

USING ELEMENTS OF ALTERNATIVE PEDAGOGY OF MARIA MONTESSORI WHEN WORKING WITH ORPHANS AND VULNERABLE CHILDREN IN ZAMBIA

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Abstract

The author is presenting her experiences with the application and use of elements of alternative pedagogy of Maria Montessori while working with Orphans and Vulnerable Children in Zambia. The author realized the research part of her work between 2006 and 2009 focusing on OVC (orphans and vulnerable children) and Street children living in compound in Kalingalinga. The research was done in three phases, during which the author prepared the environment for the work with children according to Maria Montessori, produced weekly activity plan, working sheets and prepared relevant summer activities. She also prepared case studies relevant to these activities. In order for the reader to understand the issues and problems discussed here, she also explains the social situation in Zambia, that is its education system and its poverty that negatively affects lives of children (street children and OVC).

Key words: *Zambia – poverty – education – Maria Montessori pedagogy – prepared environment*

INTRODUCTION

Educational system in Zambia

Despite the application of certain measures, education in Zambia is still very centralized. Almost all powers to make decisions belong to the Ministry of Education in Zambia. That means, that all issues relevant to planning and management of the educational process are presented before officials of the Ministry of Education in Zambia by clerks employed by the local education and school systems (Ministry of Education 2001).

Based on the statistics of the Ministry of Education in Zambia, the total number of educational institutions in Zambia represents 5,131 institutions, including 4,662 elementary schools, 353 high schools, 14 universities and 2 public universities (Nooier 2008).

There are four types of educational institutions in Zambia:

Government institutions: the government of Zambia owns and manages most of the educational institutions. These schools are very bad. For example, up to 50 children are in one classroom. Families do not need to pay for tuition, but they pay for other fees such as school uniforms, educational tools and books.

Contributory institutions: these depend on the so called school grants. Schools are owned and managed by educational institutions in cooperation with the government. The government provides donations in a form of funds, qualified teachers and lecturers.

Private institutions: these schools are owned and managed by individual persons or by a group of persons and they depend on payments and contributions given by students and their families or caretakers.

Families pay for the entire tuition, as well as for other educational tools and instruments.

Community institutions: church schools – nonprofit organizations. These schools differ from private schools as they focus primarily on community help rather than on creating profit. These schools are managed by a business entity and are based on nonprofit regulations (Ministry of Education 2001).

By visiting several schools, the author found out that classes are very boring and that pupils are required to listen to the teacher only, copy everything from the blackboard and that they are not required to participate interactively during the class. Unfortunately, many children do not speak English, which is mostly spoken by teachers. Due to the fact that up to 50 children are in one classroom, they do not have the opportunity to ask about the topic and the teacher of course, does not have time to explain the subject individually. Further, because schools managed by the state are not for free, not everybody can afford to attend these schools.

Poverty

Zambia is one of the least developed countries in the world and almost 58% of the population lives in extreme poverty. Poverty is mostly spread out in suburbs and in distant provinces, and affects mostly women and children, whereas children under the age 15 account for approximately 45% of the population. Approximately, 69% of children suffer from malnutrition. Even though Zambia is not at war, it has one of the highest mortality rate in the world and the shortest life expectancy at the age of 40 years of age (Tožička et al. 2008).

The most negatively affected social-economic group is represented by small agriculturalists/farmers, accounting for 88% of extremely poor households (Walls 2008).

Poverty is one of the worst problems for families in Zambia – 76% of the population in Zambia lives below the poverty level (more than 69% of children). This problem is closely connected to diseases, mostly malaria and sexually transmitted diseases such as HIV/AIDS. Poverty negatively affects the structure and functionality of the educational system in Zambia and therefore, also the quality of the educational process as a whole. The purpose of this article is to describe the current situation of the local educational system and to

introduce its structure in details. Further, this article also points out that due to the school payment system, not all children in Zambia have equal access to education. Poverty in Zambia mostly affects families and their children. They are many negative results due to the extreme poverty level: critical shortage of food and dangerous malnutrition, high children morbidity (malaria, HIV/AIDS) and lastly low-quality education system (Tožička et al. 2008). Poverty creates one of the least popular phenomena affecting poor countries – “Street children”, orphans and vulnerable children – OVC (Ministry of Education 2004).

Street children

The term “street children” applies to underage children who live on the street due to various reasons. In poor countries, as in Zambia, many orphans end up living on the street (these are mostly children whose parents or relatives died of HIV/AIDS). Some children are left to their own fate by their parents due to extreme poverty and inability of the parents to take care of them. “Street children” may be divided into two categories: children living on the street and “street children”. “Street children” are children with parents or grandparents but who use their parents or grandparents only to have place to sleep overnight. However, they spend all their free time on the street. Children living on the street, live their entire lives on the street, the street is their home, they live there during the day and sleep during the night. These children do not have any family support at all. Most of these children are total orphans, most of them do not even know their parents, or they lost their parents at some point in their lives due to extreme poverty. The biggest risks these children are facing are: physical, psychological and sexual abuse, drug abuse, prostitution and rape (Musonda 2002).

Orphans and vulnerable children

Zambia has the so-called group Orphans and Vulnerable Children (OVC), which may be classified as the subcategory of street children. Their vulnerability is measured by risky situations which may occur due to physical, emotional and mental suffering or damages (Ministry of Education 2004). The most significant factor is that they are orphans. Based on statistics provided by the

Civil Society for Poverty Reduction (CSO) and based on the OVC situation analysis from 2006, there are approximately 700,000 orphans in Zambia (Kwatu – Knowledge for Life 2006). Approximately half of all orphans lost their father, one quarter lost their mother and one quarter both parents. Most of these orphans live on the edge of poverty, most of them lost their parents due to HIV/AIDS (Ministry of Education 2004).

Critical malnutrition affects about 46% of children in suburbs and 33% of children living in cities. Basically every child in Zambia suffers from various parasites. In every part in Zambia we find high percentage of infectious diseases such as hookworms and roundworms, which cause schistosomiasis. Iodine deficiency affects between 50–80% of children, and nearly half of young children are anaemic with a low level of haemoglobin (Ministry of Education 2004).

From the above facts is clear that any pupil suffering from these disease will not be able to absorb the studying material well. Children often suffer from decreased cognitive functions, which creates concentration, attention and vigilance deficiencies, thus negatively affecting their learning. This also lowers the ability to remember, make choices and to process received information. The level of verbal development may be lower than in healthy children, which also applies to reading, spelling and arithmetic. Negative health factors negatively affect the number of enrolled students, their attendance and task fulfilment (Ministry of Education 2004).

Working with “street children” in Zambia

Working with “street children” is done through projects realized by various organization established in countries dedicated to help Zambia under the international cooperation programme. In the past, Zambia belonged among the 5 monitored countries supported by the Czech Republic under its International Assistance programme. International development cooperation began already in 1964, when Zambia became independent and Czech Republic responded quickly to needs of local people. The goal was to support areas in Zambia which could be important, prosperous and thus beneficial for Zambia (Zidek and Sieber 2007).

Alternative pedagogy of Maria Montessori (MM)

Pedagogy of Maria Montessori is unique due to its specification and focus on special areas of education. Prepared environment and characteristic didactical tools are typical for each education area (Turk and Scanlan 2004). Maria Montessori sees pedagogy as a vital life assistance. To try to help life is our basic principle. The concept of a human life is understood as a life of a man, its mysterious beginning and unity from which everything originates and where everything is anchored and which has its goal and sense (Helming 1996).

In MM pedagogy, children are directed by teachers less, but supported more, so they may integrate into the society using their own efforts and potential, search for their own roads and become intelligent individuals, able to use their efforts, able to cooperate, be helpful and have enough confidence (Rýdl 2007).

Maria Montessori concept:

- it respects development periods of a child;
- teaching is based on the so-called sensitive time periods (time when children interest increases and is focused to a certain activity);
- corresponds with modern knowledge focusing on psychological needs;
- may be applied both in developing and developed countries (Rýdl 1999);
- it puts stress on two basic factors:
 - education from birth: the education process begins when a child is born. Children begin to absorb information and adjust to their surroundings from the time of their birth,
 - education in early age: education last throughout the entire life. Maria Montessori regards the first 6 years as the most important time period in the child's development. Children at the preschool age form their personality and therefore all efforts shall be focused on the use of inborn qualities that manifest themselves at the early age while trying to focused on their real and normalized “personality” (Ludwig et al. 2008).

The Montessori concept helps children to use their natural desire for self-improvement by giving them enough room to develop. It

also means to pay equal attention during this time to psychological, intellectual, linguistic, emotional, spiritual and social elements in order to let the child become a fully developed human being (Rýdl 2007).

Maria Montessori principles

The principle of age heterogeneity: an optimal combination of three age groups (0–3, 3–6, 6–9, 9–12, 12–15, 15–18). Gained knowledge and experience is strengthened when children share their knowledge with younger or less experienced friends.

Principle of movement: it provides a gradual improvement of motor skills. Movement during manipulation and use of didactical tools is used to develop thinking, learning and remembering.

The principle of freedom and independence: freedom is the basis of an independent individuality and self-efficiency of any child. An important element in the development of a child is an opportunity to choose activities and behaviour freely.

The principle of leadership: the teacher is “a servant of the human spirit” – a helper, organizer, collaborator, instigator of child’s choices as well as observer.

The principle of social education: children in heterogeneous groups have the opportunity to collaborate and communicate. They learn how to be patient and helpful.

Working with an error: making mistakes is natural. It is a good tool for understanding how much we can manage certain things. Maria Montessori material is designed so that the child can discover the error by itself. It involves the so called error check process. Error is never used to ridicule the child or to punish the child. It is a tool for development and learning.

Normalization principle: it means the return to a normal state. Normalized child is a child who is psychologically healthy and therefore, may be developing in harmony and in accordance with its abilities. This is closely connected to a social behaviour, voluntary discipline and will.

The principle of silence and rest: children learn to enjoy silence, which gives them a greater joy later. In silence they try to interconnect with their own truth. During the silence exercise, the child learns to calm down its body and mind. This way a child may find

balance between the outside and inside world (Montessori 2001).

Research target

1. Using the elements of alternative pedagogy of Maria Montessori, to prepare natural educational environment, to plan weekly activities, working sheets and game activities for orphans and vulnerable children in the Kalingalinga compound.
2. To test and evaluate the feasibility of the prepared work sheets and play activities.
3. To prepare case studies relevant to these activities.

Description of the initial situation

The preventive-social project called “Street children” of Kalingalinga is one of the many projects focusing on education and free time activities of OVC living in the Kalingalinga compound. The educational part of the project is realized mostly during morning hours. During afternoon hours it focuses on preventive measures and free time activities for local children.

Target group description

Morning programmes offered by the Education centre were visited by 25 children. The full capacity was 32 children. However, rarely all children attended as they had to help with family earnings, mostly by selling goods in family store or to take care for younger siblings or for family dwelling. Another monitored and studied group, which provided results for the research, were students of the University of South Bohemia, Faculty of Health and Social Studies in České Budějovice, who were participating in the process of alternative pedagogy of Maria Montessori applied to streets children in Zambia. The last studied group was represented by social workers working with OVC in the Kalingalinga neighbourhood, under the free time and education activities programme focusing on street children.

METHODOLOGY AND MATERIALS

For our research we have used observation, case children and our own experiences.

Between 2006 and 2009 and under the social-preventive programme “Free time activities for street children” in a poor compound (poor neighbourhood) and under the educational centre, a research was performed with the intention to improve the structure and functionality of the education process applied to attending children, by using the Maria Montessori pedagogy and by creating methodic sheets and free time activities.

The research was realized during 3 research phases:

1. First research phase

During the first research phase (2006) realized in Zambia, the author first mapped out the current status and the location of the project. During this phase the author was trying to find out whether elements of alternative pedagogy may be used for OVC. The author participated in free time activities, focusing mostly on children education process.

2. Second research phase

During the second phase (2007–2008), the author focused on particular utilization of previously prepared activities, which were based and inspired by experiences gained in 2006. In 2007, the author obtained new information from literature focusing on pedagogy of Maria Montessori. Based on this information, the author created new and special activities using elements of the alternative pedagogy of Maria Montessori. The actual research in Zambia was realized in 2008.

Goals of the second research phase: to create case studies of children while monitoring and observing these children, to modify the educational and free time activities applied to children participating in the project and the last but very important goal was to create a natural educational environment for children.

Due to the replacement of a social worker and replacement of children participating in the project, the author divided the research into 3 parts:

1st part – the author mapped out the terrain and the current status of the social project, the status of children in the classroom and prepared questions for children case studies. The program was realized in the

S’Xavier Parish Church located in the poor neighbourhood of Kalingalinga. Classes were held during morning hours between 9:00 and 12:00. Full capacity was established at 30 children, between 5 and 12 years of age.

2nd part – based on monitoring, the author modified the original programme from the Czech Republic. Model questions for case studies were simplified and formed into their final shape. 11 model questions were used for case studies (see the Table 4 – examined factors). Daily programmes were modified according to the current situation and children’s mood. During morning classes, which began in November and ended in February 18, 2008, case studies were created. These studies were created at the school through the use of direct conversations with children and also with children at home, where the author spoke with parents or caretakers. During this research phase also semi-structured discussions and talks with social workers were created, which were also based on the relevant model questions (see Table 3 – examined factors).

3rd part – monitoring programme of situations in the classrooms ended by monitoring the programme: March 11.–18. 2008 and also by summarizing children’s creations and by compiling materials from the programme.

3. Third research phase

During the third research phase (2009), the author participated during afternoon activities of the Kalingalinga street children project (poor neighbourhood). She still utilized elements of alternative pedagogy of Maria Montessori. Due to the fact that in 2009 the author passed a Certified course of Maria Montessori pedagogy, the work was easier and cohesive. The work with children included mostly working with Project preferred by the cosmic education. The project was done again in the poor neighbourhood of Kalingalinga, during afternoon hours between 14:00 and 16:00. The programme was attended by 40–50 children.

During this phase of the research, the last semi-structured interviews with students of the ZSFJU, who participated in the programme focusing on the poor neighbourhood of Kalingalinga, were created. Also these semi-structured interviews included basic model questions (see Table 5).

Based on the results obtained from these three research phases, methodic sheets and free time activities were created, which are specified in the summarization table showing overview of results (see Table 6).

RESULTS

First research phase

The structure of weekly activities realized during the Kalingalinga project (poor neighbourhood) are listed in Table 1.

Table 1. Weekly plan showing realized activities

Monday	classes, education
Tuesday	creative activities
Wednesday	workshops focusing on particular topics – lectures
Thursday	group creative activities
Friday	sporting day

One of the outputs obtained during this time included items/instructions, which had to be followed during the programme creation (*see Annex 3 – sample of a methodic list*):

- activities had to be prepared to the last instruction/item, whereas the lecturer had to be ready to react to inactivity of children or to hyper-activities of children, as well as to unmanageable situations, which occur often when working with OVC;
 - a certain order must be established and shall include repeated activities and exercises attractive for children;
 - consistency and sequence must be followed when introducing the relevant activity.
1. Description of the activity.
 2. Briefly introduce the meaning of the activity so everyone understands it. Nothing professional or special (professional and special issues may be defined only for the lecturer but must be simplified for children).
 3. Notify children that they must sign their paper, if they do not know how to sign the lecturer shall help.
 4. If they do not want to accept help from the lecturer then mutual assistance between children shall be encouraged. Children are very helpful in such situations and they are glad to help a friend student.
 5. Pass around papers and pencils – in sequence, desk by desk, otherwise

children shout and take things from each other.

6. After the work with pencils is done, children approach one by one the lecturer and get a new creative tool (coloured pencils watercolours and others).

Second research phase

1. Weekly programme for children participating in the project

2. Final programme

During this research phase a final programme was created, which was the continuation of the 2008 programme with verified daily sequence.

- Children arrive at 14:00: puzzle is being passed around (focusing on the perception of shape, counting, language, everyday situations). This was used as a motivation and stimulus to fill the time gaps while waiting for other children to arrive.
- Children had a half an hour to arrive at school. After that children were not allowed to enter the class. This rule was accepted by children, it was not forced upon them and children respected it.
- Accepted rules from previous years helped with management of more difficult situations.
- The topic of the day or week, was introduced.

Table 2. Weekly programme for children participating in the project

Monday	Education activities Learning activities Sewing workshop Carpentry workshop	Soccer for boys who trained in the Roma club.
Tuesday	Art activities Creative activities see Annex 1 and 2	Dance and Drama – dancing group, drum play. Soccer for boys who trained in the Roma club.
Wednesday	Workshops Lectures focusing on a particular topic Sewing workshop Carpentry workshop	
Thursday	Story time Storytelling with active participation of the children	
Friday	Sport activities Sport activities (soccer for boys and attractive and interesting sporting games for girls)	

3. Prepared environment

One of the outputs of the second research period was to create and prepare environment according to the pedagogy of Maria Montessori. However, it was impossible to prepare the environment exactly according to the concept of MM pedagogy (not all educational tools and aids were available), but other elements were applied with great success, which supported the children education process:

- *Name labels* – were created and used as guideline cards, and used when entering the classroom as well as to create a seating plan.
- *Work desks* – a tool to display children's creations.
- *Modifications and cleanup of classroom environment, creation of a sense of order* – children participated during the cleanup of their environment.
- *Placement of educational tools and aids in the classroom* – educational tools were placed at specific locations, in order to make sure that children could reach them easily (**see Annex 3 and 4**).

4. Introduction of regular order and rules

Under this new order, new rules were created:

1. Go to school every day.
2. Do not be late, we begin at 9:00. If you are late, apologize to the teacher and to pupils.
3. Be careful when in the class.
4. Listen to the teacher and to your student friends.
5. While in the classroom move slowly and with caution. It is safer.
6. Every day you shall sit on the same place, see your card or the seating layout sheet on the wall, or ask your teacher.
7. Perform activities that the teacher orders you to do.
8. Do not be loud in the classroom.
9. Do not hurt your friends in the class.
10. Do not steal things from the classroom. We will need them tomorrow. Observe the break time. It lasts only 15 minutes. After the break, come back to the classroom.

5. Results of semi-structured interviews and talks

Table 3. Results of semi-structured interviews and talks – social workers

EXAMINED FACTORS	INDIVIDUAL RESULTS	CONCLUSION
Creation of pol. interviews	2 nd phase of the 2 nd part of the research done in Zambia in 2008.	
Number of pol. interviews	3	
Age	1. R: 26; 2. R: 30; 3. R: 24	
Sex	Female (2R) Male (1R)	
How long have you been working with children?	2 years (1R) 6 years (1R) 9 years (1R)	All respondents have been working with children for more than 2 years.
What is your level of education?	12 years of elementary school, then 3-year Lusaka course – Early childhood (1R). Faculty of Pedagogy in Brno (1R). Graduated from University in Zambia - UNZA (social work) (1R).	All respondents have been properly educated.
Do you like this work (working with street children), are you interested in this problem more?	Yes, I like this work and I am interested (2R). Yes, I like this work but I am not interested to learn more about this problem (1R).	Respondents are further educated about problems and issues relevant to working with OVC.
Do you sometimes feel tired and you do not want to come to work and why?	Yes, I am often tired, and I do not feel like coming to work (3R).	Great physical and time demands while working with children. Large work volume.
What is your motivation?	I teach children, they will broaden their views (1R). My work makes sense (2R).	Respondents believe that their work serves important purpose.
How long it takes to you to prepare for the programme?	I am preparing only before the class or wait what children will come up with (2R). I prepare every day before the programme (1R).	Respondents are not preparing enough.
What is the direction of your teaching you select most often?	Teaching through play. School play (2R). I mostly speak with children (1R).	Respondents mostly use activities that are attractive for children (play).
What is the biggest obstacle in the process of education of OVC?	The age of the children and the fact that they have no essential education from their families (2R). Restlessness, no sense of order (1R).	Children are restless and do not know anything about social principles. Their families did not teach them.
What are the most popular children activities?	Drawing, painting, working with aids and tools, competitions (2R). Sport activities, enjoyment/adventure games (1R).	Children like creative activities best.
What interested you most in the MM pedagogy?	Calm, peace and order (3R).	Respondents agreed that calm environment and order is positive factor.
What do you think about the application of the MM education process in real life?	Educational rules are very positive (3R).	Respondents confirmed that rules of the education process make sense.
May this method be integrated with the local teaching methods?	Yes, but it takes great efforts when preparing for the programme. Necessary training (3).	Respondents stated that MM pedagogy may be integrated in the OVC education process, but proper training is necessary.

Source – own research. Respondents – social workers, who worked with children involved in the project.

6. Results of case studies

Table 4. Results of children case studies

EXAMINED FACTORS	INDIVIDUAL RESULTS	CONCLUSION
Establishment of case studies	2 nd phase of the 2 nd research part in 2008.	
Number of case studies	25	
Girls	15	
Boys	10	
Art of communication in English	4R from N: speak English.	
Family background	3R from N: without father. 2R from N: without mother. 20R from N: from very poor families.	Children are from families where parents do not work. They cannot find job.
Date of birth	19R from N: do not know their date of birth.	Children remember their birth according to the time period – rainy, dry, hot, dry and cold.
Address (dwelling place)	24R from N: live in poor neighbourhood of Kalingalinga.	Good project availability.
Who sent you to school and why?	13R from N: mother sent me to school. 3R from N: I decided to go to school by myself. 1R from N: brother sent me. 8 from N: father or relative sent me to school.	Mothers want their children to know more then them. They want better future for their children. Strong emotional ties between family, community type of life.
Do you like going to school?	24R from N: I like going to school.	Children want to be doctors/ physicians. They are realizing the need to help the ill.
Diseases	5R from N: suffered from malaria. 20R from N: suffered from children diseases, diseases associated with climatic conditions, grief after loss of a close person/relative.	Insufficient prevention measures – mosquito nets, sprays, etc. (due to poverty) Frequent diseases due to the climate in Zambia. Children do not consider cough or runny nose as a disease. Poverty covers children diseases. Children are often tired, cannot pay attention. These symptoms may have different origin. Diseases are closely connected to children suffering, e.g. death of a close person.
Clothing, material support and issues	6R from N: sufficient clothing items and material support.	Children from families with less children have better support than children from families with many children.
Children free time	3R from N: must help with household maintenance intensively.	Children most often help with household work or selling items in family store.
Toys	25R from N: only handmade toys.	Most usual toys – cars, balls made from wires and plastics.
Meals	16R from N: receive meals three times a day. 8R from N: receive meals two times a day. 1R from N: receive meals only once a day.	Children eat only one type of food. Mostly corn porridge (nschima).

Source – own research. N (total number of case studies) = 25.

Respondents – Orphans and Vulnerable children: according to National Child Policy of Zambia (2006): it is a sub-category of “street children”. Their vulnerability is measured by risky situations which may occur due to physical, emotional and mental suffering or damages.

Third research phase – results

Table 5. Semi-structured interviews with students

EXAMINED FACTORS MODEL QUESTIONS	INDIVIDUAL RESULTS	CONCLUSION
Creation of pol. interviews	4 th research phase done in CR during 2009	
Number of pol. interviews	5	
Age R	From 5R=2R – 27 years; 1R – 26 years; 1R – 24 years; 1R – 21 years.	All respondents are older than 20.
Sex	Female (3R).	All women.
Why did you selected Zambia for your internship?	I wanted to spend my internship in Africa (3R). Zambia is an interesting country (2R).	A desire to learn about a new country.
What was your motivation to visit a developing country?	Difference from the rest of the world (2R). New experience (1R). Love for children (2R).	To learn about a different culture, work with children, empathy.
How long have you been in Zambia?	3 months (4R). 1 year (1R).	All respondents spent at least three months or more in Zambia.
Before your internship, did you have any experience working with children?	Yes (4R). No (1R).	Only one respondent did not have any experience with children.
Did you use your own experience while working with children?	No, I did not (4R). Yes, I did (1R).	Gained experiences of internship student make staying and working in Zambia easier.
Do you know what the terms vulnerable children and “street children” mean?	Yes, I do (5R).	All respondents are familiar with the OVC concept.
Do you know about the alternative pedagogy of Maria Montessori (MM)?	From literature, project in Zambia (3R). Project in Zambia (2R). No, I do not (1R).	Students were introduced to the MM pedagogy applied in Zambia.
What is in your opinion (based on your experience), the biggest problem in the education process of “street children”?	Pathological behaviour (drug abuse, alcohol, prostitution) (1R). Other priorities, different culture, language (3R). Restlessness and inability to pay attention (1R).	According to students, children have different personality and ethnic features, different hierarchy of values. Their behaviour is affected by the poverty.
What activities children liked the best during your internship?	Various types of plays and games – sport, creative, adventure/ enjoyment games, plays with tools. (4R). Competitions and activities allowing them to take something home (1R).	Mostly games – group plays, competitions, working with materials.
Can the MM concept be applied to OVC?	Yes (4R). I do not know (1R).	According to students, the MM concept may be applied to OVC.
Did you like working with children during your internship in Zambia?	Yes, I did (4R). No, I did not (1R).	Most students liked working with children in Zambia.
Did your internship in Zambia influenced your life and the view of the “street children” problem in the world and in Zambia?	Yes, it did (4R). No, It did not (1R).	Most students were influenced by their stay in Zambia.

Source – own research. Respondents – students of the ZSF JU who spent their internship in Zambia participated in the project of the application of alternative pedagogy of Maria Montessori in Zambia.

Final outputs and results obtained from all research period (2006–2009)

Table 6. Set of methodic sheets and free time activities

EXAMINED FACTORS	METHODOLOGICAL SHEETS	FREE TIME ACTIVITIES
Creation of materials	2006–10, Czech Republic, Zambia	2006–10, Czech Republic, Zambia
Number	17 of methodic sheets	1. creative – development of dexterity, self-sufficiency, creativity – own innate talents; 2. group creative – development of dexterity, mutual interaction between children in the group; 3. development and preventive games – support and introduce games under the prevention programme focusing on the selected topic; 4. physical games and sports activities - active participation of the child, preference for sports games developing motor skills (ball games), use local “African” games.
Main issues of working with children	Age must be taken into consideration. Proper sequence during activities. Sufficient time for the relevant activity. Feedback after completion of activities. Repeated activities. Careful tool and educational aid distribution.	Age must be taken into consideration. Proper sequence during activities Sufficient time for the relevant activity. Feedback after completion of activities. Repeated activities. Careful tool and educational aid distribution.
The main goal of activities	To support the individual personality of the child.	To support the individual personality of the child.
Education process management and free time activities	Regulations – Introduction and completion: Class environment prepared for the relevant activity (desks arrangement, preparation of the classroom). Description of the activity Briefly introduce the meaning and importance of the activity. To remind children to mark their work and creations with their name. Introduce all educational aids and tools (pencil, colour pencil, watercolours, etc.) After work with the pencil is done, children approach one by one the lecturer and get new creative tool (coloured pencils watercolours and others). Independent work of children, to pay attention constantly and to be ready to help children. Completion and termination of the presentation or activity, reflexes, interactive communication between all pupils in the classroom.	Regulations – Introduction and completion: Class environment prepared for the relevant activity (desks arrangement, preparation of the classroom). Description of the activity Briefly introduce the meaning and importance of the activity. To remind children to mark their work and creations with their name. Introduce all educational aids and tools (pencil, colour pencil, watercolours, etc.). After work with the pencil is done, children approach one by one the lecturer and get new creative tool (coloured pencils watercolours and others). Independent work of children, to pay attention constantly and to be ready to help children. Completion and termination of the presentation or activity, reflexes, interactive communication between all pupils in the classroom.

EXAMINED FACTORS	METHODOLOGICAL SHEETS	FREE TIME ACTIVITIES
Template of methodic sheets and free time activities	Age Tools and aids Description of the activity Procedure Abstract goal Real goal Beware of Additional use in real life Game modification Additional use in real life	Tools and aids Description Procedure Completion/Termination Additional modifications and variations of topics
Activities	Include active elements which force the children to think independently, without benign forced.	Include active elements which force the children to think independently, without benign forced.

Source – own research.

DISCUSSION

Several obstacles appeared during the research, mostly travels to a distant country. The research was influenced by time significantly. All was planned and constructed in such a way so the research is solid, firm and doable even under these harsh conditions. The author had to often react to changes that were based on the mood of children and their inconsistent attendance. This also points out to another difficult problem the project encountered, and that was frequent changes of children participating in the programme and age diversity of children.

During the first research phase the programme was adjusted according to the children age and attendance. Each day the number of children was different, as they had to help at home or they found another activity which did not force them to come to school. From our observation is clear that children have a certain respect for the school and they feel that they must sit, listen and not move. Based on their temperament and restless personalities, this represents a big problem and therefore, we must use activities that are attractive for them and where they can utilize their potential. Based on these experiences the author decided to produce work procedures explaining how to work with these children while applying elements of Maria Montessori pedagogy (hereafter referred to as the MM only). The basic idea was to find a way how to increase the efficiency of the educational process in Zambia, by applying her research

to preventive social project and free time and education activities. The author has been frequently visiting Zambia as a volunteer since 2004. To improve and innovate the education process of VOC and street children, she also used the MM alternative pedagogy. She selected this method purposely, as she was aware about its advantages which could be applied in Zambia. From the MM pedagogy it is clear that if you want to work with children under this concept, you must first find out the content of their life, social and family situation of OVC and mostly their particular needs. The author gained this information by observing children and by collecting information to process case studies. According to MM, open or hidden needs of a child shall be preferred before plans and intentions of the adult caretaker/teacher, who is mostly referred in the MM pedagogy as a “guide”. These needs shall be determined and based on the level of development and maturity of the child but also on the current education process of each child. Therefore, didactical activities shall precede observation and diagnosis. For that we need professional observing and monitoring methods, as well as friendly approach and empathy (Walls 2008). The author proved just that by her research.

Activities must be adjusted in a certain way, so the children understand them. The MM pedagogy helps to achieve that. MM principles motivate the child and give the child an opportunity to fulfil its life. The result of this research period proved that MM pedagogy may be applied to OVC in Zambia.

During the second research and during the creation of the programme the author selected activities focusing mostly on the support of motor skills, development of writing skills, reading and basic mathematics, while using the MM pedagogy. Based on the first research part done in Zambia in 2008, the programme was divided into two types of activities. Activities for small and older children. The programme for small children was focused on the development of motor skills and basic writing skills. Each day the programme was adjusted according to the actual situation and mood of the children. Based on the experiences gained from the previous research period (2006), some activities were integrated into the programme. The author wanted to use all elements offered by the MM method and focused mostly on the approach to children, which is applied in this concept from the early childhood.

However, one significant problem appeared during the creation of new case studies, which greatly complicated our work outside. Children and their parents often did not speak English, therefore we had to have a local interpreter. As the interpreter we have selected a social worker who was involved in the project. This worker also helped during first visits and advised how to behave properly and how to observe community life traditions.

The third research part done during 2009 focused on the children programme, which consisted of various themes. Each day was an open continuation of the previous day, and the entire week was about the theme that was practised. More concrete programme was created, which was influenced by cohesive weekly programme of the free time activities for street children in Kalingalinga. This programme was created together by all internship students between 2004–2009. The weekly programme was already influenced at the beginning of the project, which began in Kalingalinga in 2005 where the author of this article applied first regulations together with Mgr. Radka Rejhová. The programme has changed over the years and during the last phase it has become stabilized and now includes precisely set schedule (see Table 2). The programme was enriched with other activities and offered diversity which helped attract more children.

Based on experiences gained during the past research years (2006 and 2008), as well as on new experiences obtained while working with children, some instructions and procedures used during the explanation of activities to children were modified. After the first half hour, children left the classroom, so the classroom could be prepared for the special activities. The activity was adjusted according to the environment and the number of children, so children could sit down immediately and have everything ready. So it was a preparation of the educational environment, because passing around educational tools and aids was taking long time and was disturbing for the class and for the children as well. Children actively cooperated during cleanup.

After application of all elements and after testing some activities – summarized in tables, it was determined that the first goal was fulfilled. It was also determined that children positively respond to MM pedagogy and thanks to that actively participated in the programme. The author also discovered that how you approach children is very important, that is, how the teacher behaves, how he presents tasks and how he evaluates results.

The author also found out that OVC, due to the uninspiring environment positively respond to material things. These children have tough life, they suffered from various diseases, which negatively affected their perception of live events occurring around them and therefore, also their perception of being in school.

According to Bartoňová and Vítková (2007) the cultural identity, the identity of the child and national heritage must be respected during the education process (Montessori 2001). That means that the child must be accepted as is, with his personality, sole and various abilities to comprehend and perceive. This fact is also accepted by Italian physician Maria Montessori, who believed in abilities and power of children, their will to develop and thus became adults (Rýdl 2007). In her studies Maria Montessori gives children freedom while establishing certain rules as guidelines applicable to their inner lives. The inner world is very important for vulnerable children and street children, they have their own paths, which only few understand. Even though they are small children, they are great

human beings with own opinions formed according to their experiences.

CONCLUSION

During the all three research periods 2006–2009, which seamlessly followed each other, it was shown that elements of alternative education may be applied to OVC who participated in the programme under the social and preventive project for children living in the Kalingalinga neighbourhood. Outputs and results obtained during the research years were further used in additional researches, therefore, the work was very complex and interconnected. Under the research the author has mostly used the following elements: the opportunity of children to move around the classroom, freedom of choice and unobtrusive predefined rules. She also has proven that

working with colours, working with projects and use of real objects from real life is beneficial. Children realized that they do not go to school just to sit and listen to the teacher but that they can introduce their potential and realize their ideas. This methodology shall serve as the basis for further development of various tools and instruments used during class. Thanks to this methodology, these tools may be selected and modified to better fit the needs of children in Zambia. The author sees her methodological procedures tested in Zambia as possible concept applicable to OVC. The alternative pedagogy concept of Maria Montessori is not based on a theory only. Its strengths lies in the practical application of ideas. Work sheets, gaming activities and plays and prepared environment are still used for the social-preventive project of free time activities for Street children in Kalingalinga and OVC in Zambia.

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ANNEX 1 – Programme realized on October 31, 2006

Tuesday, October 31, 2006: 80 children were present

Mathematics: children learned how to write numbers and understand their meaning.

Activity No. 1: Playing with numbers: children drew a silhouette of a letter and glued inside anything they wanted (colour papers, magazines, natural elements, etc.).

Target: to show children that learning is interesting and unobtrusive motivation, that it promote development of creativity, repeating of already learned letters.

Conclusion: children tore out the number from a newspaper. The issue is, that children need to realize the integrity of the number. This activity develops fine motor skills and focus/concentration.

Activity No. 2: Numbers: to assign numbers to shapes of their own choice. Children were looking for a shape (triangle, square, rectangle) similar to the value of the number that was drawn with points on the card (similar as the domino).

Target: development of imagination, sequence and concentration. Repeating of already learned numbers. Children were not able to write the number. Therefore, it is necessary to focus on number writing exercises and to help children to understand the value of a number.

ANNEX 2 – Programme realized in February 5, 2008

Tuesday, February 5, 2008: 31 children were present

Language:

Beginning: classroom cleanup, passing around labels, writing children names in the seating layout.

Activity No. 1: drawing moves, lines – done on small sheet of paper.

Description: teacher drew points on the blackboard, which represented a certain shape – simple cobweb, the sun. Children had to transfer those point on paper and complete. To help visualize it, I drew the cobweb and the sun on the blackboard. Children were given paper. On one side they drew the cobweb and on the other side the sun. First, they used a pencil and then they used any colour pencil they selected, to enhance the shape.

Target: line drawing practice (simple lines), support of development concentration, imagination and precision.

Activity No. 2: Letters – repeating letters written on the blackboard.

Description: small and capital letters written on the blackboard. First, the entire alphabet was read and then repeated by children. Each letter was assigned with an object starting with that particular letter. Then the object was drawn on the blackboard to help the children to imagine it better.

ANNEX 3 – Sample of methodic sheet

Methodic sheet No. 1

Name of activity: **Filling Paper flowers**

AGE:	3–7 years: simple topics, 8–15 years: more difficult topics.
TOOLS AND AIDS:	Paper, pencils, group of topics, special objects for demonstrations. Topics: family, plants, fruits, animals, vegetables.
DESCRIPTION:	A group of children is given a silhouette of a flower, with the topic written inside the flower. Children write inside what is relevant and correlates with the topic.

ABSTRACT GOAL:	To interconnect hemispheres, preparation of writing, counting, independence, development of attention, similarity, working in groups, to teach children put similar things together – to pair things, to understand interconnection of topics, sequence.
REAL GOAL:	To create the same groups relevant to the topic (animals, plants, family, ...).
POINTS OF INTERESTS:	To pair the established groups together.
VOCABULARY:	Words based on the particular groups (family, animals, plants, fruits).
PROCEDURE:	To prepare the environment for the activity, so children may just sit down and begin working immediately. 1. Children are separated into groups. 2. Introduction of the activity. 3. Assigning names to all objects (naming). 4. Demonstration how the activity is done (slow demonstration, precise and without talk) – it will attract children's attention. 5. Ask whether children understood the activity (group by group). 6. Children own work (we cooperate with children constantly). 7. Completion of activity – reflection.
ERROR CHECKING:	Incorrect concretization/specification of groups, flowers not added (templates).
BEWARE OF:	of the activity. Sufficient time, correctness (children are writing down).
ADDITIONAL USE:	Artistic activities, science (natural, geographical sciences).
GAME MODIFICATION:	Creation of various groups that may be paired together.
COMPLETION:	Demonstration of objects to help children imagine them. Making collages focusing on the giving theme, selected by children from the menu (plants, animals, family). A collage was created according to their fantasies. Children used primarily colour magazines (imported from the CR), which are unfamiliar and interesting to children.

Template of a flower – demonstration

