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# Teaching by art therapy

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#### **Abstract**

Combining design with music and photography can unbound imagination, improve memory and thinking skills and achieve specific school competences. Knowing and using groups of letters (ce, ci, ge, gi, che, chi, ghe, ghi) is a touchstone for primary students in Romania. We applied a combined art therapy program (photography, music, drawing) to a group of 2<sup>nd</sup> grade students (N = 36, average age = 9.25 years) out of which nine pupils had SEN, with the aim to improve the recognition of these groups of letters. A knowledge test designed for the 2<sup>nd</sup> grade was used pre and post intervention. We assumed that by using the combined arts we shall improve the knowledge and use of groups of letters and increase the integration of pupils with SEN. As expected, we have observed an increase in the qualifiers from 44.5% to 89%, for all children, including those with SEN. These pilot findings encourage the wider use of diverse teaching materials (music, film) for a variety of topics, e.g. mathematical sciences.

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## 1. Introduction

We have researched the effects of teaching through photography, music and drawing on learning. There are a few reasons why introducing these activities may improve classroom learning: (1) they break monotony and therefore increase alertness, (2) they allow children to express and choose their preferred learning medium, thus increasing their interest and (3) they facilitate memorisation by using multi-modal material. We aimed at improving children's acquisition of difficult grapheme-phoneme correspondences in Romanian. Learning how to read « ce », « ci », « ge », « gi », « che », « chi », « ghe », « ghi » represents a significant reading milestone for primary school students in Romania. Participants were a group of 9 years old children, in their second grade, including a significant percentage (25%) of students with special educational needs (SEN).

Romanian language is a Latin language (like Italian, French, etc.) and it's orthography is transparent – to each grapheme corresponds one and only one phoneme. There are nonetheless a few exceptions, a few combinations of letters that we read a bit different:

- · "ce" and "ci" we read as the Italians does: "ce" = che, "ci" = chi. Example: cer (sky) = cher while "che" and
- "chi" we read as: "che" = ke and "chi" = ki or qui. Example: chel (bold) = kel.
- · "ge" and "gi" we read this way: "ge" = dje, "gi" = dji. Example: gem (gem) = djem.

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· "ghe" and "ghi". Those are more difficult to explain. Example: ghem (game) = game, ghitara (guitar)=guitara.

The reading of this group of letters is taught in first grade, during four of the 34 weeks of the academic year. As proof of their difficulty, we noticed that by the second semester of second grade some of the students were still not able to read or write correctly these groups of letters within words and sentences. Our current research constitutes a pilot study that wishes to prove that combining the usual teaching methodology practiced by the educator with novel educational means introduced by the support teacher, one can improve learning.

Whether called art-psychotherapy or therapy through art (Preda, 2003; Rubin, 2009), the purpose of art-therapy is to create a state of well-being through decreasing anxiety. Combined with therapy, art leads to art-therapy as a psychotherapeutic methodology that « serves one to know one-self, to face difficulties in the daily life and to overcome these difficulties » (Preda, 2003). The usage of multiple arts for therapy is also beneficial because it allows for a personalized artistic expression. The fear of rejection or judgment can be overcome if control is weakened and creativity unchained while focus is retained. When the player is captivated with the game, (Gadamer, 1994), the creative process arises by itself and the player, especially the SEN student, is included socially and academically. While memorizing, one reads, sees, hears, says, does something, classifies, orders, ranks, etc., actions that will affect differently the memorization capacity. Research has shown that we remember 10% of what we read, 20% of what we hear, 30% of what we see, 50% of what we see and hear at the same time, 81% of what we say, 90% of what we say and do at the same time (Zlate, 2009). The combination of reading and hearing with vision and language increases what the student memorizes and thus increases his knowledge.

The art-mediated curriculum was created for children and adolescents whose emotional and behavioural problems prevented them from benefiting from mainstream educative methods (Rubin, 2010). This curriculum is meant to be used along to more traditional methods and not at their place (Henley, 1997) and has already been used with children with emotional problem for increasing self-esteem (Blank, 2010). Photography, easy to learn and not requiring special abilities, has been used with children with learning difficulties (Tierney, www.teach-nology.com) and communication difficulties (Liebmann, 1990 in Freilich &Shechtman, 2010).

In Romania children with learning disabilities (LD) are integrated in mainstream education with the help of support teachers (Gliga & Popa, 2010; Borca, 2010). Support teachers have the freedom to use alternative educational methods alongside traditional methods. This research aims at exploring how successful for learning are art-based educational methods, for typically developing and special needs children. Also, we aimed at creating a training program that is easy to implement and evaluate.

## 2. Methodology

**Participants:** Students from an integrative school in Bucharest (N=36, average age = 9,25 years). 75% of these students are Rroma students with low SES - family income smaller than minimum income per family in Romania. Nine students have SEN (e.g. learning disabilities, speech and language disorders: dyslexia, dyscalculia, dislalia; ADHD, mild mental disability)

**Intervention:** The educational materials for the groups of letters were created over four weeks and they required photography, drawing and learning of a song about the groups of letters. The photos and drawings were of objects familiar to students (e.g. from the classroom, school, home) whose names contain the target group of letters. The intervention steps were as follows: 1- pre-test; 2- learning of digital photography technique; 3- completion of the photos and drawings of the objects whose names contain the group of letters; 4- learning the song about the group of letters; 5- assembly of project sketches for the group of letters (activity recorded on video); 6- displaying the final project in the classroom; 7- post-test. Stages 1 to 5 lasted 20 hours over one month. The sixth stage lasted two months and the seventh stage took place at the end of the third month.

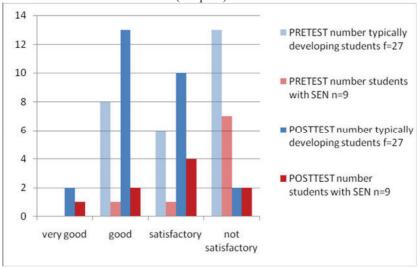
**Test/post-test:** In order to pinpoint the influence of the group of letters learning through art program we used a pre-test/post-test methodology. Thus, we composed a test that evaluated the students 'knowledge according to the current Romanian language requirements for second grade students (www.edu.ro). The test includes four items:

1- Recognizing the groups of letters in words; 2- split in syllables words which contain group of letters; 3- creating sentences with given words that contain the desired groups of letters; 4- associate images with the group of letters they contained. The test was given before and after the intervention.

#### 3. Results

In Romania, primary school students are graded with qualifiers: very good - 9,0-10 points; good - 7,0-8,99 points; satisfactory - 5,0-6,99 points; not satisfactory - 0-4,99 points , where very good, good and satisfactory are passing qualifiers and not satisfactory is the only failing qualifier.

None of the students participating in the intervention obtained the "very good" qualifier for the pre-test. More than 50% of students, a third of which had SEN, did not pass the test. After the intervention, 89% of students obtained passing qualifiers, a quarter of them being SEN students. We compared the results of the 27 typically developing students with those of the SEN students (Graph 1)



Graph 1: Pre and post-test

At the pre-test 51.9% of the typically developing students obtained good and satisfactory qualifiers as compared to only 22.2% of the SEN students. At the post-test, 92.6% of the typically developing students and 77.8% of the SEN students passed. While the percentage of typically developing students who passed increased by 40.7%, the percentage of SEN students increased by 55.6%. The percentage of "non-satisfactory" qualifier for SEN students remains substantial at 22.2% compared to 7.4% for typically developing students.

### 4. Conclusions

The pilot intervention program through art-therapy for the study of the groups of letters *ce, ci, ge, gi, che, chi, ghe, ghi* led to a fulfillment of the initial goals and learning useful skills (photography). A possible explanation for the persistence of failing qualifiers in the SEN student group could be the timing of the intervention, which is known to be crucial in the SEN case, especially when it concerns more severe diagnostics (e.g. ADHD combined with dyslexia and dyscalculia). The biggest challenge for the students with SEN that did not pass the test was the creation of sentences. This test item required, on top of memorization and identification of the groups of letters, a certain level of language development and grammar knowledge, milestones that while not the main object of this research are minimal requirements for second grade students according to the current national curriculum. Fortunately, the majority of the students were successful in passing the test following the intervention.

Although not quantifies, we observed that the program also increased the cohesiveness of the group of students and a to higher acceptance for SEN students as members with equal rights. The assignment of the roles of photographers to the SEN students also led to a higher appreciation of these students' abilities and a smaller focus on their disabilities. All students enthusiastically participated in the photographic quest, the drawing or the singing required for the completion of the educational materials that would be of use for them and other second grade students.

The intervention through art-therapy has previously been proposed for children suffering from asthma, in Romania. The art-therapy through photography may facilitate the social integration of the children with asthma who

are often socially isolate because of their chronic disease (http://mures.adevarul.ro). Choosing music as a therapeutic method for children with LD is supported by other research where music is used to improve communication, physical coordination (Bailey, 2008) and also IQ for dyslexic children (Schellenberg, 2004). Other studies also show the importance of music in cognitive evaluation and development (Silver & Lavin, 1977). In these studies, there was significant improvement in the children's concepts of space, class ordering and so on, after the completion of a 10-week art-therapy program. Studies on soap opera art-therapy for children with LD (Creswel, 2001) reinforce the importance of using familiar notions, objects (e.g. classroom, school, home) in the learning process.

We conclude that art, through its various manifestations, must be included in the academic curriculum. Our conclusion is supported by research (Pfeuffer Guay, 1993) and by the new Romanian Education Law (2010). The law states that 25% of the academic curriculum is the educator's choice, making possible the introduction of new methodologies, programs based on art, games, computer science and so on that could develop students' practical abilities and would lead to cognitive development.

The next step in this research will consist in including a control group in this study, as we need to make sure that the improvement is indeed due to our intervention and not to usual classroom material. We also need to test the wider scope of these methods by applying them to the teaching of other subjects such as mathematics or the sciences. The lack of mathematical abilities depends on a significant proportion on the teaching methodology and not just on the students' abilities. The utilization of art-therapy and/or computer-based educational materials in the study of mathematics could increase students' interest in this otherwise less embraced subject.

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