configure it from the very essence of musical language. In any case, the widening of the musical horizon, thanks to a more in-depth understanding of how music works and why, will help people who, on this level, we could

fully consider to be listeners to enjoy music in a fuller way (Ball, 2010). But neither type of analysis is exclusive, and they are certainly not incompatible, and furthermore, the same piece of musical discourse has a specific meaning for each listener. It is accepted that, throughout history, creators have made use of certain stylistic and technical compositional resources to communicate “mysteriously beautiful forms” of emotion (Rosen, 2012). Many authors have noted how valuable it could be for both analyses to complement each other when listening actively (Dahlhaus & Eggebrecht, 2012; Delalande, 2013; Meyer, 2009; Sloboda, 2012; Small, 2006).

For Swanwick (2006:99), auditory analysis is related to the imaginative play that he defines as “a psychological concept which has its musical correlation in the ways we respond to and create formal relationships, bringing to music fluid sets of expectations; speculating, predicting a future for ongoing music”. And this can be learned through MTL. Aaron Copland is a composer who also appreciated the importance of training for listeners of classical music, however elemental, to enable them to analyse what they are hearing in order to understand it and associate it with the enjoyment of live music. He stated that “it is very important for all of us to become more sensitive to music on its sheerly musical plane. After all, an actual musical material is being used” (Copland, 2008:33). Moreover, as Blacking (2006) points out, music cannot express anything non-musical unless the experience to which it is referring already exists in the mind of the listener.

As can be gathered from the literature, the three listening levels are interlinked (Ball 2010; Boulez, Changeux & Manoury, 2016; Delalande, 2013; Sacks, 2015; Sloboda, 2012; Swanwick, 2006), thereby reinforcing the enjoyment of music through fuller listening, and it is from this perspective that MTL programmes are designed. The goal of this study consists of analysing whether educational intervention by means of an MTL programme has a significant impact on the sensorial, affective and analytical listening levels of people who have and have not studied music before. The hypothesis is that MTL has a positive impact on the three listening levels in both groups.

2. Methodology

In order to study the impact of MTL on listening levels, a quantitative methodology was designed based on a new measurement scale. The following sections develop the sample selected for research, the scale construction process, and the data collection and analysis procedure.

2.1. Participants

The reference population for this study consisted of all the senior students of either gender taking MTL courses in Euskadi (Basque Country), where several entities and associations contribute to the educational and cultural development of senior citizens. This research focuses on the university setting, as this work is considered a priori to be more systematically undertaken by universities, which have a greater availability of resources and academic rigour, which implies evident efficacy and more long-lasting robustness. During the 2016-2017 academic year, we found proposals related to MTL in the programming of 24 of the 45 universities of the Spanish Association of University Programmes for Older Adults (AEPUM), data that reflect the implementation of MTL in slightly more than half (53,33%) of the university programmes targeted at older adults.

In order to select our sample, we performed non-probabilistic sampling (Malhotra, 2004) and selected as a case study the MTL courses given at the University of Deusto in the second semester of the 2015-2016 academic year. At said institution, ongoing learning that targets senior citizens is channelled through the Citizenship School (Deustobide), where two MTL courses were being offered during the selected period. The first course, called “*Vidas sonoras. Retratos y relatos de músicos a través de su obra*” (‘Sound lives. Musicians’ portraits and stories through their work’), is part of the *Ocio Cultural Universitario* (University Cultural Leisure) programme, in which 20 senior citizens were enrolled. The second course, titled “*Géneros y ciclos musicales*”, (‘Musical genres and cycles’) was part of the university degree in Culture and Solidarity, for which 44 senior people were registered. As a result, the target sample consisted of 64 students. However, the need to measure on the first and last day of class, together with the lack of attendance or punctuality among students, along with the requirement to answer the full questionnaire, meant the final sample was reduced to 37 individuals.

We shall now briefly describe the socio-demographic details of the 37 individuals surveyed. In terms of age ranges, 16 individuals were between 50 and 64 years (43%); 19 were between 65 and 74 years (51%) and only 2 people were aged 75 and above (5%). As for gender, 15 of the interviewees were men (41%) and 22 were women (59%). Regarding level of education, 6 individuals had only completed primary education (‘*Educación General Básica*’) (16%), 11 had completed secondary education (‘*Bachiller*’ or ‘*Formación Profesional*’) (30%) and 20 had university degrees or diplomas,

etc. (54%). Finally, out of the entire sample, 24 had never studied music before (65%) and 13 had some kind of previous musical studies (35%).

2.2. Instrument

Considering the analysed theoretical framework and the inexistence of scales that fully fit the MTL construct, we decided to create our own scale, the attention of which was focused on the three identified listening levels: sensorial, affective and analytical. To produce such a scale, we reviewed others related to the perception of the performing arts and music in general (Boerner & Jobst, 2013; Rössel, 2011) and to the perception of classical music in particular (Albaina & Cámara, 2010; Blasco, 1996; Chin & Rickard, 2012; Gabrielson, 2002; Law & Zentner, 2012; Thompson, 2007). The complete scale consists of thirty items, ten for each listening level. Each item contains a statement that must be rated according to the respondent's level of agreement or disagreement, using a 7-point Likert scale. A value of 1 means "completely disagree" and 7 means "completely agree". According to González & Pazmiño (2015), the use of a 7-point Likert scale helps to improve reliability with respect to a 5-point scale. In this case, the reliability of the scale as a whole, measured by Cronbach's alpha, produced a value of 0.951. We now present details of the construction of each of the three listening levels.

First of all, the sensorial level contains statements related to the listeners' focus of attention on a series of sound stimuli originating from music, while also probing awareness of said attentive attitude. To delimit the study of this attitude of being a 'listener' as opposed to a 'hearer' among subjects, we were interested in learning about their own thoughts regarding their level of enjoyment when the music plays, whether the focus of their auditory attention is intentional and addresses certain previously established musical parameters organised in categories, and also reappraising which sound elements they highlight and whether the piece as a whole causes any physical sensation in them. Cronbach's alpha was 0.820 for the sensorial sub-scale, which contains the followings items: (1) I listen carefully; (2) I am aware of myself as a listener; (3) My mind is distracted when hearing this music; (4) I try to address my auditory attention towards certain elements of this music; (5) I try to identify certain parameters in what I am going to hear; (6) I have pre-set listening patterns; (7) I try to arrange what I hear into certain categories; (8) I try to identify the most prominent parameters of what I hear; (9) I perceive the different parameters of what I hear well: loudness,

tempo, pitch, timbre of the instruments, etc.; (10) This music causes physical sensations in me.

Second, the affective level contains statements related to the expressive quality of music, which is susceptible to causing reactions among listeners that are associated with the psychological and sensitivity realms. To do so, responses are sought regarding the enjoyment aspect of listening, as well as the effects that music can provoke, such as liking, stronger or weaker impressions, relaxation, certain feelings or comfort. It is also interesting to find out whether listeners connect with music easily and even feel moved or transported by it or, if it that is not the case, whether they at least recognise its power to evoke feelings. Cronbach's alpha was 0.929 and the statements making up the affective sub-scale were as follows: (1) I feel at ease as a listener; (2) I like what I hear; (3) What I hear makes an impression on me; (4) This music relaxes me; (5) I am moved by what I hear; (6) This music provokes certain feelings in me; (7) I feel transported by this music; (8) I feel in harmony with this music; (9) This music makes me feel good; (10) This music expresses feelings.

Finally, the analytical level contains statements related to the comprehension of the organisation of musical discourse and the attribution of a meaning to what is heard. These feature a series of cognitive operations such as attention, identification, recognition, the relationship between elements, the search for meaning and comprehension of the functionality of the parameters and their articulation with syntactic and semantic purposes, which reveals whether listeners, on the basis of previously provided reference points, have acquired musical comprehension skills. Cronbach's alpha was 0.941 and the group of associated items was as follows: (1) I try to understand the structure of the piece; (2) I pay attention to the musical style; (3) I try to identify the period when the music was written; (4) I try to recognise the genre to which the piece belongs; (5) I try to identify the composer of the music; (6) I try to imagine the reason why the piece was written; (7) I try to relate elements to others in an attempt to understand what I'm listening to; (8) This music makes me think; (9) This music means something to me; (10) I understand the function of some musical parameters (rhythm, melody, pitch, loudness, instrumental timbres, etc.) in this piece.

Nunnally (1987) comments that Cronbach's alpha must be higher than 0.7, so given the results obtained, it can be considered that both the scale as a whole (0.951) and the three subscales (sensorial 0.82; affective 0.929 and analytical 0.941) are reliable.

In addition to the scale, the questionnaire also asks whether interviewees had studied music before. It also asks for their date of birth, which is used as an anonymous code in order to identify each individual.

2.3. Procedure

The questionnaire was administered in the classroom in paper format to all of the members of the two groups of senior citizens studying the MTL courses offered at the University of Deusto during the second semester of 2015-2016. In both cases, before any data were gathered, the students were informed about the anonymous, confidential and voluntary nature of their participation. In order to measure the impact of the MTL programmes, the questionnaire was administered on the first and last day of class, after listening to String Quartet No. 2 in A major by Juan Crisóstomo Arriaga. Note that the piece of music was exactly the same for both the first and second measurements.

To pair the questionnaires from before and after the MTL programme, a specific field was set up whereby the respondents' dates of birth were used as a link code, so questionnaires were only considered valid if their specific code existed both for the initial and final questionnaires. A total of 16 questionnaires corresponded to students that attended the first class but not the last, or vice versa, and therefore did not meet the required criteria and so were not even recorded in the database.

We also reviewed the quality of the responses, whereupon 11 pairs of questionnaires were considered invalid because they contained unanswered items. Accordingly, 37 pairs of questionnaires were finally selected for analysis, of which 35% involved participants who had some kind of musical studies (13 responses) and 65% that had not (24 responses).

2.4. Data analysis

Once the paper questionnaires had been paired using dates of birth, the responses were digitalised using a form that was specially created using the Google Forms application, which can be used to record data and at the same time create

an Excel database that can then be processed or exported to specific statistical systems. The form created using Google Forms contained all of the responses to the two measurements, whereby the variables corresponding to the scales of listening levels were duplicated to reflect pre-MTL and post-MTL measurements. After digitalising the responses, the Excel database was exported to the SPSS statistics application (version 21), thereby creating the definitive database for data analysis.

For each individual, a mean was calculated for each sub-scale (sensorial, affective and analytical level) for both pre- and post-MTL. Each listening level was analysed separately, and we compared the means obtained for each level before and after the programme. In order to understand the significance of the difference, we applied Student's *t*-test for paired samples. This test was performed both for the entire sample ($n=37$), and for the subsets of individuals with ($n=13$) and without ($n=24$) previous musical studies.

3. Results

The analysis of results presented below is divided into three subsections, one for each studied listening level: sensorial, affective and analytical. For each case, we present an abstract table showing the *p*-values (field called "Student's *t*"), which indicate whether or not the results of the Student's *t*-test are significant. The significant results are marked in the table with an asterisk (*) and correspond to *p*-values equal to or lower than 0.05. The tables also show the mean and standard deviation of the scale when applying the questionnaire before the programme (pre-MTL), and the mean and standard deviation of the scale when applying the questionnaire after the programme (post-MTL).

Each of the tables presents results for the entire sample ($n=37$), for the subset of respondents who had no previous musical studies ($n=24$) and for those that had studied music before ($n=13$).

3.1. Sensorial level

In the case of the sensorial level, although the means in the scale are higher after the MTL programme, the differences are not statistically significant, as shown by the results of Student's *t*-test.

Table 1: T-test for paired samples – Sensorial level

Groups	N	PRE-MTL		POST-MTL		Student's t
		Mean	Standard deviation	Mean	Standard deviation	
Without musical studies	24	4.7163	.91965	4.8528	.85879	.640
With musical studies	13	4.9615	1.12734	5.1771	.94660	.330
Total	37	4.8025	.98897	4.9667	.89136	.415

The results obtained indicate that MTL did not affect the sensorial level.

3.2. Affective level

The same holds true for the affective level as for the sensorial level, although the differences

between the pre- and post-MTL means are even smaller. In fact, the values are very similar and, the post mean is even lower than the pre mean, as can be seen in the case of the group with previous musical studies. Once again, the Student's t-test corroborates that the differences between means are not significant.

Table 2: T-test for paired samples – Affective level

Groups	N	PRE-MTL		POST-MTL		Student's t
		Mean	Standard deviation	Mean	Standard deviation	
Without musical studies	24	5.7287	1.00519	5.8323	1.05316	.649
With musical studies	13	5.8615	.90142	5.7342	.90779	.620
Total	37	5.7754	.95944	5.7978	.99276	.895

The analysis of the results indicates that MTL has no effect on the affective level.

3.3. Analytical level

The analytical level reverses the trend observed until now, since in this case the differences

between the pre- and post-means are large enough for the Student's t-test to establish that the results are statistically significant. Specifically, the results are significant for the whole group and for the subset of people without musical studies. However, the results are not significant for those that did have previous musical studies.

Table 3: T-test for paired samples – Analytical level

Groups	N	PRE-MTL		POST-MTL		Student's t
		Mean	Standard deviation	Mean	Standard deviation	
Without musical studies	24	3.7856	1.36425	4.4583	.87488	.005*
With musical studies	13	4.7806	1.02518	5.0291	1.17254	.255
Total	37	4.1352	1.33089	4.6589	1.01173	.003*

The results obtained indicate that MTL does affect the analytical level, especially in the case of people with no previous musical studies.

4. Discussion and conclusions

Following the review of the literature and analysis of the results, we can first highlight the evidence found for the subjective nature of responses to musical stimuli (Small, 2006). The answers to the different items and the degree of agreement or disagreement with their content offered by the members of the sample and as reflected on the Likert scales show how rich the variety is. This is undoubtedly due to the multiple individual factors emanating from any human group (MacDonald, Hargreaves & Miell, 2012; Sloboda, 2012; Szendy, 2015) and even more so to the heterogeneous groups of people that make contact with such training programmes (Cámara, Cañada, Albaina & Larrinaga, 2012). There are singularities, which are inherent to each person, that are not susceptible to manipulation by the teacher or conductor of the listening activity (Ball, 2010; Blacking, 2006; Dahlhaus & Eggebrecht, 2012; Drösser, 2012; Levitin, 2011; Sacks, 2015). We should also highlight the existence of other types of differences, such as those referring to auditory skills, musical studies, attitudes towards music and musical biographies which, though not unchanging and adjustable through musical and listening education, do mark certain groups that are characterised by diversity (Bonds, 2014; Horowitz, 2012; Swanwick, 2006). This undoubtedly, and to the benefit of educational efficiency, conditions didactic approaches to the design of MTL programmes (Albaina, 2015; Delalande, 2013; Schafer, 2013).

Second, and on the basis of the idea that music is captured on three complementary listening levels, this research concludes that the only listening level that is significantly affected by having studied in an MTL programme is the analytical level, and to be more precise, the impact is only prominent

among those members of the sample who had not studied music before. Apparently, the area of action of MTL is tangential to the skills involved in the sensorial listening level. Consequently, despite the importance of perceptive processes as the basis for the complex phenomenon of listening (Ball, 2010; Bonds, 2014; Boulez, Changeux & Manoury, 2016; Levitin, 2011; Sacks, 2015; Sloboda, 2012; Small, 2006; Szendy, 2015), we find that the effect of the analysed MTL is not significant with regard to this first listening level. The affective level produces similar results, as the training and leisure involved in the analysed programme does not seem to affect the robustness of people's subjective experiences with regard to music on the emotional plane. This identification with the expressive quality of music, as described in the referenced literature, barely changes the sign of any of the groups into which our sample is divided, thereby suggesting that this listening level occurs in the subconscious (Swanwick, 2006) and in the very essence of each individual (Benenson, 2011), who is affected by music through his or her own emotional implication with it (Gabrielsson, 2011).

Finally, regarding the analytical level, it is observed that the listening guidelines provided to listeners on MTL programmes have an effect that is reflected by the differences between the measures before and after the intervention (Albaina, 2015; Boulez, Changeux & Manoury, 2016). From the results obtained, it can be inferred that the cognitive plane is stimulated and that the didactic nature of MTL is fundamentally effective for the musically illiterate (Ball, 2010; Levitin, 2011; Sloboda, 2012). This confirms the benefit and usefulness of MTL programmes for enriching people's musical and educational landscape (in the context of non-formal education) and in such fashionable and valuable approaches as lifelong learning (Vargas, 2017). The reference points that are acquired in the framework of MTL can be used to analyse musical discourse (in varying degrees of depth) and to help people understand it by attributing meaning to it

(Ball 2010; Sacks, 2015; Sloboda, 2012; Swanwick, 2006). Therefore, although the three listening levels are interlinked and indivisible, it is on this listening level where there is evidence of the impact of these programmes, which transform the hearer into a listener (Albaina, 2015; Boulez, Changeux & Manoury, 2016; Copland, 2008; Dahlhaus & Eggebrecht, 2012; Delalande, 2013).

As limitations of this study, we should note the size of the sample and the length of the questionnaire. The sample, despite covering different groups with a total of 64 individuals, was eventually reduced to 37 valid responses. The difficulty of administering questionnaires on the first and last day of class, together with the length and difficulty of the questionnaire, led to a high number of lost records. Therefore, future lines of research could use the existing data to simplify the scale through factor analysis, without any negative effect on reliability. The need to answer 10 items for each listening level generated difficulties among the

respondents, as they sometimes found it hard to differentiate between the items. Simplification of the scale would probably have a positive impact on the administration of the questionnaire and the collection of responses. This accomplished, it would be advisable to identify different MTL programmes outside the specific context studied here, in order to achieve a broader group and be able to compare and contrast the conclusions found in this research. Likewise, another possible line of research would be a more in-depth examination of the impact of MTL programmes on the affective level and its relationship with the analytical level. Several authors (Drösser, 2012; MacDonald, Hargreaves & Miell, 2012; Sloboda, 2012) maintain that the listener's expectations and contextual factors can benefit emotional experiences with respect to music. Although this thesis could not be confirmed by this study, it would of great interest to examine this area in depth in future research.

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Note

- ¹ The term level, as it is used here, is a synonym for the range or category and is associated with the idea of a scale or depth of listening, depending on the listener's level. In this sense, the order of the scale would be the following: (1) sensorial; (2) affective and (3) analytical.

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