

Modern Museum Pedagogical and Inclusive Teaching: Design and Implementation of an Educational Program With the Participation of Children With Special Educational Difficulties

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Abstract: The subject of this paper is the presentation of the basic parameters that compose the doctoral research of the applicant. In particular, the second phase of the research intervention is being presented, which consists of the design and implementation of the educational program “This changing world... does not scare me”. The inclusion practices of children with special educational difficulties are investigated through conditions created by contemporary museum pedagogy and inclusive teaching.

The intervention program was completed in three phases, aiming to highlight the role of inclusive teaching in the implementation of museum pedagogy, as the pathway for achieving response from students with special educational difficulties. The research intervention, through the phases of before (pre) and after (post) examines the development of critical thinking, as a tool that responds to all social activities of the child, in addition to learning (Partnership of 21st cent skills, 2008). At the same time, the development of empathy is examined, as very important especially in multimodal learning environments, such as classes that include students with special educational difficulties (Pavlou, 2018).

In this paper, the framework and the methodology of the research are presented with emphasis on the presentation of the intervention program. The practices of inclusive teaching that have been utilized in specific activities are presented and, finally, some early results are presented regarding the skills that are examined, as the analysis of the data is still at an early stage.

Key words: contemporary museum pedagogy, inclusive and differentiated teaching, social inclusion

1. Introduction

Inclusive teaching promotes the practical realization of the parity sought by the postmodern museum, through the practices of differentiated teaching, as one of its most important manifestations in practice (Tomlinson et al., 2003). It is real proof that a child’s failure is not due to any disability of his or her own, but to the system’s failure to meet the child’s particular needs and bring out his or her abilities. Differentiated teaching consists of practices that the teacher is required to implement, reaching the same goal, but in a different way (Argyriadis, 2015; Zoniou-Sideri, 2011). Identifying different learning levels, readiness levels and interests is the primary criterion for

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implementing differentiated instruction. Missions — postcards, alternative options, lesson interactivity, freedom in the timeframe of a task, are some of the basic practices of differentiation¹.

The main research question of the present research is the investigation of the results of inclusion and the provision of equal learning opportunities through the application of modern museum pedagogy to heterogeneous school ensembles.

The main question is explored by investigating the following sub-research questions:

- How is inclusive teaching utilized in the implementation of modern museum-pedagogical programs? Therefore, under what conditions can children with educational disabilities be included into the whole classroom as part of the intended learning outcomes?
- How can the design of educational programs in the museum with the characteristics of inclusive teaching contribute a) to the development of critical thinking and b) to behavior change related to the development of empathy skills?
- How can contemporary museum pedagogy be adapted to social conditions of social crises and how is the strength of the intended learning outcomes affected without the physical presence of children in the museum?

2. Necessity of Research

The continuous development of the field of museum pedagogy in Cypriot museums gives rise to new research questions related to the design and implementation of educational programs. Special museum pedagogy is essentially inclusive museum pedagogy, as is evident from its inextricable connection with museum pedagogy and Special Education and is a modern and innovative field with many aspects that are appropriate to be explored. The principles underlying the teaching of inclusion are a common reference point between the above subject areas.

Given the current literature concerns and the absence of reports on the inclusion of students with educational difficulties and disabilities in the educational programs of Cypriot museums, this research is considered necessary in terms of literature (Argyriadis, 2015). In particular, the above research gap gives the impetus for the study of learning outcomes in the museum through experiential, educational programs characterized by the principles of inclusive teaching. Such programs seek to achieve learning outcomes for all students equally, without excluding children with specific educational difficulties. This research has not been implemented before at the Cypriot level, while the role of museum education in relation to inclusion is also a novelty for Cyprus. Non-exclusion in non-formal education and particularly in relation to formal education is a necessary area of investigation, which the research follows through the adoption of practices and strategies that have the sole purpose of inclusion.

3. Main Text

3.1 Research Methodology

In order to investigate the research questions, the qualitative research model was mainly used and in particular, a modern approach to the model, the ethnographic critique. However, methods from the quantitative method of data analysis were also utilized to cross-check and test the resulting data descriptively where necessary.

The population of the study consisted of teachers and students of the six classes of primary schools in Cyprus,

¹ Available online at: <http://www.moec.gov.cy>.

with the classes including students with special educational difficulties, as well as those responsible for educational policy in the Archaeological-Historical-Laographic Museums and Museums of Arts of the Nicosia Province.

Table 1 Sample Characteristics and Research Phases

Sample. 1st phase of research	Museums =>	7 managers
Sample. 1st phase of research	Teachers =>	14 teachers
Sample. 2nd phase of research	Schools =>	1 school
	Museums=>	1 gallery
	Classes =>	6 classes
	Children=>	93 children
	Educators=>	6 educators

Phase 1: Teachers and Museum Managers

- Teachers:

Interviews were conducted with 14 primary school teachers from the districts of Nicosia and Larnaca. The teachers teach in heterogeneous classes from different levels of primary education.

- Museum program officers:

Interviews were conducted with 7 educational program officers at Archaeological-Historical-Laographic and Arts museums in Nicosia province. Out of the 23 museums in the city and five in the Nicosia district, according to the official list of the Republic of Cyprus, an invitation of interest was sent to the 12 museums belonging to the categories of Historical-Archaeological-Laographic and Art Museums, which demonstrate the richest activity in the implementation of educational programs.

Phase 2: Museum, Schools, Children, Classes, Teachers

A research intervention was carried out which was completed in three stages: within the classroom, with a virtual transition to the site of the Nicosia State Gallery of Contemporary Art and again within the classroom. The research diagnosis is carried out before and after the end of the intervention, following the before and after, for the purpose of highlighting the intended learning outcomes.

A small Primary School in Nicosia area was selected, where all classes falling within the scope of the research, i.e., 3rd-6th grade, with the participation of children from 9 to 12 years old. A total of 6 classes and 79 children participated during the “before” (pre) phase and 93 children during the final “after” (post) phase. The school sections are heterogeneous and at the time of conducting the study, children with learning difficulties ADHD, dyslexia, dyscalculia, low level of cognitive development and with non- learning difficulties such as behavioral problems, psychomotor problems, psychological problems were included. Additionally, a child with an immigrant biography with resulting learning problems attended.

3.2 Collection of Research Data

All required ethical and confidentiality rules have been respected by obtaining permissions for all stages of data collection. Initially, the Centre for Educational Research and Evaluation of the Pedagogical Institute (CEEI) granted permission to conduct the research and then a declaration of interest was sent to the principals of schools in Nicosia district.

Data collection was conducted between November 2019 and September 2020. Phase A of the survey, which included interviews with teachers and museum education program staff, was conducted between November 2019 and January 2020. In January 2020 an expression of interest was sent to primary schools and the intervention (Phase B of the survey) was conducted in September 2020. The long delay was incurred as a result of measures to contain

the coronavirus pandemic. Phase B of the survey was redesigned and the second stage of the survey was conducted through asynchronous distance learning with the researcher videotaping the program and implementing it in the classroom with the children with the help of the projector. For the purpose of this research, specific results and conclusions were selected due to the initial stage of extracting results.

3.3 Research Intervention Tools

3.3.1 Index of Empathy for Children and Adolescents

(Index of Empathy for Children and Adolescents) (Bryant, 1982)

In the context of assessing and seeking to develop the level of empathy of children, the Index of Empathy for Children and Adolescents (Bryant, 1982) is adopted, which has been translated into Greek by Tsitsas, Giovazolias, Mitsopoulou & Antonopoulou (2012). This questionnaire (see Appendix 1.5) is used to assess empathy in children and adolescents. Regarding children up to 12 years old, the adapted version in Greek consists of 22 sentences, whose range of response scores varies from zero (0) to one (1) (YES = 1 and NO = 0). The YES/NO formula is adopted because of its suitability for pre-adolescent children. Questions in italics are scored in reverse. Although there is an overall score corresponding to a specific level of empathy, however, contemporary analyses of the index suggest averaging the scores in order to categorize the responses, which is what the present study adopts. The questionnaire was administered by the researcher during the initial and final phase of the diagnosis, taking the form of pre and post test.

3.3.2 Critical Thinking Skills Assessment Rubric (Facione, 1994, 2009)

This is a tool for measuring critical thinking skills subject to descriptive assessment by the assessor, or assessors. Specifically, through the observation and control of certain activities, the evaluator draws conclusions regarding the level of critical thinking skills of the person being tested. As can be seen in Annex 1.6, there are 4 categories, which describe, in decreasing order, the level of readiness of critical thinking skills. It was considered an important and necessary tool for the present research, as it examines one of the basic skills to be studied, and is part of the diagnostic framework, taking the form of the pre and post test, adapted to the qualitative research data. It is worth noting that, the guidelines of the creators of the tool to the evaluators are particularly helpful, in the context of ensuring the validity of the results (Facione, 2009).

3.3.3 In-depth Semi-Structured Interviews

At the end of the intervention, one week later, interviews were conducted with the children by groups. The interviews were semi-structured and focused on the children's impressions of the distance program, the role of the researcher and the learning outcomes in relation to the method of conducting it.

3.3.4 Reflective Diary

At the end of each stage, the researcher subjected herself to a critical reflection on her actions on that day and identified areas for improvement, which was a catalyst for the credibility of the research.

3.4 Analysis of Research Data

The analysis of the data obtained from the empathy questionnaire is mainly analyzed descriptively and interpretatively, and the SPSS statistical data analysis system is used to cross-check the results. The analysis of the results from the descriptive critical thinking assessment tool was adapted to the availability of the researcher to complete the tool as the project was being conducted. Data from the interviews were analyzed using the constant comparative method as proposed by Glaser (1965), while the diary was recorded as part of the reflection and the results recorded during the project acted as a complement to the results from the above tools. These choices are

based on the needs that characterize ethnographic research, as evidenced in the literature on methods appropriate to this type of research (Bogdan & Biklen, 2006; Glesne & Peshkin, 1992).

4. Results

Table 2 Activities and Objectives During the Intervention

Diagnosis — empathy index (using a weighted tool for children and adolescents)	Empathy level
Diagnosis — descriptive assessment tool for critical thinking skills.	Level of critical thinking skills
Intervention	
A. In the classroom	
* Insertion activity-blindfolding, hands binding, ear covering-conversation	Empathy
Sending a painting - we turn a script into a painting- conversation	Empathy, imagination, creativity, critical thinking
Sociometric question	Empathy, Inclusion, Isolation
Watching a video with refugee children - discussion	Empathy, critical thinking
Concluding discussion	Empathy, critical thinking
B. Virtually in the gallery	
Activities to get familiar with the museum space — a trigger for the programme	Imagination, critical thinking
Activities during the transition from one learning station to another — interactivity	Imagination
Activities related to the work of art “The Transcendental Journey”	Empathy, critical thinking
Activities related to the painting “The yellow man”	Empathy, imagination, creativity, critical thinking
Activities related to the painting “The good fruits of the earth”	Empathy, imagination, critical thinking
Concluding discussion: activity	Empathy, critical thinking
C. In the classroom Intervention	
“The Transcendental Journey” in a different way	Empathy, creativity, critical thinking
Re-diagnosis: empathy + critical thinking tool	Summative Assessment
Recommendations to teachers	Practice in all skills

Choosing from above, “the transcendental journey” by Nikos Kourousis, the approach to the work of art began with an in-depth observation and interpretation. Through the interpretation that there are probably travelers in the boats, we begin to experience the work by creating our own journey.

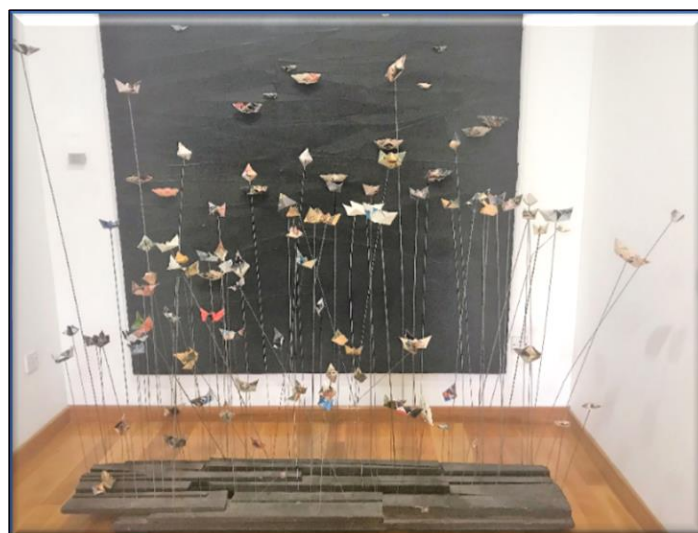


Figure 1 The Transcendental Journey, Nikos Kourousis

After finding a possible identity of the travellers in the artwork, we become refugees ourselves and are invited to travel on a journey of agony, uncertainty, an unsafe, difficult journey, with an unknown destination. Each group mentally enters a boat and chooses to carry out one of the many instructions heard from the researcher. As an illustration, some children hold the black sail and the others get in - we keep our distance. The instruction is given that the journey consists of three parts: distress; transition; safety, which they are asked to identify through the alternations of the three soundtracks. At the end, there is a discussion about our journey, about our own difficulties, those of others, about our path to redemption.

Regarding the inclusive practices adopted in the above activity, it is worth noting that the program was anyway designed anticipating continuous variations in a strictly, pedagogical framework. The social conditions imposed by the pandemic and the unclear picture of the children's specificities made it necessary to redesign and differentiate the program, from face-to-face to asynchronous distance teaching.

Regarding this activity, one class was attended by a child with an immigrant biography, which made the differentiation necessary. My personal contact with the child and the creation of a coded way of communicating between us ensured both the child's participation and my own notification in case he was uncomfortable with anything.

The presence of children with significant behavioral and social inclusion issues prompted the researcher to change the scope of the activity, as while initially the activity was designed to be implemented within the classroom, it ultimately worked better in the outdoor courtyard, where these children felt free and away from the classroom stereotype they had in mind.

From this activity, constant changes were witnessed both in terms of content and time, in the context of achieving proximity to the initial goals set. For example, there were instances when the instructions during our journey, changed, some children instead of holding the sail, were instructed to "swim" under the sail, which proved to be redemptive. In particular, their targeted channeling of energy based on a scenario and their active participation, and therefore, inclusion, was also hyped.

Leader-assistant methods, camouflaged individualized assistance, constant readiness for continuous adaptation and modulation based on the circumstances of the class and the students, each time, were adopted. The aim was to quickly identify the particularities of each child and the class, and the researcher acted with a view to not excluding anyone. As a summary of the above, the action was based on respect, acceptance and the pursuit of improvement (Figure 2).

The results of the Phase B of the survey are still at an early stage of extraction (Table 3). The empathy tool for children and adolescents has been extensively analyzed. The Man Whitney U test statistic was utilized as the samples per phase were different. Therefore, it was sought not to lose any sample but also to achieve a comparison by phase to identify any statistically significant differences. Below, the results are listed by school, i.e., the results of all classes combined, and it is shown that 12 out of the 22 questions proved to be statistically significant, i.e., there was an improvement in the level of empathy.

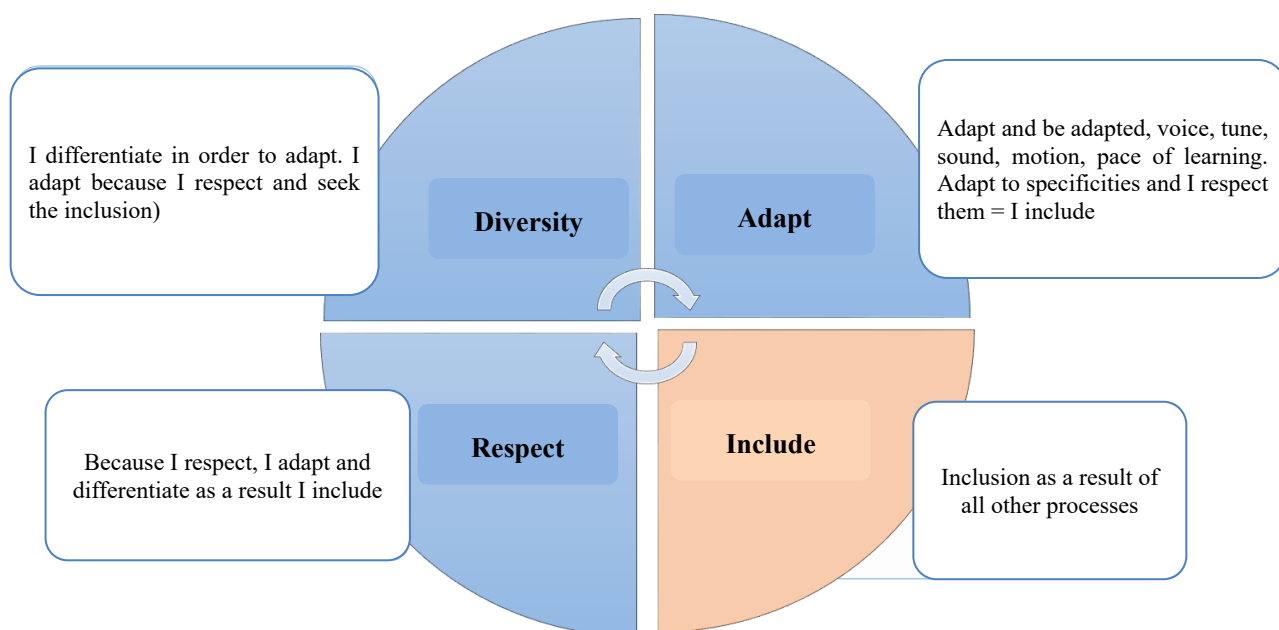


Figure 2 Implemented Model of Inclusive Teaching

Table 3 Results of the Man Whitney U Test

	I get sad when a girl can't find someone to play with	I find it silly when I see children hugging their parents	Boys who cry out of joy are silly	I like seeing people opening gifts, even if I haven't received a gift myself	A crying boy makes me want to cry too	I get angry when I see a girl beaten up	I laugh even if I don't know the reason someone is laughing
Mann-Whitney U	3522.500	3471.500	3481.500	3429.500	2991.500	3066.000	2960.500
Wilcoxon W	6525.500	7749.500	6331.500	6355.500	7362.500	7437.000	7331.500
Z	-.283	-.452	-.034	-.431	-2.430	-2.250	-2.277
Asymp. Sig. (2-tailed)	.777	.651	.973	.666	.015	.024	.023

	Sometimes I cry when I watch TV	Girls who cry out of joy are silly	I find it hard to understand why someone gets angry	I get angry when I see an animal beaten up	I get sad when a boy can't find anyone to play with	Some songs make me so sad, that I want to cry	I get angry when I see a boy beaten up
Mann-Whitney U	3081.000	3569.000	3570.000	3210.000	3151.000	2730.000	3402.000
Wilcoxon W	7452.000	7847.000	7941.000	7581.000	6311.000	7008.000	7680.000
Z	-1.984	-.089	-.205	-2.323	-2.302	-3.250	-.785
Asymp. Sig. (2-tailed)	.047	.929	.837	.020	.021	.001	.432

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	Grown-ups sometimes cry without being sad about something	It's foolish to treat dogs and cats as if they have human emotions	I get annoyed when I see a classmate constantly pretending to need help from the teacher	Kids who don't have friends obviously don't want to do so	When I see a girl crying, It makes me want to cry too	I think it's stupid for people to cry when they watch a sad movie or read a sad book	I can eat all my cookies, even if I see someone looking at me asking for one	I do not get upset when my teacher punishes a classmate for not obeying the school rules
Mann-Whitney U	2914.500	3489.000	3042.000	2893.500	3444.000	2893.500	3534.500	2890.000
Wilcoxon W	7285.500	6649.000	6123.000	5974.500	7815.000	5974.500	7812.500	5893.000
Z	-2.567	-.675	-2.121	-3.221	-.193	-3.221	-.532	-2.507
Asymp. Sig. (2-tailed)	.010	.500	.034	.001	.847	.001	.595	.012

5. Discussion

As mentioned above, the presentation of the results and the drawing of clear conclusions is still at an early stage. Therefore, for the purpose of this paper, it was chosen to present some thoughts, starting with the views of museum officials and teachers, regarding the responsibilities for not implementing inclusion.

As adopted in this research, inclusion, is purely, an internal change (Taylor, 2017). The existence of partnerships characterized by initiatives, meetings and practical actions can bring about a valuable form of internal change. Through internal organization, goals, plans and most importantly models/patterns are put in place that help to understand the partners and the situations, between them. People should understand the social power they hold as members of a collaborative policy. They will simultaneously perceive the power of this social strength, as an obstacle and as a social maturation to any learning and deep, social, exclusion (Trebecka - Postrzygacz et al, 2018).

It is remarkable that in the literature, the solution of consultants - government representatives, who advise but are willing to depart from chronically applied practices and guidelines (politically correct themes) is often proposed (Dewhurst and Hendrick, 2013). As for the case of art museums, the above can be translated if we bring to mind a 19th or 20th century painting, such as Michael Kassialos, or Lucia Nicolaidou-Vassiliou, for example. The latter in particular, influenced by her refugee and exile in France, in many of her works dating from near the Turkish Invasion of 1974, she strongly quotes her desires for the reunification (request for unification) of the island. In a seamless collaboration and with the retreat of all stakeholders, the acceptance and promotion of multivocality will be promoted (Dewhurst & Hendrick, 2016). This will simultaneously remove the overprotectiveness in the artist's perceptions, due to the fact that they prevent any critical dialogue in the future. Particularly in the case of the Cyprus problem, to date, political-partisan perceptions have been a dangerous cutting edge and have been delicately handled. Young people, therefore, need to feel safe to speak out and, above all, to feel confident in having their voices heard in environments that do not exclude alternative values (Da Milano, 2013).

As an agent of social change, the museum, through the aforementioned pluralism, functions as the most inclusive and non-racist organization. (Dewhurst & Hendrick, 2017; Anila, 2017). In the case of Cyprus, anti-racist policy, given that it is not at least widely witnessed by museum officials, can be linked to the policy of inclusion of children with migrant biographies. However, it is noteworthy that, recently in the US, they were surprised by

research results that found the education system (in its formal and informal forms) to support implicit perceptions of exclusion (Dewhurst & Hendrick, 2017).

In any case, collaborative initiatives should aim to establish interpretive practices that make the museum a space for all. In this space for all, the public will be able to shape its own meaning, seeing in the meaning the contribution of all stakeholders (Anila, 2017). Collaboration characterized by institutes of collectivity rather than absolute autonomy, effortlessly and naturally promotes all the manifestations that the concept of inclusion can bring (Taylor, 2017).

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