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THE DELIBERATE PRACTICE: THE SPORT EXCELLENCE VERSUS THE MUSICAL EXCELLENCE

Trabajo Fin de Grado

presentado por

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Curso: 2014/2015

Convocatoria ordinaria

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ABSTRACT

If we look around us, we can observe that there is someone who is the best in each field of activity. We could think that they are exceptional individuals.

This Final Project aims to increase knowledge of the effects of Deliberate Practice in the domains of music and sport. This will define you a concept of Deliberate Practice and then focus on the diversity of situations in which it shows us how it is presented in real life.

From a questionnaire that has been designed for this study and distributed to the music students, I have expected to obtain a result that allow me to come to the conclusion that exists a relation between the hours of practice and the expertise in the execution.

This reality has been linked to the regarding situation in the sport practice, whose information has been provided by the coordinators of the different sports.

Taking into account the limited number of references available, this work has focused on a qualitative analysis of the data, interpreted from my point of view and my personal experience, which has been confirmed in the results obtained.

The statistics managed allow me to conclude that, although the argument is not definitive, the guide effort through deliberate practice is essential to achieve the excellence.

Key words: Deliberate practice, music, sport, dedication, expertise, excellence.

RESUMEN

Si miramos a nuestro alrededor, observamos que alguien es el mejor en cada materia. Podríamos pensar que son individuos excepcionales.

El presente Trabajo Fin de Grado pretende ahondar en el análisis de los efectos de la práctica deliberada en los ámbitos de la música y del deporte. Para ello partiremos de un concepto de práctica deliberada para, posteriormente, centrarnos en la diversidad de situaciones donde podemos ver como se nos presenta en la realidad que vivimos.

A partir de un cuestionario elaborado “ad hoc” y distribuido entre el colectivo de estudiantes de música, se ha pretendido obtener un resultado que nos permita colegir la relación existente entre las horas de práctica y la excelencia en la ejecución.

Esta realidad se ha vinculado a la situación referente en la práctica deportiva, cuya información ha sido facilitada por los coordinadores de los distintos deportes.

Teniendo en cuenta el reducido número de referencias disponibles, este trabajo se ha centrado en un análisis cualitativo de los datos, traducidos bajo el prisma de la mi experiencia personal, que se ha visto confirmada en los resultados obtenidos.

Las estadísticas manejadas me permiten concluir que, si bien el argumento no es definitivo, es fundamental el esfuerzo dirigido a través de la práctica para la obtención de la excelencia.

Palabras clave: práctica deliberada, música, deporte, dedicación, experiencia, excelencia.

INTRODUCTION

When we enjoy a brilliant execution, we often think about the uncertainty of the ability of the protagonist: that level of performance is innate or the person has reached it through a forced preparation. The arguments that defend one and the other position are multiple and all of them have an empirical basis.

I have studied guitar at the Conservatory where I have achieved the Professional level. Besides, I have played basketball and ride horse for 14 years and, now, I am last year student of Physical education and sport degree. In the study program of this degree is included the final project degree, which is compulsory for every student to obtain the title. Music and sport are my passions and both are the most important part of my life. Because of this, I realized that music teaching and sport training have some similarities and too many differences.

I would like to remark that in Spain, music studies and sport studies have not the same legal regulation, that is, to acquire professional grade in music domain is required ten years of study and, furthermore, to get superior grade is necessary four more years. However, to be a sport instructor is only required two years and to be a physical education teacher or a coach is required another four years.

The music skill is a motor ability that requires an intellectual development and an artistic sensibility. Thus, Gulick suggested that physical training specialists, and not music teachers, might be best equipped to teach the complex fingering exercises necessary to learn musical instruments (Luther Gulick, quoted in Weston, *Making of American Physical Education*, p. 147). With this work, I expect to reinforce the position of the guide practice as a means to achieve the excellence. Obviously, it will be a hardworking practice, which will require a minimum number of hours and the supervision of the effective development.

Even though I recognise the influence of genetic issues which make possible to accomplish certain levels of masterful execution, I consider that the participation of these hereditary factors that can determine our intelligence, skill or morphology will not be enough to consider it distinctive. The position that I defend about the incidence of deliberate practice in the completion with ability of any task, I think it can

be analyzed in the study that I propose. This concept has been developed in the music domain in the origin but now is applied in sport training.

Next, in the following pages, a series of previous concepts that make up the theoretical framework of the study, are presented.

THEORETICAL FRAMEWORK

Theory of Deliberate Practice

The theory of deliberate practice not only presupposes a repeated execution. It requires the presence of a monitor-supervisor to correct the imperfect executions, to avoid the incorrect learning and to transmit to the learner the profiles that design or should configure his or her behaviour. In these terms, Ericsson et al., (1993) argued that to assure effective learning, subjects ideally should be given explicit instructions about the best method and be supervised by a teacher to allow individualized diagnosis of errors, informative feedback, and remedial part training. The instructor has to organize the sequence of appropriate training tasks and monitor improvement to decide when transitions to more complex and challenging tasks are appropriate. (p. 367).

Indeed, the presence of the teacher is essential, both to supervise the execution and to carry out suitable adaptations to the level that, with that practice, has acquired the subject. This situation demands for an effort of accompaniment during the development of the person that cannot be neglected without risk of failure. Perhaps for that reason, the best performances are the ones that correspond proportionately with larger weekly periods of deliberate practice.

It is opportune not to confuse the deliberate practice with other similar concepts as work or play. The latter refers to reiterated activities of the human that have not specific goal and are innately pleasant (Ericsson et al., 1993). Note that the authors would exclude any sport practice inherently competitive: the game only, in this case, would provide fun. For its part, the term work, from the point of view of the authors, introduces the concept of external reward which is not necessarily economic but it is the most common. This word can also refer to competitions with prizes.

Finally, the deliberate practice is defined as those activities designed specifically to improve the performance, which are linked inherently to the concept of learning and progress.

10000 hours rule

Ericsson (1990) says that it takes 10.000 hours (20 hours multiplied by 50 weeks a year multiplied by ten years = 10.000) of deliberate practice to become an expert in almost anything.

Obviously, I think that deliberate practice and the number of hours which establish the limit allow achieving the excellence, a brilliant performance, even a masterful exercise of any activity in any domain. This does not impede the existence of arts and professional commanding executions that include an individual component, that include the uniqueness of the human being that does it unique and unrepeatable. The very personal performance gives a unique nuance to some developments that have explained the existence of masterpieces within reach only to some individuals, so in art as in sport (large compositions, unforgettable performances, stratospheric records, sole works of art, etc).

It is an undoubted fact that Ericsson and co-workers are searching to categorise a repeat of executions that makes possible to state a general success, of the common of humans and in any of the specialties that we can imagine. The ten thousand hours are a specific estimation of one more abstract referring to the ten years required of practical execution of a skill to obtain the mastery. Of course, this amount does not mean an unachievable barrier. These are just a number that translates an idea. Clearly, somebody can achieve it with "only" nine thousand nine hundred and ninety-nine hours of practice, even someone not reach with ten thousand and one, but the majority of the population will approach that figure. This concept allows Ericsson and collaborators consider it a categorization.

Maybe, this is the reason why the years of regulated musical studies at a professional level materialize in ten (four of elementary education and six more of professional education), in the same way that sports categories use those ten years

to define the main learning time, from the youngest age to the absolute category which represents the age of majority.

Thus, Ericsson, Krampe & Tesh-Romer (1993) suggested that stable levels of performance after extended experience are not rigidly limited by unmodified, possibly innate, factors, but can be further increased by deliberate efforts. We have shown that expert performance is acquired slowly over a very long time as a result of practice and that the highest levels of performance and achievement appear to require at least around 10 years of intense prior preparation. (p. 366)

Motor competence

Ruiz Pérez (1995) says that the term "motor competence refers to the knowledge, procedures, attitudes and feelings that take part in the multiple interactions that the subject carry out in his environment and with others, and which allow that school students surpass successfully the various motor problems that have been set out, both in the sessions of physical education or in their quotidian life."

Parlebas (2008) refers to the praxeology concept of motor conduct as motor behaviour when it has meaning, that is, the meaningful organization of the actions and reactions of a person who does something. (p. 85).

The first matter that attracts my attention from the previous statements is that the definition exceeds the academic world, to encompass all vital situations of every day, taking a remarkable dimension the non-school times in the process of teaching-learning. It refers to the subject must become aware of his or her physiology, morphology and mobility to, immediately, train motor skills that will be useful when the time comes in which the person is required to use the mobility with sense and consciousness. Of course, this process is not always the same; it has much to do with the maturity of the subject. It is a fact that the more alternative motor situations had seen oneself involved in, the more possibilities of action and ability of motor response will possess.

Unfortunately, until these days, the study of motor development has not been gone in depth. Usually the motor competence has been related to the chronological age detecting those imbalance's behaviors. Nowadays, the method connects the age

ranges with the tasks of the three dimensions of the child's mobility: the balance (dynamic, static and objects), the hand coordination (insert, thread) and the global coordination (throws, catches, jumps). The result is compared with reference standards to determine if the current level of motor competence is the appropriate or could be improved.

Second question I must remark is that music and sport involved multiply intelligent. As Gardner, H. (1983) stated, the intelligence is the ability to solve problems or make useful products for one or more cultures. The author establishes several intelligences like independences competences. Although in scholar field are prevailing logical-mathematical or linguistic, all of them are remarkable. From this classification, only two of them are essential on my project. Clearly, musical intelligent is defined as the capacity to analyze and compose pieces, and we use virtuoso to name the best musician because they knowledge the technique. The bodily-kinesthetic intelligence refers the ability to control the body mobility specialised and due to that, we reserve talent to define the best athletics because they shows capacity in the performance. Finally, both music and sport are social motor conducts, because they describe body movements in relation with time, place and the other person, but there is significant difference considering that the study of the music is individually.

Motor learning

Palmer, C., & Meyer, R. K. (2000) claim that “motor learning refers to changes - mental or physical – associated with practice or experience that provide the capability for producing skilled actions”.

If we want to define learning from a colloquial point of view, we will have to accept that this supposes the evolution of people from a point of ignorance to wisdom and knowledge. Obviously this would be the idyllic manifestation that introduces the change from an undesirable situation to another improved where the individual seemed more skilled than in the origin, considering that we should not forget that significant learning reflects the concept of competence.

However, in the field of motor learning we find subjects who do not evidence abilities in motor skills which are those that are related with their ability to do body

movements, muscle coordination's or combined strategies that are essential in this discipline, and there are not efforts to intervene in this area.

There is a certain indifference to incorporate the concept of improvement associated to motor skills. This becomes more evident when the situation is analyzed according to the gender, being especially patent until these days, in which seem to have happened a regression, that the female population presented traditionally more difficulties to develop these abilities. Let us add to these evolutionary problems of motor coordination other issues that contribute, such as deficient nutrition of the young population which unleash to obesity, or the proliferation of ways of entertainment that encourage the sedentary lifestyle as video game consoles.

I deem that we should value this motor learning that provides coordination, control, harmony, fluidity of movements or rhythm of action, in our acts.

So, I think that the notion of teaching physical education as a practical activity should be recovered, pushing into the background the theoretical contents that lately have been imposed, assigning the most of the time of the school schedule to the practice, taking into account the limited time that is available for our subject.

Intervention

In the process of teaching-learning of Physical Education become apparent some circumstances, a methodology and, even a genuine space. In this speciality the body and the movement are essential elements of intervention, and most of the occasions the relations between the people are in an outdoor environment, outside the classroom and with completely different equipment of the rest of the subjects. Here, the concept of game becomes a special relevant. Referring to musical teaching, the pupil and the teacher are in a classroom without anybody else.

We cannot forget the need to create habits in the sport area due to the benefits that physical exercise generates to the health. It seems to be really well-known that the age of initiation at physical activity will be a fetching factor to keep this healthy habit.

These arguments would make by their self to justify the intervention that is promoted by the academic authorities. The combination of the fun and healthy facets should be

enough to recognize the relevance of the subjects in the school schedule. If we accept the effect of the deliberate practice and, in consequence, we appreciate the excellence is based on a high number of hours of practice, it would be positive that the entire educational community would claim for a physical-motor and musical intervention as early as possible to allow us to lay the foundations to promote and improve the knowledge and development of the person as well as his or her relations with the environment in which the individual interacts. It is a fact that as earlier you intervene as more benefits you achieve.

Nature

“Quod natura non dat, Salmantica non præstat”, is a Latin proverb transformed in a Spanish saying: the university cannot provide what nature has not supplied: neither the intelligence, nor the memory, nor the learning ability, nor will power and nor perseverance. The reference to the innate adjective tells us about qualities and personalities that people possess since they are born. These characters might be hereditary or acquire during the development of the embryo or foetus, neither directly attributable to the environment, nor to the collectivization process. Actually, when the people says that certain characteristics are innate and another ones are acquire, in spite of morphological differentiations that may influence a special physical condition, a distinction must be established: people should differentiate between what is common to all human as gender and in all time, place and culture (the morals, the language, impulses,...) and, in the other hand, what is different (likes, interests, ideas, proportions, physical morphology). Thus, in this second field, in the difference, is where the discussion about the innate qualities or acquire qualities makes sense.

I defend the position that the differences, in general, are acquires and, in addition to that, these functions should be develop in a social environment with its historical, cultural and ambience realities and, of course, unexpected events that affect and shape to each individual. It is clear that, when a human being interacts with the reality, will develop self-confidence and perseverance in those tasks in which receive more endorsement. This leads him or her to undertake and finish new challenges successfully, in the same way that failure and, the consequent reproach, cause abandonment.

But the most remarkable thing in my modest opinion, is the risk that supposes to proclaim innate differences, because too often, behind the assertion of its existence is disguised a totalitarian ideological profile that only aims to prove the superiority of a race, a social class or a collective with the consequence that they claim the natural law of subduing the inferiors.

With this I do not deny that there are genetic issues that were the origin of the human evolution through a process of natural selection, but should be considered insignificant compared to the field of influence of the factor that is acquired with the practice. The genetic is relevant, but the practice managed properly can surpass all the differences.

To summarize, Ericsson and colleagues argued that prolonged effort, not innate talent, explained differences between experts and novices (Hambrick D. Z., Ferreira F., & Henderson J. M., 2014). So, deliberate practice did not explain all, nearly all, or even most of the performance variation in these fields. In concrete terms, what this evidence means is that racking up a lot of deliberate practice is no guarantee that you'll become an expert. Other factors matter like the age at which a person starts an activity (Hambrick D. Z., Ferreira F., & Henderson J. M., 2014).

In conclusion, the authors explain that development of expertise as opposed to some innate intelligence or talent.

Sport education

González, C., Cecchini, J.A., Fernández-Río, J. & Méndez, A. (2008) suggest that "Sport is a complex social reality and it is one of the topics most commonly used in school settings."

In relation to the statement, when traditionally this discipline was analyzed, two ways to tackle its contents were classified: on the one hand, the technique was encouraged (traditional approach, which prioritized more the knowledge of the diverse concepts and skills than the effective practice) and, on the other hand, the emphasis was on the tactic (alternative approach, related to the excitement of the discovery that refers to a fun motor experience).

But the sport education does not follow simple patterns. It makes necessary the utilization of several techniques, experiences, and differentiated solutions according to the coincidence of certain variables to a specific case. In this way, it will be essential take into account not only the sex of the subjects of learning, that obviously will provide different answers, but also other issues such as their physical condition, motivation and personal qualities. Also, the teacher who guides the training will be predisposed to individual influences that modify the pattern, as their likes, personality, specialization, etc.

In general terms, it is commonly accepted that the techniques of sport education are different depending on the place and the moment in which are developed, and especially according to the subjects of the learning process.

AIM OF THE PRESENT PROJECT

This project aims to get conclusions about the practice and excellence. In order to do these, starting from a well-known concept (Deliberate Practice), which is traditionally referred to musical learning but I would like to see how it is presented in the sport field, using the empirical data. I will look for some answers on two scopes: on the one hand, from a quantitative point of view, to set the number of hours devoted to training or practical study of the persons analyzed. On the other hand, from a qualitative point of view, to make a technical argument based on my personal experience in both domains, using the information source developed, and to strengthen this argument with the literature that refers to the Deliberate Practice's theory. Thus, establish opportune relations between both disciplines and study how the excellence is achieved without any reference to the genetic factors.

MATERIALS AND METHODS (Design of the study)

Participants

All the music students of the Conservatory of Logroño were selected to participate in the project but the cooperation with it was volunteer, so, for that reason, the amount of people that, finally, accept to collaborate was even less than the 10% of the total students enrolled in the Conservatory.

This place was elected because is the most regulated institution to study music at local level. Also, is highly known that Conservatory is related with professional studies and the usual range of ages of the students is between 8 and 18 years old, coincident with the age categories in sport.

In terms of sport, the selection of the subjects was personal and it was based on contact the main coordinator of the clubs by e-mail or phone call and tell him or her about my project and if could be possible to arrange a meeting to interview him or her about some training factors.

Finally, from all the coordinators of those interviewed, were selected seven coordinators of seven distinct sports for their representativeness and assume a variety of disciplines. They liked the idea and aim of my project and provided me with the necessary information.

Data Collection

When processing the data, first of all, I have decided to separate the information relating to sport activities and to the musical expertise. This situation arises from the fact that, outside of the obvious differences between both domains, has established a different procedure to collect the samples and data.

In regards to the sport field, seven sports were selected: three collective duel (basketball, soccer and volleyball) in which introduce concepts like team mate and adversary, one individual duel (judo) and three race and contest sports (athletics, swimming and horse riding).

The coordinators of the main clubs of these sports in La Rioja were interviewed about the hours of training sessions and competitions per week in each age category: youngest player “benjamín”, beginner “alevín”, child “infantil”, young player “cadete” and junior “juvenil”.

The questionnaire had an identical number and content of questions for all the sporting specialties. That is, all the persons who were submitted to the interview had to answer the same questions regardless of the sport they represented. Their collaboration was excellent and complete. I did not have any hesitation or refusal of the coordinators to answer the questionnaires. An effort of contact to set the people to whom I would be interviewed was necessary, but once the appointment was provided by the personal relationships that were used as a method, everything was very easy. The personal conversation did that, once broken the ice, the relationship happened with fluency, facilitating the development of the suggested experience. Thus, with a previous meeting set with them, in relaxed environments, the appointments were taking place and the data obtained were incorporated.

These data about the hours were approximations and, in every single interview, were written down in an Excel document, in order to know the total amount of time that the subjects spend in sport practice and compare with the musicians.

Regarding to the information that concerns to the musical aspect, the issue becomes more complicated. Not only I had to develop a questionnaire (Annex 1) that provides me the precise information for the study, but also I had to access to the answers. Taking into account that the target audience was obviously larger, it became necessary to create a virtual tool as well as a website where posted it. I proceeded to use free software available on the network as “one.com” to create my own webpage (Annex 2) in which was explained a short reference of my identity and the purpose of the study to better understanding of the people that link it. Its design was rudimentary because it just aimed to be used for support to the main document of the statistical analysis, that is, the survey.

Unfortunately, I could not control the number of responses. I went to the reference music school in my region, the Professional Music Conservatory of La Rioja, where I had studied, a fact that allowed me the accessibility to the headmaster of the centre.

Once I have gone through this first barrier, the problem resided in getting a significant number of responses that would allow me to draw conclusions from them. So, an e-mail was sent to the Conservatory headmaster with an attach document (Annex 3), which contains the webpage link, with the aim of forward it to different teachers who should print and dispense it to their pupils. In a maximum period of five days, each musician should answer online but the ones under 18 years old must do it in company of an adult who acts as guardian to the rights (informed consent) to participate in the study. Every single response was registered immediately in the software “encuesta fácil” what allow me to evaluate how many people have replied and analyze the data collected.

Now, precisely, the process got complicated. The moment when I asked for collaboration was not the most favourable because they were finishing the school year with tests and exams that demanded all the effort of the students and, for this reason, a massive desertion in the voluntarily cooperation of the subjects could happen. Therefore I carried out a personalised tracking of the delivered surveys, calling some people that I had a more intensive relationship and asking them to fill in the form, as well as using them as loudspeakers to diffuse my work and get a more intimate involvement. In this way, I got an equivalent response to six percent of the surveys provided. It was not totally significant in the quantitative scope but the data collected could be really useful if I would correctly extract all the information that they included.

This situation obliged me to modify the approach. Now, the study could not consist in a mere reflection of statistical data and a quantitative analysis of them, because the conclusions could not be established as definitive and in any case, it was difficult to consider them representatives. So I should focus on the data, not in their number, but in the information that they provided me and according to them, try to draw some usable conclusions.

Obviously, the musicians that belong to the family of the instrument that I have studied seem much more willing to participate and they were the ones that, to a greater extent, answer the questionnaire. This way, the participation rate in this area rose to levels of the thirty percent.

To calculate the data, I have done the average in several cases and, sometimes, the trimmed mean.

Questionnaire

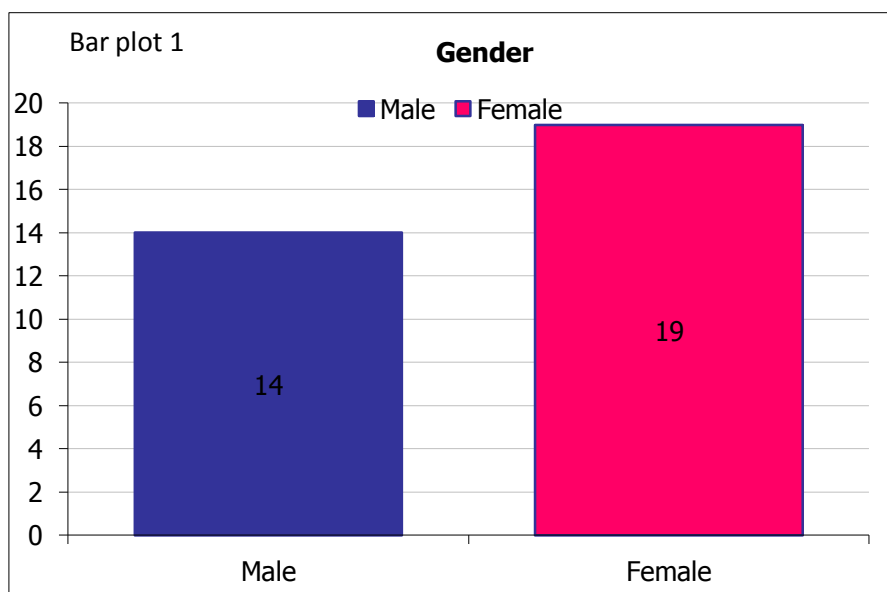
The questionnaire was written in Spanish language and it was created with the design software “encuesta fácil” and included several items: personal information, music, sport and PAQ-A. The questionnaire was prepared meticulously collecting those facets that, I think, provided the most relevant data to the objective of the work. It consisted of interrogating a series of subjects about relevance issues in the musical study they were doing. Therefore, it was necessary to define their age range, their speciality, their level, the hours of dedication, in short, everything that could reflect some idiosyncrasies but that for its characteristic, implied a common thing that could to be useful to the study.

The questionnaire had three parts: music, sport and PAQ-A. A short description about the method and what they must do, was included before the start of each part. The questions in the music and sport part's, follow the same pattern. I asked them about thirteen topics. Referring to music, I wanted to know some information about the instrument they play, music familiar precedents, how many times a week they practice, how many hours, how many hours of guided practice, the level they have, the marks they had obtained, if they wish or not to be professional player, their music habits, etc. In the sport part, I asked about the same items as in music but referring to physical activity. The third part was completed by the PAQ-A, which includes ten questions asking about how active have been the subject during the last week.

The answers in the music or sport part of the questionnaire had different models. Ones of them were open answers, and in other, they must chose an option between some given responses.

RESULTS AND DISCUSSION (Conclusion)

In the analysis of the results of the present work we must take into account that due to the limited number of study components in its music section (total participants: 33 musicians; 14 males and 19 females (Bar plot 1) with range of age from 1994 to 2005 (year of birth)). Now, my effort will focus on a qualitative control of the participants. I will describe in detail their responses to draw some conclusions that can be useful both at present and for this study, as in the future, to be part of a more ambitious plan that could be done on this matter.



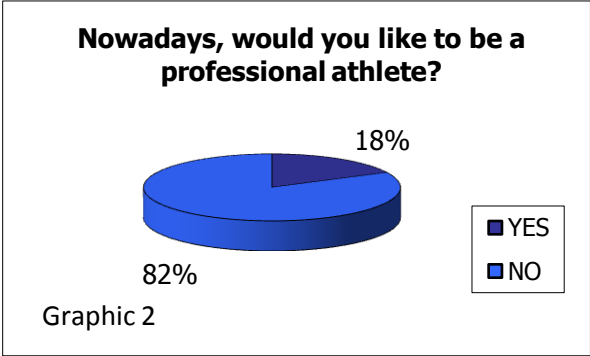
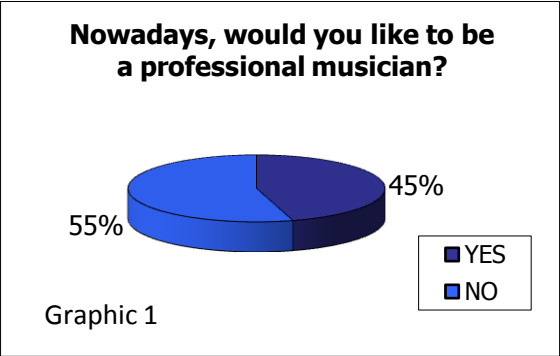
First, I must do a classification of the different instruments that are played by the subjects involved in the study. The questionnaire shows me that there were five aerophones: three of the woodwind family (fagot, oboe and flute) and two of the brass family (bass trombone and french horn). Also, there was one percussionist and the majority belongs to the chordophones: nineteen of plucked string (fourteen guitars, three mandolins, one lute and one bandurria), three bowed string (violins) and five struck string (pianos). Besides this, hereafter, I am going to go into detail about the answers of the questionnaire, grouping them into three areas: music, sport and PAQ-A.

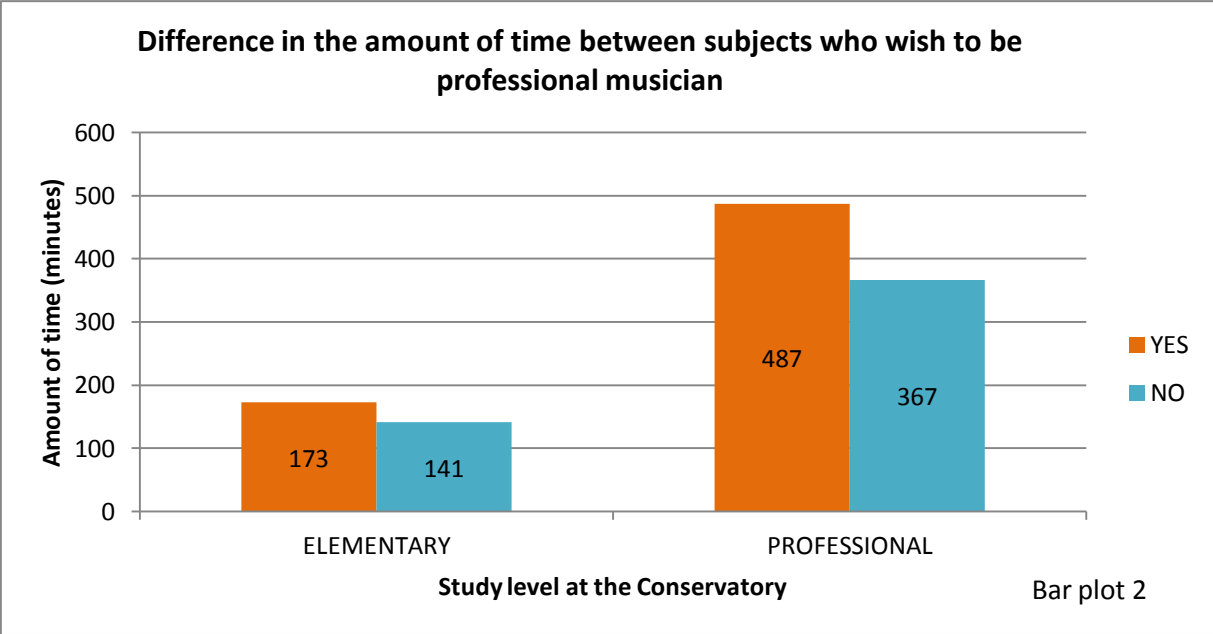
In terms of music the amount of females are more than the males, but the answers shows that there is not a pattern of selection the instruments. More than 54% (18) of

the subjects have a familiar precedent who has played an instrument. It is important to recall the data of piano's players because 80% (4) have a music familiar history. Even more, in plucked string, 90% (9) have precedents with the same family of the instrument.

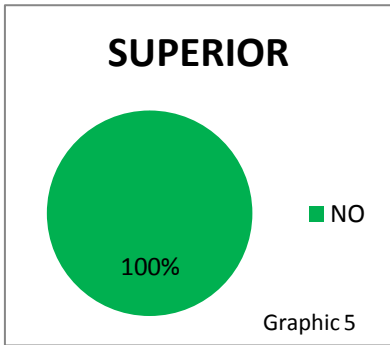
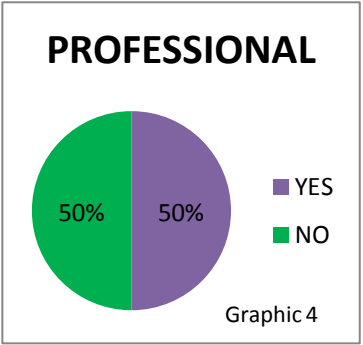
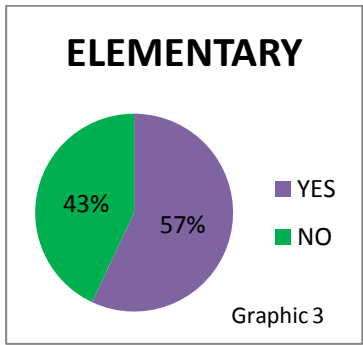
Half of the sample, 49% (16) are in Professional studies, 42% (14) are in Elementary studies and 9% (3) are in Superior studies. The 50% of the subjects who are in Elementary studies are delayed regarding to the adequate level, 43% are in the appropriate level and, only, 7% (1) has passed the level. In professional studies, 50% are in the appropriate level and the rest are delayed. Finally, in superior level, 66% are delayed and 34% (1) is in the appropriate level. In the sport scope, people cannot be delayed to the age category that represent. Moreover, the 79% (26) of the sample have obtained good marks, between 7 and 9 points. In consequence, I assume that the success is the result of effort. That is, the people who practice so much are the ones who better marks obtain.

Finally, the 45% (15) of the subjects wish to be a professional music player in the future, and for rest of the sample, the music is just a hobby (Graphic 1). However, only, the 18,75% (3) aspire to be a professional athlete, which expose that in this case, the more important aspect is fun (Graphic 2). Therefore, those who declare their eagerness to be professional are the same who practice longer. So, in Elementary studies subjects practice 32 minutes more than the ones that do not hope to be professional. In Professional studies, the difference is 2 hours (Bar plot 2). Additionally, this reality is against the fact that the sample prefer to talk about sport than talk about music.



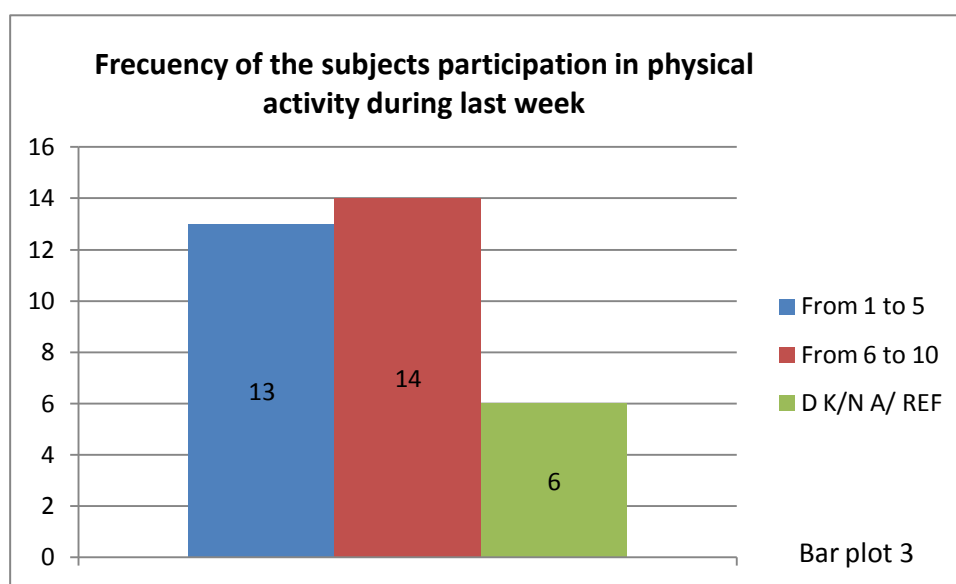


Regarding to the sport domain, the musicians who practice a sport, apart from playing an instrument, are the 57% (8) in the Elementary studies, the 50% in Professional level and none in Superior Grade (Graphics 3, 4 and 5). Respect to the heredity factor, 62,5% (5) of the ones that are in Elementary studies, have familiar precedents and 50% (4) in professional level.

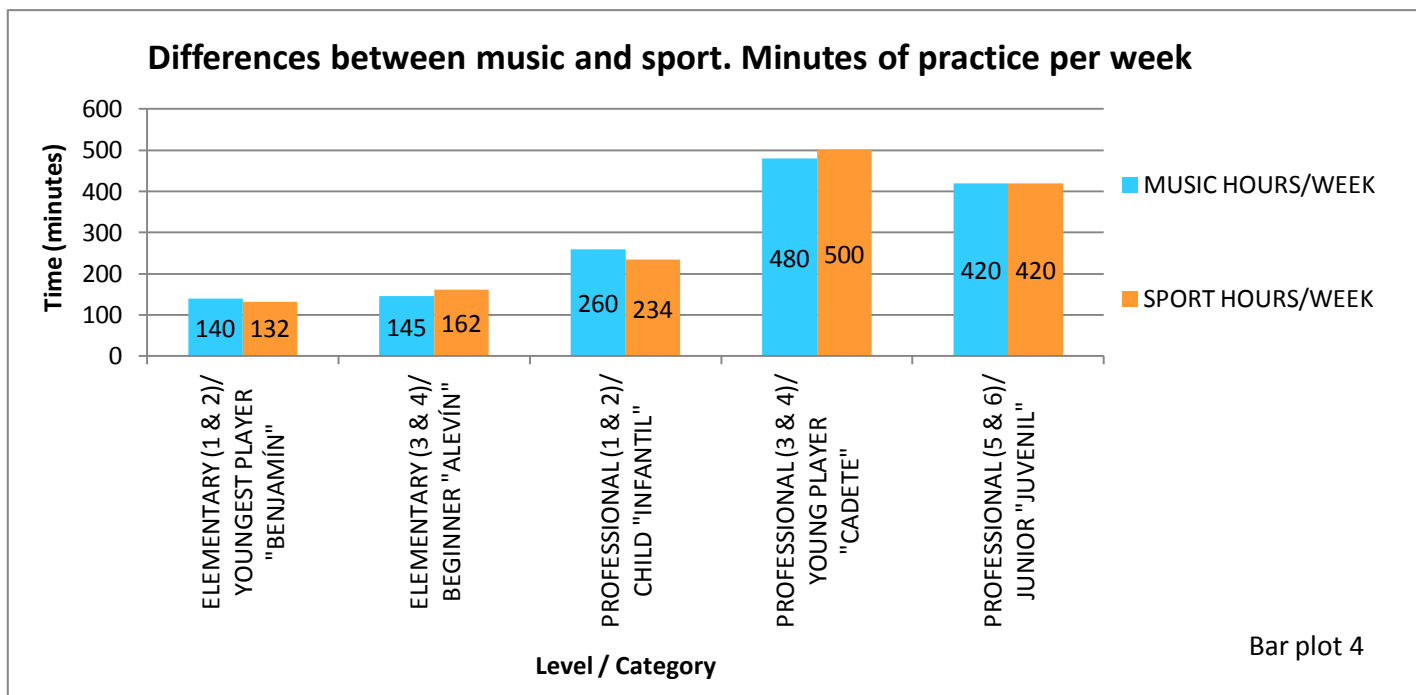


Also, the responses of PAQ-A present some information. All the survey respondents affirmed to have performed some physical activity last week. Half of them (14) has performed less than five activities and the other half (13) has performed between six and ten different activities. No one has done more than this figure (Bar plot 3). The most frequent activity is cycling, followed by walking and running (with the same amount of times), then swimming and games and basketball. Hockey and skiing are not practiced because is not the appropriate season. Thus, it can be concluded that

they keep regularly active during the physical education lessons. Usually, they spend the time during the breaks to rest and the lunch time is to relax. The 66% enjoy the time out-of-school playing games, doing sports or dancing and the 80% enjoy from 6 p.m. to 10 p.m. (free time) being active with games, sports and dancing. The 96% of the sample enjoy the weekend playing games, doing exercise or dancing because they have two days off. The same percentage says that they have practiced effort activities last week. The majority respond that the frequency of their physical activity along the days of the week is normal or more. The 96% of the subjects have not had any impediment to exercise.



In trimmed mean values, after I have compared the information between both domains, I assume that the elementary musicians, first and second courses, (2 hours and 20 minutes) practice more than the youngest player “benjamín” (2 hours and 12 minutes) during the week. However, in third and fourth courses, the musicians play 2 hours and 25 minutes and in beginner category “alevín” is 2 hours and 42 minutes per week. The musicians, that are in first and second course of Professional studies play 4 hours and 20 minutes. In contrast, in child category “infantil”, they practice 3 hours and 54 minutes. The musicians who are in third and fourth course of Professional studies play 8 hours, but the young player “cadete”, only practice 5 hours. Finally, the hours that play the musicians in fifth and sixth courses of Professional studies are the same amount hours that the people who are in junior category “juvenil”, that is, 7 hours per week (Bar plot 4).



To calculate the trimmed mean of the different categories of sport, I see that in the youngest categories (youngest player, beginner and child) the extreme values correspond to the sports swimming (highest) and horse riding (lowest). In the adult categories (young player and junior) the extreme values are swimming (highest) and basket (lowest).

In general terms, the music practice requires more dedication than sport. Even, when they are older than 14 years, the music requires almost a full-time contract because this domain becomes more and more demanding (eight or seven hours per week). When subjects are 17 or 18 years old, sport practice is equal to music domain, due to bachelor studies.

At the end, these results are diverse when I add the competition variable. In this case, with the exception of the young player "cadete" category, the rest sport categories imply more hours than in music domain. Thus, it is confirmed that the first years of practice sport overtakes to music because physical activity is considerate a fun game. From 14 to 16 years old, the music practice requires more hours, but in the last two years of Professional studies at the Conservatory, the hours dedicate to practice music and sport are almost the same due to the bachelor studies. I affirm

that as older is the sample as much time they spend practicing both sport and music, during the week (Figure 1).

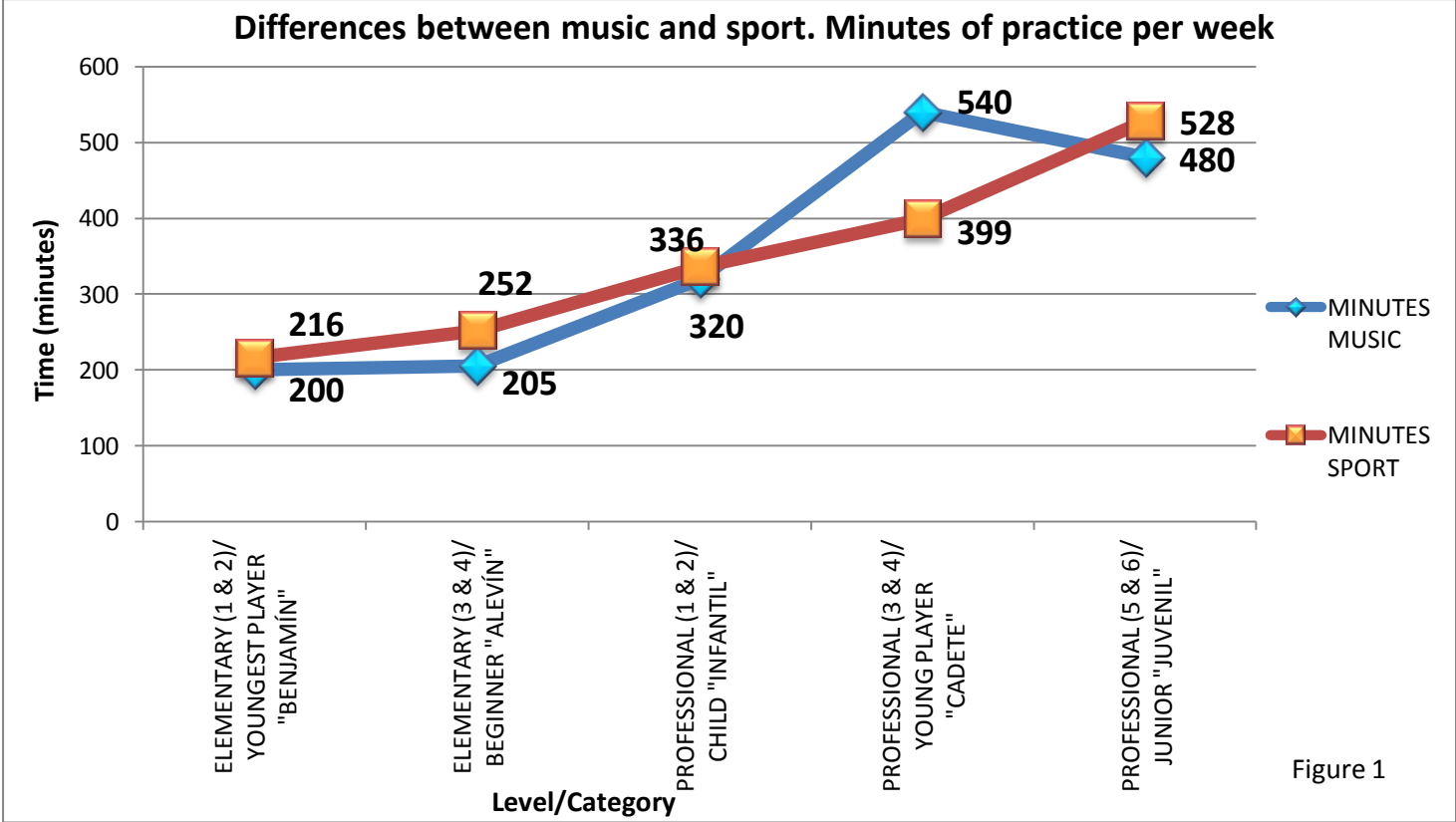


Figure 1

Now, I conclude, considering the content of the data manipulated, that it is a fact that the knowledge of the technique that allows a professional performance of a musical instrument requires, in general, more dedication and effort than sport. Of course, this information must be studied carefully. Not all the musical instruments require the same effort and skill, likewise that all the sports are not equally demanding. I could establish the highest level of musical difficulty in playing the piano, an instrument that requires a visual control of two staves at the same time, while the rest of the instruments require only one staff. In the same way, the practice of rhythmic gymnastics or swimming does not require the same dedication than team sports like soccer.

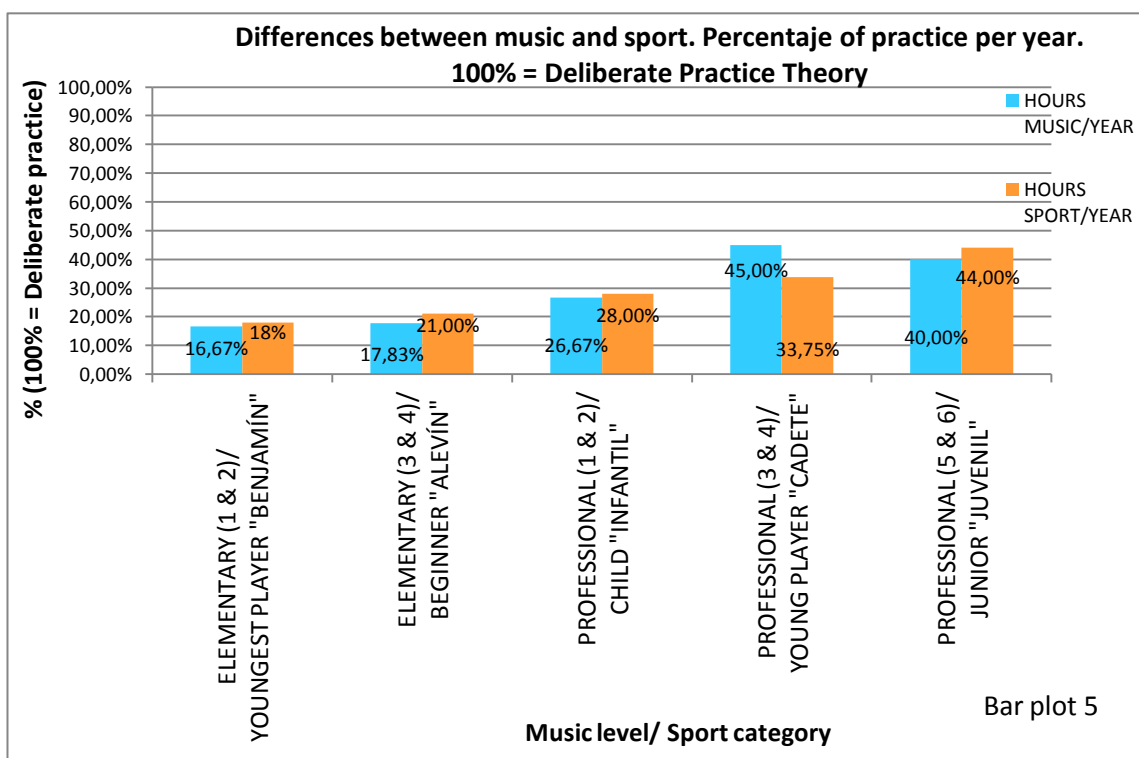
We should add to this fact, the reality that demonstrates that in childhood, with the exception of those kids that have a professional aspiration, prioritises a lot more the

fun aspect than the technical perfection. But fortunately, lately this data cast serious doubts on.

But what I affirm once I have analysed the information of the survey thoroughly is that exists too much parallelism between the way of training sports and the artistic rehearsal that demands the musical performance. Clearly, in both cases, the number of hours is associated with the level of execution but I could also check that the guided practice is essential in both situations. Naturally, the development of the technique by the repetition of guided behaviours is common to both specialities. With the questionnaires, I have confirmed my personal experience. I had gone through the two ways, without professional aspirations in any of them, but the provided responses reveal significant parallelisms with my vital vicissitude in these fields.

Personally and in an empirically way I had could prove that the people had to spend many hours studying and training to obtain satisfactory results in their execution and practice, now, I can provide a more global vision of that reality. The results have helped me to make some assertions about it.

What it has been, until these days, only a personal experience, suddenly, it has revealed as common experiences to other people who had shared my efforts both in the sport field and in the music area.



The bar plot 5 shows that both, music practice and sport practice, are so much distant from the estimate amount of hours that Ericsson and colleagues claimed. Only, the swimming training overtakes 10.000 hours rule but not in all the categories. The majority of the sport disciplines do not achieve the fifty percent, an amount that is even lesser talking about music field. Although, in the music domain the time dedicates to study is away from the rule, the evolution observed is different because of the influence of bachelor requirement. It is a fact that if you want to be a graduated musician you need bachelor qualification. Besides, I believe that is impossible to achieve the number of hours (20 per week) in the earlier ages because the children would not enjoy the rest of the activities of their education, the other two types of activities: work and play in Ericsson and colleges terms. The society wants to train persons, not only brilliant musicians or high performance athletes.

The sport success in the last years confirms what the Deliberate Practice suggests, that is, in general, the more time is dedicated to sport implies better results. Thus, we have several brilliant athletes but only a few mastery musicians. One solution possible would be starting the deliberate practice earlier. The participants of my study begin when they are eight years old, like the subjects of Ericsson and co-workers study (7,9 years old), but we could teach the people from three years providing early access to the Deliberate Practice.

My corollary asserts is divided in two ways. My first idea defends that the learning methodology is not the same when people studies music than when they train sport, so for that reason, is complicated to copy this concept without make it suitable. Secondly, I assume that the concept of Deliberate Practice should be clarified because in terms of sport, almost all of the hours spent in training are guided and improved by a professional instructor. However, the work in music is mainly alone and the teacher only supervises and corrects the advances.

FUTURES PERSPECTIVES

The selection of this topic as the objective of my final project, has allowed me to get in the knowledge of a surprising issue. The reference of this matter during my degree was merely tangential.

I would like that this study becomes a germ from which would born a more complete study material both in quantitative and qualitative scope. So, I desire to broaden the spectrum of the sample to other collectives, not only at local level but also the number of disciplines considered. The extension of this process would lead me to analyze if the data obtained until now can be extrapolated to other populations and if their behavior is comparable beyond the geographical borders.

I think that it has so much scientific value, the control of the responses and behaviors in these non-professional levels of sport and artistic practice.

If I can dedicate some more time to this subject, I will try to delve into its study because it could be the starting point for my doctorate.

DIFFICULTIES

The realization of this work has supposed a large process of research and literature review. In these terms, the search and selection of the study articles has been complex due to the scarcity of publications relating to this subject. Besides, the difficulty was double for me, because my purpose of study covered two scopes of action: music and sport.

Even though it is true that I found some studies regarding to the Deliberate Practice carried out at professional musicians and high performance athletes, those publications could not transfer to my work, due to mine was focused on non-professional people and trainees.

On the other hand, my lack of awareness of some tools and software used in the development of the project, has not speeded up the realization of it, meaning an additional effort. It is true that this situation has provided me the knowledge of new methods that will be really useful in my future.

In addition, the participation of study subjects has not been very successful. In the case of music, to request their collaboration as volunteer, it has caused that the subjects have avoided the questionnaire. This situation is increased by the fact that I could not have a direct contact to the study subjects, so it was impossible to me to persuade them of the importance of their participation, due to they are the protagonists and who should provide me with opportune information. Therefore I have been forced to make an almost customized monitoring of the subjects to obtain the replies requested.

Finally, add to this situation, the fact that Logroño is a small town and the target audience of the study has a very limited presence because the low number of enrollments of this Music Conservatory.

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ANNEX 1

Encuesta: Estudio sobre el hábito musical y deportivo

Pág. 1.- PORTADA

¡Hola chicos y chicas!

Lo primero agradeceremos que os toméis un ratito en atenderme.

Mi nombre es Elvira y estoy en el último año del grado en ciencias de la actividad física y del deporte en la Universidad del País Vasco. La facultad en la que estudio se encuentra en la ciudad de Vitoria, aunque yo resido en mi localidad natal, Logroño.

El presente cuestionario forma parte de un estudio incluido en mi trabajo fin de grado, para saber tu esfuerzo a la hora de intentar sacar sonidos a un instrumento. Quiero ver qué relación hay entre la dedicación y el éxito y para eso necesito un poco de información acerca de ti. Las preguntas incluidas en la encuesta son muy sencillas y de fácil comprensión y hacen referencia las horas que dedicas al estudio de tu instrumento o a la práctica de tu deporte.

Está claro que sin tu consentimiento esto no puede seguir adelante, por eso necesito que, si eres menor de edad, te acompañe un adulto que pueda completar tu permiso para la utilización de los datos en este trabajo. Quiero que sepas que tomarte la molestia de contestar a la encuesta me ayuda mucho y me hace entender que autorizas la utilización de la información exclusivamente en este trabajo.

Es importante que recuerdes que el cuestionario es anónimo.

Muchas gracias por tu colaboración.

Pág. 2.- INSTRUCCIONES

Para que no tengas ninguna duda de cómo contestar a las preguntas, es importante que prestes atención a estas breves instrucciones:

1.- Lee detenidamente el contenido de cada pregunta.

2.- Ten en cuenta que no existen respuestas correctas ni incorrectas. Contesta con sinceridad.

3.- Contesta a todas las preguntas. Todas son relevantes.

4.- Si deseas matizar alguna respuesta, hazlo en el apartado de observaciones, que se incluye al final del documento.

5.- Ten en cuenta que tienes el derecho de rectificación y anulación que puedes ejercitar poniéndote en contacto conmigo a través del correo electrónico elvi4_pascu@hotmail.com o a través del teléfono (+34) 620212332

6.- Repasa el cuestionario antes de enviarlo.

Pág. 3.- DATOS GENERALES

Preg.1.- Sexo

(* Esta pregunta es obligatoria)

(* Marque una sola opción)

Masculino

Femenino

Preg.2.- Fecha de nacimiento (dd/mm/aaaa)

(* Esta pregunta es obligatoria)

Respuesta:

Respuesta:

Pág. 4.- MÚSICA

Preg.3.- ¿Qué instrumento tocas? (Indica cual es el primer instrumento que estudias en el conservatorio. Solo hay una posibilidad)

Respuesta:

Preg.4.- ¿Tienes antecedentes familiares en la práctica de algún instrumento musical?

(* Marque una sola opción)

- SI
 NO

Por favor, especifica la relación que tenía contigo y el instrumento que tocaba: (* Contestar solo si: han contestado a "¿Tienes antecedentes familiares en la práctica de algún instrumento musical?": "SI" de la página "MÚSICA".)

Preg.5.- ¿En qué curso académico te encuentras?

(* Marque una sola opción por fila)

	1º	2º	3º	4º	5º	6º
Enseñanzas Elementales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enseñanzas Profesionales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enseñanzas Superiores	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Por favor, selecciona solo un curso académico.

Preg.6.- Si ya has terminado tus estudios, indica qué titulación has conseguido o en qué curso abandonaste las enseñanzas musicales.

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Preg.7.- ¿Cuál ha sido tu calificación en la asignatura de instrumento del año anterior?

Respuesta:

Preg.8.- ¿Cuántas horas dedicas al día al estudio del instrumento?

(* Marque una sola opción)

- 0
- 0,5
- 1
- 1,5
- 2
- 2,5
- 3
- 3,5
- 4
- 4,5
- 5
- más de 5

Preg.9.- ¿Cuántos días a la semana utilizas para el estudio del instrumento?

(* Marque una sola opción)

- 1
- 2
- 3
- 4
- 5
- 6
- 7

Preg.10.- ¿Cuántas horas semanales de práctica del instrumento realizas en el Conservatorio junto con tu profesor?

(* Marque una sola opción)

- 0
- 0,5
- 1
- 1,5
- 2
- más de 2

Preg.11.- ¿Cuántas audiciones o conciertos realizas al año?

(* Marque una sola opción)

- Menos de 5
- Entre 6 y 10
- Entre 11 y 20
- Entre 20 y 40
- Otro (Por favor especifique)_____

Preg.12.- ¿Con qué frecuencia mantienes conversaciones sobre temas musicales?

(* Marque una sola opción)

- Nunca
- En contadas ocasiones
- Habitualmente
- A todas horas

Preg.13.- ¿A cuántas audiciones o conciertos de tu instrumento asistes, en calidad de espectador, al año?

(* Marque una sola opción)

- De 1 a 5
- De 6 a 15
- De 16 a 30
- Otro (Por favor especifique)_____

Preg.14.- ¿A cuántas audiciones o conciertos de otros instrumentos asistes, en calidad de espectador, al año?

(* Marque una sola opción)

- De 1 a 5
- De 6 a 15
- De 16 a 30
- Otro (Por favor especifique)_____

Preg.15.- En la actualidad, ¿Te planteas la dedicación profesional a la música?

(* Marque una sola opción)

- SI
- NO

Pág. 5.- DEPORTE

A continuación se presentan una serie de cuestiones relacionadas con la práctica deliberada y su ámbito deportivo.

Si practicas deporte en categorías escolar o federado, por favor, te ruego que dediques 5 minutos para cumplimentar estas preguntas. Si no, dirígete directamente a la página 5 (IPAQ).

Muchas gracias por tu colaboración

Preg.16.- ¿Qué deporte practicas?

Respuesta:

Preg.17.- ¿Tienes antecedentes familiares en la práctica de algún deporte?

(* Marque una sola opción)

- SI
 NO

Por favor, especifica la relación que tenía contigo y el deporte que practicaba:

(* Contestar solo si: han contestado a "¿Tienes antecedentes familiares en la práctica de algún deporte?": "SI" de la página "DEPORTE".)

-

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-

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Preg.18.- ¿En qué categoría militas?

(* Marque una sola opción)

- Prebenjamín (primer año)
 Prebenjamín (segundo año)
 Benjamín (primer año)
 Benjamín (segundo año)
 Alevín (primer año)
 Alevín (segundo año)
 Infantil (primer año)
 Infantil (segundo año)
 Cadete (primer año)
 Cadete (segundo año)
 Junior/Juvenil (primer año)
 Junior/Juvenil (segundo año)

Preg.19.- ¿Qué puesto, marca o título obtuviste la temporada pasada?

Respuesta:

Preg.20.- ¿Cuántas horas a la semana dedicas al entrenamiento de tu deporte?

(* Marque una sola opción)

- 0
- 0,5
- 1
- 1,5
- 2
- 2,5
- 3
- 3,5
- 4
- 4,5
- 5
- 5,5
- 6
- 6,5
- 7
- 7,5
- 8
- 8,5
- 9
- 9,5
- 10
- Más de 10

Preg.21.- ¿Cuántas horas a la semana dedicas a la competición?

(* Marque una sola opción)

- 0
- 0,5
- 1
- 1,5
- 2
- 2,5
- 3
- Más de 3

Preg.22.- ¿Cuántos días a la semana tienes entrenamiento?

(* Marque una sola opción)

- 1
- 2
- 3
- 4
- 5
- 6
- 7

Preg.23.- De las horas reflejadas anteriormente, ¿Cuántas horas son de entrenamiento dirigido?

(* Marque una sola opción)

- 0
- 0,5
- 1
- 1,5
- 2
- 2,5
- 3
- Más de 3
- Todas las horas que entreno son dirigidas

Preg.24.- ¿Cuántas jornadas competitivas tienes al año?

(* Marque una sola opción)

- Menos de 5
- Entre 6 y 10
- Entre 11 y 20
- Entre 20 y 40
- Otro (Por favor especifique)_____

Preg.25.- ¿Con qué frecuencia mantienes conversaciones sobre temas deportivos?

(* Marque una sola opción)

- Nunca
- En contadas ocasiones
- Habitualmente
- A todas horas

Preg.26.- ¿A cuántos eventos deportivos de tu especialidad asistes, en calidad de espectador, al año?

(* Marque una sola opción)

- De 1 a 5
- De 6 a 15
- De 16 a 30
- Otro (Por favor especifique)_____

Preg.27.- ¿A cuántos eventos deportivos de otras especialidades asistes, en calidad de espectador, al año?

(* Marque una sola opción)

- De 1 a 5
- De 6 a 15
- De 16 a 30
- Otro (Por favor especifique)_____

Preg.28.- En la actualidad, ¿Te planteas la dedicación profesional al deporte?

(* Marque una sola opción)

- SI
- NO

Pág. 6.- Cuestionario de actividad física para niños/as (PAQ-A)

Quiero conocer cuál es tu nivel de actividad física en los últimos 7 días (última semana). Esto incluye todas aquellas actividades como deportes, gimnasia o danza que te hacen sudar o sentirte cansado, o juegos que hagan que se acelere tu respiración como jugar al pilla-pilla, saltar la cuerda, correr, trepar y otras.

Recuerda: 1.- No hay preguntas buenas o malas. Esto NO es un examen.

2.- Contesta las preguntas de la forma más honesta y sincera posible. Esto es muy importante.

Muchas gracias por tu colaboración

Preg.29.- Actividad Física en tu tiempo libre: ¿Has hecho alguna de estas actividades en los últimos 7 días (última semana)? Si tu respuesta es sí: ¿cuántas veces las has hecho? (Marca un solo círculo por actividad)

(* Esta pregunta es obligatoria)

(* Marque una sola opción por fila)

	(No)	(1,2)	(3,4)	(5,6)	(7...)
Saltar a la cuerda	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patinar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jugar juegos como el pilla-pilla	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Montar en bicicleta	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Caminar (como ejercicio)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correr	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aeróbic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Natación	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bailar/Danza	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bádminton	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rugby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Montar Monopatín	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fútbol/fútbol sala	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Voleibol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hockey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baloncesto	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Esquiar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otros deportes de raqueta	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Balonmano	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Atletismo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Musculación/pesas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Artes marciales (judo, karate,)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Preg.30.- En los últimos 7 días, durante las clases de educación física, ¿cuántas veces estuviste muy activo durante las clases: jugando intensamente, corriendo, saltando, haciendo lanzamientos? (Señala sólo una)

(* Esta pregunta es obligatoria)
(* Marque una sola opción)

- No hice/hago educación física
- Casi nunca
- Algunas veces
- A menudo
- Siempre

Preg.31.- En los últimos 7 días ¿qué hiciste normalmente a la hora del recreo? (Señala sólo una)

(* Esta pregunta es obligatoria)
(* Marque una sola opción)

- Estar sentado (hablar, leer, trabajo de clase)
- Estar o pasear por los alrededores
- Correr o jugar un poco
- Correr y jugar bastante
- Correr y jugar intensamente todo el tiempo

Preg.32.- En los últimos 7 días ¿qué hiciste normalmente a la hora del almuerzo (antes y después de comer)? (Señala sólo una)

(* Esta pregunta es obligatoria)
(* Marque una sola opción)

- Estar sentado (hablar, leer, trabajo de clase)
- Estar o pasear por los alrededores
- Correr o jugar un poco
- Correr y jugar bastante
- Correr y jugar intensamente todo el tiempo

Preg.33.- En los últimos 7 días, inmediatamente después de la escuela hasta las 6, ¿cuántos días jugaste a algún juego, hiciste deporte o bailes en los que estuvieras muy activo? (Señala sólo una)

(* Esta pregunta es obligatoria)
(* Marque una sola opción)

- Ninguno
- 1 vez en la última semana
- 2-3 veces en la última semana
- 4 veces en la última semana
- 5 veces o más en la última semana

Preg.34.- En los últimos 7 días, cuantas días a partir de media tarde (entre las 6 y las 10) hiciste deporte, baile o jugaste a juegos en los que estuvieras muy activo? (Señala sólo una)

(* Esta pregunta es obligatoria)
(* Marque una sola opción)

- Ninguno
- 1 vez en la última semana
- 2-3 veces en la última semana
- 4 veces en la última semana
- 5 veces o más en la última semana

Preg.35.- El último fin de semana, ¿cuántas veces hiciste deporte, baile o jugar a juegos en los que estuviste muy activo? (Señala sólo una)

- (* Esta pregunta es obligatoria)
(* Marque una sola opción)

- Ninguno
 1 vez en la última semana
 2-3 veces en la última semana
 4 veces en la última semana
 5 veces o más en la última semana

Preg.36.- ¿Cuál de las siguientes frases describen mejor tu última semana? Lee las cinco antes de decidir cuál te describe mejor (Señala sólo una)

- (* Esta pregunta es obligatoria)
(* Marque una sola opción)

- Todo o la mayoría de mi tiempo libre lo dediqué a actividades que suponen poco esfuerzo físico.
 Algunas veces (1 o 2 veces) hice actividades físicas en mi tiempo libre (por ejemplo, hacer deporte, correr, nadar, montar en bicicleta, hacer aeróbic).
 A menudo (3-4 veces a la semana) hice actividad física en mi tiempo libre.
 Bastante a menudo (5-6 veces en la última semana) hice actividad física en mi tiempo libre.
 Muy a menudo (7 o más veces en la última semana) hice actividad física en mi tiempo libre.

Preg.37.- Señala con qué frecuencia hiciste actividad física para cada día de la semana (como hacer deporte, jugar, bailar o cualquier otra actividad física).

- (* Esta pregunta es obligatoria)
(* Marque una sola opción por fila)

	Ninguna	Poca	Normal	Bastante	Mucha
Lunes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Martes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Miércoles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jueves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Viernes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sábado	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Domingo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Preg.38.- ¿Estuviste enfermo esta última semana o algo impidió que hicieras normalmente actividades físicas?

- (* Esta pregunta es obligatoria)
(* Marque una sola opción)

- SI
 NO

ANNEX 2

Link to the webpage:

<http://eps-sport.com/>

HOJA DE INFORMACIÓN

Identificación de la investigadora principal

Elvira Pascual Soares Email: epascual008@ikasle.ehu.es Teléfono: (+34) 620212332

Universidad del País Vasco / Euskal Herriko Unibertsitatea

Centro: Facultad de Ciencias de la Actividad Física y del Deporte

Portal de Lasarte, 71. 01007 Vitoria-Gasteiz. España Teléfono: 945 013500

Identificación del proyecto

Título: The deliberate practice: the sports excellence versus the musical excellence

“La práctica deliberada: la excelencia deportiva versus la excelencia musical”

Trabajo de fin de grado enmarcado en la titulación de ciencias de la actividad física y del deporte que pretende promover la formación de la investigadora y la adquisición de las competencias y habilidades relacionadas con la obtención del título.

- Objetivo:

Valorar la relación de la práctica deliberada, horas dedicadas a la actividad deportiva o artística del practicante, con el éxito conseguido, estableciendo los principios de similitud o diferencia entre ambas.

- Duración:

El registro de datos se realizará durante el mes de junio de 2015.

Método:

El estudio se efectuará entre deportistas activos y alumnos del Conservatorio Profesional de música de La Rioja, quienes, de forma voluntaria y previo consentimiento de sus padres o representantes legales, cumplimentarán un formulario que incluirá el “IPAQ”, cuestionario internacional sobre la actividad física.

Se les solicitará a los participantes que diligencien el formulario vía telemática en compañía de sus padres o representante legal, quienes a través de la realización de la encuesta, consentirán el uso de la información para los fines académicos aquí expuestos.

Página web donde se encuentra el LINK para la cumplimentación de la encuesta:

<http://eps-sport.com/>

Descripción de riesgos y/o molestias.

Le solicitamos disponga del tiempo suficiente para la cumplimentación del cuestionario, el cual está estimado entre 15 y 20 minutos. En caso de necesitar más información o tener alguna duda, póngase en contacto con Elvira Pascual Soares, tel. 620212332 email epascual008@ikasle.ehu.es, investigadora principal del proyecto.

ANNEX 4

Statistical tables created by personal compilation about the training times and competitions in diverse sports per week and during the year.

CATEGORY		YOUNGEST PLAYER "BENJAMIN"									
SPORTS	Basket	Voley	Soccer	Athletics	Judo	Swimming	Horse riding	AVERAGE	VALUE (Hours)	TRIMMED MEAN	VALUE (Hours)
Hours of training/week	2	2	3	2	2	6,25	1,5	2,678571429	2 hours & 40 minutes	2,2	2 hours & 12 minutes
Duration of the competition (warm up included) / week	1,5	1	1,5	2	1	2	1	1,428571429	1 hour & 25 minutes	1,4	1 hour & 24 minutes
Total amount of hours of practice / week	3,5	3	4,5	4	3	8,25	2,5	4,107142857	4 hours & 6 minutes	3,6	3 hours & 36 minutes
Weeks of practice / year	50	50	50	50	50	50	50				
Amount of hours of practice / year	175	150	225	200	150	412,5	125				
Deliberate practice / year	1000	1000	1000	1000	1000	1000	1000				
Deliberate practice / year (percentage)	17,50%	15%	22,50%	20%	15%	41,25%	12,50%				
CATEGORY		BEGINNER "ALEVIN"									
SPORTS	Basket	Voley	Soccer	Athletics	Judo	Swimming	Horse riding	AVERAGE	VALUE (Hours)	TRIMMED MEAN	VALUE (Hours)
Hours of training/week	2	3	4,5	2	2	14,5	1,5	4,214285714	4 hours & 12 minutes	2,7	2 hours & 42 minutes
Duration of the competition (warm up included) / week	1,5	1	2	2	1	2	1	1,5	1 hour & 30 minutes	1,5	1 hour & 30 minutes
Total amount of hours of practice / week	3,5	4	6,5	4	3	16,5	2,5	5,714285714	5 hours & 42 minutes	4,2	4 hours & 12 minutes
Weeks of practice / year	50	50	50	50	50	50	50				
Amount of hours of practice / year	175	200	325	200	150	825	125				
Deliberate practice / year	1000	1000	1000	1000	1000	1000	1000				
Deliberate practice / year (percentage)	17,50%	20%	32,50%	20%	15%	82,50%	12,50%				

CATEGORY		CHILD "INFANTIL"									
SPORTS	Basket	Voley	Soccer	Athletics	Judo	Swimming	Horse riding	AVERAGE	VALUE (Hours)	TRIMMED MEAN	VALUE (Hours)
Hours of training/week	3,5	4	4,5	4,5	3	20,5	3	6,142857143	6 hours & 8 minutes	3,9	3 hours & 54 minutes
Duration of the competition (warm up included) / week	2	1,5	2	2	1	2	1	1,642857143	1 hour & 38 minutes	1,7	1 hour & 42 minutes
Total amount of hours of practice / week	5,5	5,5	6,5	6,5	4	22,5	4	7,785714286	7 hours & 47 minutes	5,6	5 hours & 36 minutes
Weeks of practice / year	50	50	50	50	50	50	50				
Amount of hours of practice / year	275	275	325	325	200	1125	200				
Deliberate practice / year	1000	1000	1000	1000	1000	1000	1000				
Deliberate practice / year (percentage)	27,50%	27,50%	32,50%	32,50%	20%	11,25%	20%				
CATEGORY		YOUNG PLAYER "CADETE"									
SPORTS	Basket	Voley	Soccer	Athletics	Judo	Swimming	Horse riding	AVERAGE	VALUE (Hours)	TRIMMED MEAN	VALUE (Hours)
Hours of training/week	3,5	6	4,5	4,5	6	22,5	4	7,285714286	7 hours & 17 minutes	5	5 hours
Duration of the competition (warm up included) / week	2	2	2,25	2	1	2	1	1,75	1 hour & 45 minutes	1,65	1 hour & 39 minutes
Total amount of hours of practice / week	5,5	8	6,75	6,5	7	24,5	5	9,035714286	9 hours & 2 minutes	6,65	6 hours & 39 minutes
Weeks of practice / year	50	50	50	50	50	50	50				
Amount of hours of practice / year	275	400	337,5	325	350	1225	250				
Deliberate practice / year	1000	1000	1000	1000	1000	1000	1000				
Deliberate practice / year (percentage)	27,50%	40%	33,75%	32,50%	35%	12,25%	25%				

CATEGORY		JUNIOR "JUVENIL"									
SPORTS	Basket	Voley	Soccer	Athletics	Judo	Swimming	Horse riding	AVERAGE	VALUE (Hours)	TRIMMED MEAN	VALUE (Hours)
Hours of training/week	3,5	8,5	6	8	7,5	24,5	5	9	9 hours	7	7 hours
Duration of the competition (warm up included) / week	2	2,5	2,5	2	1	2	1	1,857142857	1 hour & 51 minutes	1,8	1 hour & 48 minutes
Total amount of hours of practice / week	5,5	11	8,5	10	8,5	26,5	6	10,85714286	10 hours & 51 minutes	8,8	8 hours & 48 minutes
Weeks of practice / year	50	50	50	50	50	50	50				
Amount of hours of practice / year	275	550	425	500	425	1325	300				
Deliberate practice / year	1000	1000	1000	1000	1000	1000	1000				
Deliberate practice / year (percentage)	27,50%	55%	42,50%	50%	42,50%	132,50%	30%				