



7th International Conference on Intercultural Education “Education, Health and ICT for a Transcultural World”, EDUHEM 2016, 15-17 June 2016, Almeria, Spain

Evaluating attention, socioemotional factors and anxiety in secondary school students in Murcia (Spain) using the BAPNE® Method. Research protocol

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Abstract

This article aims to set out the research protocol being used at IES Diego Tortosa, a secondary school in Cieza in the region of Murcia (Spain), in a project looking at attention and socioemotional factors. The project will be completed in early 2017. For this research project, a range of tests approved in Spain are being used. These include: self-concept tests (AF-5), social skills tests (EHS), psychometric testing (SOCIOMET), the STAI anxiety test, and the D2 test to assess sustained attention. The aim is to demonstrate the benefits of the BAPNE® Method as a teaching and therapeutic resource in the secondary classroom.

Body percussion is an excellent resource for secondary education if the BAPNE® Method is used, because this method stimulates the different types of attention (Sohlberg & Mateer, 1987,1989). The methodology used makes students work in groups in a cooperative manner, without hierarchies, which leads to an improvement in their behaviour and motivation. This form of working can also have positive effects on their achievement in other subjects, leading them to meet objectives and to achieve more.

We aim to demonstrate a different form of education in which the student is the protagonist of their own development. BAPNE® helps to build a form of egalitarian education that improves the classroom atmosphere. We think a change in education is required in order to meet the needs of the young people of 21st century. As such, we will use the activities of the BAPNE® Method in the music classroom for specific reasons, sequencing them precisely.

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Peer-review under responsibility of the organizing committee of EDUHEM 2016.

Keywords: BAPNE®, neuro-motor skills, body percussion and group work

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1. Introduction

The aim of this investigation is to evaluate attentional and socioemotional factors in young people in a secondary school in order to improve levels of social wellbeing and social cohesion using specific activities sequenced appropriately.

In order to achieve effective development in the students and a positive atmosphere in the classroom, we believe that group work will improve behaviour, self-esteem, decision making and empathy between them. By performing the activities in the method, they will be able to learn important values and acquire important social skills in order to build themselves into better young people who can cooperate when working with others.

Young people are faced with different social demands, for which they are often not prepared. They need to feel accepted by their classmates and to feel that they fit in in their school, and also able to develop their own personalities in an environment that allows them to grow as a person. A motivated student who feels at ease with his or her classmates will behave appropriately, will develop emotions, will feel part of a group, and will make academic progress. Sharing responsibilities will allow development in certain psychological aspects and there will be more tolerance for diversity. We are interested in students' wellbeing and cognitive development, as well as avoiding them dropping out of school or failing as a result of difficult or bad relationships between classmates (García-Bacete & González-Álvarez, 2010).

The teacher will mix with his or her class of students a lot more when carrying out body percussion, which once again means that a favourable classroom atmosphere can be created, one in which there are no hierarchies. The level of stimulation amongst the students will be measured using approved tests. The tests which they have undertaken measure factors such as attention, social skills, self-concept, anxiety and relationships with students within the group. These are all very important issues within a group of young people and they can show us the initial state of the group and thus how they have change by carrying out the BAPNE® Method activities.

2. State of the Issue

The research will be carried out in IES Diego Tortosa, a secondary school in Cieza, in the region of Murcia (Spain). Cieza is a town in the north of the region, and is the sixth biggest town with a population of around 35,000.

For this investigation, we have carried out initial research using a variety of meta-search engines such as Web of Science, JSTOR, RILM, Dialnet, Scopus and ERIC. We looked specifically into executive functions and attention in relation to rhythm and body percussion. After in-depth research, we can point out that there are very few studies which measure levels of attention in terms of these factors. Nevertheless, it is important to highlight the publications on dance and executive functions and the importance of Handclapping Songs (Brodsky & Sulkin, 2011). It is for this reason that we wish to bring more data to this line of investigation by means of a quantitative study which measures both aspects related to attention as well as the socioemotional climate within the classroom.

BAPNE® is a method of cognitive, socioemotional, psychomotor and neuro-rehabilitative stimulation, created by Dr Javier Romero Naranjo based on neuro-motor skills. The activities in the method aim to develop processes of attention, concentration and memory, as well as cooperative learning. For this reason, the methodology of BAPNE® helps to foster many necessary values amongst students who might be lacking in them, need to fine tune them, or who simply do not consider them important.

The key tool in these activities is body percussion, which is the art of hitting one's body and thus producing different sounds, typically for therapeutic, anthropological or social reasons. Therefore, the body is used – in all meanings of the word – as an acoustic, rhythmic, timbral and dynamic instrument, and is linked to voice, movement and dance.

3. Method

The investigation is being carried out within a regular Music class for students in a test group in their third year of secondary school. The class consists of 29 students: 19 boys and 10 girls. There are 2 South American pupils, one Bulgarian boy and one Moroccan girl. Two students have studied Music previously, there are 5 students who are

repeating the school year, and there are 3 students with specific educational needs. The control group is also in their third year of secondary school and this group will not carry out BAPNE® method activities. This group consists of 26 students: 14 boys and 12 girls. There are 2 South American pupils, a Ukrainian girl and a Moroccan girl. One student has studied Music previously, there are 3 students who are repeating the school year, and there are 2 students with specific educational needs. The pupils are all aged between 14 and 16. IES Diego Tortosa in Cieza, Murcia (Spain) is a school with more than 1000 pupils in secondary and further education. The students are, in general, from medium-low income families. The school has been open for over fifty years and is found in a quiet area in the centre of the town. It is a centre with a generally good atmosphere where there are no major sources of conflict.

Firstly, we had to ask permission from the head teacher in order to be allowed to carry out tests and post-tests. We then chose a test group and another control group in the third year. After choosing the groups, we produced a consent form which we gave to students to hand to their parents. We told students that they would sit some tests in January, and then a post-test in May, and that we would be measuring certain variables related to our area of educational interest. We asked them to inform their parents and, if they had no issue with the research, to ask them to sign the consent form to allow us to carry out the investigation. We had no problems obtaining consent from parents, and thus went on to carry out the first tests in the first week of January. The post-tests were carried out in mid-May. The period between the tests and post-test was thus 19 weeks.

The tests that we carried out were: AF-5, D2, SOCIOMET, STAI and EHS. These tests are approved in Spain and were carried out strictly observing the specific rules as to their use.

The AF-5 test is a self-concept test which we sat together. It aims to evaluate how students perceive themselves in terms of social, academic, emotional, familiar and physical factors. Self-concept is very important for psychosocial wellbeing in various fields of Psychology (Stevens, 1996). Each individual has self-concept, which consists of multiple facets. These facets are themselves formed of some aspects which are stable, and some which are changeable and malleable. An individual judges him or herself according to qualities which come from their own personal experience and which are considered either positive or negative. Self-esteem is the conclusion of this process of self-evaluation. We can define self-concept as “the complete thoughts and feelings of a person in reference to self as an object” (Rosenberg, 1979).

The D2 test, from TEA, measures several aspects of selective attention and concentration. We also sat this test together. Each one of the items in the test had a time limit of 20 seconds in which to record a score. It measures processing speed, successful following of instructions and performance on a visual discrimination task.

The GREI Group is the creator of the sociometric questionnaire SOCIOMET. The test consists of four questions. In questions 1 and 2, students have to choose their best friends within the group, as well as those who they do not have relationships with, or with whom they have problems for various reasons. In questions 3 and 4, the students need to think about who will have chosen them as friends, and who will have selected them as having a bad relationship with them. Their responses can be justified or not, and for each question, up to three classmates can be chosen.

We used a questionnaire called STAI: State-Trait Anxiety Inventor, published by TEA, which aims to measure anxiety both as a state and as a trait. In modern society, where social demands are ever greater, the terms ‘anxiety’ and ‘stress’ are widespread, including in the lives of young people. STAI is one of the first tests which has been approved and used by professionals and researchers into mental health (Bermúdez, 1978a, 1978b) which has also been used in the field of education.

The state of anxiety ‘A/S’ is conceptualised as a state or transitory emotional condition in the human organism, which is characterised by subjective feelings of tension and apprehension, of which the individual is aware. It is also characterised by hyperactivity in the autonomous nervous system. It can vary with time and fluctuate in intensity. The trait of anxiety ‘A/T’ is a propensity for anxiety, where different subjects have different tendencies to perceive situations as threatening and to consequently raise their state of anxiety (A/S).

The questionnaire consists of two sections – ‘A/S’ and ‘A/T’ – with different questions which students score between 0 and 3. The results will give us information about stressful situations between our students. Students are told that this is a self-evaluation questionnaire, in order to avoid adding extra stress. The ‘A/S’ section will focus on the experimental group, asking them to respond thinking about how they felt when they were performing body percussion

with the BAPNE® Method. This is because this part of the test allows the researcher to place the student in the situation he or she deems most appropriate.

We then finally carried out the EHS test, which is a questionnaire into the level of social skills, produced by TEA. The aim is to evaluate the whole group at the same time in terms of the students' level of assertiveness and social skills. It has 33 items, each with 4 alternative answers, from "I do not identify with this" to "Strongly agree". The higher the score, the higher the individual's social skills and assertiveness in different contexts. It measures six factors: self-expression, defending one's rights, expressing anger, non-conformity, saying no, making requests and interacting with the opposite sex.

The idea is to continue with the research next academic year by carrying out further post-tests to continue measuring the degree of stimulation that students experience whilst performing body percussion with the BAPNE® Method. The teachers of these students at this time will be able to give us clearer data as to what is happening at a neuronal and motor level amongst these young people.

Throughout the research period, we carried out activities from the BAPNE® Method with the test group during 50 minute sessions on Thursdays and Fridays.

4. Conclusions

The aim of this investigation is to measure the impact of the BAPNE® Method on stimulating attention in secondary school students and fostering socioemotional relationships between them. For this reason, both music and body percussion have been used with students. During the course of the investigation, we have witnessed a fair degree of improvement (in terms of observed results), but we need measurable quantitative results to demonstrate the effectiveness of this methodology. It is for this reason that BAPNE® will contribute importantly to improving students' wellbeing, self-esteem, and motivation, and thus group cohesion.

For several weeks, we carried out activities with the students in the music classroom. After a while, we could see that the group was improving, with a more positive socioemotional climate in the classroom, which had positive knock-on effects in other subjects in terms of attention levels. A more positive environment was noticed, in which students showed their empathy with the teacher and in which they enjoyed themselves. We observed that the students were changing significantly in terms of their attention and motor coordination, and for that reason we decided to measure scientifically what was occurring within students when they regularly practise body percussion.

BAPNE® is not a musical method, but it does use music and rhythm, alongside the body in order to transmit and manage cognitive and socioemotional aspects. To this end, pupils will use melodies, psychomotor texts and rhymes alongside body percussion exercises. Many different musical skills are developed by practising the BAPNE® Method, but what is most interesting is that pupils internalise the techniques before learning about their theoretical significance.

Within the classroom, students work in circles, in concentric circles, in pairs, in small groups, or in two rows facing each other. This way of working together is ideal to foster a group mentality and to make students feel integrated in the classroom. According to Lowen's theory, becoming part of a group is based on eye contact, the hands and the feet (Lowen, 1985).

In the background, this method develops and stimulates a wide variety of values, because the class dynamic favours equality, empathy, respect, tolerance and responsibility, since the work is non-hierarchical. The activities will allow students to connect with their own identity, and for us to use music and rhythms which they identify with more (Barcewicz, 2011).

Attention and concentration are two of the main aims of the BAPNE® methodology and they are both stimulated through continuous practice of body percussion. This is because carrying out the activities demands high levels of attention from the students. The exercises will improve their attention (Romero et al. 2014), and we will offer them a new tool which will allow them to individually develop on many levels. It has been shown in various studies that improved attention has a positive impact on academic results and that low levels of attention damage academic achievement, lead to poorer behaviour and less effort (Osborne, Kenny & Cooksey, 2007). We must understand that attention is closely linked to learning and affective and emotional development (León, 2008). It is also important to

understand that helping to build students' executive functions will impact upon their self-control, motivation, and control of their behaviour.

In the secondary classroom, students who exhibit cognitive development which is typical for their age have to work together with other pupils who have different educational needs. These students often show problems with laterality and concentration, as well as difficulties with motor coordination. BAPNE® can be used as an excellent resource to help these students to fit into the group and to cooperatively improve their self-esteem and motivation, as well as to develop motor and attentional skills, where they tend to have many difficulties (Romero-Naranjo, 2013). In the test group, we have worked with three pupils with specific education needs who have had the opportunity to work with the rest of the group. They have found the classes to be a space of respect, where they have noticed their classmates' support, and a climate of equality, which they often do not find in their school, or indeed in wider society.

The results of the current research will be useful in the future as the levels of stimulation have been very significant. As such, we will be able to direct the focus of future research projects along those lines that we find most interesting.

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