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TEACHER PLACEMENT REPORT

Investigation: Action research project investigating methods for promoting creativity in double bass students attending a Portuguese music school

Masters Degree in Music Teaching

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Abstract

Part I. Teaching practices

The years teaching placement in the Nossa Senhora do Cabo Music School was seen to present the opportunity to develop a collaborative teaching venture between myself and the principle double bass teacher. My role was to complement existing teaching activities with some more specialized work centred around the theme of creativity. Work included two large-scale creative projects; “Recercadas” and “Three Places in Linda-a-Velha” as well as a project dedicated to historically informed interpretation entitled “The Origins of the Double Bass”. This teaching took place in individual lessons, group lessons and workshops and pedagogical approach was orientated by constructionist viewpoints.

Students with no previous experience learnt to improvise using various different approaches including Jazz, historically based elaboration and free improvisation. Knowledge of interpretation was developed through an exploration of historical approaches including ornamentation and the expressive use of articulation, and students had the opportunity to listen to and try out historical instruments and bows for themselves.

Work was presented at end of term concerts, all of which included students performing their own original compositions for double bass some of which were performed as ensemble pieces.

Part II. Investigation: Action research project investigating methods for promoting creativity in double bass students attending a Portuguese music school

For an educator, especially in the arts, an important task is to stimulate creativity; existing curricula are perceived to be unduly focused on the factual and measurable. As well as deepening the student’s understanding of a subject, exercises in creativity help establish the adaptability that will be needed in work of all kinds. The subject has attracted much research, but its place regarding musical instrument teaching has been relatively neglected. Techniques

for filling the “creativity gap” were explored in two settings in both group and individual lessons.

The investigation, which employed the action research method (qualitative analysis), was divided into four phases. In phases 1-3 the participants were six double bass students at the Nossa Senhora do Cabo Music School. Pilot exercises in creativity were followed by broader and more ambitious projects. In phase 4 the techniques were tested and amplified during a summer course for twelve double bass students at the Santa Cecília College.

Findings were largely in accord with the constructionist, child-centred, approach to education. Creativity flourished in a working environment that respected difference and encouraged spontaneity. Group activity had to be planned with individual students in mind. From a disappointing start, results improved when the teacher recognized the need to be a participant as well as an instructor. Specific difficulties arose from the nature of the instrument being learned, the double bass.

Some of the models in this project require refinement, but others might with little alteration be added to a repertoire of techniques for creative work with music students. They do not demand superior creative abilities in the teacher, for whom this aspect of education provides continuous stimulation and self-renewal.

Keywords

Creativity, constructionist, gap filling, environment, action research, experience.

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Part I. Teaching practices

1. Context of the teaching work

1.1. Description of the school

The school, Escola de Música Nossa Senhora do Cabo was founded in 1977 as the result of an initiative by parents supported by the local church under the leadership of Father Manuel Martins.

In 1982, the school was recognized by the Portuguese Ministry of Education from which it receives funding, and its courses were given parallel status with the state primary and secondary education systems in a system known as the articulated teaching regime. In addition, the school was given pedagogical autonomy.

In 1992, the town council of Oeiras, assisted by a European Union grant, sponsored the construction of the building the school presently occupies. It was designed specifically as a music school, and has numerous music teaching rooms, both large and small, a café and an auditorium. Set in pleasant surroundings, the building is spacious and light and to the visitor, appears as a hub of activity, both musical and social. Billboards display an imaginative array of posters publicizing upcoming concerts by students, and for those waiting in the entrance hall, a large screen displays televised concerts.

Presently, the school has approximately seven hundred students and provides tuition on a complete range of woodwind, string, brass and percussion instruments together with singing and ballet. Of these, six study the double bass under the guidance of their teacher, João Diogo Duarte. In 2001, 14% of students expressed an interest in making music a profession but only a very small proportion of such students actually continue onto further professional training (approximately 1% of all students). In the most recent survey of levels of satisfaction amongst students, parents and teachers the results are positive or highly positive in all the areas surveyed (Escola de Música Nossa Senhora do Cabo, 2001, pp. 17-21).

Since the foundation of the school, the educational aims have been clearly orientated by Christian ethics. One of the earliest statutes states that culture, from a Christian perspective, is an integral component of human development and the present site of the school refers to “education through art” (<http://www.emnsc.org/>). Art is seen as an agent of personal growth.

In common with most music schools, much of the teaching is skills orientated though particular emphasis is given to ensemble playing on account of what the school's site describes as the healthy companionship and social cooperation that it promotes. As far as creativity is concerned, the school offers the possibility of beginners having Orff lessons which include improvisation and in 2010, the school launched a activity named "Art Space" which includes the option of "Creative Writing". More advanced students study analyses and composition, which includes student composition, though the emphasis at this stage appears to be to use composition as a means of achieving a deeper understanding of the areas being studied. The double bass programme, when compared to other similar schools (such as the Fundação Musical dos Amigos das Crianças and the Escola Profissional Metropolitana) is notable in that it allocates a relatively small number of studies and pieces to work concerning the development of technical skills. It can therefore be considered as a core curriculum around which other activities can be pursued that can either be aimed at further development of the technical skills already specified or, alternatively, to complimentary activities which can be a reflection of the specific interests of the student. João Diogo Duarte places a particular emphasis on the importance of ensemble playing, partly because, together with orchestral playing, he has observed that it has a strongly positive effect on student motivation and also because of its social developmental benefits. The programme is therefore well adapted to a flexible and innovative approach to teaching and past activities have included a "Double Bass Day" involving an exhibition and presentations related to the double bass, exchange visits with other music schools and a project named "Aleatoric Sounds", dedicated to an exploration of unusual double bass sonorities.

Supporting this approach, the direction of the school, headed by Pedro Figueiredo is welcoming to new ideas. The school aims to adapt to new social realities, including, recently, a larger number of students from families facing economic difficulties and increasing number of students who wish to have the opportunity to learn an instrument without, at the initial stage, a heavy commitment of time dedicated to the activity. The school hopes therefore to achieve increasing flexibility, and find new ways of providing an educational experience that is relevant to the expectations of contemporary society.

1.2. The students

The students and their parents gave full consent to their appearance in the presentation of this work. However, it was felt that owing to the sometimes personal nature of the material, it would be preferable to use a numbering system instead of real names.

1.2.1. Student 1

Sixteen years old, in the 10th year and presently working for the 6th grade, this is a student with above average success in terms of marks. He dedicates a lot of time listening to music, though not necessarily classical music and is considering becoming a professional musician. This strong interest in music revealed itself not only during creative work undertaken during the course of the year but also during the early music project in which he showed considerable curiosity and responsiveness. He has a highly individualistic approach of learning and playing that lends itself more to solo playing than ensemble and orchestral playing.

Of particular interest to the work undertaken during the year is his interest in composition. Much of the music he has composed was composed and recorded on the computer but a year previously he had composed a piece for solo double bass that he performed at an end of term concert. This interest had been developed without the assistance of composition lessons. The music showed above all the influence of film and light music genres. Previous to the work undertaken he had no experience of improvisation.

The student proved himself to be well equipped with skills associated with musical creativity; a good understanding of musical syntax, originality, divergent thinking skills, well developed skills in identifying tonal and rhythmic patterns, and flexibility. Particularly notable was a high level of aesthetic sensitivity which revealed itself in the capacity to respond to stylistic influences, and in the ability to both write and play in a highly expressive manner.

In common with many creative individuals, this student demonstrated high levels of intrinsic motivation, more interested in achieving personal objectives than in conformity to outward success. This motivation is supported by a good self-perception.

1.2.2. Student 2

This student began studying the double bass at the age of 14 and is now 17. He is presently in the 10th year and has completed the 3rd grade. He began learning the double bass because his course of study required that he learn a second instrument and this choice was motivated in part by an interest in jazz. His principle instrument is the piano and he plans to continue into the music profession as a pianist. During the years he has been learning, this student has never had his own instrument to practice at home and the little practice he is able to do takes place in the school. In effect, most development takes place during lesson time. Despite this lack of time, the student has an unusual facility in playing the instrument, and this combined with his experience on the piano together with highly developed auditory skills has led to him achieving exceptionally high marks in all his exams. He does not play in the orchestra but at one point played in a small ensemble with a group of friends at the school.

It seems likely that this student will stop playing the double bass once the course of study has finished. Double bass playing can therefore be seen as means of broadening his musical knowledge, not only giving the opportunity to get to know another instrument but also to widen his playing experience.

A broad skills base meant that this student was well prepared for creative work. Familiarity with musical syntax included knowledge of harmony and musical form. This was accompanied with a broad general knowledge of music and an appreciation of different musical styles. He also has some experience of improvisation on the piano including playing jazz and realization of basso continuo. An ability to quickly provide a number of different solutions also implied good divergent thinking skills. These abilities are supported by a good self-perception.

The work undertaken suggested a high level of intrinsic motivation but other factors had a heavy bearing on results. This student was in the process of preparing for the 8th grade piano exam and this, combined with academic exams and a problem in his right arm meant that work on the double bass was not a priority. Many of the activities undertaken remained uncompleted.

1.2.3. Student 3

This student, now 13 began playing at the age of eight, is in the 8th year and studying for the 4th grade. Marks up to now have been above average. He is a hard working and conscientious student, interested in achieving success but possibly not motivated by a very strong interest in music. Music is just one of a number of interests in which sporting activities possibly take first place. He is presently of the opinion that music will not be something he wishes to pursue professionally. Of particular interest to him is orchestral playing and he is a dedicated and reliable member of the school orchestra.

Supporting creative activities is a high degree of craftsmanship. He applies skills effectively to realize his musical intentions on the instrument and good ensemble playing skills are of considerable assistance during many of the activities. These abilities are accompanied by a fair understanding of musical syntax and an ability identify rhythmic and tonal imagery. Aesthetic sensitivity appears not to be a strong point although this varied considerably according to musical genre. He clearly feels more comfortable working with jazz and popular music styles. Activities that emphasized divergent thinking appear to be less appealing than instruction based activities.

Motivation appeared to be largely extrinsic during most of the tasks carried out with a preference to be to achieve a good result rather than realize personal objectives but the student appears to have a poor self-perception and this may have a significant impact on motivation during these activities.

A personal quality associated with creativity is the ability to take risks. In this, the student shows himself to be adept, accepting very challenging tasks that are then performed in challenging situations.

2. Teaching work undertaken

2.1. Overview

From the outset, the year's teaching placement in the Nossa Senhora do Cabo music school was taken to present an opportunity to develop a collaborative venture with the principle double bass teacher, João Diogo Duarte. We agreed that rather using my presence as a means for reinforcing teaching processes already underway, it could be used as a way of diversifying the educational experience of the students. This approach was considered to have a number of advantages; it would allow each of us the opportunity to focus with more freedom on areas of particular interest, it would avoid the risk of confusion arising from each of us covering the same area but with differing approaches and it could allow for the development of some projects based in activities not usually included within the scope of the course work.

From the outset, various possibilities were already apparent. My specialized knowledge of historical instruments and performance practice should be exploited for the benefit of the students. Secondly, experience as an accompanist (on the piano) could assist in the preparation of the students for exams and concerts. Thirdly, my interest in discovering and developing a new repertoire for teaching the double bass to children could be used to enrich the choice of repertoire available to the students. Finally, it was hoped that the placement would allow me the opportunity to develop an experimental project dedicated to creativity that could prove enriching to the educational experience of the students.

2.2. Teaching approach

Peter Wiegold (2002) describes the ideal learning process as “a synthesis of the formal and imaginative” (p. 239). Specifically, in the case of music “one of the constant struggles (and joys) of music making is the attempt to embrace the most formal and technical along with the natural and spontaneous”. He argues that in order to effectively teach music one must combine two approaches, one, “child-centred” and the other, “authority centred”. Dewey (1997) commenting on the latter approach states that “Books, especially textbooks, are the chief representatives of the lore and wisdom from the past, while teachers are the organs through which pupils are brought into effective connection with the material” (p. 18).

The decisions taken regarding my teaching activity during the years placement meant that potentially almost all the activities could be child-centred, as the activities were concerned with either creativity or interpretation (itself a form of creativity). Dewey used the term progressive to describe this approach to teaching but more recently it has come to be known as constructionist. In this approach students are considered the principle agents in the learning process and preference is given to “learning centred in activity” (Webster, 2002, p. 17). Marina Glushenko (1994) describes this approach when, comparing the lesson experience to a theatrical drama she states that “the teacher is both director and actor while the student is not an indifferent spectator but active participant and co-author of an interesting and fascinating act” (p. 5).

In practice this type of teaching involves providing the students the means to learn for themselves. Learning is based in experience and students are encouraged to take an active role in decision making. Direct instructions are kept to a minimum and when interventions are required, preference is given to a questioning approach. Through this process, students learn to think critically, identify problems for themselves and search for their own solutions. It is also an approach that values individuality and originality.

2.3. Activities

2.3.1. First period

The first month of the placement was dedicated to the observation of lessons with the objective of becoming familiar with the teaching process underway. My objective was to get to know the students better, identify strengths and weaknesses and pinpoint areas of particular interest to the students that might be developed further. Once these areas were identified, a strategy was agreed upon by myself and principle teacher.

Student 1. In the case of student 1, there was little difficulty in identifying an area where I might be of assistance. Would it be possible to assist the student in his developing interest in composing for the double bass? As previously observed the student had received no formal

training directly relevant to his interest in composition. As this interest was clearly of relevance not only to the motivation of the student but also of possibly considerable significance to his future as a musician, it was thought reasonable that this type of work be included as part of his double bass tuition. Three distinct categories of intervention were identified:

i) The student should be stimulated to write more music by being provided with opportunities to perform his compositions and, if need be ideas to assist with the generation of these pieces. As noted by Csikszentmihalyi (1996), levels of creativity depend on the circumstances in which an artist lives. “Without a culturally defined domain of action in which innovation is possible, the person cannot even get started” (p. 326). Demand, or the requirement of the production of new work and the opportunity to perform it in the presence of a discerning public appear to greatly influence the degree to which artists are able to create new and valuable work. Webster (2002) reinforces this view when he states that “the kind of task and the context in which the task is set can have a strong effect on creative thinking” (p. 30).

ii) Where possible, the student should be assisted in developing the quality of his compositions. In this work the principle strategy pursued was that described by Webster (2012, p. 95) as “revision”. Development occurs through the analyses of existing material. In practice, this process can occur as part of the process of developing an interpretation of the composition. Strengths and weaknesses are identified (often by the student himself) and solutions are sought to resolve problems and fully exploit existing qualities. Inspired by the constructionist viewpoint, much of this work could be taken in the spirit of an artistic collaboration, an act of co-creation. Burnard (2012) says that “at least a portion of learning time occurs in partnership with others, lived in world-practices that make learning more relevant, useful and transferable” (p. 13). The lived in world practice would, in this case be working with a knowledgeable and experienced accompanist on the refinement of the music and its preparation for performance.

iii) As with work on other parts of the school programme, the preparation of the pieces composed should involve the development of the skills already acquired and, when necessary, the introduction of new skills.

Student 2. As previously described, student 2, despite following the same programme as the other students, did so under considerably differing circumstances. Of central significance was the lack of both time and an instrument to enable practice to take place between the lessons. In order to keep up with the programme, lessons consisted for the most part of supervised practice in which the development of motor skills was of primary importance. It was clear that any further addition to the workload of the student could only prove detrimental. A strategy needed to be developed whereby existing skills could be put to new uses, thus broadening the educational experience of the student. Two possible focus areas were identified:

i) Interpretation. The student should be given the opportunity to focus on developing interpretive skills. Short and easily readable pieces were used that provided interpretive challenges. This would also provide the added benefit of expanding his experience of playing the instrument without placing new technical demands.

ii) Improvisation. It was thought that improvisation could not only provide the student with an interesting way of putting existing skills to a new use but would also provide the student with a new skill that might be useful in the future. Various genres were examined: free improvisation based on the pentatonic scale, improvisation using the method outlined in Ortiz's *Trattado de Glosas* and jazz improvisation.

Student 3. This student began having lessons with the trainee during the last few weeks of the first period. The principle objective was defined by the principle teacher, in turn a response to a request made by the student: to provide a piece that the student could enjoy playing to his friends and family. Two strategies were defined:

i) Choice of piece. The student should be encouraged to select a piece he would like to play. Any piece, published or unpublished could be an option so long as it was deemed within technical reach of the student.

ii) The piece should be learnt and performed in such a way as to reflect, as far as possible, the student's personal opinions. Decisions should be made by the student concerning the arrangement of the piece, accompaniment and structure.

Teaching material	
“Lines to Time”	Duncan Fox
“O Exilado”	Sviridov, arrangement for two double basses by Duncan Fox
“Air”	J.S. Bach, arrangement for Piano and double bass by Duncan Fox
“Recercada Primera”	Diego Ortiz, arrangement by Duncan Fox (appendix 1)
“Little Brown Jug”	Joseph Winner/ Glenn Miller, arrangement by Duncan Fox (appendix 2)
“Christmas Bass”	Student 1

Table 1. Teaching material for the first period

2.3.2. *Second period*

During the second period, a joint project was developed by myself and the principle teacher entitled “The Origins of the Double Bass”. All the students in the class (six in number) were involved in this project and each learnt a piece representing a stage in the development of the double bass from the first large bowed string instruments at the end of the 15th century to the appearance of the instrument in its modern form at the beginning of the 19th century. Work on each piece was accompanied by information concerning the context in which it was written, where it might have been performed, its social function and what types of instruments would have been used in its performance. Iconography including paintings of musicians from the time the music was composed and, where possible, use of facsimile editions of the music reinforced this process. The students also had the opportunity of hearing these instruments performed by specialists and of trying them out themselves.

As in the first period, pieces were chosen that would allow for a continuation of the development of the student’s skills but with an additional emphasis on historical performance practices.

In addition to learning solo pieces, all the students were involved in a creative project entitled “Recercadas” which concerned not only the development of an understanding of historical

performance practices but also work on skills associated with musical creativity and with ensemble playing. Each student was required to improvise or compose a section of a piece occupying between eight and thirty two bars. The basis of this work was the 16th century method of elaboration described in the *Trattado de Glosas* published in 1553 by Diego Ortiz. Students were given a worksheet including extracts from a facsimile edition of this work. This worksheet provided a simple explanation of this technique for creating new music (appendix 3). Two works were developed using these methods; “Recercada I”, based on the harmonic sequence of the same name outlined in the book and “Folie d’Espagne”, a chord sequence commonly used during the 17th century as the basis for improvisation. Students could choose their own approach to this work, either composing or improvising.

This work was presented in a final concert in which the pieces were performed in chronological order accompanied with iconography from each period and demonstrations of historical instruments. Besides from being a presentation of the work undertaken, the performance was designed to be an educational experience not only for the students themselves but also for students of other instruments in the school who might be interested to learn about the history of the double bass.

Student 1. The “Origins of the Double Bass” allowed for a continuation of the work begun in the first period. The student was given the challenge of writing a new piece for double bass, this time making use of composing techniques described in the *Trattado de Glosas* from which a selection of bass lines were provided to serve as a possible “cantus firmus” for the composition. In addition, work was undertaken to develop the improvising abilities already touched on during the first period. For this purpose and ensemble piece, “Folie d’Espagne” containing improvised sections was used.

Student 2. Continuing the work on improvisation developed in the first period, this student participated in the ensemble project, “Folie d’Espagne”. In addition, the student was required create and learn his own version of the piece “Virgen Dina d’Honor” adding “glosas” using the method described in the *Trattado de Glosas*. It was hoped that these two projects would

provide the student with challenging learning experiences without excessive addition to his already heavy workload.

Student 3. Participating in the ensemble piece, “Folie d’Espagne” would develop on the improvising skills already touched on during the project “Little Brown Jug” in the first period. In addition, the student was given the a piece representing the last stage of development of the double bass to be performed in a version for two double basses. This piece would provide the opportunity to develop some ideas concerning historically informed interpretation including issues related to ornamentation and articulation. The work would also provide an opportunity to develop ensemble playing skills.

Teaching material	
“Recercada I” worksheet	(appendix 4)
“Folie d’Espagne” worksheet	(appendix 5)
“Virgen Dina d’Honor” worksheet	(appendix 6)
“Largo”	Corelli/Dragonetti (reconstruction by Duncan Fox)
Powerpoint presentation of the history of the double bass including iconography relevant to each piece being performed	(appendix 7)

Table 2. Teaching material for the second period

2.3.3. *Third period*

Developing on the experience of the previous periods and encouraged by the enthusiastic response by students, teachers and parents to the creative work undertaken it was decided to launch a more ambitious and time consuming project, once again involving all the students. The project “Three Places in Linda-a-Velha” (described in detail in part two) aimed to provide the students with an opportunity to be creative without predetermined limits and involved work on composition, exploration of sonorities on the instrument, improvisation and the development of ensemble playing skills. The work took place during a period of two months

and involved group and individual lessons. As the objective was to stimulate the students to think for themselves much of the teaching work was creative in nature or, in the words of Stacy DeZutter (2011) “appropriate and disciplined improvisation” (p. 27). The teacher acted as facilitator, assisting the students to achieve objectives of their own choosing.

The piece was performed at an end of year concert in June.

Teaching material
Students were provided with copies of the evolving score with suitable spaces in which they could write new ideas
“Three Places in Linda-a-Velha” – complete score (appendix 8)

Table 3. Teaching material for the third period

2.4. Areas of learning developed through the teaching work

The teaching work undertaken throughout the year could be roughly divided into two categories; work concerning the development of knowledge and skills associated with specific types of music, and work dedicated to stimulating creativity in the students.

2.4.1. Jazz and historically informed interpretation

Within the first category, we covered jazz and the historically informed interpretation of classical, baroque and renaissance music. The skills associated with these activities could be summarized as follows:

Skills associated with jazz and the historically informed interpretation of classical, baroque and renaissance music
Jazz playing pizzicato technique
Knowledge of a range of expressive techniques associated with various historical periods and their possible applications
Knowledge of historical ornamentation

Table 4. Skills associated with jazz and historically informed interpretation

The jazz pizzicato technique is significantly different from the classical pizzicato and is usually not taught except in jazz orientated courses of study. It is however quite easily learnt and most double bass players, including amateurs will, at some point find it to be useful. Perhaps more interesting than the technique itself is the way it leads the student to focus on questions related to pizzicato sound quality. Pizzicato appears frequently in chamber and orchestral playing yet it rarely appears in solo music and therefore receives relatively little attention from teachers. To play an entire piece in pizzicato offers an interesting opportunity for the student to develop a wider range of pizzicato sonorities. As the bow is not held whilst playing this type of pizzicato, greater variety of movement is possible together with the potential for the production of a wide range of different sonorities. Students were encouraged to explore this potential and observe and comment on results for themselves.

Similarly, the study of historically informed interpretation inevitably leads to a focus on the bow as a medium of expression that modern players frequently omit. In the absence of such techniques as vibrato and the use of dynamics, bow use assumes a more central role in the interpretation of the music. Particularly important are questions related to articulation. Not only does note length assume a particular importance but so too does the question of bow attack. The student is therefore called upon to develop a greater subtlety of bow use.

We also examined notions of character. If the music is a dance, where does the accentuation fall? Similarly, the compositions, in their original form, leave many decisions to be made by the interpreter. What is the character of the piece? How can dynamics and articulation be used in order to bring out this character? Students were also encouraged to look at the overall structure of the piece to develop an idea of “what is happening” in the music. Could they find climax points? Should repetitions involve modifications? For the more advanced students, the idea of rhetoric was discussed in relation to music.

This work aimed not only to give the students ideas about historical practices but to broaden their outlook as to the expressive possibilities of the instrument, possibilities that could be used in any type of repertoire. Rather than teaching a “correct” way of playing, it was hoped that these lessons would provide the means to find a more individualized outlook on interpretation.

In addition to questions related to the written music, questions relating to ornamentation, both written and unwritten were addressed. One of the first points to be clarified was often what note to begin an ornament on and the way in which the starting and ending notes could be prolonged. Later, students were called on to identify places where ornamentation could be added, such as trills at cadences. Finally, students were encouraged to find ways of adding their own variations to the music, adding, as one example a few variants when repeating a section.

For all students, the idea that the score itself could represent an interpretation of the composer's original work, was new. This opened a new horizon for creative and critical thought. It was pointed out that indications in the score, such as dynamic and articulation markings could often be later additions, not anticipated by the composer. Naturally, at this point the students had little knowledge of historical conventions but it was thought useful to encourage this type of approach. The use of trills, identifying new locations in which they could be used was one way of working on this ability.

2.4.2. Creative activities

The second category, creative work (to be analyzed in detail in part two of this report) was undertaken with the principle aim of stimulating creativity in the students and in including creative activities as a component in the learning process. However, these creative activities can indirectly influence many other areas of a musician's development. Table 5 below outlines these areas.

Auditory related skills. Creative work, which was the focus of much of the teaching, can be seen influence the development of a wide range of skills. Of these, perhaps primary significance should be given to the development of listening skills. Paynter (1992) describes these skills as "the mainspring of musical understanding" (p. 12). Edwin Gordon (2003) grouped many of the listening skills associated with musical creative thinking within the term "audiation". Audiation, according to Gordon, is "the capability of hearing and understanding music for which the sound is not or may never have been physically present" (p. 3). Taking what Gordon would have described as an "inside out" approach, creative projects oblige the

students to think in music. They must go beyond what they can hear and imagine something new. Even when this process involves experimentation rather than imaginary sounds, this process involves critical listening. Inevitably, creating music must involve giving meaning to music. Gordon (2003) also considers this too to be a function of audiation; “sound becomes music only through audiation, when, as with language, you translate the sounds in your mind to give them meaning” (p. 4). For Paynter (1992), “the overriding importance to musical creativity of having a 'good ear' suggests that we shall derive deeper significance from the experience of music if we cultivate the skill of attentive listening” sound and structure (p. 12).

Creative thinking in music	
Auditory related skills	Improvisation Sight reading Music memorization
Interpretive skills	Aesthetic awareness Development of the musical imagination
Ensemble playing skills	Communication Flexibility Collaborative group work
Personal development	Self realization and social skills
Cognitive development	Divergent thinking Transfer

Table 5. Creative thinking in music

Improvisation. Pamela Burnard (2012) describes improvising as “articulating and expressing music from the mind, through the body, on and out of the instrument” (p. 260). For Gordon (2003), improvisation is the highest manifestation of audiation. He believes that, given appropriate guidance, all students are to some extent potentially able to improvise and he gives an extreme importance to this activity: “Improvisation is the essence, the sum and substance, of music” (p. 1). Like many, Gordon believes that improvisation can be learnt through practice, given that appropriate activities are chosen. During the course of the year the students had regular practice at improvising. The method followed derived from a mixture

of sources. The first piece undertaken by many of the students made use of the pentatonic scale. A number of practitioners, Carl Orff being the most celebrated example, have chosen this scale for improvisational work with children. The scale is attractive to children, the absence of half tones mean that dissonance is absent and in the case of the double bass, it is technically easy to play. In this case, the improvisation was unstructured, based simply on a four note ostinato figure.

From this point, the students moved on to improvising by selecting from a limited number of notes for each bar ("Little Brown Jug"), moving on to improvising connecting passages between principle notes ("Recercadas") and finally, a freer improvisation both with and without a harmonic basis. This work did at times examine technical considerations such as the use of repetition, sequences and varying rhythmic motives but was mainly concerned with gaining experience and confidence. It took time for students to gain the ability to listen to the accompaniment and play at the same time. For some, fear of making mistakes and risk taking were factors that were difficult to overcome. Teaching involved discussing these difficulties and explaining the importance of mistakes in bringing about new ideas.

In the "Three Places in Linda-a-Velha" project, improvisation served firstly as a means of generating material for the student compositions. Students were encouraged to improvise freely on their instruments in search of musical ideas. Once an idea was found, the idea was expanded on once again through improvisation. Students would select from the ideas they produced during these improvisations, choosing the ideas they found best and then either refining these ideas or advancing on to new ones. Improvisation was also used as a means of expanding upon existing music. Following the jazz model used in "Little Brown Jug", a simple harmonic pattern was isolated from the music and then used as the basis for improvisation. One example was the "Walking Music". The harmonies of the four bar melody were used as the basis for improvised sections played by all the other students in the group.

In this way, short melodies could be developed into longer movements. It also inferred an interesting experience of group work in which students were able to contribute to each other's compositions with ideas of their own.

Sight reading and music memorization. Although sight reading did not receive any special attention during these activities, some consider that the ability to improvise and the

development of the inner ear that it entails can be beneficial to sight reading. According to Gordon (1980), “We also audiate when we assimilate and comprehend in our minds music we may or may not have heard, but are reading in notation” (p. 4). In effect, audiation adds depth to the reading process. In improvising, ideas held in the mind must be realized on the instrument. At its most basic level, sight reading can involve a mechanical process of associating written notes with technical procedures. Improvising develops the ability connecting music heard in the mind to the production of that music on the instrument. This ability can then be applied to sight reading. Through the process of improvisation, the mind associates different sounds with the physical sensation they engender whilst playing the instrument. These sensations can then form part of the memory.

This type of work also has an impact on the ability to memorize music. Once again, audiation provides another layer to the process underhand. Gordon (2003) comments that “most students and musicians memorize a piece of music without being able to audiate it contextually. Memorizing music on an instrument is primarily related to fingerings and other technical matters and not to audiation itself” (p. 6). The development of the inner ear is also a development of musical memory reinforcing the ability to memorize music visually and through physical sensation.

Paynter (1992) points out the way that activities can complement each other. “For all musicians there is a continuing cycle of improvisation, composition/interpretation, rehearsal and performance with each element feeding back into the others. The ability to “hear music in your head” comes only from involvement from all points of that cycle” (p. 92).

Interpretive skills. Aesthetic awareness. Dewey (1980) states that “when artistic objects are separated from both conditions of origin and operation in experience, a wall is built around them that renders almost opaque their general significance, with which esthetic theory deals. Art is remitted to a separate realm, where it is cut off from that association with the material and aims of every other form of human effort.” (p. 4). Rather than search for personal meaning in a composition, there is a risk that students come to view that the music they are studying as an object detached from their own personal experience. This in turn can limit their spirit of inquiry in the area of interpretation. One way of giving students an alternative viewpoint on the nature of music is to ask them to create their own music. Of the creative activities engaged in during the year, one could be singled out as being particularly useful in

this respect: “Three Places in Linda-a-Velha”. In this project, students were required develop an aesthetic response to the places they visited. Before beginning to compose they developed an idea of the emotional message they wished the music to convey. The compositional process was therefore based in their own experience. In this way, the students had the opportunity to understand music making from a different perspective. This understanding could then give them a different viewpoint on the role of the interpreter not only showing new ways of understanding music but also encouraging them to develop their own aesthetic response to the music they are learning. To take the words of Reid (2002) “the creative process connects what they are doing in the classroom to real life outside the classroom, and reinforces music concepts” (p. 100).

Development of musical imagination. There is much debate about the extent to which creative abilities can be transferred from one type of activity to another (Baer, 2010). However, it is reasonable to assume that once encouraged to be creative in one area of musical activity (in this case improvisation and composition), the potential for creativity in other areas of musical activity may be enhanced. Ability in interpretation can be instruction based but the long term goal should be that the student becomes able to develop a personal approach. Creativity has an important role in interpretation. In the words of Paynter (1992), interpretation “involves an appreciation of the artistic potential and quality in the possibilities being explored” (p. 93). This Aesthetic understanding guides the process of putting existing skills, both playing techniques and knowledge to new use through a creative process.

Ensemble playing skills. All of the creative projects involved ensemble playing in groups between two and five students.

Communication. Some of the projects, particularly “Three Places in Linda-a-Velha” provided some complex challenges in terms of communication. All the students alternated between leading roles and accompanying roles. This involved giving and receiving messages, one example being the giving of entrances at the beginning of movements using gesture and eye contact. Additional challenges were provided in improvised sections which had no predetermined length. Students had to be attentive to unspoken signals so as to know when to stop and start and when to move on to new sections.

Flexibility. The activity of accompanying music written by their colleagues provided challenges in developing the capacity to adapt their playing in accordance to what was happening in the melodic line. Often, the accompanying lines were required to make considerable adaptations concerning tempo and dynamics.

Collaborative group work. Although part of compositional process took place on an individual basis every project involved a stage at which cooperation with other students was required. In each successive project the level of cooperation required became greater. In the “Three Places in Linda-a-Velha” project, some decisions about the compositions were taken within a group context. Opinions were given and received and decisions had to be taken. As far as possible, teacher intervention was avoided and students were allowed to work through these processes by themselves. The process was based on the principal of shared responsibility. When agreement could not be reached, the various ideas were tested. This provided the students with an experience of the type of collaborative group work required in some non-classical genres of music and, to some extent, the collaborative approach used in some chamber music ensembles. Barnes (2001) comments that “Teaching for creativity in music is an affective and potentially the most effective way of bringing together the desirable qualities of co-operation, self-confidence, flexibility, risk-taking, and communication” (p. 98).

Personal development. Barnes (2001) states that “In both play and performance, creativity can be seen as *making* meaning in a personal and social sense” (p. 95). He believes that creativity “may be seen as part of our intelligence, a way of thinking and making sense of life”. It is an activity that is not only individualistic but also involves relating to others. He suggests that creative activities help personal development, in his own words “handling relationships, emotional self-awareness, harnessing and managing emotions” (p. 98). Creativity therefore can have a role in both self-awareness and social awareness. Clarkson (2002) states that “the language of the imagination dissolves the categories of self and other, thus helping us to understand difference” (p. 53). He believes that developing the imagination develops the capacity for empathy and assists in bringing the individual into a relationship with the community.

The creative projects, involving both individual creativity and group work would appear to provide a stimulating environment for this type of development. The students acted as a community engaged in a joint venture that involved both communication of personal

experience and the capacity to empathize with others. During the projects, engagement and a sense of ownership were encouraged. Opinions were not imposed from the outside. Students had to seek their own solutions. The function of the teacher was limited as far as possible to asking questions and suggesting ways of resolving disagreement within the group. For the project to succeed, it was necessary that the group function as a community.

Cognitive development. Divergent thinking. Creativity could be argued to represent the highest level of cognitive ability (Kaufman, Kornilov, Bristol, Tan, & Grigorenko, 2010). Divergent thinking is one of the processes most commonly used during creative activities. Novel solutions are reached through access to a wide range of knowledge, closely or distantly connected. Divergent thinking is a cognitive skill that is not only useful in creative activities but also in other areas. According to Beghetto (2010), divergent thinking is a skill frequently ignored or even repressed through teaching. Creative activities could be considered to be an effective means of leading students to further develop their own capacities in this area.

Transfer. Transfer, or the ability to apply knowledge gained in one area of learning to another related or unrelated area is considered of key importance in effective learning by many educationalists. Neurologists have discovered that thinking processes engaged in during creative activity involve the use of a number of different regions of the brain and the connection between these regions (Kaufman, Kornilov, Bristol, Tan, & Grigorenko, 2010). Barnes (2001) states that “creativity requires that we operate on several cognitive levels simultaneously... bringing together parts of the brain that handle image, intellect, imagination, sound, metaphor, movement and reflection in a challenging process” (p. 96). It is an activity in which metaphors constructed from sound and silence are arranged and rearranged to represent our sensuous experience. This process requires the combination of different areas of knowledge and relates to thinking processes that are used during transfer. It is possible that creative work may have a positive impact on this important ability.

3. Critical analysis

3.1. Student 1

During the course of the year, this student composed four pieces, three of which were performed in public (appendix 9). I did not contribute significantly to the student's understanding of compositional techniques and few modifications were made to the compositions themselves as a result of my intervention beyond suggesting use of repetition and additional detail in the form of dynamics, tempo indications and articulation marking. These modifications were usually brought about during the process of interpreting the music. During this process of developing the interpretation I adopted the role of accompanist rather than instructor, attempting to replicate a "real life" situation in which a new piece is prepared for performance. Development generally occurred as a result of asking questions. What was the effect the student desired in a particular passage? How could we bring about this effect through our interpretation of the music? Did he think we had achieved the effect he had intended? When no answer was forthcoming, I demonstrated what I might do if I was required to interpret the solo line myself. In this way, the student was encouraged not only to seek solutions but also to listen critically to his own playing. The end objective was to give fine performances of the compositions in order to provide the incentive to write new compositions.

The most notable development occurred from one composition to next. The student not only gained confidence but also clearly grew in his awareness of his own potential as a composer. Each new composition marked a significant step forward, above all in terms of the diversity of the material and increasingly rich use of accompaniment.

Alongside of this development went advances in the expressiveness and individuality of the playing with notable improvements in vibrato and an increasingly subtle use of the expressive potential of the bow. The performances of these pieces marked high points at the end of term concerts, largely because of their expressive intensity.

Work on composition was complimented with the development of improvising skills. This work began with the "Recercadas" project. The student had no previous experience of improvising but by the time of the performance at the end of term concert, he was able to improvise freely over the eight bar chord sequence (appendix 10). This work continued in the

third period with improvising practice using the four bar sequence from the “Walking Music”. Possibly the highlight of this improvising work took place during the performance of the “Mini Forest” in the “Three Places in Linda-a-Velha” project in which, during an improvisation over a pedal point, expressive use was made of dissonance together with subtle alternations between major and minor (see figure 41 in part II).

The student showed considerable interest during the demonstrations of historic instruments, expressing the opinion that “gut strings sound better on the double bass than metal strings” and curiosity in trying to play the instruments. This, together with the interpretive work undertaken may in part explain the significant development he showed in expressiveness and the development of an individual playing style.

3.2. Student 2

It was during the first period that the most interesting work was undertaken with this student. Unfortunately, owing to time pressures and an injury to the arm, the student was absent during much of the second and third periods and failed to appear in the end of term concerts.

Generally work consisted of short learning episodes, often confined to the span of a single lesson. The student appeared to be interested in this work and some attractive repertoire was covered which involved discussion of factors that would, above all contribute to the general knowledge of the student and could be applicable in other areas. Topics such as the use of temperament in tuning, use of varying articulation to bring out the expressive character of the harmony in a basso continuo line and methods for elaboration and ornamentation in early music were covered. At the end of the first period, the student performed “Little Brown Jug” which involved the development of the jazz pizzicato playing technique.

This student also did a considerable amount of work on improvisation, successfully transferring skills he possessed on the piano to the double bass in a wide variety of genres. He improvised with confidence in the “Little Brown Jug” project and was particularly notable for his subtle use of rhythm whilst accompanying with a percussive line (see figure 11 in part II).

Despite the limited lesson time and impossibility of individual practice, it would be reasonable to assume that this work was successful in that through playing the double bass, he achieved a broadened musical outlook.

3.3. Student 3

The first piece this student worked on (“Little Brown Jug”) proved a success. Not only did the student himself clearly enjoy playing the piece but it also proved popular with family and friends at the end of term concert and therefore fulfilled the requirements set out at the beginning of the project. Jazz pizzicato technique was a welcome addition to the student’s knowledge of the instrument and during the next two periods he went on to develop this further to the point at which, during the last concert he was able to provide a full sounding, swinging, walking bass line.

Concerning the work on historical interpretation, the student did not reveal any strong interest but he did benefit from the critical approach to interpreting the written score. In the piece prepared for the presentation of the history of the double bass, dynamics were suggested by the student himself and he also identified locations in which ornaments could be added.

A considerable amount of work was undertaken on improvisation. The “Little Brown Jug” project contained an improvised section which, with the assistance of a work sheet he managed with some degree of success. The second project, “Recercadas” proved more problematic, possibly because he was not as comfortable with the music genre. Eventually he decided to compose rather than improvise his 32 bar section. This composition (appendix 10) showed a number of impressive features including effective use of sequences and a gradual increase in intensity up to the conclusion. In the “Three Places in Linda-a-Velha” project, the student expressed a preference for improvisation rather than composition. The solution found was to follow a short composed section with a longer improvised section followed by the repetition of the first section. First of all the student attempted to improvise freely but eventually worked out a strategy of his own; he composed a series of short fragments that he then incorporated into the improvisation used as the basis for further improvisation. In the final concert, the student achieved a highly effective result that was musically interesting and

provided a dramatic representation of the underlying storyline (see figure 34 in part II). For a student with no previous experience of improvisation and who had shown a considerable lack of self-confidence, this was an impressive achievement. It is to be hoped that he has developed the degree of self-belief required to embark on new projects requiring improvisation having passed the significant point of having proved that he is capable of undertaking it with success.

This student showed very considerable growth in his ensemble playing skills. This may have been in part due to the attentive listening required during improvisation practice. Also, some of the activities, particularly “Three Places in Linda-a-Velha” project were very demanding in this respect. Notable were his advances in his ability to adapt his playing so as to support what others were playing, the use of gesture-both given and received as a means of communication during performance and the ability to adapt confidently and appropriately to unforeseen occurrences.

3.4. Further considerations

In assessing the overall success of the year’s work, the opinion of the principle teacher, João Diogo Duarte was very important. I questioned him to what extent he felt the collaboration had been a success, whether he felt that the creative work had had a positive influence on the student’s development and whether he had observed aspects that had not functioned well.

In answer to the first question, about the collaboration, he felt the work had been a success. Teaching activities proved to be complimentary to one another without creating confusion by overlapping. He felt that the most successful work occurred when we were both involved in the same project as was the case with the “Origins of the Double Bass” project. Here the work was shared with joint contributions to all activities involved; the preparation of pieces, work on the “Recercadas” and the creation of a multi-media presentation of the project at the end of the period. He noted that the opportunity for the students to work regularly with a pianist had been extremely beneficial in developing intonation, quality of interpretation and ensemble playing skills. Creative work was seen to be a very useful compliment to skills orientated learning. He also highlighted the importance of the experience of playing jazz, both from a

technical and a musical point of view, considering this a very useful compliment to classically based work. Concerning the development of student's compositions (student 1) he considered that the development had been notable.

In relation to the creative work the feeling was that this had been beneficial in its own right and had also proved beneficial in contributing to skill development and positive attitudes in other areas. Students revealed qualities that neither they nor their teachers suspected that they possessed. This in turn led to greater confidence in other areas and higher levels of motivation. He was impressed by the enthusiasm and dedication the students demonstrated during the projects. Particularly important were what he considered to be the socially beneficial aspects of the work. This was in keeping with his own approach, emphasizing the potential of music as a stimulant to personal development. He considers chamber music particularly beneficial in that the group-work involved requires communication, empathy and a sense of shared purpose. He believes that parents and students also place a high value on this type of work, possibly valuing it higher than purely technical achievements. The creative projects were, he considered, particularly valuable in this respect. They required a high level of cooperation, involved a mutual process of discovery and the sense of shared adventure and developed a sense of community. He also considered that the decision taken by student 1 in the middle of the year to move to a course of study orientated towards the music profession may have been influenced by a strong interest in the creative activities and the notable developments this provoked in his playing abilities.

Questioned about less positive aspects of the work he confirmed my impression that at time there had been an overload of activities for the students. This was particularly the case for the "Three Places in Linda-a-Velha" project. At this time, the students had many other commitments including school exams and the project placed very high demands in terms of time and also energy. Possibly it was over-ambitious or could have been conducted over a longer time scale.

Finally, perhaps most importantly, he felt that it would be interesting to find a way of continuing the work, possibly developing a few more creative projects during the course of the following year.

4. Conclusions

The teaching work appeared to have largely succeeded in its objectives. The collaboration served to enrich the learning experience of the students. Work on different playing approaches, jazz or historically orientated was enthusiastically taken up by the students and led to development in their playing, both technical and musical.

The creative projects were largely experimental in nature and represented an area of teaching in which I had little experience. Some results were surprisingly good, others fell below expectations. It was clearly useful in that it proved to be motivating, led to improvements in ensemble playing skills, provided personal challenges and led to some students discovering abilities that they did not know they had. Shortcomings mostly concerned the appropriateness of the projects to the students' skills base, time management and difficulties in adapting activities to individual needs within the context of group projects.

The constructionist orientated teaching style initially caused a certain amount of puzzlement in the students but they became increasingly participative over time and within the context of the activities undertaken it appeared to be effective. Possibly it was less effective during the work on historical interpretation which could have been more informative. The work was designed to work towards an understanding of a historically informed approach to playing but might have benefitted from the provision of more information at the outset. Students who showed less interest may have felt they were working without clear objectives. At times during creative projects it was clear that a broader skills base would have been useful. This work might also have been accompanied by instruction orientated teaching. This would have facilitated the process and given the students a clearer sense of structure and direction.

Bennett Reimer, in the introduction to his book, *A philosophy of Music Education* (1970), states that "The essential nature and value of music education are determined by the nature and value of the art of music" (p. 1). Music is in essence a performing art and it was perhaps at the concerts that took place at the end of each period that the full effect of the work undertaken could be felt. In the three concerts presented during this year's work, students presented a diverse and often highly original range of work. In this they showed high degrees of commitment and enthusiasm. The experience appeared to be enriching to themselves, their parents and their teachers.

**Part II. Investigation: Action research project investigating
methods for promoting creativity in double bass students
attending a Portuguese music school**

1. Introduction

A number of years ago I had the pleasure of participating in the preparation and performance of Shostakovich's Michelangelo Sonnets. Of these eleven movements one was to remain particularly present in my memory, song number eight, "Creativity". As the sculptor's hammer falls on the block of stone releasing the human form hidden within, Shostakovich renders these blows with mind shattering chords, the reverberations send scurrying passages up into the high registers before they dissipate into air that seems to have become electrically charged. The sensation is of a vast release of energy, of liberation. Shostakovich, already suffering what was to be his final illness had put into music one of the most life affirming of all human experiences. The act of creation.

There appears to exist a broad consensus of opinion amongst educators, business leaders and policy maker that it is desirable to stimulate creativity in children. Much has been written on the subject. The ability to play an instrument clearly provides an opportunity for children to develop their musical creativity, and individual and group lessons in a music school would seem to provide an ideal environment for a teacher to stimulate and support this development, yet despite the huge body of literature dedicated to almost every other aspect of instrumental teaching and a large body of literature dedicated to creativity as applied to general music education, very little material exists to provide solutions for the teacher interested in developing creative activities within the context of group or individual instrumental lessons.

In common with a number of other teachers I have spoken to, I have long felt that creative activity should have a more central role in my teaching work and also, that it should have been more central to my own learning experience. Over the years, I have made a number of attempts to bring creative activities in my teaching but none of these achieved the success I had hoped for.

The years teaching experience in the Nossa Senhora do Cabo Music School appeared to present an opportunity for a more serious pursuit of a solution to this difficulty. The regular teacher, João Diogo Duarte was highly supportive of the project aims, I would have the opportunity to give both group and individual lessons, and being free from the responsibility of developing the more conventional skills associated with double bass playing, I would be able to focus on the area of interest to the study. In research terms, the learning situation had

the advantage of being fairly representative of the norm in Portugal for double bass teaching, a factor that would contribute to the relevance of the findings.

Creativity can form part of many aspects of learning an instrument but it seemed most useful to select an activity where it would be of central importance: students would create and perform their own music. This activity, usually defined as either improvisation or composition can, like most other areas of learning, be developed through a skills based learning approach but in this case the decision was taken to focus on the purely creative. Students, rather than developing new skills, would put existing skills and knowledge to new, creative use.

The project therefore had two aims: to enable each student to create “a novel relational product, growing out of the uniqueness of the individual on the one hand and material, events, people and circumstances of his life on the other” (Torrance, 1962, as cited in Barret, 2012, p.52), an educational aim considered worthy in its own right, and secondly, to develop my own knowledge and skills as a teacher, recording my experience and identifying factors found to be of particular importance in such a way as to indicate a path of future development relevant not only to my own practice but to other teachers interested in following a similar course. The teaching aims were defined by Webster (1990): “Conceptual understanding, craftsmanship, and aesthetic sensitivity obviously grow with age and experience, but transfer of these abilities does not often occur naturally. This transfer might well be a goal of formal music education” (p. 24). Students would be encouraged to use existing skills in a new creative way. They would compose and improvise their own music.

The project grew out of a combination of personal experience – previous attempts at teaching creativity, personal involvement with creativity (composing, improvising and arranging) and some limited experiences of observing other’s teaching of creativity – and the reading of broad and at times, very inspiring body of research into creativity. This combination of experience and learning was then applied by means of an action research project and developed through a process of qualitative analysis.

Whilst the literature did not provide information directly applicable to the context of a music school, there is a wealth of research indicating factors that should be considered when undertaking this type of work. The study of this research was useful in gaining understanding of the nature of creativity, the importance of creativity within education and issues involved in

the teaching of creativity including teacher role, project design and assessment. The literature also provides many case studies of projects designed to promote musical creativity and although none were found that dealt specifically with the music school context many aspects of this work were found to be applicable to the present investigation. The investigation therefore began by putting existing knowledge to use in a new context – the designing of a creativity project for double bass students in a Portuguese music school. The action research model was then used as a means for refining the use of this knowledge in a way suited to the context, identifying areas where new solutions were required and then either searching for existing solutions within the literature or inventing novel solutions. Findings consisted of distinguishing between effective and non-effective strategies in an open ended search for an improved method for teaching creativity.

Having completed the project in the school, an opportunity arose to apply findings in another setting; a three day summer music course involving twelve students who had not been involved in the previous activities. This served as a complement to the research already undertaken in that it provided means for testing the findings in a new context and of testing broader applications of the methods.

Presentation of results involved the summarizing of these findings, examining both project design and teaching strategies and suggesting new avenues for research.

2. Literature review

Three areas were considered of particular relevance to the investigation within the literature concerned with creativity; the conceptualization of the term “creativity” including attempts at systemization, issues concerning creativity in education including its purpose, findings about its teaching and assessment techniques, and descriptions of research projects with similar aims to that of the investigation.

2.1. Conceptualizing creativity

The word creativity is considered to have entered the English language in 1875 (Burchfield, 1972) and one of the first issues addressed by most writers on the subject is to clarify the meaning of the word. The precise definition continues to be a source of disagreement among specialists and a number of commentators have suggested that this in itself is an obstacle in advancing knowledge in this area (Webster, 1990; Beghetto, Kozbelt, & Runco, 2010; Plucker, & Makel, 2010; McLennon, 2002). It is generally considered that the contemporary study of creativity began in 1950 with J. P. Guilford’s address on creativity to the American Psychological Association (Barrett, 2012, p. 50), calling attention to the importance of divergent thinking in problem solving. Torrance, another pioneer in the field, described creativity as “the emergence of a novel relational product, growing out of the uniqueness of the individual on the one hand and material, events, people and circumstances of his life on the other” (as cited in Barret, 2012, p. 52) and was a pioneer in the development of psychometric methods for measuring creativity. Since then, the “novelty” element remains a constant in definitions but many subsequent researchers emphasized that the product of creativity must be useful or relevant as well as being novel (Amabile, & Pillemer, 2012; Csikszentmihalyi, 1996; Burnard, 2012). Csikszentmihalyi (1996) identifies three subsystems involved in creativity; the domain, which consists of accepted rules and practices, the individual (the creator) and the field, consisting of the recipients, often led by specialists who Csikszentmihalyi terms “gate keepers” whose opinions influence to what extent a new contribution finds acceptance. Concerning the question of field, Csikszentmihalyi has also stood out on account of his requirement that a work, in order that the word “Creativity” be applicable should be domain changing. When Webster (1996) states that “Some regard

creativity as a term best reserved for geniuses” (pp. 87-88), he is possibly referring to this viewpoint and speaks for many who find the limitations of the definition problematic. A number of specialists, following the lead from Csikszentmihalyi, separate “creativity” into big C “Creativity” and small c “creativity” (Smith, & Smith, 2010, p. 258), big C Creativity meeting the requirements of Csikszentmihalyi’s main definition and small c creativity being applicable to many other activities in which imagination and innovation are used including personal creativity. Pamela Burnard (2012) on the other hand, has pointed to the wider implications of the terms “individual” and “field” showing that the context, who is writing, where and for whom has a considerable bearing on how the term “creativity” can be applied. This has proved of significance in the area of education. Burnard, in one example points out that children performing music to an audience of friends, parents and teachers can be considered to be creative. Csikszentmihalyi who had declared in 1996 that “children cannot be creative” (p. 156), later softened this stance and recognized that within certain contexts, they could, stating that “children are *creative within the domain of children’s arts*” (Sawyer *et al.*, 2003, p. 220, as cited in Barrett, 2012, p. 53). A number of writers have further broadened the application of the term creativity to what could be described as “personal creativity”, thus merging, to some extent domain, individual and field (Richards, 2010; Robinson, 2011). Paynter (1992) highlighted the importance of creativity in listening to music; a position followed by a number of subsequent commentators (Webster, 2002; Wiggins, 2011). Burnard (2012) considers that the diversity of creative activity is such that it is more appropriate to speak of “creativities”, whilst Kozbelt, Beghetto and Runco (2010), writing on theories of creativity emphasize *pluralism*, hoping that “a multitude of theoretical perspectives, with different assumptions and methods, and operating at different levels of analysis, all (ideally) contribute to a more robust – if at times, contestable – understanding of human creativity” (p. 20). When Craft, writing in 2008, complains that “to succeed in enhancing creative learning for the children of the world is the equivalent of trying to fly an aeroplane at the same time as it is being designed, built, and tested” (p. xvi) they make it clear the requirement made by Peter Abbs (1989) twenty years earlier that “If we can formally understand the nature of the creative process we can begin to establish what kind of teaching best fosters it, what blunts and diminishes it” (p. 2) has yet to be met by the research community. Sean McLennon (2002) states that “research on creativity in music education is a fairly recent phenomenon. The relative lack of research is not due to a lack of interest, but with the problems associated with

the definition and assessment of the concept” (p. 35). Perhaps, in some ways, it is appropriate that the researcher, faced with this plurality must build up a personal understanding, in itself a creative response.

2.2. The role of creativity within the field of education

Guilford’s identification of the development of creativity as a key educational goal (Guilford, 1950 as cited in Barrett 2012) and the burgeoning in research that has followed it has been accompanied by many attempts to apply research findings to educational practice. Creative activities were initially seen as a way of adding depth and meaning to the educational experience and promoting individual talent (Marsh, 1970; Reimer, 1970; Balkin, 1990) but recently, it has also increasingly been viewed as being important as preparation for a rapidly changing world and has been associated with innovation and economic competitiveness (Robinson, 2011; Small, 1996). Others have drawn attention to its social benefits (Barnes, 2001; Clarkson, 2002; Veloso, & Carvalho, 2012). They consider that creative activities can promote personal development. In the words of Barnes (2001) “a music education which is founded upon the creative response develops emotional literacy not only in ways it helps to express and understand emotion, but also in that it involves handling relationships, emotional self-awareness, harnessing and managing emotions” (p.97-98). Austin Clarkson (2002) adds that “Educating the imagination stimulates the moral imagination, thus bringing the individual into relationship with the community” (p. 54).

The present Portuguese National Curriculum (Ministério da Educação, 2012) refers to creativity as a general skill that should be promoted in all disciplines where possible (p. 11). Within the arts, the development of creativity is seen as one of the main teaching objectives (p. 138).

2.3. Teaching creativity

It is clear from the literature that in order to engage students effectively in creative activity, a special approach must be taken that may differ considerably from an approach taken in other learning areas. Findings can be divided roughly into four areas; learning environment,

motivation, task selection and teacher role. In all these areas there is a considerable degree of consensus.

Concerning the environment, Csikszentmihalyi (1996) comments that “it is easier to enhance creativity by changing conditions in the environment than by trying to make people think more creatively” (p. 1). Findings stress the importance of freedom, both from internal and external constraints. Marsh (1970) explains that “creative thought can flourish in an emotional climate that is relaxed and accepting of individual response” (p. 3). Risk taking and a positive attitude towards error must be encouraged. Spurgeon (2002) comments that “one of the greatest barriers to creativity is fear: fear of making mistakes, being embarrassed or compromised” (p. 145). In tackling this problem, Morin (2002) states that one must establish “an accepting environment that is safe for experimenting, risk taking and making mistakes” (p. 165). Many factors can contribute to this. Webster (2002) speaks of the dangers of time pressure “A very important implication for music teaching is that we must allow time for creative thinking to occur” (p. 24). Pressure to achieve should also be avoided. Csikszentmihalyi (1996) comments that “devoting full attention to a problem is not the best recipe for having creative thoughts” (p. 138).

Amabile found that intrinsic motivation is of central importance in creative activities and that extrinsic motivational factors can have a negative impact (Amabile, & Pillemer, 2012). This has particular relevance when selecting tasks. Once again, there is a general consensus that tasks must be of personal relevance to the students. Amabile and Pillemer state that students must be able to “internalize the activity as part of their personal identity” (p. 13). A feeling that success has been achieved is very important in maintaining intrinsic motivation, a factor that is particularly relevant in music education. Burnard (2012) warns that “children’s self-perceptions as composers, song writers, improvisers or creative performers in music decline to a greater degree than their self-perceptions in other curriculum subjects” (p. 9). Students must find tasks relevant, feel in control and have a sense of ownership (Barnes, Hope, & Scoffham, 2008).

Peter Abbs (2003) speaks for many when he states that “learning can be released by the teacher but never inferred – for it is not so much an object as a caste of mind, a critical and creative orientation towards experience” (p. 15). Although there are a number of approaches to creativity that involve the teaching and learning of skills associated with improvisation and

composition, when it comes to the personal, creative component, most writers agree that the teacher's function is largely confined to selecting activities that will appeal to the students, encouraging the students to adopt appropriate attitudes through personal example and avoiding attitudes that can have a negative impact on creativity (Webster, 1990; Wiggins, 2002; Morin, 2002). In this clearly constructionist approach "teachers and their students are involved collaboratively in creative inquiry" (Morin, 2002, p. 164). Teachers are often described as "facilitators" or "enablers" rather than as instructors. Sullivan and Willingham (2002) refer to the teacher as providing "scaffolding" for the students (p. xiv).

Beghetto (2010) indicates ways in which teaching can negatively impact creativity in students pointing to studies conducted during the 70's and 80's in primary and secondary schools. It was found that approximately 75% of class time was dedicated to instruction and only 1% dedicated to activities requiring reasoning or a personal opinion from the students (p. 450). This approach heavily emphasizes convergent thinking processes and he argues that children learn that this is the correct way of thinking about and responding to questions, which in turn leads to reduction in divergent thinking patterns. Teachers have an important role in the formation of student attitudes and thinking approaches.

2.4. Assessment of creativity

Assessment, an issue of central importance within education has proved problematic when applied to creativity. Both Guilford and later, Torrance (Smith, & Smith, 2010) developed what were referred to as psychometric approaches to measuring creativity. Ideational fluency (an extension Guilford's notion of divergent thinking), flexibility and originality became characteristics that could potentially be measured. In 1982, Amabile developed a method known as CAT testing in which a group of specialists judge the level of creativity demonstrated by a work (Baer, & McKool, 2009). Other researches have preferred to concentrate on process rather than product (Morin, 2002; Barnes, 2001; Webster, 1990; Prieto, 2002). Prieto (2002) states that one should "concentrate on discovering if the student achieved the behaviors that are described in the objectives" (p. 114). However, there remains little consensus on how musical creativity can be measured and even if it can be measured.

John Kratus (1990) states that “most types of educational assessment evaluate the correctness of student responses. But with creative activities, no model for correctness exists” (p. 33). Kaufman, Plucker and Baer (2008) consider that the root of the problem is that “an absolute and indisputable criterion of creativity is not readily available” (p. 53). McLennon (2002) confirms this point of view, saying that “Possibly, musical creative ability may not be measurable in statistical terms” (p. 49) and Burnard (2012) warns of the danger of applying historical criteria to assessment of creativity. Although a generally accepted method of evaluating creativity has not been found, many teachers create methods to suit their own particular approaches and value systems. If creativity is considered, at least in part to consist of “creative skills”, these can be evaluated. Originality can also be evaluated. The “relational” component in Torrance’s definition is more problematic and lies at the root of difficulties in evaluation. It is clear however, that in order for creativity to take a more significant place in curriculums, some more generally acceptable form of evaluation will need to be found although it is an activity that will always evade an approach that places testing as a priority. In the words of Burnard (2012b) “there is an inherent contradiction between calls for more creativity in education and curricula that are becoming increasingly narrow and focused on testing and bureaucratic accountability” (p. 22). The findings concerning the importance of intrinsic motivation and the negative impact of extrinsic motivation on creativity also indicate that the application of assessment techniques needs to be treated carefully (Maehr, Pintrich, & Linnenbrink, 2002). Assessment, to be successful when applied to creative activities, must aim to stimulate intrinsic motivation.

2.5. Descriptions of creativity in music education

The huge majority of descriptions of the teaching of musical creativity come from mainstream classroom teaching situations with students possessing little or no knowledge about playing musical instruments (Marsh, 1970; Veloso, & Carvalho, 2012). This may be because mainstream teaching is more exposed to policy changes and government directives than instrumental teaching and since the late sixties, the word “creativity” has increasingly found a place in directives concerning the teaching of the arts in mainstream education (Paynter, 1992; Abbs, 2003). It may also be the case that for students who possess few skills, it is actually easier to create music than it is to reproduce music that has already been created. Veloso and

Carvalho (2012) describe one such project in Portugal named “Magic Sounds” that involved seven year old school children composing music in school music lessons. Paynter (1992) and Schafer (1986) provide detailed descriptions of projects undertaken with groups of students playing a variety of different instruments on which they have a degree of prior knowledge which have the aim of developing the students’ abilities as composers and critical listeners. Despite these numerous reports, many comment on the lack of creative activities within arts education (Webster, 2002; Willingham, & Sullivan, 2002; Beghetto, 2010; Small, 1996; Abbs, 2003). Webster (1996) referring to creative thinking comments that “ironically it is precisely this kind of thinking that is so often not stressed by music teachers – often ignored in favour of factual or skill orientated content” and goes on to say “it is equally ironic that mathematics or history teachers might be more effective in getting students to think imaginatively about their subjects than is the music teacher” (p. 89). This lack of creativity has been put down to the learning background of the teachers themselves (Odena, & Welch, 2012; Barnes, 2001) difficulties of classroom management (Burnard, 2012a) and time pressures (Sullivan, & Willingham, 2002; Barnes, 2001).

In her inspirational introduction to her series of books *Piano Books for the Young Musician* (1994), Marina Glushenko states that “Creative instincts are inherent in children, the degree only differs. The teacher’s task is to feed and develop these inclinations” (p. 5), an aim shared by many others including double bass teachers, and although she provides suggestions, many questions as to how to go about it remain unanswered. The literature appears to support the notion that there is no simple answer. A multitude of approaches can be adopted, each dependent on the particular context.

3. Methodology

3.1. Action research: its characteristics and suitability to the aims of the present investigation

The aims of the project – to provide systematic opportunities to students to develop their creative potential and further the understanding of the investigator and others interested in reading the findings – was pursued by means of applying the action research method to a pilot project. Koshy (2010) describes action research as “a method used for improving educational practice. It involves action, evaluation and reflection and based on gathered evidence, changes in practice are implemented” (p. 1). She also highlights its collaborative nature and the fact that it is situation based and develops knowledge through action. Cohen (2011) describes action research as “a small scale intervention in the functioning of the real world to address practitioners’ own issues, and a close examination of the effects of such an intervention” (chapter 18). The method, first established through the investigative work of Kurt Lewin in the 1940’s is particularly well suited to sociological and educational research.

In the present investigation, the action research method would enable the focus to be on the area of application, the real life situation. Two activities could be combined; teaching and researching. Somekh (2006), explains that in action research, “the focus on change and development is in a natural (as opposed to contrived) social situation” (p. 7). It would therefore be unnecessary to prioritize either teaching work or investigation, both would be mutually supportive. Somekh also comments that the research method “engenders powerful learning for participants through combining research with reflection on practice” (p. 8). The research method therefore engenders an approach to teaching that enhances its potential as a learning experience for the teacher. The method would also appear particularly well suited specifically to issues concerning creativity. Abbs (1988) comments that creativity requires “a disposition of mind where the results cannot be comprehended in advance of the process” (p.1). A research method that is open and flexible would therefore seem most appropriate. Results, or even the type of results cannot be predicted at the outset. Additionally, action research enables a focus on process as well as product, essential for any meaningful interpretation of creativity in the context of education.

According to Robson (2011), action research can have three objectives: to explore, describe and explain. In the case of the present study the exploration consists of an investigation of the literature followed by the development of a project, the potential of which is then explored. Description involves a written description of the process illustrated with examples of the students' work. Explanation consists of analysis of this process. Findings, in the words of Koshy (2010) "emerge as action develops, but they are not conclusive or absolute" (p. 2). Robson goes on to add one further category which he considers particularly relevant to action research; that of emancipation. In this case, emancipation lies at the root of the projects aims. Creativity is in itself an experience of emancipation; emancipation from the pre-established in favour of the possible.

3.2. Action research model chosen for the investigation

Many different models of action research exist but all include the identification of an area in which change is deemed desirable, the formulation of a plan of action, often involving fact finding and analysis, the implementation of the plan, critical analysis of the results of the action and a reformulation of the plan of action. This process can be repeated many times in pursuit of the desired effects.

The model used was based on the methods described by Koshy (2010) all of which involve a continuous sequence of revised plans of action. As this project did not represent a continuation of a process already underway, an adaptation of this research model was required in order to implement a number of differing plans. The process was therefore not continuous. The newness of the activity both for the students and the researcher meant that the model had to allow for the application of a number of different strategies. Rather than defining the objectives at the outset, it seemed more prudent to begin with small pilot projects, limited both in their ambition and time scale and progress to larger, more ambitious projects once the potential of the students and researcher became clearer. In this way it would be possible to avoid the risk of either overestimating or underestimating the potential of the participants, and maximize the benefits of the experience accumulated in devising new projects. The project was divided into four research phases and although each successive phase was informed by

previous findings, each involved the introduction of new untested elements and remained, to some extent, pilot projects.

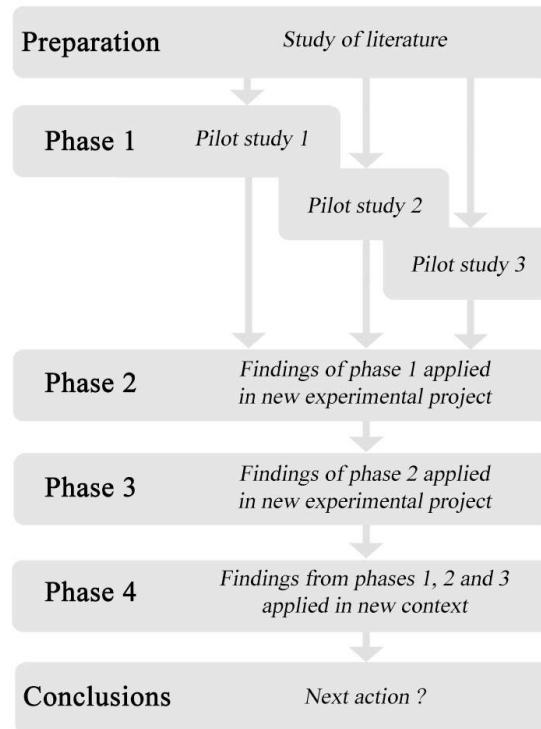


Figure 1. Action research model diagram

3.3. Data collection

During the course of the investigation, two different types of data were collected; data relating to process, and data relating to product. Product data consisted of student artifacts – their compositions and transcriptions of improvisations. Data on process was derived from multiple sources which included pupil feedback, parent feedback, musical ideas, playing characteristics, and comments from informed observers. This data was and recorded in a field diary, music scores, sound recordings and videos.

3.4. Data analysis

All analysis was qualitative in character. Flyvbjerg (2011) comments that “in the study of human affairs, there appears to exist only context-dependent knowledge, which thus presently rules out the possibility for social science to emulate natural science in developing epistemic theory, that is theory that is explanatory or predictive” (p. 302) and creativity, according to Sawyer (2010) is “*chaotic*, non-linear and essentially impossible to explain and predict from mechanisms and laws” (p. 368). Quantitative analyses was considered inappropriate on account of the small number of cases involved, the impossibility of generalizing from the particular, and the dependence of the results upon context.

Analysis was orientated by elements that Flyvbjerg (2011) describes as “developmental factors in relation to environment” (p. 301). Environment was considered to include a wide range of different factors including teacher role, teaching setting (group or individual lessons) and project design. Developmental factors were considered to be most fully represented by the student artefacts. MacKinnon (1978) states that “the starting point, indeed the bedrock of all studies of creativity, is an analysis of creative products” (as cited in Kaufman, Plucker, & Baer 2008, p. 53). For the purposes of the investigation, Torrance’s definition of creative product was used – “a novel relational product, growing out of the uniqueness of the individual on the one hand and material, events, people and circumstances of his life on the other” (Torrance, 1962, as cited in Barret, 2012, p. 52). In music, “novel” clearly implies that the music must be original or have an original element. “Relational” in this case implies that the product must be capable of conveying emotional meaning related to the composer’s experience that is then transmitted to the listener (or reader) through the medium of music. “Material” was taken to mean pre-existing skills and domain knowledge, for example the ability to play an instrument and knowledge and experience of music written by others. “Events, people and circumstances” were personal factors including the learning experience, and the field – those would listen to the finished result. During the course of the investigation, student creativity (compositions and improvisations) were evaluated according to this definition. Results – the level of creativity exhibited in the artifacts – were then used to provide information on factors related to process. These were factors that could either have positive or negative influence. Findings drawn from these results were then used to modify

subsequent phases in the research project. Peer validation formed part of this decision making process and also served to provide triangulation of data.

3.5. Limitations of the research method

The quality of the results to be expected from the investigation was limited in a number of ways. One was the lack of contextual knowledge. I had no prior experience of working with the students and was therefore unable to judge the full impact that the project had on them. Also, the role as teacher and researcher placed limitations on my observations, one example being the difficulty in getting impartial feedback from the students about their experience of the projects. The small number of students involved, although it allowed for detailed analysis, was a limiting factor in that it was impossible to judge how far this group of students could be considered representative of the norm in Portugal. It is therefore difficult to judge to what extent similar results could be expected in another setting.

All findings (besides from the student artifacts presented with the results) are highly subjective in character. As far as possible, triangulation of findings, by means of other teachers and musician colleagues was applied but often this was not possible. Although many of the findings were subsequently tested, many unforeseen factors may have influenced these results.

3.6. Ethical considerations

Students and their parents provided full consent to their involvement in this research project, including the use of their names and images. It was however considered preferable, following the practice used in part one of this report, to refer to the participants using the numbering system rather than their names as the information could be considered, to some extent, personal in nature.

During the course of the investigation, whenever there was conflict between the interests of the investigation and the quality of the students' educational experience, priority was given to the educational experience. The investigative procedure was designed to be non-intrusive.

3.7. Context of the investigation

The investigation involved all six of the double bass students attending the school. Work was carried out during individual lessons and group lessons. Many of the group lessons were informal and students attended these lessons while waiting for other activities such as the orchestra. Students having lessons early, and therefore with a lot of time to spare, spent considerably more time in these group lessons than students with later lessons. Not only did the early arrivals spend more time in the lessons, but they also received more individual attention than the later arrivals as the group tended to grow in numbers as the lessons progressed. Some students therefore received considerably more tuition than others.

In addition to the three students described in part one of this report there were therefore three more who, following the practice used previously will be described as student 4, student 5 and student 6.

3.7.1. Student 4

Twelve years of age, this student is in the 6th year having already studied the instrument for five years. He is presently studying for the 2nd grade. These years have presented many difficulties both technical and musical and the student has not achieved particularly high marks.

Before starting the projects, the student had already revealed a highly creative personality during double bass lessons with a passion for telling stories, some of which occupied the greater part of the lesson time. During the project he clearly demonstrated good divergent thinking skills, readily producing an abundance of ideas, and this was supported by high levels of intrinsic motivation and good self-perception. Through this creative process he also revealed high levels of aesthetic sensitivity.

Prior to the investigation the student had no practice at improvising on the double bass and had not written any compositions. When asked if he had ever invented any music, his reply was, "I sometimes invent music on the piano with my sister".

3.7.2. Student 5

Thirteen years old and studying for the 3rd grade, this student has been learning the double bass for three years. During this time she has received high marks and shows considerable physical aptitude for the instrument, an aptitude which is supported with musicality and a good ear.

Although not notable as a divergent thinker, she demonstrates a very good understanding of musical syntax together with aesthetic sensitivity. Levels of intrinsic motivation appear to be high and are supported by good self-perception.

Previous to this investigation she had not composed any music or had any experience of improvisation.

3.7.3. Student 6

Fourteen years old and studying for the 4th grade, this student began at the age of 11 after a number of years learning the piano. She suffers some physical difficulties in playing the instrument related to strength and coordination but has a very good musical ear and fine aesthetic sensitivity.

Creative work was supported by a limited knowledge of musical syntax and an interest in singing – which also involved inventing melodies. Intrinsic motivation appeared not to be particularly high. Self-perception, similarly, appears to be modest. She has no experience of improvising on the double bass.

4. Action

Phases of the investigation		
Phase 1	Preliminaries: “Lines to Time”, “Recercada Primera”, “Little Brown Jug” and “Christmas Bass”	Four short pilot projects
Phase 2	“Recercadas”	A longer project occupying between two and five lessons per student
Phase 3	“Three Places in Linda-a-Velha”	A long, ambitious project involving between five and ten lessons per student
Phase 4	“In the Forest of the Kalajunga”	A two day project designed to test findings in a different context

Table 6. Phases of the investigation

4.1. Phase 1: Preliminaries

At this initial stage of the investigation it seemed best to use tasks of very limited duration. Emphases was on providing tasks at which the students could achieve success therefore increasing their self-perceptions as composers and improvisers and increasing motivation for future projects. Close attention was given to the learning environment with a focus on the generation of positive attitudes, particularly towards mistakes and the collaborative role of the teacher was reinforced by active participation in the projects. The short duration of the projects also meant that a number of different approaches could be used that would provide a valuable font of information when designing new projects. Four projects were undertaken; “Lines to Time”, “Recercada Primera”, “Little Brown Jug” and “Christmas Bass”.

4.1.1. “Lines to Time”

Student	Number of sessions	Time (total)
Student 1	1	15 minutes
Student 2	1	15 minutes
Student 3	-	-
Student 4	-	-
Student 5	-	-
Student 6	-	-

Table 7. Number of sessions and time for each student in project “Lines to Time”

Process. The starting point of this piece was a pentatonic ostinato consisting of four notes (figure 2).



Figure 2. “Lines to Time” ostinato

This formed the basis of the piece, developed through improvisation in which students and teacher were initially allowed to use just seven notes (figure 3).

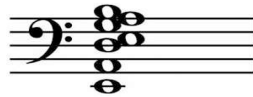


Figure 3. Notes allowed for improvisation in “Lines to Time”

In this way it was hoped that students would have a simple introduction to melodic improvisation in which, owing to the nature of the scale a pleasing result is almost guaranteed. It was also hoped that the work would be enjoyable. The piece was carried out as a duet with student and teachers alternating between playing the ostinato line and the improvised melody. Emphasis was on communication with the teacher picking up on ideas the student’s playing and encouraging the student to adopt the same approach.

Product. The exercise functioned in that good results were easily achieved as can be seen from this example from the work of student 1 (figure 4):

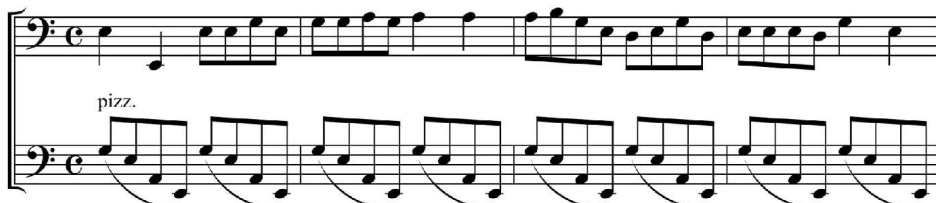


Figure 4. Example from the work of student 1

The piece clearly had potential for further development. It would have been possible to introduce many variants to the work including percussive effects and further imitation and possibly expand the piece into a larger ensemble format. In the case of these two students, the character of the scale perhaps made the exercise seem childish and over simple and it therefore seemed undesirable to continue with the work in further lessons.

Findings. Two findings emerged from this project:

- i) The pentatonic scale presents a relatively simple means for beginning melodic improvisation on the double bass.
- ii) For more advanced students, even those improvising for the first time, the musical characteristics inferred by the scale were of limited interest.

4.1.2. “*Recercada Primera*”

Student	Number of sessions	Time (total)
Student 1	1	20 minutes
Student 2	1	20 minutes
Student 3	-	-
Student 4	-	-
Student 5	-	-
Student 6	-	-

Table 8. Number of sessions and time for each student in project “*Recercada Primera*”

Process. This work by Diego Ortiz served as a brief introduction to improvisation as practiced in the 16th and 17th centuries by both instrumentalists and singers. Unlike the previous exercise, it made use of a written score and was therefore more analytical in character. Once again, it was played in the form of a double bass duet with a written accompaniment but this time included some melodic material (appendix 1).

Examples were given from Ortiz of methods for elaborating on this simple basis (figure 5).



Figure 5. Example of musical elaboration from the *Trattado de Glosas*

The piece was played a number of times with both teacher and student improvising. As in the previous work, I attempted to relate my improvised sections to those of the student, imitating and developing on the ideas presented.

Product. Once again, good results were achieved in this exercise as can be seen in this example from student 2 (figure 6):

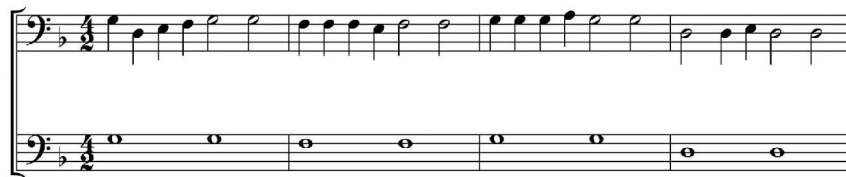


Figure 6. Example from the work of student 2

Even though no notes were written down, the approach taken by students was visual with thinking processes based on the reading of the score.

The exercise proved to be flexible to students' abilities and as with the previous exercise, there was little risk of failure. Once again, as well as providing experience, it could be described as confidence building. There was clearly potential to develop this work further.

Findings.

- i) The project provided a simple means of stepping beyond text based learning into learning based on creative thought.
- ii) The project provided the opportunity to combine a creative activity with learning about historical performance practice.
- iii) A limitation of the project was creative that thinking was largely influenced by visual rather than auditory factors.

4.1.3. “*Little Brown Jug*”

Student	Number of sessions	Time (total)
Student 1	-	-
Student 2	2	60 minutes
Student 3	4	105 minutes
Student 4	-	-
Student 5	-	-
Student 6	-	-

Table 9. Number of sessions and time for each student in project “*Little Brown Jug*”

Process. This project was developed as the result of student 3’s request to learn a piece that his friends and family would enjoy listening to. Once “*Little Brown Jug*” had been selected, it became clear that there was a shortage of melodic material and it was therefore lacking in length. A good solution appeared to be to follow the practice of Glenn Miller and his band and add improvised sections to the work. As student 1 had no previous experience of improvisation, he was provided with a work sheet to assist with him in this giving a selection of possible notes to choose between (figure 7).

Figure 7. Work sheet provided to student 1

It was suggested that extremely simple solutions be used first, searching, for example for notes that were common to the different harmonies (figure 8).

Figure 8. Solution using notes common to the different harmonies

Over the course of two more sessions, this improvising became gradually more complex and was further developed by the student during practice time. The student was encouraged to add additional notes not included on the worksheet and develop an independence from the written score. During the last two lessons, student 2 joined the group, now consisting of three players. In his case, the improvisation presented fewer difficulties as he already had experience at improvising on the piano. As the bass part and melodic line were already supplied by two players, a percussion part was added which was played by each of the players in turn.

Product. The piece was performed at the end of term concert (for transcription of concert version see appendix 11). Student 2, playing accompanied only by percussion, improvised with competence (figure 9).



Figure 9. “Little Brown Jug” improvisation – student 2

Student 3, having made considerable progress during the lessons appeared to suffer from nervousness in the concert and for a number of bars lost track of the underlying harmony before correcting himself just before the end of his section. However, he showed inventiveness in use of rhythm and a sense of melodic line (figure 10).



Figure 10. “Little Brown Jug” improvisation – student 3

Particularly notable was the quality of the percussion part (figure 11):



Figure 11. “Little Brown Jug” percussion improvisation – student 2

This model as with the previous one was interesting in that provided a mixture of written material and spaces to be filled in, and embodiment of Abbs (2003) idea that “in the teaching of any intellectual or artistic activity there must be open structures, gaps” (p. 15). It provided an easy transition from conventional learning from a score to a more creative approach. Concerning the improvising, student 2 achieved good results in the concert. For student 3, the process had possibly been too rapid. Although he had made significant progress, the transition from a lesson situation to concert situation was too abrupt. Lessons had taken place in an accepting environment where risk taking had been encouraged and personal and intrinsic

motives had been an important factor. The change to the concert situation was clearly destabilizing. Besides from by providing more experience, this problem could be tackled by developing the capacity to empathize with other performers, an ability Burnard (2012) and others emphasizes as being of particular importance during improvisational performance.

Of particular note was the quality of the percussion parts. Here, students were relatively unhindered by technical limitations and were able to give freer rein to their creative instincts.

Findings.

i) The appeal of the musical genre enhanced intrinsic motivation. The use of a popular music genre increased the appeal of the activity. The motivation this generated assisted in undertaking a personally and technically challenging activity.

ii) Percussive effects provided good outlet for creativity. Using percussive effects provided a means for students to be more creative and achieve finer results than they were able to achieve in playing melodic passages.

iii) Gap filling opportunity. As with “Recercada Primera”, this activity effectively complemented written material with “gaps” requiring student creativity in order that they be filled.

4.1.4. “Christmas Bass”

Student	Number of sessions	Time (total)
Student 1	5	150 minutes
Student 2	-	-
Student 3	-	-
Student 4	-	-
Student 5	-	-
Student 6	-	-

Table 10. Number of sessions and time for each student in project “Christmas Bass”

Process. As student 1 had a strong interest and previous experience in composing, it was suggested that he compose a piece of his own to perform at the end of term concert. One week after the proposal was made he appeared at the lesson with a completed composition. This piece had been composed at the computer without reference to the double bass and was very difficult for the student to play. After several attempts, I suggested that it might be easier in a transposed version and wrote out a short section of the piece for him to try. It was agreed that the piece should be transposed to this key.

At the next lesson, the student came with an almost entirely new composition. Most notable was the increased complexity of the piano part which now included some solo sections. From this point onwards the work was orientated towards preparing the piece for performance, the only alterations in the score being the addition of dynamic markings and some repetitions. Besides from some suggestions regarding technical solutions to playing difficulties, I limited my role to that of co-interpreter, working in collaboration with the student towards the best possible performance of the piece an approach that Burnard (2012) would describe as a real-world practice.

This work mostly consisted of providing a positive and stimulating experience to reward creative work already undertaken. The most significant step in creative terms was the reworking of the piece to include a more interesting piano part. It appeared that a possible means of furthering the student's development would be to present composition projects that would lead to the exploration of new aspects of composition and therefore develop a broader outlook.

Product. The work resulted in a convincing composition (see appendix 9) which was performed with flair at the end of term concert and provoked an enthusiastic response from the public.

Findings.

- i) Collaborative role of teacher stimulated development. The provision of an accompanist led to a development in the student's composition. Significant learning had occurred as a result of a change in the learning environment.
- ii) Personal relationship with the music enhanced performance. Aesthetic understanding of the work led to the student producing a very effective performance which appeared to involve a development in expressive range and a closer identification with the instrument.

4.2. Phase 2: "Recercadas"

"Invention is a gift of Nature, much improved by Exercise and Practice."

Christopher Simpson, in *The Division-Viol* (1659)

The development of the second phase of the investigation was influenced by a number of external factors. One was that it seemed desirable to involve more students in the project. The other was the desire to forge a link between creative work and other teaching in progress. The result was a project entitled "The Origins of the Double Bass", a collaboration between myself and the principle teacher, in which we would work on teaching the students about the development of their instrument and the historical conventions that could inform the interpretation of the music they were learning. The creative component was a project entitled "Recercadas" in which students would learn about and practice a form of improvisation and composition used during the 16th and 17th centuries.

The model used for the project was based on the "Recercada Primera" project used in the preliminary stage. This idea would be expanded on to provide different challenges depending on student ability. The ensemble playing element of "Little Brown Jug" would be applied to this project in that students would perform the music in ensembles. Students receiving more tuition time would have a longer time frame to develop their improvising skills before the concert.

Student	Number of sessions	Time (total)
Student 1	7	290 minutes
Student 2	-	-
Student 3	6	270 minutes
Student 4	3	60 minutes
Student 5	3	60 minutes
Student 6	4	80 minutes

Table 11. Number of sessions and time for each student in project “Recercadas”

Process. “Recercadas” consisted of three different assignments. The three students who had participated in the previous projects (students 1, 2 and 3) and would have the most tuition time worked on the “Folie d’Espagne”, a 16 bar harmonic sequence for which a work sheet was provided including extracts from the facsimile edition of the *Trattado de Glosas* by Diego Ortiz to explain the procedure (appendix 3). Students 4, 5 and 6 would work on the 8 bar sequence from “Recercada I” for which a worksheet similar to that of the “Folie d’Espagne” was provided (appendix 4). Finally, student one would be given a new composing challenge also based on historical practice. He would choose one of the recercadas to provide a bass line for a composition. The work was underlined by the principle of elaboration. Long notes were replaced by shorter notes connected with note sequences of the students’ own composition.

The “Folie d’Espagne” group worked largely following the methods used during the previous projects. The emphasis was in making the activity enjoyable through a collaborative spirit and the engendering of positive attitudes. This work took place both in individual and group lessons. There was some discrepancy in the ease that students felt at improvising and it was possibly for this reason that after the third session, student 3 decided he would rather compose a variation than improvise. This composition was then built up during a number of lessons, largely through a process of improvisation followed by selection of material to be included. Some compositional techniques were suggested during this process including the use of sequences and harmonic figurations. The process of composition was painstaking and time consuming, usually consisting of improvisation followed by critical reflection. A lot of teacher guidance in the form of questioning was necessary during this process.

The “Recercada I” group, working to a much tighter schedule composed their variations following the method used by student three in the “Folie d’Espagne”. Students 4 and 5 completed this work within a single session. Student 6 continued the work at home. This writing was done in isolation from the double bass and included a number of passages that she would clearly find unplayable. Bar 12 serves as an example (figure 12).



Figure 12. “Recercada I”, bar 12 first attempt – student 6

As the student was unable to play what she had written, it proved difficult to find a way to progress without simply telling her to start again and work out a new solution. In some cases a way was found to simplify passages in such a way as to maintain their original character, as was the case with bar 12 (figure 13).

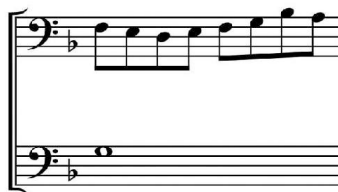


Figure 13. “Recercada I”, bar 12 final version – student 6

In other cases no such solution was found and they remained as originally written as was the case with the last two bars (figure 14).

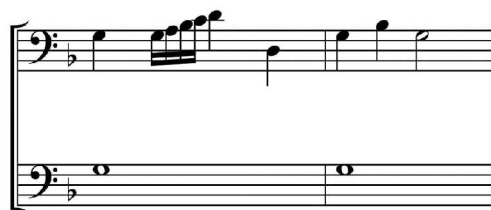


Figure 14. “Recercada I”, bars 15 and 16 – student 6

Product. The pieces were performed at the end of term concert. The students showed enthusiasm and commitment and the concert was well received by the public. As can be seen from the work completed (appendix 10), the work was consistently good. Students 1 and 3, who received the most tuition time produced the most impressive results. “Century”, the composition by student 1, showed a considerable growth in aesthetic subtlety compared to the previous composition and included the incorporation of stylistic elements from the music under study. By the end of the term he had also learnt to improvise freely to the harmonic sequence of “Folie d’Espagne”. In the concert he showed less freedom in his improvisation. This might have been the result of a number of factors including the presence of the public and my own playing which might similarly have been affected. It was notable that at the approach to the end the student responded to my introduction of a syncopated figure (bar 31). Student 3, opting to compose his 32 bar variation achieved a result that had considerable merit as a composition including a gradual build up to a climax in the final eight bars. The “Recercada I” students produced compositions that resulted in an attractive ensemble piece. The results reflected the students’ playing capacities. As with the “Folie d’Espagne” group, results were aesthetically satisfying and showed the influence of the other music the students were listening and studying.

Findings. Seven significant factors for consideration emerged through analysis of this work. These concerned both the planning of the project and the process through which it was realized.

i) The relationship between playing ability and compositional aims. The work of students 3 and 6 revealed a difficulty to be taken into account when organizing the activity. These students, being more advanced as players felt the requirement to write more complex music than the other players – music that would fully exploit their playing abilities. This in turn meant composing music of greater complexity than the other students. However, these students, like students 4 and 5 had no previous experience of composing or improvising and therefore, their starting point was essentially equal. It was therefore considerably more difficult for these students to realize their aims within the time available, a situation particularly notable in student 6. Student 1, having previous experience of composing did not suffer from this disadvantage.

ii) Mind to matter. Another factor of considerable importance was considerable variance in students' ability to apply imagined musical ideas to the instrument. Aguiar (2012) describes this ability as "interception between motor and mental training" (p. 65). He points to findings that suggest this ability can be stimulated through creative activities. For some students, the instrument had seemingly never been a vehicle for personal experimentation. It had served rather as a means for producing music through the application of instructions given by others, either in the form of written music or verbal instructions. For them, the idea of experimentation, applying personal thoughts and ideas directly to the instrument without the assistance of predetermined notes was new and proved problematic. There may have been an abundance of ideas, but the means for applying them was missing. This situation was noted particularly in student 6. She was able to put ideas into practice through singing but not through playing the instrument. In contrast, student 4 was notable in her use of relatively complex rhythms (figure 15). These, she was unable to write down correctly, opting instead for a simpler solution (figure 16).

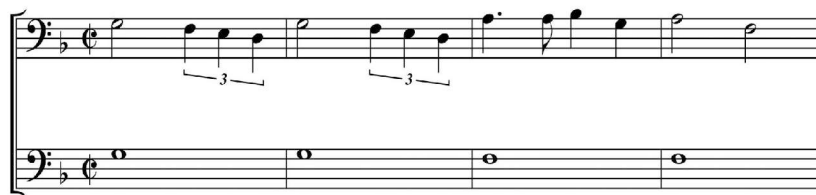


Figure 15. "Recercada I", bars 1 and 2, as played by student 5

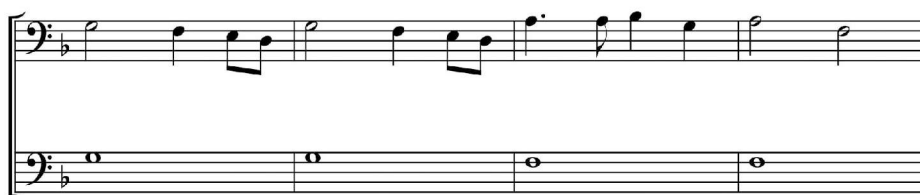


Figure 16. "Recercada I", bars 1 and 2, as written by student 5

It was therefore clear that a strong musical idea was guiding the process and this idea was being applied directly to her playing. The ability to use the instrument as a medium for exploring musical ideas had a very important bearing on the efficiency of the creative processes necessary for the success of this project.

iii) Motivational factors. Students reacted very differently to these activities. Particularly notable were attitudes that could be construed as representing the feeling of ownership and personal relevance. An interesting contrast was provided by students 4 and 6. Student 4 had considerable difficulty in starting but eventually found a solution for the first two bars (figure 17).

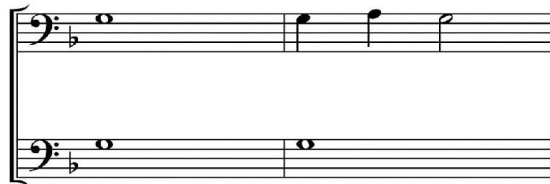


Figure 17. “Recercada I”, bars 1 and 2 – student 4

Having achieved this, he seemed at a loss as to how to continue and I therefore pointed out that ideas already invented could be reapplied. For example, he could treat bar 3 in the same way as he had bar 2 (figure 18).



Figure 18. “Recercada I”, suggestion for bar 3

The student strongly rejected this proposal and instead, suggested the following suggestion (figure 19):

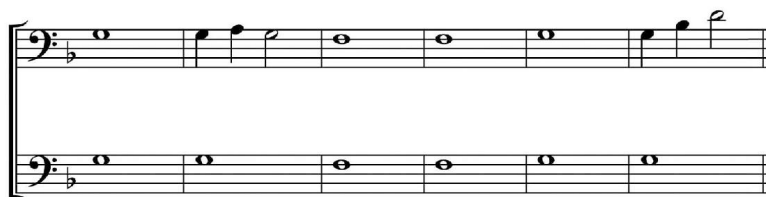


Figure 19. “Recercada I”, bars 1 to 6 – student 4

This was not only a better solution but indicated the intrinsic motivation of the student. He was aiming, not for a result that his teacher was satisfied with, but one he personally valued.

Adopting a similar approach with student 6, I found that my suggestions were taken to be “correct” and therefore she accepted them without question. It appeared that her objective was to complete the task in a manner that her teacher considered to be appropriate rather than to achieve a result that was personally meaningful. Student 3 showed similar tendencies though to a lesser degree.

It is possible that factors such as a low self-perception, or the choice of tasks that were inappropriate were in part responsible for this difference.

iv) Differing attitudes towards problem solving. Another factor affecting student difference were differing approaches to problem solving. The constructionist orientation of the teaching approach provoked widely varying responses from the students. Some students appeared to be confused and disorientated especially by the posing of questions designed to provoke divergent thinking. They appeared to be waiting to be given explicit instructions or correct answers – which were not forthcoming. Others, particularly students 1 and 4 responded very positively to this approach and appeared to find it stimulating. This may have been in part the result of a process of preconditioning described by Beghetto (2010). He describes how school experiences based on generating correct responses through convergent thinking processes can gradually precondition children into applying this type of thinking process in all lesson situations. Another explanation could be differing attitudes towards ambiguity. A number of writers comment on the importance of ambiguity as a component of the creative process (Webster, 1990; Csikszentmihalyi, 1996; Burnard, 2012; Kaufman, Plucker, & Baer, 2008). Some people are more comfortable with it than others. This may or may not be the result of preconditioning through past experiences. It may be that this difficulty is related to preconceptions concerning the learning process described by Beghetto (2010). Students become used to being expected to provide answers through a process of convergent thinking.

v) The importance of empathy during improvised performance. Burnard (2012a) describes improvising as “a profoundly social activity... a process that requires musicians to be sensitive to the inner states of others... with enhanced emphatic processes” (p. 162). During this project and the “Little Brown Jug” project it became clear that the teacher has a vital role

to play as a participant, especially during public performances. As students themselves do not have the experience and skills to provide this type of support to each other, a heavy responsibility lies with the teacher if this type of work is to be successful. When accompanying, the teacher must offer support and encouragement both through gesture and a musical approach that is supportive and inspiring. There must be a strong spirit of collaboration.

vi) Projects need to take into account not only varying abilities but also individual interests. This project proved successful in its capacity to adapt to differing playing abilities and individual approaches. It was not however entirely successful in adapting to individual interests. Differing levels of motivation may have been caused in part by this inflexibility. In the case of student 3 for example, the project failed to capitalize on the enthusiasm generated during the “Little Brown Jug” project. Had this line been continued, it might have been possible to build on the improvising skills that had already begun to develop.

vii) The project allowed little scope for individuality. The provision of a clear underlying structure together with indications as to the compositional approach had clear benefits as a means of securing success. It did however limit scope for individuality. All the students wrote in a style that was heavily influenced by these factors and was therefore highly conventional. The project did not stimulate students to adopt individual approaches.

4.3. Phase 3: “Three Places in Linda-a-Velha”

“Concerning all acts of initiative (and creation), there is one elementary truth, the ignorance of which kills countless ideas and splendid plans: that the moment one definitely commits oneself, then Providence moves too. All sorts of things occur to help one that would never otherwise have occurred. A whole stream of events issues from the decision, raising in one’s favour all manner of unforeseen incidents and meetings and material assistance, which no man could have dreamt would have come his way.”

Murray, *The Scottish Himalayan Expedition* (1951)

The projects realized up to this point had all been successful in that they had all led to students producing creative results. These results could all be described as being authentic, representing the student’s aims, and based on their own decisions without imposition of external solutions. However, all the projects had been limited in the sense that they all imposed stylistic and/or aesthetic characteristics on the students’ creations. The next project should seek to give the students the opportunity to develop their own voices and choose their own stylistic approach. The composing processes would begin with student ideas without pre-established guidelines.

A number of researchers describe their experience with assisting children to compose their own songs in a classroom situation (Marsh, 1970; Wiggins, 2002). Schafer (1986) describes a project with a student orchestra in which students compose their own orchestral pieces through improvisation. It ought to be possible to do the same type of work with double bass students.

Supporting this work would be the experience and confidence the students had already gained through the previous projects and my own experience gained in teaching during these activities. In case of difficulty, a number of strategies, including modified versions of all the previous projects would be available in order to assist the students.

Most of the creative projects described involve some sort of associative stimulation. The initial impulse for creation is non-musical. In the case of song writing, students are provided lyrics before starting or compose their own. Sometimes a story line is provided. Schafer

(1986) describes a composition project based on a story the children themselves invent, inspired by a devilish mask on the class room wall and another project in which students find the means to describe musically a city shrouded in smog. Veloso and Carvalho (2012) describe a project in which children create music inspired by colours in a project entitled “Magic Sounds”.

In searching for suitable starting point for a new project, Charles Ives’ “Three Places in New England” was to provide the necessary inspiration. The students would compose a piece inspired by the surroundings of their music school entitled “Three Places in Linda-a-Velha”. Following the suggestion of Barnes (2001), we would be taking “real experience as the springboard for truly creative thought” (p.101).

Process.

Student	Number of sessions	Time (total)
Student 1	11	380 minutes
Student 2	-	-
Student 3	13	440 minutes
Student 4	9	330 minutes
Student 5	5	255 minutes
Student 6	7	285 minutes

Table 12. Number of sessions and time for each student in project “Three Places in Linda-a-Velha”

For the sake of clarity, the lengthy creative process involved in this project has been presented according to parameters defined by Webster (1990). These are preparation – the presentation of the task, illumination – production of initial musical ideas, and verification – the selection and working of musical material into the final product.

Preparation. The students and their two teachers met at the school on a Saturday morning in April. The only equipment required for the morning’s work was a good pair of shoes for walking and, if possible, a camera to take photographs.

Before setting off, I described the outlines of the project. As they had all shown themselves to be talented at creating music in previous projects we would work on a more ambitious project in which they composed their own pieces. Mentioning the piece by Charles Ives, I explained that we would choose three places in Linda-a-Velha and compose a piece of music for each. The music could be about anything they thought appropriate. It could be about how they felt in the place, sounds they heard in the place, thoughts they had in the place, something they imagined happening in the place in the past or in the future, or any other idea that came to them. What did they think? Would they like to do it?

Reactions were a mixture of curiosity and puzzlement. One student asked “but how are we going to write the music?” I responded that first we would find the places and see whether any ideas came up that could form the basis of the music. Afterwards we would think how to write the music. I then asked if anybody knew the town and could suggest a good place as a starter. Student 4 replied that he knew a beautiful public park. We set off with him leading the way.

Upon arrival in the garden, students broke up into groups, taking pictures, talking with one another and exchanging opinions about mobile phones. The mood was of relaxed enjoyment. Having spent some ten minutes in this location, the group reassembled and set off to try and find a place from which the river could be seen. This proved a lengthy procedure. Student 4 once again led the way but seemed unsure about the route. Eventually we found ourselves in an area of small trees overlooking some blocks of flats with a small patch of river to be seen between two buildings. Student 5 declared that this place should be called the “Mini Forest”. Student 1 appeared to be the only person concerned about the composition project. Standing between the trees he declared that he “could not see that there was anything to write about”.

As we had strayed a long way from the school we decided to head back in that direction. On the way, student one explained that he had once lived nearby and it was the home in which he had most enjoyed living. I questioned him further on this subject and then asked whether he thought he could write some music based on these reminiscences. He thought he could. The mood continued to be one of enjoyment. Students took pictures of dogs they met along the way and student 4, who was missing an English lesson in order to be present, decided that it would be a good idea to practice his English with me, a decision the others joined in with.

Talking with student 6, I asked if she might be able to write some music to represent the walk between places. She said she would think about it.

Shortly after passing a fire station, student 5 called our attention to a statue of a fire man holding a child in his arms and emerging from a burning building. What had caught her attention was not the statue itself but the leaves of a plant that was sprouting from between the fingers of the fireman's clasped hands. Several students climbed the statue in order to look at this more closely. It was agreed that music could be written about this statue.

We then headed back to the school café to discuss what we had seen. Impressions were given about the places. The "Mini Forest" provoked few comments. One student referred to hearing the sound of wind. Another said it was "agreeable". Student 4 commented on "light and shade". The fireman statue stimulated much more comment. When asked what the statue represented, student 4 replied that "the fireman comes out of the burning house with a child in his arms but just as he comes out something falls on his head and kills him but as he falls, he throws the child forward away from the flames and to safety". Students began to think about fire noises. Student 5 remembered a way of making sounds to crackling and sparks. There was general agreement that the fire should be represented with high sounds and gradually get louder. Student 6 commented that feelings of panic could be represented with tremolo. I asked student one about the fireman. How could we represent him? The reply was that low notes would be good. I agreed, saying that these could represent his strength and firmness of character. The public garden provoked fewer comments. One student mentions the feeling of peace and others commented on the interesting statues that could be seen there.

Students were concerned about practical considerations; who does what? Student 5 wanted to know if she had to write music for everyone to play. I responded that they should all write what they felt like and ideas could then be tested through playing. Student 4 asked if he could write music for the park and student 1, whether he could write music about his memories. I asked student 6 whether she was still interested in writing "Walking Music", student 3 whether he would like to write the fireman's music and student 5 whether she would like to write fire music. All seemed satisfied with the allocation of the themes. Student 1 commented that he had already thought of some music.

Illumination. Within two weeks, all of the students had produced musical ideas. Some of these were memorized (students 1 and 4), one recorded in a sung version (student 6) and others, inspired by other compositions, were developed during lesson time through improvisation (students 3 and 5). The allocation of places was also determined. Student 4 wrote music about the park – “Aciprestes Park”, Student 5 wrote the “Mini Forest” music, student 3 the “Fireman Hero” music, and student 1 (following a change of plan), the “Homage to the Fireman”. Student 6 would write the “Walking Music” used between movements.

i) Student 1 – “Homage to the Fireman”

Student 1 had already come up with a musical idea before the first session was over (figure 20).



Figure 20. “Homage to the Fireman”, first ideas

Then, in the next session, through a process of experimentation in which I played the written part and the student improvised, a second line was developed (figure 21):



Figure 21. “Homage to the Fireman”, development on first ideas

ii) Student 3 – “Fireman Hero”

This theme was developed during a lesson. When I asked the student if he could come up with some musical idea to represent the fireman, he remembered the opening of Beethoven’s 5th Symphony, which he played in the following fashion (figure 22):

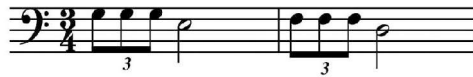


Figure 22. "Fireman Hero", first idea

I pointed out that this was not exactly the same as the symphony opening but that for the composition this could be beneficial. The rest of the theme was developed through a process of experimentation followed by selection and, if necessary, further modification of material. The final result was as follows (figure 23):



Figure 23. "Fireman Hero", complete melody

iii) Student 4 – "Aciprestes Park"

This student came to the lesson with an eight bar phrase (memorized, not written) representing "peace in the garden" already completed (figure 24):



Figure 24. "Aciprestes Park", first melody

This later underwent a modification, possibly in part due to chance factors (figure 25):



Figure 25. "Aciprestes Park", new version of first melody

I played both versions to the student and asked which he preferred. The second version was chosen.

A week later, the student came to the lesson with a new melodic idea – also memorized (figure 26):



Figure 26. “Aciprestes Park”, second melody

The student seemed satisfied with the melody as it was but agreed when I expressed concerns at its shortness. A strategy was agreed whereby the melody would be repeated and then rounded off without the need of composing any new material (figure 27).



Figure 27. “Aciprestes Park”, second melody completed

iv) Student 5 – “Mini Forest”

This student had changed her mind about what she wished to compose. As the “Mini Forest” had been her idea, she felt that she should write the “Mini Forest” theme. In creating this theme, she followed a similar process to student 3 in starting the process by attempting to remember a theme she had already heard (figure 28):



Figure 28. “Mini Forest”, first idea

She was concerned about using a theme written by somebody else but I expressed the opinion that the version was sufficiently dissimilar to the original to be fully acceptable. Through a process of experimentation followed by selection and verification, an eight bar phrase was composed (figure 29):

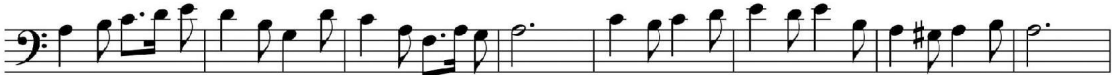


Figure 29. “Mini Forest”, 8 bar phrase

Having achieved this, I made a proposal, asking what the student what she thought about changing the last note from an “A” to a “G#”. This would provide an effective way of rounding off the melody by using the first four bars to end the piece. The agreed with this idea. It was agreed that the melody could be further improved by repeating each section. The finished melody was therefore as follows (figure 30):



Figure 30. “Mini Forest”, complete melody

v) Student 6 – “Walking Music”

This student had thought of her “Walking Music” whilst travelling in the car with her mother and in order not to forget it, had recorded herself singing it on her mobile phone (figure 31).



Figure 31. Walking Music, first idea

A week later she had written out a fuller length version (figure 32):



Figure 32. “Walking Music”, first composed version

Verification.

i) Student 1 – “Homage to the Fireman”

During the weeks that followed the lesson in which the first musical idea had appeared, this student made little progress. Work consisted mostly of re-working existing material. As the student had previously shown a strong interest in composition, it was clear that in some way, the project was not proving motivating. Having attempted and failed to provide encouragement to make further steps I decided on a change of tactic and suggested that he might wish to write on another subject matter. My proposal was that the “Fireman” movement be divided into two parts. The first part, created by student 3 would describe the action. A second part, written by him would be a homage to the fireman after his death. The student reacted positively to this idea. Two weeks later, he had completed a 55 bar length composition, later extended to 69 bars through the repetition of the last section (see appendix 9). For the final performance, the piece required no reworking as it already included a fully composed accompaniment.

ii) Student 3 – “Fireman Hero”

Having completed the opening theme, the challenge was how to continue this movement. The student professed a preference for improvisation over composition and we worked out a story line which would underline the improvisation. The fireman would break down the door of the house, run up the stairs, search the smoke filled rooms and rescue the child. Work on this improvisation produced very variable results, seemingly depending on the degree of confidence felt by the student. Eventually, the student himself suggested a new strategy; he would compose a collection of melodic fragments and these could be used as the basis of the composition. A week later the student came to the lesson with three ideas played from memory (figure 33):



Figure 33. “Fireman Hero”, ideas for improvisation

Finally, in the concert, this served to produce the following result (figure 34):



Figure 34. “Fireman Hero”, final improvisation

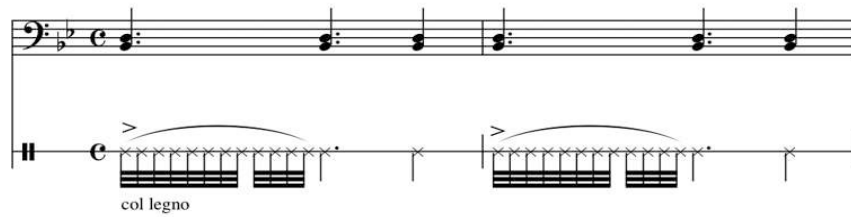


Figure 37. “Aciprestes Park”, percussive motive

I suggested that the piece be further extended through an improvised section. This would allow the piece to develop from an A-B-A form to an A-B-C-B-A form. For this effect I had worked out a chord sequence to form the basis of this improvisation based on Bb. The student seemingly had no need of pre-established ideas and invented the following phrase for which I chose a D minor pedal point (figure 38):



Figure 38. “Aciprestes Park”, improvisation

For the final performance, the rest of this piece was complemented with some sustained pedal points.

iv) Student 5 – “Mini Forest”

It was clear that the initial melody was insufficient to form a complete movement. Attempts to prolong the movement through improvisation proved largely unsuccessful. During the second

lesson dedicated to this search, the student began to make observations about the accompaniment, at this point, a simple four note sequence of my own choosing (figure 39):



Figure 39. "Mini Forest", accompaniment

She suggested the following modification (figure 40):



Figure 40. "Mini Forest", accompaniment elaboration

This suggested a solution involving a variation on the original theme brought about through an elaboration of the accompaniment.

In the final stages of preparation, student 1 contributed an improvised introduction to the piece which produced the following result in the performance (figure 41):



Figure 41. "Mini Forest", improvised opening by student 1

At my own suggestion the following ending was introduced using the repetition of the final two bars an octave lower (figure 42):



Figure 42. “Mini Forest”, suggested ending

v) Student 6 – “Walking Music”

The extended version of the original material presented considerable problems, not the least of which was the fact that it was too difficult for the student to play. Through the course of several lessons, we attempted to make small simplifications to the composition but it remained unplayable. Eventually a more radical solution was chosen, maintaining the principle melodic motives but using a simpler structure (figure 43).



Figure 43. “Walking Music”, restructured theme

As this was clearly too short, I suggested that the underlying harmony be used as a basis for composing additional material or improvising – applying the methods used in the “Recercadas” project. This would allow other students to contribute to the piece so that when

it reappeared during the course of the final composition (representing as it did, the walk between the various places) it would do so in different forms.

The student agreed happily to this idea and went on to compose another eight bars through a process of experimentation, selection and modification (figure 44).



Figure 44. “Walking Music”, new material

Working up to the final performance, the bass line was developed through the jazz inspired work of student 3 and supplemented by some filler harmonies played by myself (figure 45).



Figure 45. “Walking Music”, accompaniment figures

This was further enriched with an improvised percussion part.

The piece appeared four times during the concert, representing the walk linking the different places visited. Each time this “Walking Music” appeared it included different improvisations so that by the end of the piece, all the students had made a contribution.

Product. The result of this work was a score (appendix 8) and a performance lasting approximately 25 minutes. The performance itself provided some last minute examples of creativity with a fine improvisation by student 1 in the “Mini Forest” movement including evocative alternations between major and minor (figure 41), a dramatic and dynamic improvisation by student 3 representing the exploits of the fireman in the burning building (figure 34) and a witty and highly effective addition to the Aciprestes music by student 4 (figure 37).

Of the projects conducted so far it produced the highest levels of creativity. All students produced work that could be described as relational with compositions that were related to the subject matter and expressing to some degree the identity of the creator. This produced a result that was valued by the parents, friends and teachers who were present at the performance.

Findings. This project was very demanding for most students and was also very time consuming. From a teacher’s standpoint, it presented considerable difficulties, including the possibility of at least partial failure and was complex to organize. It embodied some of the features considered most characteristic of creative activities; risk and ambiguity. The process of its realization revealed some very positive features but also revealed a number of weak points.

Positive characteristics:

- i) Positive working environment. The first phase of the project involving the walk and subsequent meeting in the school café to exchange impressions was highly effective in creating a good environment for creative thought. In addition, it enhanced the spirit of co-operation between the students through presenting them with the opportunity to enjoy each other’s company. The experience appeared to liberate students from preconceptions about “correct” procedures in learning and brought about a playful atmosphere in which divergent thinking appeared to flourish and students felt free to express ideas.
- ii) Ambiguous character of project enhanced creativity. The ambiguity of the project led to high levels of student creativity. Although the ambiguity once again appeared to cause

difficulty for some students (particularly students 3 and 6), it produced very positive results in that work was more imaginative and personalized.

iii) Improvisation provided a means of extending material. Jazz based procedure proved an effective strategy in extending and completing compositions. The use of improvisation based on the procedure used in “Little Brown Jug” (when necessary, assisted by a worksheet), proved to be a very effective way of extending movements to a satisfying length without recourse to compositional techniques with which the students were unfamiliar. It also provided the opportunity to further develop improvising skills.

iv) The use of a story line was highly effective in stimulating creative thought. The story line invented for the “Fireman” music resulted in high levels of student involvement and led to the production of many creative ideas.

Negative characteristics:

i) Lack of sequential learning. This project would have been more effective if supported with a stronger skills base. Particularly notable were difficulties observed during “Recercadas” concerning the transfer of mental images via appropriate responses on the instrument. All students would have benefitted more if they had had more experience with improvising. This led at times to a lengthy and at times frustrating expenditure of time in creating new melodic material.

ii) Group work suffered on account of differing abilities and attitudes between students. Although group work was beneficial at the start and end of the project, it presented many problems during the working process. Most notable was that it was impossible for more than one student to work effectively on an idea at one time owing to the smallness of the room and the noise accumulation. Also, it was found that some students, generally those with more ideas, tended to dominate proceedings leading to very low participation of others. Finally, for the more able students it was at times frustrating and disinteresting to work with less able students.

iii) The project was incompatible in some respects with the timetable of existing lessons. Much of the work was undertaken during the students’ free time in between lessons. This was positive in that it provided some students more time to work on their compositions. For

others, most notably student 5, it had the opposite effect and they had little time compared with other students.

iv) The large amount of time necessary for this project may have had a negative impact on other learning activities. The large time expenditure necessary for this project meant it might have been better if it had been carried out over a longer period or been better supported by developing the skills necessary for its realization before its commencement.

v) Improvising in front of colleagues was problematic for some students. This project revealed a new problem related to students' improvised performances – the presence of other students could cause inhibition for those improvising. Some student reactions, particularly laughter, had a clearly negative impact. Perhaps this problem might have been resolved by providing all students with equally demanding challenges – which might in turn have led to higher levels of empathy.

4.4. Phase 4: “In the Forest of the Kalajunga”

The performance of “Three Places in Linda-a-Velha” marked the end of the school year. It was to be hoped that the students had developed confidence and experience to embark on new creative experiences both with music and in other areas of their lives. From my own point of view, a number of effected strategies had been identified some of which could be used in future, either in their existing forms and others in modified versions. Teaching methods had also been gradually refined. The investigation had however left a number of loose ends. Many of the findings, particularly those of phase three remained untested.

An invitation to give a master class for the 12 double bass students attending the Santa Cecília College in Lisbon provided an opportunity to extend the investigation. The objective would be to apply the findings of the previous phases in a new project. The differing context of the work – a two day intensive course – would also provide the opportunity not only to test findings but also to find out to what extent findings were applicable to this new situation. This could in turn indicate further applications of the findings. The teacher in charge of the students, Abel Carvalho was enthusiastic and highly supportive of the initiative. For this course I designed a creative music project entitled “In the Forest of the Kalajunga” (appendix

12). The project sought to apply positive findings from phases 1, 2 and 3 and test new solutions to problems that had arisen.

“In the Forest of the Kalajunga” is a piece based around a narrative of tribal life in the jungle. It is pre-composed but contains large gaps that require student creativity in order that they be filled. These are filled using a number of strategies ranging from free improvisation to structured composition. The project therefore aims to achieve a balance between activities based on instruction and student centred activities, the clearly defined and the ambiguous. The piece in itself represents a process of sequential learning, each section representing a step forward in relation to the last. Preparation of each section involves developing skills that will be useful in the next.

Process.

Student	Number of sessions	Time (total)
12 students	4	6 hours

Table 13. Number of sessions and time for each student in project “In the Forest of the Kalajunga”

i) “Time in the Forest” motive. Students, playing in large closed circle (without scores or music stands) began by learning the time motive, an ostinato that accompanies most of the piece (figure 46).



Figure 46. “Time in the Forest” motive

There followed a discussion about the nature of time. Does it always feel the same? Does it sometimes seem to go faster, other times slower? Students reported that time can indeed pass very slowly, one example being during mathematics lessons and at other times, when it is time to get up in the morning being an example, it can pass very quickly.

This effect can be represented in the time motive by playing heavily when the passage of time is slow, and lightly when the passage of time is easy and pleasant. Various students then lead the group in indicating the character of the passage of time by playing the motive using contrasting dynamics whilst the others followed their lead. Through this practice, students not only learned to take musical decisions, choosing between a wide range of dynamics, but must also give and receive musical instructions. The strength of the ensemble was also developed through this practice.

ii) “Look-out call” motive. The students learnt the look-out call. I explained that the Kalajunga tribe always has a member on the look-out for approaching danger. If the look-out thinks something is approaching, he calls out to the others and they all respond. Although these calls are based on notes and rhythms, there is an underlying text (which in this case the students did not use) (figure 47).

The look-out

f To- dos Fe-ro - zes Nos so-mos ka - la- jun- ga

All the rest

ff To- dos Fe- ro - zes Nos so-mos Ka- la- jun- ga

Detailed description: The image shows two staves of musical notation in bass clef with a common time signature (C). The top staff, titled 'The look-out', contains four measures of music. The first measure has a quarter note followed by a quarter rest. The second measure has a quarter note followed by a quarter rest. The third measure has a quarter note followed by a quarter rest. The fourth measure has a quarter note followed by a quarter rest. Below the staff are the lyrics: 'f To- dos Fe-ro - zes Nos so-mos ka - la- jun- ga'. The bottom staff, titled 'All the rest', contains four measures of music. The first measure has a quarter rest followed by a quarter note. The second measure has a quarter rest followed by a quarter note. The third measure has a quarter rest followed by a quarter note. The fourth measure has a quarter rest followed by a quarter note. Below the staff are the lyrics: 'ff To- dos Fe- ro - zes Nos so-mos Ka- la- jun- ga'.

Figure 47. Look-out call and response

iii) “Talking drums”. The students learnt that the Kalajunga, in order to communicate in the jungle, use talking drums. These can be used for different purposes; they can either be used to transmit the same message from one member of the tribe to another, one such message being “it is lunch time”, or they can be used to converse, which each member having something different to say. The children tried out both versions, first practicing imitation, transmitting the same rhythm around the circle and then, when this became fluent, inventing different rhythms

so as to create a rhythmic dialogue. A further advance was made when instead of transmitting these messages around the circle, they transmitted messages across the circle to players on the opposite side, indicating their choice of player through eye contact.

iv) Repetition of the look-out call.

v) “Animal sounds”. Each student was required to invent an animal noise. This could use any effect they pleased and need not represent an actual animal but could be imaginary. Each student in turn played their chosen animal, accompanied by the rest of the group quietly playing the time motive.

vi) “Storm”. The students imitated a tropical storm. First wind is heard (hands brushing on the wood of the instrument), then the sound of rain drops (finger tips tapping on the wood), then rolling thunder (low notes bowed fortissimo), and then then the sound of the breaking of tree branches (Bartok pizzicato).

vii) Repetition of the look-out call but in a different tonality (figure 48).

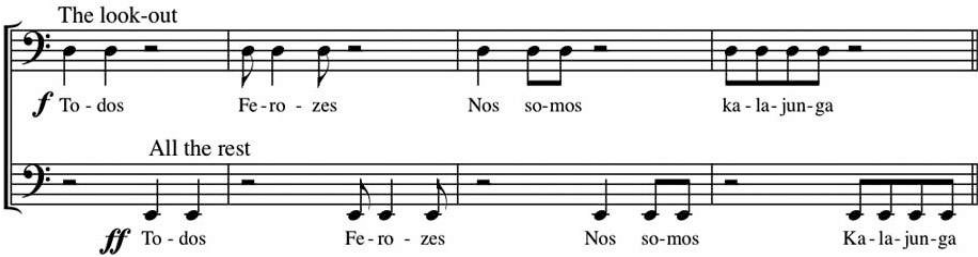


Figure 48. New look-out call

viii) Debate. I explained to the students that the use of a different look-out call provoked consternation in a people used to an unchanging life style. This caused an unsettling change to the “Forest Time” motive which changed to the following form (figure 49):

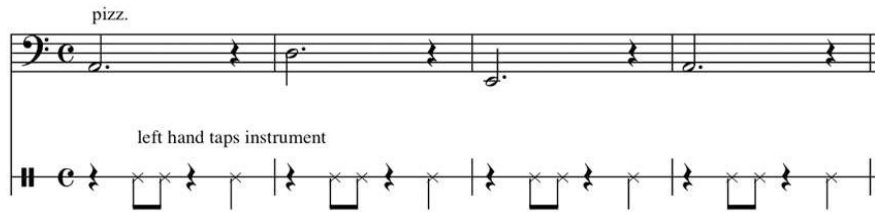


Figure 49. New “Forest Time” motive

This also provoked a different reaction from each member of the tribe and they have a debate. The students were each required to create an eight bar phrase based on this new time motive using a work sheet if they required help (figure 50).

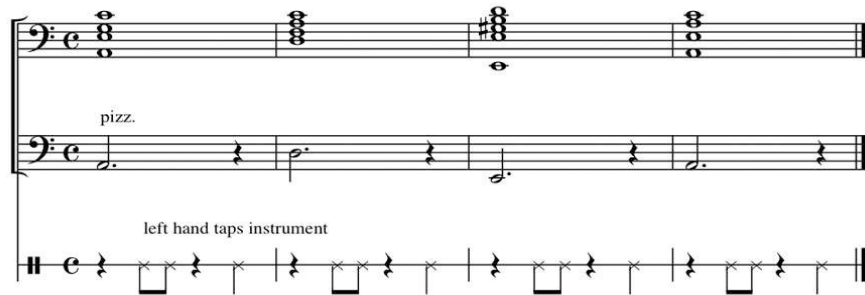


Figure 50. Debate worksheet

In order to compose these phrases, the students went away to work in small groups of three or four students with similar abilities. Some students chose to improvise, others to compose. Some students chose to demonstrate virtuosity (figure 51).



Figure 51. Debate – a display of virtuosity

Others used their imaginations to full effect (figure 52):



Figure 52. Debate – a display of originality

ix) Look-out call (the original, figure 47).

x) The look-out call ended with one student playing a low sustained “E”. Then each student joined with a note of their own choice and the chord grew progressively larger and louder until a huge fortissimo chord had been constructed. The last student then indicated the end of the piece which consisted of one final fortissimo chord in staccato.

Product. The piece was performed following the sequence followed during the learning process with the player acting as look-out deciding when each section should end. Parents and friends of the students found themselves surrounded by a circle of double bass players, and a running commentary informed them of the events that were taking place in the forest. The audience response at the end of the performance was enthusiastic.

Findings.

i) The mixture of instruction based and ambiguous activities appeared to suit most, if not all students involved in this project.

- ii) The project provided a sequential learning experience with simple yet fundamental skills being dealt with first, leading to more complex activities later.
- iii) The “Talking drums” section and “Animal sounds” sections encouraged students to engage in activities involving a transfer of musical thoughts to a physical realization on the instrument.
- iv) The “Debate” section made use of the idea developed in the “Recercadas” project but had the advantage of leaving students free of stylistic influences. Higher levels of creativity were therefore more likely to occur.
- v) Creative group work was more effective in groups of students with similar abilities.
- vi) The project was very inclusive. All the written music involved the use of only open strings and the creative activities proved engaging for all the students as they were adaptable to all levels of ability.
- vii) The use of a narrative proved highly effective in drawing the students into the project and giving focus to creative activities.
- viii) The use of an entertaining story line, conversations between the students and the inclusion of activities that were enjoyable and amusing (such as the animal noises) assisted in creating a good environment for creative learning.

5. Summary of findings

During the course of the investigation findings at each phase informed the management of process in subsequent phases. A constant throughout the project, the importance of choosing tasks that were appropriate and therefore intrinsically motivating was established in the first project, “Lines to Time”. The importance of gap filling (Abbs 2003) as a stimulant and aid to creativity also appeared early with “Recercada Primera” and revealed further potential in all the following projects. The value of the teacher as a musical collaborator also became clear in the early stage with the experience of performing “Century” reinforced by issues related to improvisation (“Little Brown Jug” and “Recercadas”). This collaboration was important in providing support (or empathy) during creative work, especially when improvising. It was also clear that the teacher, through participating at times in a full capacity as a musician, could significantly enrich the learning environment.

In phases two and three, some problematical elements became increasingly prominent. Starting in the “Recercadas” project and extending into the “Three Places in Linda-a-Velha” project, the difficulties some students had in improvising began to have an impact the success of activities, above all concerning the time that was required for their successful realization. This had implications concerning planning. Activities should involve a more sequenced approach to learning, providing, for example, all students the opportunity of improvising in projects more appropriate to their abilities and experience (such as “Lines to Time”) before advancing to more demanding activities. Similarly, in the “Three Places in Linda-a-Velha” project, different learning preferences amongst students, particularly in relation to tolerance of ambiguity, began to reveal itself as a cause of difficulty. Whilst some students benefitted from this (such as student 4) others seemed to be demotivated by it (student 6). An ideal solution appeared to be one providing sufficient ambiguity to bring out the full creativity of students who feel comfortable with it, but at the same time, having solutions to hand for those students who feel the need of a more structured approach.

Two positive factors were particularly notable in phase three. One was the success of the first day’s outing in the “Three Places in Linda-a-Velha” project in producing a good environment for bringing out student creativity. Not only was the walk productive in generating ideas but it was also conducive to a number of attitudes and thought processes considered important for

creativity such as risk taking, spontaneity and divergent thinking, and may have diminished preconceptions about correct and incorrect learning behaviors. The second was the discovery that the jazz inspired gap filling method used in “Little Brown Jug” could be used as a means of extending and completing student compositions. A harmonic outline taken from thematic material already written served as a basis for further creation through improvisation. As none of the students had specialized knowledge about composition, this provided a welcome solution to the difficulties related to the absence of knowledge of techniques for formal development of material.

Phase four appeared both to confirm previous findings, implementing strategies that were found to be effective and remedying some of the defects observed in previous projects. The use of group conversations and an entertaining story line helped create a good creative environment and the project provided a sequenced approach to learning with percussive improvisation together with sound exploration (Animal Sounds) providing an effective first step for improvising. Various different types of gap filling were used throughout the piece and the semi structured approach in the Debate section appeared to provide one solution to the difficulty of providing sufficient ambiguity to some and structured support to others.

5.1. Product

To what extent was creativity present in this work? A number of people played the role of gate keeper during this investigation; teachers, colleagues, musical friends, parents (the students’ and my own) and the students themselves. There was general agreement that there was at least some creativity present in the results.

My personal opinion is that all six students involved in phases 1 to 3 demonstrated creativity at some point. Amongst much notable work by student 1, perhaps the most memorable was the heartrending melody that appears towards the end of “Homage to the Fireman”, all the more effective when it appears a second time, unaccompanied. The improvisation, unprepared, that he provided for “Mini Forest” (figure 41) was also a high point. Student 2, who regrettably was absent for much of the time, showed considerable potential in the subtle and refined percussion part he contributed to “Little Brown Jug”. Student 3, for whom

composition was a somewhat laborious process demonstrated, just in the closing days of the project, a remarkable capacity for invention in the improvised section of “Fireman Hero”. We hear the frenzied action as the fireman searches the burning building punctuated by the thumps of falling objects and finally; a terrifying climax, with trills in the high register as the building collapses. Student 4 revealed himself to have great creative potential and every step he took marked a significant advance. The shady opening of “Aciprestes Park” leads on to light, with a delightful lilting pentatonic tune, then followed by a more serious development in the following improvised section. A last touch added on the day of the concert was a delicate chirruping effect produced by bouncing the wood of the bow on the string. Student 4 produced a somewhat conventional melody for “Mini Forest” yet revealed creative potential in the highly effective contribution she made to “Recercada I”. Finally, student six produced a melody for “Walking Music” that caught the spirit of that lively and entertaining morning’s outing. In phase four, with the “Kalajunga” project there were a number of fine contributions, especially in the Animal Sounds section and the inspired use of glissandi in the melody mentioned earlier (figure 52) in the Debate section marked another creative high point in the year’s work.

5.2. Future course of action

An overview of the whole research project produces four findings of central central importance in planning the continuation of this teaching project: the usefulness of gap filling as a strategy for teaching creativity, the importance of sequential learning, the importance of environment as a stimulus to creativity, and the need for further investigation into the mind to matter connection – the ability to transfer mental images into action on the instrument. All these factors could potentially be written into project designs.

Gap filling had proved itself to be an effective way of creating projects for stimulating student creativity. A number of gap filling methods had been tested and the approach showed itself to be flexible to a wide variety of creative approaches, musical styles and technical abilities. It was also found useful as a concept. Different approaches to gap filling could also be designed to respond to learning preferences in students, particularly in relation to attitudes towards ambiguity.

The importance of sequential learning had revealed itself in the difficulties some students experienced during the course of the projects. One solution to this problem would be to develop a larger quantity of projects, catering for different abilities and focusing on different areas of development. Three of the pieces used during the research project – “Little Brown Jug”, “Recercadas” and “In the Forest of the Kalajunga” could be included in this collection without alteration. “Three Places in Linda-a-Velha” would require some rethinking in terms of provision of gap filling approaches and “Lines to Time” would benefit from a more substantial outline.

The “Three Places in Linda-a-Velha” project and “In the Forest of the Kalajunga” revealed the potential for building unusual and creatively productive working environments into projects. Further development of gap filling projects should capitalize on this discovery and seek to provide similar and alternative solutions as a feature of projects. One obvious strategy would be further use of story lines.

An important area requiring further investigation, described as the “mind to matter” problem relates to the difficulty many had in realizing musical ideas on the instrument. This difficulty, most evident in the students’ ability to improvise had a profound impact on the efficiency of the creative process. A priority in the construction of a sequential learning approach would be the development of this ability. In this, the double bass clearly presents problems. Approaches adapted specifically to the requirements of the instrument should be sought. Further action research could provide an effective means of pursuing this goal. Some findings from the present investigation could be used as a starting point; use of percussive effects and the sound explorations used in the Animal Sounds section of the “In the Forest of the Kalajunga”.

6. Conclusions

The findings in this investigation were largely consistent with previous research. Student creativity flourished in a working environment that respected difference and encouraged spontaneity – as exemplified by the relaxed and playful atmosphere of the first day's outing in the “Three Places in Linda-a-Velha” project and the “In the Forest of the Kalajunga” project. Intrinsic motivation proved to be of fundamental importance: activities had to be planned with individual students in mind. The difficulties experienced by student 1 during the “Three Places in Linda-a-Velha” project illustrate the negative effects of a poorly selected task when, in the earlier project, better task selection had rapidly yielded good results. That the teacher must be continuously supportive and collaborative became particularly evident during improvisation and the preparation of music for performance: best results were obtained when the function of teacher was combined with that of musician, participating as well as guiding. Hence the substantial improvement from phases one and two (when improvised performances were disappointing) to phase three when impressive results were obtained despite the more challenging nature of the tasks.

Where do my conclusions deviate from those of previous commentators? Many experts on music education favour a strongly constructionist, child-centred approach, and my attempt to follow this strategy did indeed yield positive results during the earliest stages of creative work. However, it was less effective in later stages, particularly during the verification stages of the “Three Places in Linda-a-Velha” project. In some students this approach seemed to generate confusion, with a negative impact on creativity. When the child-centred strategy fails, the teacher may need to fall back on a more structured technique – possibly based on instruction. Another difficulty that has escaped comment in much of the published work is the nature of the instrument employed. Many researchers have used either the human voice or instruments that require little knowledge or skill in order to be played. In this respect the double bass has disadvantages. Its physical nature and the technical skills required present barriers to spontaneity. Group work, widely regarded as a spur to creativity, is not readily achieved with this instrument. From my experience I conclude that, although group work with the double bass is achievable and can be highly rewarding at certain stages in creative activity, it needs to be managed with care. For example, in “Three Places in Linda-a-Velha” some

students were adversely affected by working with others of different playing ability (whether superior or inferior), clearly inhibited by the presence of colleagues.

Potentially the most useful result of this investigation was that it yielded models for future creative work with students. Some models, such as the “Three Places in Linda-a-Velha” project and the pentatonic exercise, clearly require refinement; but the methodologies of the “Recercadas” project and the “Kalajunga” project could be applied without much alteration in two contexts. Firstly, “Little Brown Jug” and “Recercadas” are compatible with normal teaching programmes. By offering an easy transition from text-based learning to creative learning within the span of a single piece they exemplify the “gaps” that Abbs (2003) regards as essential to the learning of artistic skills. An additional benefit is that they yield ensemble pieces that can make an attractive feature of end-of-term concerts.

Secondly, the methodologies are applicable beyond normal teaching. The “Kalajunga” project, which proved effective in the two-day intensive course, could readily be conducted in parallel to normal teaching activities, possibly with one session a week during one term. The “Three Places in Linda-a-Velha” project might likewise be offered as a parallel extra, though it might benefit from a more structured format. Pentatonic improvisation could be incorporated into these or other projects or developed into a project in its own right.

Beyond putting existing findings into practice, an important next step is to develop more teaching material. This is particularly relevant as concerns the “gap filling” work represented by “Little Brown Jug” and “Recercadas”. Clearly this type of work, to be truly effective, requires continuity and should be progressive. Therefore the long-term objective should be to compile a collection of such strategies, encompassing a broad range of genres and technical difficulty. The challenges presented by certain instruments, such as the double bass, also have to be confronted. Approaches that deserve further exploration, hinted at in this investigation, include the use of percussive effects and “animal sounds”.

If, as many experts have declared, creativity deserves higher priority in music school curricula, there are many paths that can be taken. I have suggested only a few. My hope is that, ultimately, this key element of musical training can be included in the assessment of students. But does this represent a threat to teachers who doubt their own capacity to create? My own experience was that the teacher is not obliged to be more creative than the students,

and in certain activities I found myself well behind. What mattered most in these circumstances was the spirit of collaboration. In addition, I had the strong impression that my personal creativity was progressively enhanced by these methods of teaching: new ideas came up with increasing ease, not only within teaching practice, but beyond it. For a teacher, as the years go by and the curriculum threatens to become routine, this aspect of musical education could be a continuous spur to self development and renewal.

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Appendices

Appendix 1

Recercada Primera

Diego Ortiz-
arr. Duncan Fox

1

2

3

9 Student elaborates- improvisation or composition

1

2

3

16

1

2

3

Appendix 2

Little Brown Jug- Work Outline

The material presented can be re-ordered in any way felt appropriate. Numbers of players may also vary.

1

2

Percussive effects produced by tapping the wood or strings of the instrument by any means felt appropriate.

12

12

A

19

19

percussion ad lib.

B

27

27

C

34

34

D Improvisation

42

B^b E^b C7 F7 B^b F7 B^b E^b C7 F7 B^b

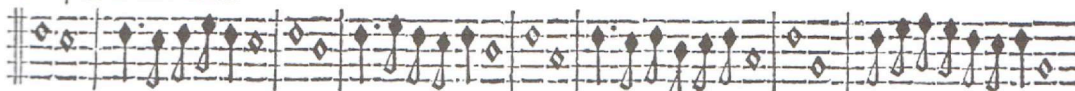
42

Appendix 3



Modo de glosar sobre el Libro.

La primera y mas perfecta es que despues de hauer' hecho el passo, o glosa sobre qualquier punto que se a, y vaya a passar al otro punto que sigue, el postrer punto dela glosa sea e nel mismo que a glosado, como estos exemplos lo muestran.



Como he dicho esta es la mas perfecta manera por que empieza la glosa y acaba e nel mismo punto glosado y la cayda la haze como el mismo canto llano de modo que no puede auer e nullo ninguna imperfection, La segunda manera toma vn poco de mas licentia por que al tiempo que se muda de vn punto a otro no cae como los puntos llanos fino al contrario como estos exemplos lo muestran.



Para baxar la segunda de minima · To go down a second in a minim · Eine Sekunde abwärts mit einer Minima



Appendix 4

Recercada I - Worksheet

The students' own versions of the Recercada can be written in stave 1 or improvised.
Numbers between 2 and 4 players can be involved

The musical score is organized into three systems, each consisting of three staves. The first system is labeled with the number '1' at the beginning. The second system is labeled with the number '6' at the beginning. The third system is labeled with the number '11' at the beginning. Each system contains three staves of music. The first staff in each system contains whole rests. The second and third staves contain various musical notations including whole notes, half notes, and slurs.

Appendix 5

Folie d'Espagne - Worksheet

Students' own versions of the Folie can be written on staff 1 or improvised.
Between two and four players can participate. Percussive effects may also be used.

1

2

3

6

12

Appendix 6

Virgen Dina d'Honor - worksheet

The student's own version of the bass line can be improvised or written in staff 1.
Repetitions should be added as thought appropriate.

The first system of the musical score consists of three staves. Staff 1 is a bass clef staff with a whole rest in every measure. Staff 2 is a bass clef staff with a melodic line in 2/4 time, starting on G2 and ending on E2. Staff 3 is a grand staff (treble and bass clefs) with a piano accompaniment. The key signature has one flat (Bb) and the time signature is 2/4. The piece concludes with a double bar line and repeat dots.

The second system of the musical score consists of three staves. Staff 1 is a bass clef staff with a whole rest in every measure. Staff 2 is a bass clef staff with a melodic line in 3/4 time, starting on G2 and ending on E2. Staff 3 is a grand staff (treble and bass clefs) with a piano accompaniment. The key signature has one flat (Bb) and the time signature is 3/4. The piece concludes with a double bar line and repeat dots.

Appendix 7

Presentation to accompany The Origins of the Double Bass

Os primeiros instrumentos de corda tocados com arco foram provavelmente desenvolvidos no Médio Oriente. Tinham uma caixa de ressonância feita de materiais vários, como casca de côco (gourd), ou escavada num pedaço de madeira. A tampa da caixa de ressonância, em vez de madeira, era de pele. Normalmente, não havia mais do que 3 cordas. As cordas eram feitas de crinas de cavalo, tripa ou, mais tarde, seda. O instrumento era tocado numa posição vertical, às vezes com um espigão. Instrumentos deste tipo ainda são usados em muitos países, desde o Médio Oriente, Ásia Central, até à China e Indonésia, e têm nomes como Rebab, Rabab e Rubab.



A partir do século VIII, as nações europeias entraram em contacto com estes instrumentos, primeiro por causa da ocupação pelos mouros de territórios no sul de Itália e na Península Ibérica e, depois, por causa das cruzadas. Foi na Península Ibérica, no território chamado Andaluzia, que este contacto entre culturas foi mais produtivo. Nesta zona, desenvolveu-se uma cultura chamada mouro-andaluzia, produto de influências de várias culturas e tradições. Mesmo os territórios Cristãos na Península foram fortemente influenciados pela cultura andaluza, como podemos ver nas Cantigas de Santa Maria, um compêncio de músicas feito sob os auspícios de Afonso X, Rei de Leão e Castela no século XII. Nas imagens podemos ver instrumentos tipicamente andaluzes a serem tocados como, no caso desta imagem, o oud (mais tarde o laud) e o rebab (mais tarde o rebec).



A partir de meados do século IX, com a expulsão gradual dos mouros, houve um grande esforço para eliminar a cultura associada aos mouros. Características do rabab e oud foram combinadas num novo instrumento, o vilhela, que existiu sob duas formas: Vihuelo de mano e Vihuelo de arco.

Como o tampo harmónico era feito de madeira em vez de pele, era possível pôr mais cordas e, já no fim do século IX, surgiram instrumentos com cinco ou até seis cordas.

Exemplo: este quadro pintado em Valencia, 1475.



Em 1492, o novo Papa, Rodrigo Borja de Valencia, levou com ele um grupo de músicos para Roma. Um observador descreveu: "Tocaram Vihuelas de arco quase tão grande como eu e produziram um som doce e delicado."

O que tocavam nestes instrumentos grandes?

Sabemos que estes instrumentos eram utilizados para tocar musica vocal, às vezes a acompanhar vozes e às vezes em versões só para instrumentos. Em ambos os casos, os músicos faziam versões próprias da linha vocal numa prática chamada "glozar", que era uma maneira de tornar a linha vocal mais elaborada e mais rica com notas adicionais.

1. Virgen Dina d'Honor

O Francisco vai demonstrar esta prática com a sua própria versão de uma música publicada nesse mesmo ano de 1492.

60 anos mais tarde

(Um baile na Corte de Marguerite de Valois, segunda metade do séc. XVI)



O que poderiam ter tocado num baile como este? Provavelmente haveria muitas danças com melodias conhecidas. Pelo aspecto das figuras na imagem, é considerado que estão a dançar uma dança chamada “Volta”. Além destas danças com melodias conhecidas, é provável que houvesse um forte conteúdo de música improvisada (não se vêem partituras na imagem).

Para fazer uma aproximação a esta forma de fazer música, decidimos utilizar um livro publicado em 1553, o “Trattado de Glosas” de Diego Ortiz. Este livro explica como se pode criar uma peça tendo como base uma simples progressão de notas ou harmonias. Na próxima peça, escolhemos uma sequência sugerida no livro de Ortiz para compor uma “Recercada” própria, utilizando algumas das técnicas de composição sugeridas no livro.



2. Recercada I

Sessenta anos mais tarde, agora na Alemanha, podemos ver um grupo ou “consort” de violas da gamba composto por uma família, tendo cada um dos membros um instrumento de um tamanho apropriado, com o patriarca, o Duque Augusto de Braunschweig, a tocar o contraabaixo.



No século XVI, a prática da improvisação ou composição era comum entre músicos, mesmo no caso de se tratarem de músicos amadores. Nesta imagem estão a tocar com partituras, mas se tivessem desejado tocar uma peça mais livre baseada em improvisação, uma das possibilidades seria uma "Folie d'Espagne". Esta é uma sequência de acordes, conhecida do Sul ao Norte da Europa, e que era usada da mesma maneira que uma sequência de blues no jazz - era uma base que toda gente conhecia e que era utilizada para criar novas músicas, compostas ou improvisadas.

Esta versão que se segue é, mais uma vez, fruto do trabalho criativo dos alunos.

3. Folie D'Espagne

Selma e Salaverde - exemplo de violone

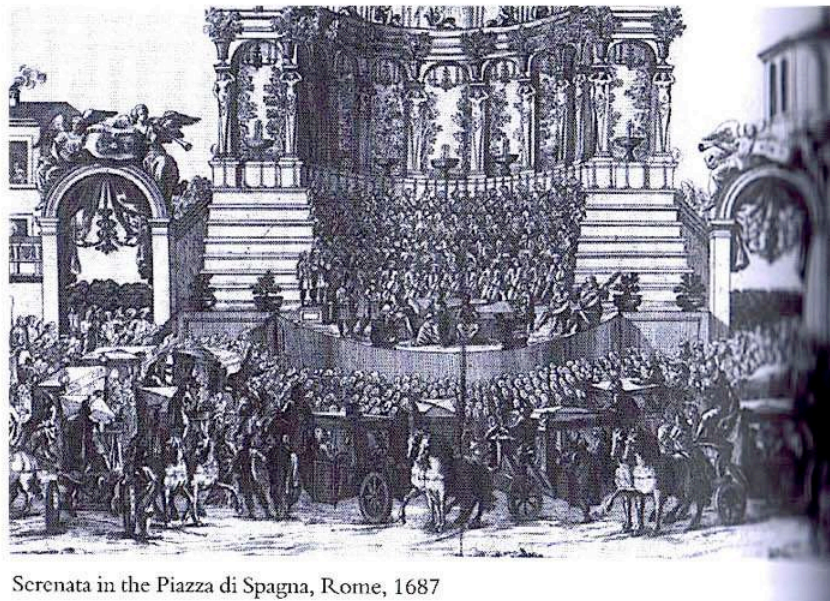
50 anos mais tarde, fim do séc. XVII, Inglaterra



Durante a história do desenvolvimento do contrabaixo, e mesmo nos instrumentos construídos hoje em dia, podemos ver características do passado distante do instrumento, da vilhuela de arco e viola da gamba (por exemplo, nas costas planas, etc.) e também, às vezes, características que vêm da família dos violinos (costas redondas, cantos do violino). O instrumento na imagem, pintada na Inglaterra pelo pintor Peter Lely, tem claramente características do violino. Na altura, era chamado "basse de violon" ou violino baixo.

John Eccles era contemporâneo de Peter Lely e trabalhou para o mesmo patrão, o Rei de Inglaterra. O Diogo vai tocar um Minuet deste compositor, uma dança aristocrática de origem Francesa, muito apreciada na Corte Real nesta altura.

4. John Eccles - Minuet



Serenata in the Piazza di Spagna, Rome, 1687

Foi na Itália que os maiores instrumentos da família das cordas, naquela altura chamados “violones”, do tamanho do nosso contrabaixo moderno, foram construídos para serem tocados em espaços grandes, como palácios e igrejas, ou ao ar livre. O som destes instrumentos tornou a sonoridade de uma orquestra ou coro mais poderosa e nobre. (Exemplo: um violone em ré, cópia de um instrumento de Nicolo Amati construído em c.1660.)

Um dos pioneiros na utilização de orquestras para concertos públicos foi Arcangelo Corelli. Nesta imagem, podemos ver um concerto que ele organizou e dirigiu em 1687 em Roma. (Conseguem ver os violones na fila da frente?)

Nesta altura, ainda era normal um músico ser não só instrumentista mas também compositor. Entre os músicos contratados para tocar na orquestra de Corelli estava o célebre violonista e compositor, Giovanni Lorenzo Lulier, também conhecido como “Giovannino del Violone”. As obras de Lulier foram frequentemente tocadas juntamente com as obras de Corelli num mesmo concerto.

A Ana vai tocar um andamento de uma sonata que Lulier escreveu para violone.

5. Giovannino del Violone - Adagio



Cinquenta anos mais tarde, no Palácio de Esterhazy, já no período chamado “Clássico”, o instrumento mais grave na orquestra de Haydn era o “violone de Viena” (temos um exemplo aqui na sala). Muitos concertos e obras de música de câmara foram escritos para este instrumento (Vanhal, Dittersdorf, etc.). O próprio Haydn escreveu um concerto que infelizmente desapareceu - esperemos que um dia seja reencontrado...

A orquestra de Haydn era pequena, como a orquestra na imagem, mas contou com a presença de músicos de altíssima qualidade. Haydn frequentemente incluía solos nas suas sinfonias para revelar as qualidades dos seus músicos, como, por exemplo, este solo da Sinfonia nº31, tocado pela Maria.

6. Haydn - Solo



Cinquenta anos mais tarde, no início do século XVIII, os instrumentos contrabaixo deixaram de ter trastos e o número de cordas foi reduzido para três ou quatro. Nesta altura, o grande virtuoso no instrumento era Domenico Dragonetti, que trabalhou como músico de orquestra, solista e também como compositor.

O instrumento que utilizou era, com excepção das cordas de tripa, o instrumento que conhecemos hoje em dia, e tal como os nossos instrumentos, mostra, na sua forma e técnica de tocar, as suas origens no passado (breve conversa sobre arcos, o arco Dragonetti, arco Francês, etc.).

O Luís e a Maria vão tocar uma peça que Dragonetti tocou frequentemente com o seu amigo e colega de estante na orquestra, o violoncelista Robert Lindley. É um arranjo de uma sonata para violino de Corelli, para dois contrabaixos.

7. Dragonetti/Corelli - Dueto

Finalmente eis-nos chegados ao início do século XXI. O nosso contrabaixo moderno consiste numa rica mistura de elementos que vêm dos tempos pré-históricos até aos tempos mais recentes.

Para terminar, o nosso compositor em residência, o Tasso, vai tocar uma peça da sua própria autoria chamada “Century”, que tem como base uma sequência de notas que vem quase do início desta nossa história, há 500 anos atrás. Podemos dizer que esta peça, tal como o nosso instrumento actual, representa um presente baseado e enriquecido num passado longo e complexo.

8. Century

Appendix 8

Three Places in Linda-a-Velha - Score used in concert

Walking Music

Musical score for 'Walking Music' in bass clef, 2/4 time. The score consists of two staves. The first system (measures 1-8) shows the right hand with rests and a melodic phrase starting at measure 5, and the left hand with a steady eighth-note accompaniment. The second system (measures 9-14) features a more active right hand with sixteenth-note runs and a melodic line, while the left hand continues its accompaniment. The third system (measures 15-22) shows the right hand with a melodic line and the left hand with a steady accompaniment. The fourth system (measures 23-30) returns to the first system's structure with rests in the right hand and a melodic phrase starting at measure 25.

Aciprestes Park

Musical score for 'Aciprestes Park' in bass clef, 2/4 time. The score consists of two staves. The right hand (top staff) plays a melodic line with eighth and sixteenth notes, including some grace notes. The left hand (bottom staff) plays a steady accompaniment of eighth notes with a consistent interval of a fourth between the two hands.

40

Musical notation for measures 40-49. The top staff contains a melodic line with eighth and quarter notes. The bottom staff contains a bass line with eighth notes and chords.

50

Improvisation

Musical notation for measures 50-60. The top staff contains a melodic line with eighth and quarter notes. The bottom staff contains a bass line with eighth notes and chords.

61

Musical notation for measures 61-70. The top staff contains a melodic line with eighth and quarter notes, including a first ending bracket. The bottom staff contains a bass line with eighth notes and chords.

71

2.

Walking Music

Musical notation for measures 71-80. The top staff contains a melodic line with eighth and quarter notes. The bottom staff contains a bass line with eighth notes and chords.

81

Improvisation

Improvisation

Musical notation for measures 81-88. The top staff contains a melodic line with eighth and quarter notes. The bottom staff contains a bass line with eighth notes and chords.

89

Mini Forest

Improvisation

Musical notation for measures 89-98. The top staff contains a melodic line with eighth and quarter notes. The bottom staff contains a bass line with eighth notes and chords.

103

Musical notation for measures 103-112. The top staff is a bass clef with eighth and sixteenth notes. The bottom staff is a bass clef with whole notes.

113

Improvisation

Musical notation for measures 113-126. The top staff is a bass clef with eighth notes and rests. The bottom staff is a bass clef with whole notes.

127

Musical notation for measures 127-136. The top staff is a bass clef with eighth notes and chords. The bottom staff is a bass clef with whole notes.

137

Walking Music

Musical notation for measures 137-144. The top staff is a bass clef with eighth notes and rests. The bottom staff is a bass clef with eighth notes.

145

Musical notation for measures 145-154. The top staff is a bass clef with sixteenth notes and chords. The bottom staff is a bass clef with eighth notes.

155

Fireman Hero

Musical notation for measures 155-164. The top staff is a bass clef with whole notes and rests. The bottom staff is a treble clef with eighth notes.

Appendix 9

Christmas Bass- second version

Student 1

pizz.

Cb.

Pno.

arco

Cb.

Pno.

Cb.

Pno.

pizz. *rit.*

Cb.

Pno.

Century

Student 1

1 *p* F F E^b F *mp* Gm

10 *f* Dm Em Am Dm C F Dm C *p*

18 *f* Gm F C C7 B^b A^b Gm C^m Am F Gm F *p*

30 *mf* C7 Dm C B^b F *mf* Gm Am Dm

Detailed description: The image shows a musical score for a piece titled 'Century' by Student 1. It consists of two systems of music, each with a treble clef staff (labeled 1 and 2) and a bass clef staff. The key signature has one flat (B-flat). The first system (measures 1-9) features a treble staff with eighth-note patterns and a bass staff with whole notes. Chords are indicated below the treble staff: *p* F, F, E^b, F, and *mp* Gm. The second system (measures 10-17) has a treble staff with eighth-note patterns and a bass staff with whole notes. Chords are: Dm, *f* Em, Am, Dm, C, F, Dm, and *p* C. The third system (measures 18-29) has a treble staff with eighth-note patterns and a bass staff with whole notes. Chords are: Gm, *f* F, C, C7, B^b, A^b, Gm, C^m, *p* Am, F, Gm, and F. The fourth system (measures 30-37) has a treble staff with eighth-note patterns and a bass staff with whole notes. Chords are: *mf* C7, Dm, C, B^b, *mf* F, Gm, Am, and Dm. A triplet of eighth notes is marked with a '3' and a slur over the final measure of the system.

Homage to the Fireman (for 2 double basses)

Student 1

179 *pizz.*

pp

192

202 *arco* *mf* *pizz.* *p*

213 *arco* *f* *mf*

225 *p*

236 *f* *fp* *pizz.* *ppp* *arco*

f *fp*

Appendix 10

Recercadas- Student 1 (improvisation)

The image displays a musical score for a piece titled "Recercadas- Student 1 (improvisation)". The score is written for two staves, both in bass clef, with a key signature of one flat (B-flat) and a time signature of 3/4. The music is organized into four systems, each starting with a measure number: 1, 9, 17, and 26. The notation includes various rhythmic values such as quarter notes, eighth notes, and sixteenth notes, along with rests and accidentals. The first system (measures 1-8) shows a melodic line in the upper staff and a harmonic accompaniment in the lower staff. The second system (measures 9-16) continues the melodic development with some slurs. The third system (measures 17-25) features more complex rhythmic patterns in the upper staff. The fourth system (measures 26-33) concludes the piece with a final cadence in both staves.

Recercada I- students 4, 5 and 6 (composed)

Student 4

1

2

Student 5

14

3

Student 6

25

3

39

3

Recercadas - Student 3 (Composed)

33

Two staves of music. The top staff is in bass clef with a key signature of two flats (B-flat and E-flat). It contains six measures of music with eighth and sixteenth notes, some beamed together. The bottom staff is also in bass clef with the same key signature and contains six measures of music with dotted half notes.

39

Two staves of music. The top staff is in bass clef with a key signature of two flats. It contains five measures of music with eighth and sixteenth notes, some beamed together. The bottom staff is also in bass clef with the same key signature and contains five measures of music with dotted half notes.

44

Two staves of music. The top staff is in bass clef with a key signature of two flats. It contains six measures of music with eighth and sixteenth notes, some beamed together. The bottom staff is also in bass clef with the same key signature and contains six measures of music with dotted half notes.

51

Two staves of music. The top staff is in bass clef with a key signature of two flats. It contains six measures of music with eighth and sixteenth notes, some beamed together. The bottom staff is also in bass clef with the same key signature and contains six measures of music with dotted half notes.

58

Two staves of music. The top staff is in bass clef with a key signature of two flats. It contains six measures of music with eighth and sixteenth notes, some beamed together. The bottom staff is also in bass clef with the same key signature and contains six measures of music with dotted half notes.

Appendix 11

Little Brown Jug- Transcription of concert performance

Student 3

Student 2

Teacher

15

Fine

A

15

15

B

27

27

27

Little Brown Jug

Student 3- Improvisation

39

39

B

53

53

Da capo
al Fine

70

70

Appendix 12

Na Floresta dos Kalajunga

A passagem do tempo na floresta...

Musical notation for the first passage, featuring a bass line and a drum line.

pode ser leve ou pesado...

Musical notation for the second passage, featuring a bass line and a drum line.

p *f* *p* etc...

Aqui estão os Kalajunga...

solo

To - dos Fe - ro - zes Nos so - mos ka - la - jun - ga

tutti

To - dos Fe - ro - zes Nos so - mos Ka - la - jun - ga

Agora, a passagem do tempo novamente, mas agora, junta-se o som dos Kalajunga a cominciar com "talking drums" (os alunos vão tocar dois compassos cada um a trocar de ideias rítmicas entre eles)

Musical notation for the third passage, featuring a bass line and a drum line.

Novamente o canto dos Kalajunga..

solo

To - dos Fe - ro - zes Nos so - mos ka - la - jun - ga

tutti

To - dos Fe - ro - zes Nos so - mos Ka - la - jun - ga

A passagem do tempo com sons naturais de floresta: animais pássaros, chuva, tempestades etc.

Musical notation for the fourth passage, featuring a bass line and a drum line.

Aparece uma nova versão do canto dos Kalajunga

solo

To - dos Fe - ro - zes Nos so - mos ka - la - jun - ga

tutti

To - dos Fe - ro - zes Nos so - mos Ka - la - jun - ga

Debate- Recercadas

Cada aluno vai criar uma melodia escolhendo entre as notas disponíveis e (no caso de haver vontade) a criar passagens de notas para ligar as notas escolhidos. O aparecimento das notas novas pode ser adiado para criar suspenções.

(Podem utilizar Fá sostenido em vez de Fá natural e Dó sostenido em vez de Dá ntural)

Resolução

Os alunos vão ficar em quatro grupos. Cada grupo vai compor dois compassos duma melodia utilizando as notas indicadas . Depois, vai-se juntar tudo para criar uma linha melodica (optional)

Nova versão do canto dos Kalajunga

solo
To - dos Fe - ro - zes Nós so - mos ka - la - jun - ga

tutti
To - dos Fe - ro - zes Nós so - mos Ka - la - jun - ga

Mais uma passagem do tempo..

FIM

A seguir dum Mi grave, os alunos vão entrar um a um, escolhendo notas para criar um Acorde