



THE MONTESSORI PEDAGOGICAL APPROACH AND THE STAKEHOLDERS' PERCEPTIONS OF ITS EFFECTIVENESS AND IMPACT IN THE CONTEXT OF TANZANIA

FINAL REPORT



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LIST OF ABBREVIATIONS

ECD	Early Childhood Development
ESR	Education for Self-Reliance
FGD	Focus Group Discussion
MCT	Montessori Community of Tanzania
MoEST	Ministry of Education, Science and Technology
MPA	Montessori Pedagogical Approach
MTCs	Montessori Training Centres
NECTA	National Examination Council of Tanzania
PO-RALG	President's Office - Regional Administration and Local Government
PSLE	Primary School Leaving Examination
TIE	Tanzania Institute of Education
WEO	Ward Education Officer

EXECUTIVE SUMMARY

This study sought answers to the following questions: to what extent are stakeholders aware of the Montessori pedagogical approach in teacher training and children's teaching and learning? What perceptions do the stakeholders hold about the effectiveness of the Montessori pedagogical approach in teacher training centres and in promoting children's development? How feasible and scalable is the Montessori pedagogical approach in the context of Tanzania? And what are the scalability pathways?

The study was conducted in six regions; namely, Dar es Salaam, Dodoma, Kagera, Mtwara, Mwanza and Kilimanjaro. Using convenience sampling, the study was undertaken at four Montessori Training Centres (MTCs), and six schools (two pre-schools, two primary schools and two secondary schools) in four regions with MTCs. A total of 74 participants were sampled. The participants included district and ward educational officials, heads of primary school and teachers, the teacher training colleges, as well as the regional, school, and community levels. To collect the data, the study conducted content analysis of relevant documents, key informant interviews, focus group discussions, classroom observations, and a structured questionnaire.

Key Findings

- The stakeholders including parents with and without children enrolled in Montessori schools were aware of the existence of the Montessori pedagogical approach in Tanzania. They demonstrated an understanding of the key principles of the Montessori pedagogy approach such as emphasis on a prepared learning environment that is rich in play materials, that stimulates self-learning, curiosity, life skills, independence, and creativity. The participants, however, were of the view that MPA was relevant and developmentally appropriate in early childhood education settings.
- The Montessori education philosophy was in alignment with the existing education and training structures, including the Education for Self-Reliance philosophy and the pre-primary education curriculum and syllabus.
- The stakeholders found the Montessori pedagogical approach was effective in promoting child development and learning, and trainee-teacher competences.
- The participants including government officials from the ministry and district level, and graduates from Partage Teacher Training Centre commended the public teachers in-service training on MPA especially on children's pedagogy, teaching learning materials development and use and behavioural interventions.
- There were challenges which limited the application of the Montessori pedagogical approach in government schools and colleges: lack of systematically established number of Montessori day care centres and schools, and Montessori-trained teachers and their employment status; lack of vertical progression; and 'misconceptions' about the Montessori approach among a few participants involved in this study including: (1) Montessori classrooms are unsupervised, the

children are free to do whatever they wish, it is wastage of time since children spend most of their time playing instead of learning how to read and write, and cannot work in classrooms with a high teacher-pupil ratio; and (3) Montessori schools are religiously oriented.

Conclusion

The MPA in Tanzania is consistent with the nation's Education for Self-Reliance philosophy. The Government has demonstrated its willingness to adapt MPA in schools and in-service pre-primary teacher training, as some of the MPA features have been adapted and integrated into the pre-primary curriculum and syllabus as well as teacher training. This demonstrates a diffusion of MPA into the existing education structures in Tanzania. The engagement of the MCT members in national curricula material development and Montessori-trained teachers is key for capacity building and the sustainability and scalability of MPA within and across the existing structures. To strengthen its viability even further, there is a need to address the challenges outlined in this study including the misconceptions that the stakeholders hold about the Montessori pedagogical approach, lack of systematic statistics to establish the number of registered Montessori day care centres and schools, and Montessori-trained teachers.

Recommendations

- MCT, Montessori training centres, and Montessori schools should organise regular community sensitisation seminars or workshops relevant stakeholders on the Montessori pedagogical approach including play-based pedagogy and its effectiveness in promoting children's holistic development and learning.
- There is a need for MCT continue engaging with the government and other relevant stakeholders to fuel employability of graduates from MTC as teachers or assistant teachers in public pre- and primary schools to promote application of the Montessori pedagogical approach in Tanzania's public schools.
- MCT might map relevant stakeholders and encourage them to establish primary and secondary schools that implement the Montessori educational curriculum to ensure vertical progression from preschool through higher levels of education.
- There is a need to scale up the training of teachers on MPA beyond MTCs. This might include opportunities to integrate MPA in the preparation of pre-service teachers in public teacher training colleges. This might include scaling up the MPA in-service training, and continual engagement with the MoEST and the PO – RALG and working with universities and teacher training colleges which train early childhood teachers. The evidence and lessons from the Partage Teacher Training Centre in Bukoba Municipality might inform the discussion of scaling up the training of in-service training to public school teachers.
- There is a need for the MCT in collaboration with other stakeholders to conduct a national survey to systematically establish the number of Montessori day care centres and schools, and Montessori-trained teachers and their employment status.



This study was undertaken at four Montessori Training Centres (MTCs), and six schools (two pre-schools, two primary schools and two secondary schools) in four regions with MTCs.



01

INTRODUCTION

Montessori education is a distinct educational pedagogy that is implemented across the globe. The approach spread rapidly across the world following the early success and international acclaim regarding Maria Montessori's casa dei Bambini. The first Montessori school was opened by Dr. Maria Montessori (1870-1952), an Italian educator in Rome, Italy. It was founded on the premise that the educational approaches of the time were largely ineffective (Whitescarver & Cossentino, 2008). Montessori schools initially grew because of training conducted by Montessori while, in other places, passionate educators established Montessori schools based on Montessori's training. In some places, missionaries and other charitable organizations established Montessori schools (Debs, Brouwer, Murray, Lawrence, Tyne & Wehl, 2022). Dr. Montessori's highly acclaimed, child-centred approach, with a specific emphasis on how children naturally learn, changed the dynamics of teaching young learners (American Montessori Society, 2013). Currently, there are more than 15,763 Montessori schools spread across 154 countries worldwide (Debs, et al, 2022).

In Tanzania, Montessori Education dates back to 1967, when Roman Catholic nuns established a Montessori training centre in Dar es Salaam. The pioneers of the Montessori training centre in the country had received training from Muriel Dwyer, a London Montessori College Tutor, who occasionally visited Tanzania and trained a few women and girls on the Montessori approach. Subsequently, the then Mother Superior of the Switzerland-based congregation of the Baldegg Sisters asked Sr. Denise Mattle in 1981 to provide support at the Montessori college in Dar es Salaam, which was under the care of Baldegg Sister Salvina. Sr. Denise ad studied KiSwahili and worked at the Archdiocese before teaching various courses, whereas Sr. Gaspara and Hilda Mwendapole taught at St. Joseph. Significantly, Sr. Salvina received a donation to build two small classrooms at Kariakoo. In 1982, Sr. Denise went to London to study for a Diploma in Montessori and returned to Dar es Salaam in 1983. Upon returning from London, Sr. Denise – together with other members – started teaching the Montessori class at Kariakoo in Dar es Salaam. The first children's centre was established at Magila. In 1984, the sisters bought a plot in the neighbourhood of Kariakoo and the care centre was enlarged to accommodate the children's activity and play needs..

Due to the increasing demand from parents, the sisters sought a plot on which to establish a Montessori training college. The then Archbishop Cardinal Rugambwa offered the Archdiocese buildings of Msimbazi, where the Montessori day care centre was located, for the establishment of a training centre.

However, there was no funding available to run it. The Cardinal said that the training centre should be self-financing. Help from the Dreikoenigsaktion in Austria facilitated the building of a workshop, childcare centre, and Sister's house in addition to renovating the existing infrastructures at Msimbazi Centre.

The Montessori Training Centres have been operating over 50 years in Tanzania. The programme offered in these colleges is based on advocating and spearheading the principles of Maria Montessori. Historically, the first Montessori Training College (MTC) was established in 1972 in Dar es Salaam at Msimbazi. This was followed by the establishment of the MTC in Lushoto and, from the 1990s onwards, several other MTCs were established to bring the number of MTCs to seven today. Currently, private institutions or individuals operate these colleges in Dar es Salaam, Arusha, Lushoto, Bukoba, Mwanza, Mtwara, and Moshi. These colleges provide training for both men and women to become Montessori teachers in Children's Nursery Schools and Day Care Centres.

Over the past 25 years, the Montessori Community of Tanzania (MCT) has been striving to promote the Montessori pedagogical education by supporting children's natural growth and care for the benefit of the nation. It was originally established and registered as the Montessori Training Association of Tanzania (MTAT); a society under the Tanzania Societies Ordinance of 1954 with ordinance number SO NO. 8922. In early 2021 MCT had to restructure its constitutional framework and operational model to comply with the newly established government requirement of NGO policy and associated act number 4 of 2022, with its amendment in 2018.



The MCT oversees the Montessori operations in Tanzania. While envisioning a society in which children have affordable access to the Montessori pedagogy of learning for their holistic development, MCT in collaboration with Seven (7) Montessori Training Centres in Tanzania has trained more than 4,000 caretakers been trained with the Montessori values and principles, 2,000 day-care centres and reached about 100,000 children. Even though the Montessori educational pedagogy has existed over the years, A systematic research on the state of MPA in Tanzania is largely lacking. In this regard, MCT conducted research in 2023 to fill this gap of knowledge.

1.1. Research Aim and Objectives

This study aims to generate an understanding of the Montessori pedagogical approach within teacher training, children's day care and learning centres in the context of Tanzania. Specifically, the research seeks to answer the following research questions:

- To what extent are the stakeholders aware of the Montessori pedagogical approach within teacher training and children's teaching and learning?
- What perceptions do the stakeholders hold regarding the effectiveness of the Montessori pedagogical approach in the teacher training centres and in promoting children's development?
- How feasible and scalable is the Montessori pedagogical approach in the context of Tanzania? And what are the scalability pathways?



02

METHODOLOGICAL APPROACH

2.1. Research Sites and Participants

2.1.1. Regions

The study was conducted in six regions (see Figure 1) of Dar es Salaam, Dodoma, Kagera, Mtwara, Mwanza and Kilimanjaro. These regions were purposively selected due to their long-standing history of the adoption and application the Montessori pedagogical approach. Moreover, these regions have established Montessori Training Centres, pre-schools, and primary schools.

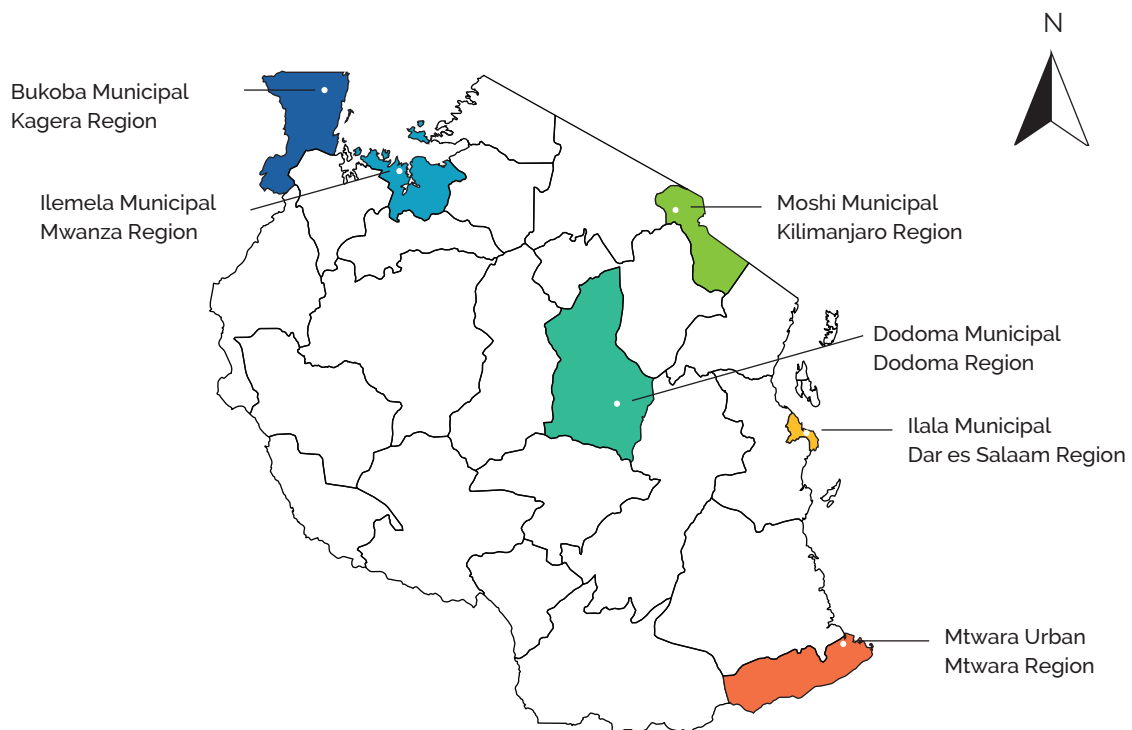


Figure 1: Locations of study regions

In all, there are seven Montessori Training Centres in Tanzania located in seven different regions nationwide. However, the study focused on the six regions which are highlighted green in Figure 1. Even though the two regions highlighted in grey also have Montessori Training Centres, they were not included in the study because of resource and time constraints. Nevertheless, as Figure 1 illustrates, the regions selected for the study are spread out across the country to promote geographical representation to generate a comprehensive understanding of the topic from areas with diverse social, cultural, and economic contexts..

2.1.2. Montessori Training Centres and Schools

Five MTCs were conveniently selected from four participating regions (Dar es Salaam, Mtwara, Kilimanjaro, Kagera and Mwanza).

2.1.3. Selection of Montessori Schools

Six schools (two pre-schools, two primary and two secondary schools) from the regions with MTC were conveniently selected to participate in the study to develop a better understanding of the subject by reaching the caregivers or directors for interviews and classroom observations.

2.1.4. Participants and the selection procedure

The study recruited 74 participants, comprising officials drawn from the government, who were responsible for early childhood, primary and secondary education. Moreover, the sample included participants from the regional administration, teacher training centres/colleges, pre-schools, and the community. Table 1 presents the number of participants by category and level.

Level	Sampled Participant	Total
National-level government officials	One official from MoEST, one official from PO-RALG, two officials from TIE (1 Director of Curriculum Development and Research and 1 pre-primary education focal person)	04
MCT Regional Co-ordinators	Three MCT Regional Co-ordinators	03
WEO	Two WEOs	02
Principals and Tutors at MTC	The principals (one from public and three from Montessori teacher training colleges) and seven tutors (four from public and two from Montessori teacher training colleges)	10
MTC Trainees	24 trainee-teachers (12 from public and 12 from Montessori teacher training college)	24
School-level participants	Seven heads of school (four from public primary schools and three from Montessori schools), four academic teachers, three teachers from public schools and three caregivers from Montessori schools	17
Parents	14 parents (six parents with children and eight parents without children enrolled in Montessori schools)	14
Total		74

Table 1: Number of Participants by Level

A total of 74 participants were sampled including district and ward educational officials, heads of primary school and teachers, the teacher training colleges, as well as the regional,



The participants were aged 15-70 years. They have five-20 years of work experience. Their education qualifications ranged from a Diploma in Education to a Master's Degree. The head teachers, for example, were mainly bachelor's degree holders; tutors from the public colleges had at least a master's degree; and the tutors at the Montessori schools were diploma graduates from Montessori colleges. The public primary school teachers had a Grade IIIA certificate education qualification whereas the trainee-teachers were in either their first or second year of pre-service education programmes both in public and Montessori teacher training centres. Most of the parents were Standard VII leavers, who were peasants and businesspeople by occupation. These lived in the vicinity of the schools under study.

2.2. Data Collection and Analysis

The study used face-to-face interviews with key informants, focus group discussions, and observation techniques to collect the data. The key informants' interviews involved officials from MoEST, PO-RALG, and TIE. Interviews were also held with MCT regional co-ordinators, head teachers and caregivers from the selected schools. The interviews explored the participants' perceptions of the applicability, effectiveness, and relevance of the Montessori pedagogical approach in Tanzania. Six focus group discussion sessions, one from each of the four selected regions, were conducted with parents with and without children in Montessori preschools. Moreover, four FGDs were conveniently conducted with the MTC trainees. Six to nine participants were recruited to comprise a group. The groups were heterogeneous in nature, containing both males and females.

Interviews and FGDs were held in Kiswahili, the national language and lingua franca of Eastern and some part of Central Africa, which also serves as the medium of instruction in most of the country's public pre-primary and primary schools. The study employed English with non-native Kiswahili speakers and those participants who were comfortable to engage in English. The interviews and FGD sessions lasted between 45 minutes and one hour. These sessions were audio-recorded after obtaining consent from the participants. This allowed the preservation of the participants' words and retrieval of information during the data processing and report writing stages.

Classroom observations were conducted in MTCs and schools. These observations explored issues related to teaching and learning facilities as well as supportive resources and classroom organisation.

The data analysis combined both deductive and inductive strategies. The research team neither approached the data with a rigid set of pre-conceptions nor fully inductively, but rather deductively. In other words, a combination of the two approaches was used. The analysis of the data was also informed and guided by three main steps: preparing and organising the data; creating the categories/themes; and the coding, presentation, and interpretation.

03

FINDINGS

3.1. Introduction

This section presents the findings of the study. It is organised into five sub-sections, namely: the community awareness of the Montessori pedagogical approach; views on the teaching and learning environment; the perceived effectiveness of the Montessori pedagogical approach; the alignment of the Montessori education philosophy with the existing educational structures in Tanzania; employability of graduates from MTCs; and challenges.

3.2. Community Awareness of the Montessori Pedagogical Approach

Overall, the stakeholders were aware of the existence of the Montessori pedagogical approach in Tanzania. They reported that the Montessori approach was applied in the private teacher training centres as well as in day-care centres and the pre-primary education context. The participants reported that they had learnt about the Montessori pedagogical approach (MPA) and its application in Tanzania through conversations with friends, relatives and neighbours. Others reported hearing about MPA during their teacher training at the Montessori teacher training centre. According to the participants, the Montessori pedagogy emphasised learning by doing and child-initiated activity.

One of the parents, for example, said:

“

I became aware of the Montessori pedagogical approach and Montessori schools from my friend. One day, I visited her, and I observed her four-year-old child, who performed various roles, such as washing the dishes, arranging things in order, and washing clothes, while having a high sense of respect. When I asked the secret behind this, she told me that her child was studying at one of the Montessori schools. ”

The parents further reported that they knew about the Montessori pedagogy when they visited a Montessori teacher training centre. They said that the centres regularly invited them to graduation ceremonies, whereby the centres demonstrated how they train teachers to develop teaching-learning materials and use them to promote children's competences.

In this regard, one parent, for example, noted:

“

I heard about Montessori when we were invited to a parent- teacher meeting. During the meeting, the teachers explained the Montessori pedagogical approach and its implementation. Since then, I have known about this pedagogy. ”



The trainee-teachers demonstrated an acute awareness of the Montessori pedagogical approach and described it as a model of day-care and early childhood education that emphasises concrete objects and activity-based teaching and learning. Moreover, they reported that the Montessori pedagogical approach focused on children's needs, including caring and learning for children with special needs, fosters freedom in learning and uses materials that develop children's curiosity in learning.

The study also found that the stakeholders were aware of the principles guiding the Montessori pedagogical approach. According to the participants, the Montessori pedagogical approach was informed by principles such as motivating children to learn, preparing an amenable environment, giving them the freedom to express their talents and potentials as well as to play or work with learning materials, and moulding creativity and talents through material exploration and manipulation by the children themselves.

A few of the participants, however, reported that the community was unaware of the Montessori pedagogical approach. In this regard, they reported that the people who were aware of this approach were those whose children were enrolled in Montessori schools.

One MCT co-ordinator said:

“...based on my experience, many people are unaware of the Montessori pedagogical approach. Those with children in Montessori schools are aware of the approach. The rest, I think, do not know anything about the Montessori pedagogical approach. This suggests a need to create community awareness of the Montessori pedagogical approach.”

The study findings further demonstrate that most of the participants, including officials from the Tanzania Institute of Education, were aware of the Montessori approach in Tanzania. They further demonstrated an understanding of the overarching principles that guided the implementation of the Montessori approach, which focuses on the ability of a learner to develop or grow holistically.

3.3 Views on the Teaching and Learning Environment

The participants presented diverse notions on how the environment was prepared for the application of the Montessori pedagogical approach. Most of the participants reported that the environment served as a vehicle for learning when prepared and equipped with materials. In this regard, the majority of the trainee-teachers revealed that, for children to learn, the environment ought to be equipped with materials that allow the spontaneous selection of whichever materials they wanted. According to the participants, a conducive environment should channel the learning by providing materials that are tailored towards developing a particular competency or talent in the young learners. Such an environment when prepared with learning corners enable children to engage actively in learning through the manipulation of materials. Likewise, these materials foster children's inquisitiveness and curiosity.

As one of the trainee-teachers explained:

“What I know is that a teacher in a Montessori classroom prepares the environment with different materials and pictures and lets the children choose what they want to play with in a free manner.”

The pre-primary teachers and tutors from regular teacher training colleges, which were not informed by a Montessori pedagogical approach, also revealed that Montessori classrooms are endowed with drawings and pictures, with plenty of teaching-learning materials organised in corners to facilitate teaching and learning. However, classroom observation in the public primary schools and teacher training colleges visited revealed that teaching-learning materials were largely lacking.

The pre-primary teachers explained that the Montessori approach emphasised the need to equip the learning environment with teaching and learning materials. In a prepared environment, children of mixed age groups learn together and help each other. Having children from different age groups and with

different levels of ability together enable them to develop self-discipline, a sense of love, co-operation, obedience, and respect for each other in addition to growing intellectually. According to the participants, the prepared environment facilitated the children's self-development, self-learning, self-expression, and other potentialities. One of the pre-primary teachers said:

“

The Montessori approach emphasises the need to equip the environment where children of different ages are mixed and learn together. The age of the children does not become a problem because older children can learn from younger children and vice-versa if the environment is prepared for them to learn.

One of the participants summed up that the Montessori pedagogical approach was a means of engendering children's holistic development and learning. The participant further expressed that the Montessori classrooms, with materials such as drawings, pictures, building blocks, and toys enabled the children to explore their interests and potential.



3.4. Perceived Effectiveness of the Montessori Pedagogical Approach

3.4.1. Stakeholders' perception of the effectiveness of the Montessori pedagogical approach in promoting child development and learning

The participants reported that the Montessori pedagogical approach was effective in promoting a child's development and learning as well as life skills, including problem-solving, independence, creativity, curiosity, and self-learning skills. The participants further revealed that the approach was effective, as it addressed the child's needs because of the individualisation of learning activities and emphasis on learning-by-doing.

One of the participating parents, for example, reported:

“

On my side, the Montessori pedagogy is very effective in helping children to develop practical life skills, for example, problem-solving, in addition to independence, creativity, and curiosity. In my view, this is because of its emphasis on learning-by-doing, the use of manipulatable materials and adhering to the child's interest, freedom, and individual pace. I believe this pedagogy is effective because it employs these strategies and materials.”

According to the participants, children who were enrolled in schools which were informed by the Montessori pedagogical approach demonstrated more independence and a greater capability to perform many tasks on their own compared with their counterparts in other schools. Additionally, the participants revealed that children benefiting from the Montessori pedagogical approach unleashed their talents as early as possible because of their exposure to materials that gave them room to explore their potential, interests, and capacities relative to their inborn attributes.

They also demonstrated a higher sense of respect than those who were enrolled in public schools because of the emphasis on learning grace, courtesy, and order. The pre-primary and day-care centres which were informed by the Montessori approach insisted on teaching children about grace and courtesy as one of the important learning areas. The participants explained that most of the parents liked schools that embraced and applied the Montessori pedagogy because their children learnt how to respect each other and older people in their respective communities:

“

It is a very important thing that children learn about grace and courtesy in Montessori schools. Here, children are taught how to respect each other, their parents, and other people in the community. I know that, in public schools, they insist on this [also] a lot, but they are not doing a good job on this aspect because the teachers who teach the children take it easy and focus mainly on the academic aspects.”

The findings imply that the children who attended Montessori schools were more likely to demonstrate problem-solving skills, independence, creativity, and a capability to perform many tasks on their own compared with their counterparts who attended centres and school which were not informed by MPA.

3.4.2 Perceived differences between Montessori Training Centre graduates and those from other Teacher Training Colleges

The participants also indicated that the graduates from MTCs differed significantly from those from other teacher training colleges. The most reported differences were related to the knowledge and skills to develop and use developmentally appropriate teaching and learning materials and interact positively and respectfully with young children. The participants claimed that graduates from MTCs were relatively better at preparing learning materials that were usable by and attractive to children compared



**A principal of a public teacher training college said:
“The major notable difference between graduates from MTCs and those from other teacher training colleges is their preparation of teaching and learning materials. Those from the MTCs are good at preparing and using durable and attractive materials to support children’s learning activities.**

with their counterparts from other teacher training colleges. The MTC graduates were also reportedly proficient at organising classrooms and teaching-learning resources in addition to applying them properly to promote learning. Moreover, according to the participants, the graduates could accordingly arrange and organise materials to ensure that all of the children can access learning materials in an engaging classroom atmosphere.

A principal of a public teacher training college, for example, said:

“

The major notable difference between graduates from MTCs and those from other teacher training colleges is their preparation of teaching and learning materials. Those from the MTCs are good at preparing and using durable and attractive materials to support children's learning activities.

The participants further revealed that the graduates from the MTCs were competent and proficient at interacting positively and respectfully with the children during learning and play sessions. They further explained that their interactional patterns were child-centred, and child-initiated, hence distinguishing them from those prevalent in many public-school settings, where the large, often overcrowded classes tend to encourage teacher-centred approaches. It was challenging to trace where the graduates from the MTCs were employed and their impact, however, due to a lack of reliable data.

3.5. The Alignment of the Montessori Education Philosophy with the Existing Education Structures

The study findings indicate that the Montessori pedagogical features were aligned with the Education for Self-Reliance philosophy, which informs the educational and training practices in Tanzania. The study further found the application of MPA in public pre-primary classes; the adoption and adaptation of MPA in the pre-primary education curriculum and syllabus (2016); and an orientation of in-service public pre-primary teachers towards MPA.

3.5.1 The Alignment between Education for the Self-reliance Philosophy and the Montessori Education Philosophy

The current education system in Tanzania generally comprises one year of pre-primary education (PPE), seven years of primary education, four years of ordinary level secondary education, two years of advanced level secondary education and three+ years of tertiary education. The pre-, primary and secondary education levels follow centralised school curricula, developed by the Ministry of Education Science and Technology through its Tanzania Institute of Education (TIE). Pre-primary education is compulsory for five-year-olds and aims to prepare these children for primary education using the national pre-primary education curriculum and syllabus of 2016.

The Tanzanian education system is informed by the Education for Self-Reliance (ESR) philosophy of 1967. This philosophy, among other things, emphasises developing active individuals who can apply their talents and potential to contribute meaningfully to national development. This study established that the Montessori education philosophy is consistent with ESR, the education philosophy that informs the education and training system of Tanzania. The MPA and ESR both stress the need to educate the whole child to become independent, self-reliant, and orderly, with an ability to solve problems in his/her surrounding environment. The analysis further reveals that Montessori education's objectives are in line with the aims, objectives and expected competencies of primary education in Tanzania, as presented below:

Aims of Primary Education in Tanzania

To develop the child's reading, writing and arithmetic skills, ability to communicate, care for health and hygiene, and the environment, self-awareness, thinking, creativity, and problem-solving.

Upon graduating from primary school, a pupil should be able to identify, appreciate and make use of science and technology.

Major learning/subject content areas:

Language, Social Sciences, Science and Technology, Mathematics, Sports and Arts, and Religious Education

Aims of Montessori Primary Education

To promote the child's competences in literacy and mathematical concepts. Children engage in literacy tasks and mathematical activity every day. In addition to literacy and numeracy, the child follows a project topic related to biology, geography, or history. The project topics provide a child with an opportunity to learn concepts and reinforce their literacy, numeracy, independence, and problem-solving skills. Moreover, primary-school-age children actively participate in the daily upkeep of the classroom and are expected to take care of their hygiene and health, and the environment, and promote social aspects.

Major learning/subject content areas: Literacy, Mathematics, Biology, Geography, History, Use of Technology and Sciences

3.5.2 Montessori Pedagogical Features that are in line with the Pre-primary Education Curriculum and Syllabus (2016)

The study findings further show that the PPE curriculum's features are aligned with the Montessori pedagogical features (see Appendix 2). The Montessori pedagogical approach, for example, advocates child-centred learning, that places children at the heart of the learning activities, like the PPE curriculum. The MPA also emphasises the development of competencies that are aligned with five learning areas: practical life, sensorial, mathematical, literacy, and cultural activities. These competencies are in line with the six competencies stipulated in the PPE curriculum and serve interests that are in line with the philosophy of education for self-reliance.

In fact, both the 2016 curriculum and syllabus for PPE and the Montessori pedagogical approach (MPA) underline the importance of developing a child holistically and providing a classroom environment that encourages a child to interact with the materials and self-initiated learning activities. Moreover, both the PPE and MPA emphasise enabling the child to be creative and curious and develop problem-solving skills.

The study further established that, notwithstanding the curriculum's alignment with the MPA and PPE curriculum and syllabus of 2016, there also existed incongruities in practice between the two. The Montessori pedagogical approach thrives in a conducive environment that has been equipped with materials that are well-organised according to the learning areas in addition to emphasising the

children's interests, choices, and freedom when selecting the materials.

Even though the PPE curriculum similarly stresses the child's active learning in a well-prepared environment that contains sufficient materials based on the desired six competencies as advocated, the public pre-primary classes visited paint a different, gloomy picture, that is far removed from the ideal. The study found that the pre-primary classes consisted mainly of desks and blackboards with limited or no teaching-learning resources that could engender child-centred, child-initiated learning. Generally, the classroom environment of many of the public pre-primary classes visited was too poorly prepared to enable the children to interact and learn with freedom and choice.



3.5.3. The existence of public pre-primary classes implementing MPAs

The findings from the interviews and observations indicate that some public pre-primary classes, which were implementing the Montessori pedagogy. These exemplary classes are presented as cases I and II:

CASE 1

The school was established in 1976 and currently has eight teachers in total, of whom six are permanent and pensionable, one is a volunteer, and another is a Montessori-trained teacher who is paid by the Usharika wa Neema College. The school has 384 pupils, comprising 191 boys and 193 girls, enrolled in pre-primary to primary classes up to Standard VII. The school started implementing the Montessori pedagogy in the pre-primary class from early 2022. The class contains 70 children.

The findings reveal that the pre-primary class was enforcing the 2016 curriculum and syllabus for PPE using MPA. The class was taught by one teacher with a background in the Montessori pedagogy. The teacher was being paid by Ushirika wa Neema Montessori Training College. The teacher is assisted by two other teachers, one of whom is a permanent employee and the other a volunteer. The Montessori pedagogy teacher oversees the learning process in both streams and works together with the two assistant teachers in both classrooms.

The parents with children enrolled at this pre-primary class attested to how their children have undergone a holistic transformation in addition to developing spiritually and socially. The parents also reported that their children had developed an ability to relate to each other and had grown into social beings who respect everyone in the community. The parents also indicated that, as a result of such exposure, their children liked school and were self-motivated to attend school voluntarily.

CASE 2

This is a public primary school located in one of the regions which participated in this study. The government-run school establishment is a system of four primary schools: Schools A, B, C and D. School D is the only school that implements the Montessori philosophy in the teaching and learning of the pre-primary education class. The initiative to implement the Montessori philosophy in a public primary school was motivated by a public primary school teacher who had studied Montessori. She holds a certificate in Montessori education and a Grade III A certificate.

The initiative to establish a pre-primary class that was informed by the Montessori philosophy materialised in 2016, following the renovation of the Class to suit the Montessori philosophy by adding a well-designed infrastructure. The Isenga D pre-primary class had 70 children in 2016 with a single teacher attending to all of the children. In 2021 and 2022, the enrolment was recorded at 140 children and 138 children, respectively. The class is divided into shifts: the morning shift is from 08:00 am to 11:00 am and the afternoon shift is from 11:00 am to 02:00 pm.

The class teacher holds a certificate in teacher grade III A and a certificate in Montessori teacher education.

These cases demonstrate the existence of public pre-primary classes implementing MPAs. Statistics, however, were largely lacking to establish the number of Montessori dare care centres and schools and their registration status.

3.5.4 Integration of the Montessori Pedagogy in the Public Education Institutions

The study found that some pre-primary classes employed the Montessori pedagogical approach in a bid to promote child development and learning. The approach involved integrating elements of the Montessori pedagogy into the national pre-primary education curriculum. These classes implemented the content stipulated in the national education curriculum but employed materials, learning strategies, and assessment procedures, such as the Montessori pedagogical approach. In these schools, teachers applied the principles of the Montessori pedagogical approach such as freedom for choice, a prepared environment, and individualised learning.

Regarding this aspect, one MCT Co-ordinator said:

“

There are more than 50 pre-primary schools in my zone, which integrate the Montessori pedagogical approach into the execution of the national pre-primary education curriculum. The main aspects that have been integrated and well-implemented include learning strategies, prepared environments, and freedom of choice in learning as well as the development of human tendencies.”

On the other hand, the head teacher at a Montessori pre-primary school reported:

“ We do not have primary schools here which employ the Montessori pedagogical approach per se, but we have integrated aspects of the Montessori pedagogical approach in the lower grades (i.e. standard one and two). These aspects include the prepared environment, play-based learning, independence, respecting the child's interest and developing human traits and tendencies. ”



3.5.5 The adaptation of MPA in primary and secondary schools

The study also found that some of the private primary and secondary schools were informed by the TIE-developed curriculum. These schools, however, have adapted the Montessori pedagogical approach to translate the curriculum into practice. The primary school, for example, adapted a mixed-age grouping. These groups integrated children aged six-seven years (Standard I and II), eight-nine year-olds (Standard III and IV), ten-11-year-olds (Standard V-VI) and those aged 12 and above (Standard VII). Standard VII were not mixed because this is the final year of primary education. At the end of Standard VII, pupils sit the Primary School Leaving Examination (PSLE), administered by the National Examination Council of Tanzania (NECTA). Thus, Standard VII pupils were not mixed with other age categories, to give them more time to prepare for the PSLE. Besides the mixed-age approach, the teaching of subjects from the curriculum prepared by TIE entailed reorganising the subjects and placing them into blocks with similar content.

The study further found that some secondary schools operate under the government structures, including the TIE curriculum, from Form I to Form 4, but had adapted MPA. The MPA was, indeed, reflected in the implementation of the curricula through indoor/outdoor activities. In consequence, teaching and learning were minimally conducted using the chalk-and-board method. Instead, the class largely engaged in table teaching and project activities, peer tutoring and individual study in libraries and computer rooms. The students were also encouraged to learn to uphold the Montessori motto: "Help me to do it by myself."

3.5.6 The Existence of Functional Montessori Training Centres

The Montessori training centres were privately-owned colleges. There were seven MTCs. The centres were Msimbazi in Dar es Salaam, Kawekamo in Mwanza, Montessori Mtwara, Montessori Ushirika wa Neema Moshi, Montessori TTC in Lushoto, Tanga, and Partage Montessori in Bukoba. These training centres provided a one-year Montessori teacher certificate for day-care, awarded by the Social Welfare, and a two-year Montessori Diploma in Philosophy and Methodology. Enrolment in a certificate in day-care education programme requires at least a D pass. On the other hand, enrolment in the Diploma programme requires, at a minimum, the completion of the one-year certificate in day-care education.

The certificate in day-care education prepares trainees regarding early childhood development, care and education. The areas of focus included responsive caregiving skills; play-based pedagogy in teaching children; monitoring, assessing, and evaluating the caregiver and pre-primary teachers; teaching and learning material development; early identification and interventions for children with special needs aged zero to eight years; and psycho-social care and support services for the most vulnerable children and youths. Similarly, the trainees were expected to acquire general knowledge in English, Kiswahili, Civics, leadership, nutrition, first aid, stories and songs, arts, psychology, and teaching methodologies, which are all essential when teaching young learners

The two-year Montessori Diploma prepared trainees in early childhood development, care and education. The areas of focus were physical development, cognitive/intellectual development, Mathematics, Science, the History of education, child development and psychology, Montessori peace education, observation, communication skills, leadership/school management, general knowledge, and cosmic education. Trainee-teachers, who have completed their studies satisfactorily with acceptable attendance records, have an opportunity to sit the Diploma Examination, which consists of seven

separate elements: theory, method, general knowledge, practical, a reference file prepared during the course, making the Montessori learning materials, school visits, such as lecture attendance, practical sessions, and students' standard of work and general attitude.

The study found that all of the MTCs have diverse types of private ownership: religious institutions, and secular individuals and entities. The findings further reveal differing orientations due to diversity of ownership. The study further found that enrolment in MTCs was low (an average of



34% trainee teachers were enrolled in four MTCs over the past five years, 2018 – 2022), and statistics on Montessori-trained teachers were largely lacking. Also, statistics were lacking to establish the number of schools which integrated and adapted MPA.

3.5.7 In-service Public Pre-primary Teachers' Training Programme in Montessori Pedagogy: The Case of Partage Montessori TTC

Partage Montessori Teachers' College, in collaboration with the MoEST, and the PO-RALG, with the support of the Arthur Waser Foundation and other stakeholders, is engaged in a three-year pilot teacher-training programme. The Partage Montessori TTC, in Bukoba Municipality, Kagera Region, was established in 2007 and registered in 2018. The programme was launched in May 2022.



This teacher-training programme targets in-service public pre-primary teachers, randomly selected from eight districts in Kagera Region. It is organised into six six-month cohorts. These cohorts enrol 20 pre-primary teachers each. Thus, by 2025, 120 trainees will have graduated from the programme. The first cohort of the programme, which started on 5th September 2022, will graduate in March 2023. The cohort

comprises seven male and 13 female trainee-teachers.

The programme introduces trainee-teachers to the Montessori pedagogy programme. The programme is organised into two broad components: the academic and professional components. The academic component comprises theories on early childhood education and child psychology. The professional component, on the other hand, consists of teaching and learning methodologies and learning material development. The teaching/learning methodologies aspect introduces the trainee-teachers to strategies aimed at sharpening their competencies and skills regarding how to manage and teach large classes, particularly in public pre-primary classes.

In addition, the trainee-teachers get an opportunity to link theory with practice seamlessly. The course package includes micro-teaching sessions and eight days of practical field experiences outside the college, which exposes the trainee-teachers to practice in Montessori pre-schools for four days and public pre-primary classes for four days. The training follows the guidelines developed by Partage Teacher Training College in collaboration with the MoEST and PO-RALG through Tanzania Institute of Education (TIE).

3.5.7.1 Qualitative evaluation of the programme

As already highlighted, the first cohort of 20 graduates graduated in March 2023. The research team conducted a qualitative evaluation study to examine the effectiveness of the programme. The research team conducted interviews with school quality assurer official from MoEST, coordinator of the programme at LGA level and a sample of 4 graduates. All participants positively commended the programme. They expressed that the programme was relevant and timely. They also expressed that the programme was effective in terms of promoting teachers' competences on children's pedagogy, teaching and learning materials development and use, and behavioural interventions. They also reiterated that the nature of the programme with practical component and learning by doing was effectively promoted creativity. The graduates felt confident enough to implement the child-friendly and collaborative methodology to support children's development, creativity, problem solving skills, confidence and learning when they go back to schools. They wished the programme could be scaled up to reach as many in-service public teachers.

One of the graduates, for example, expressed that,

“

I am proud I have attended the programme. The programme has opened my mind in several ways. With the teaching learning approach, I have studied, child psychology, behavioural intervention, development, and use of child-friendly and developmentally appropriate teaching-learning materials, I feel confident enough that I can support children's development and learning.”

The findings imply that the programme has promoted trainees' content and pedagogical competences. It has also instilled self-efficacy believes among graduates' that they can support children's development and learning.

3.5.8 Engagement of MCT Members in National Curricula Material Development

The study found that the TIE was inviting personnel with a Montessori pedagogical orientation to different workshops related to curriculum development, the development of a pre-primary teacher's guide, and preparation of pre-primary textbooks. These personnel included tutors from the Montessori training centres and teachers who were working in Montessori day-care centres and early childhood education settings. Moreover, such personnel with expertise in MPA engaged in various in-service training programmes for public pre-primary schoolteachers to facilitate sessions related to teaching-learning material development, classroom arrangement, play-based teaching and learning, and the assessment of child development and learning.



The study found that some pre-primary classes employed the Montessori pedagogical approach in a bid to promote child development and learning by integrating elements into the national pre-primary education curriculum such as employing learning materials and strategies, and assessment procedures used in the Montessori pedagogical approach.

In this regard, one TIE Officer said:

“

I have witnessed the participation of experts from Montessori in our different curriculum development workshops. I remember in 2020, when we were developing a teacher education curriculum. On my panel, there were some members from the Montessori training centre. I think this is a good way of adopting [and adapting] relevant elements from the Montessori approach into the training of teachers. ”

Similarly, one MCT Co-ordinator said:

“

The Tanzania Institute of Education involves us in many activities regarding curriculum development, curriculum review and the preparation of a teachers' guide and pre-primary books. This practice provides us with an opportunity to share our knowledge on the elements of the Montessori pedagogical approach for adaptation and integration into the national education curriculum, especially the pre-primary education curriculum. We are also involved in in-service training, where we facilitate sessions, such as teaching-learning material development, learning corners and the assessment of development and learning. ”

3.6 Employability of graduates from the Montessori training centres

The study also sought to determine the employability of graduates from the Montessori training centres, based on the participants' perspectives. The participants took the view that graduates from the Montessori training centres were competent enough to be marketable among employers specialising in early childhood education. In this regard, the participants reported that graduates from the Montessori training centres were more likely to be employed in private pre-primary schools than in public primary schools. As such, the participants called for intentional efforts to lobby the government to employ graduates from the Montessori training centres in public schools.

One TIE officer, for example, said:

“

It is true that graduates from Montessori teacher training colleges demonstrate the competencies required by employers. They are employed in private day-care centres and pre-primary schools since having a Montessorian teacher is a pre-condition for registration and running private day-care centres. I think there is a need to strategize on how best to convince the government to employ graduates from Montessori in the public pre- and primary schools. ”

Implicitly, graduates from the Montessori training centres possess all of the requisite competencies that employers cherish. The graduates, therefore, can have an opportunity to find work in ECD centres that are owned by individuals or private institutions, yet they do not secure direct employment in

government-run institutions, regardless of their potentially invaluable contribution to such schools. Moreover, it was challenging to trace Montessori trained teachers due to lack of systematic records.

3.7 Challenges to Applying the Montessori Pedagogical Approach

The study also found that the challenges to the application of the Montessori pedagogical approach in MTC, public schools and teacher training colleges included the limited financing and the scarcity or lack of teaching and learning facilities to facilitate the development of teaching/learning materials. The results show that the public pre-primary classrooms suffered due to having insufficient materials.

The participants further reported that the implementation of MPA in regular pre-primary classes was time-consuming. In this regard, the teachers reported that, it was challenging to manage the time with MPA in public classes, considering the lack of teaching-learning materials coupled with the high teacher-pupil ratio. As a result, the teacher training colleges reported that they encountered difficulties in ensuring that relevant materials were available to enable the training of MPA in MTCs'. Some of the trainees were funded through scholarships provided by the MTCs; others were self-financing trainee-teachers. In other words, the insufficient funding limited the scaling up of the MPA philosophy.

On their part, the trainee-teachers reported that there was a paucity of Montessori training centres in Tanzania to accommodate teachers to cater for all schools, should the government opt to employ them in public pre-primary schools.

In this regard, one of the trainees said:

“ There are only eight Montessori colleges in Tanzania so it will be more theoretical rather than practical because this approach needs people to work more with teaching and learning materials. In our government-run colleges and schools, there are inadequate numbers of rooms for practicals. As such, it will be a political activity. ”

The study findings further indicate that the lack of registered fully-fledged Montessori primary and secondary schools posed a challenge to the effective and efficient implementation of the Montessori pedagogical approach in Tanzania. According to the participants, the lack of primary and secondary schools informed by the Montessori pedagogical approach constituted a barrier to parents enrolling their children in Montessori pre-primary classes. In fact, the parents feared that their children would lack continuation because, when they graduated from a Montessori pre-primary class, they would be unable to find a primary school and secondary school, which were informed by the Montessori pedagogy. The participants further reported that the value of Montessori education could increase, with registered Montessori primary and secondary schools having their own recognised curriculum.

The Head Teacher of a Montessori pre-primary school, for example, said:

“

One of the challenges we are facing right now is the lack of primary and secondary schools that use the Montessori curriculum. I think that, if we had registered primary and secondary schools using the Montessori pedagogical approach, our approach could have been more excellent than it is right now. ”

The MPA is gaining ground in the community. Similarly, the application of the MPA in Tanzania has proven successful for quite some time now because graduates completing their studies in Montessori kindergartens and pre-primary schools continue their studies in the public primary and secondary schools. As such, there is a need for more sensitisation from the community to the national levels on the significance of the Montessori pedagogical approach. This course of action might warrant the minimisation of the existing challenges to the implementation of the approach.

04

DISCUSSION OF THE FINDINGS AND THEIR IMPLICATIONS



The findings show that stakeholders are aware of the MPA, as there was a consensus among most of participants that this approach emphasises children's active engagement in play and use of materials during the learning process. Indeed, the approach focuses on children's needs and freedom of learning in order to develop curiosity. This implies that the transformation of the learners starts early. In this regard, Macià-Gual and Domingo-Peñafiel (2021) explained that the application of this approach in education would enhance the child's chance of attaining success both at school and in life generally. Moreover, MPA draws specific attention to self-directed and independent learning, self-efficacy, and respect in addition to developing motivation and joy regarding learning (Hiles, 2018). However, for the

MPA to flourish, the environment must encourage learning by readily availing materials tailored to cultivate a particular skills-set or talent. An environment that is equipped with materials enabled the children to participate actively in learning activities.

The existing commendable alignment between the Education for Self-Reliance, the PPE curriculum and syllabus and the Montessori pedagogical approach demonstrate, in many ways, that the MPA is applicable, feasible and scalable in the Tanzanian context. Similarly, the diffusion of MPA in teacher education, including in-service teacher training, could be a catalyst for scaling up further MPA. This might go beyond in-service teacher training to cover pre-service teacher training in universities and teacher training colleges. It is estimated that, currently, there are 17 teacher training colleges for pre-primary teachers. This might be an avenue through which to explore the scalability potential.

The initiatives aimed to scale the application of the pedagogy up to include the adoption and application of the Montessori pedagogy in the country's public pre-primary classes and schools. In 2022, it was reported that Tanzania was among the countries with the largest number of Montessori schools. Other countries included the United States, China, Thailand, Germany, and Canada. It was estimated that Tanzania hosts approximately 800 Montessori schools (Debs et al., 2022). The current study, however, reveals that there could be many more such schools, however, evidence to demonstrate that they have been registered by the responsible authorities is lacking. Other schools used the name Montessori but, in practice they were not Montessori schools.

Integrating MPA in government/public schools would bring about challenges due to the inadequate teaching and learning facilities, such as materials for creating teaching aids, the time constraints on both the teachers and trainee-teachers and financial challenges, not only in Tanzania but also in other countries. The common hurdles include struggling with the budget and meeting the government's mandatory requirements as well as an acute shortage of competent teachers. However, Montessori schools strive to maintain their unique learning environment and niche using certified teachers, in-service training, and well-equipped classrooms (Jones, 2017).

Starting and maintaining a public-school that upholds and integrates the Montessori programme might be hindered by inadequate numbers of qualified MPA caregivers. The teachers working in the public schools must receive training on the Montessori pedagogy, regardless of whether they have a Grade IIIA teacher certification, in line with the United States, where public teachers possess both state- and Montessori certificates. Other challenges, include the use of technology in the teaching of MPA, for instance, when it comes to exhibiting high technology efficacy and valuing the development of technological skills among their students (Ansari & Winsler, 2014). Given the diverse ways to implement the MPA pedagogy, it is necessary to harmonise how Montessori education is provided to meet its ideal goals.



The study found that most of the education stakeholders were aware of and demonstrated a firm understanding of the approach and is consistent with the nation's Education for Self-Reliance philosophy, which informs the country's education and training and has been adapted and integrated into the pre-primary curriculum and syllabus as well as teacher training.

05

CONCLUSION

Most of the education stakeholders were aware of and demonstrated a firm understanding of the approach. The MPA is consistent with the nation's Education for Self-Reliance philosophy, which informs the country's education and training. The Government has demonstrated its willingness to adapt MPA in schools and in-service pre-primary teacher training, as some MPA features have been adapted and integrated into the pre-primary curriculum and syllabus as well as teacher training. In other words, the diffusion of MPA into the existing pre-primary, primary and in-service teacher training structures in Tanzania has already started. The engagement of MCT members in national curricula material development is key for capacity building and the sustainability of MPA in the existing structures. To strengthen its viability even further, there is a need for continual engagement with the relevant Government entities as well as to address the challenges outlined in this study.

To further scale up MPA, there is a need to explore further opportunities to integrate MPA into the preparation of pre-service and in-service teachers in public teacher education by offering courses in early childhood development and learning. This might also include community sensitisation, and scaling up the MPA in-service training, lobbying and continual engagement with the MoEST and the PO – RALG. Experience from the Partage Teacher Training Centre in Bukoba Municipality might inform the discussion of how to scale up the in-service training. This study provides a frame of reference for those wishing to understand how the Montessori pedagogical approach is perceived by the stakeholders, and a snapshot of the Montessori approach's applicability in Tanzania.

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APPENDICES

Appendix 1: Alignment between the Montessori Pedagogical Approach and the 2016 Curriculum and Syllabus for PPE

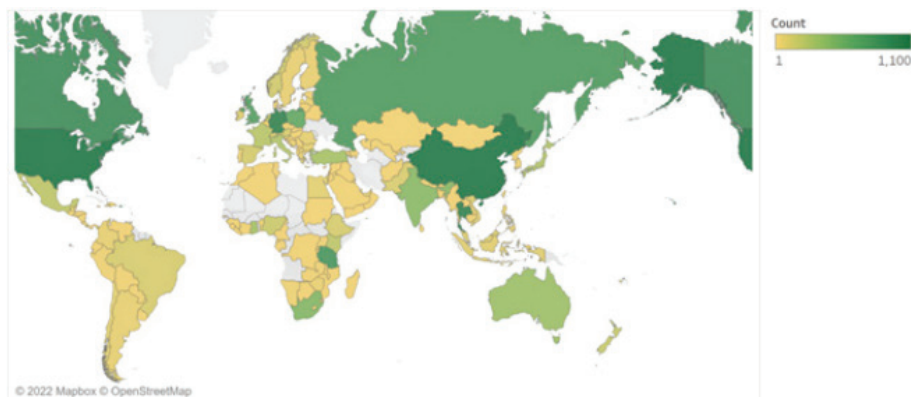
Salient Feature	The 2016 Curriculum and Syllabus for PPE	Montessori Pedagogical Approach
The Context and Concept	This education is provided to enable children to develop competences that will enable them to manage their daily lives and prepare them for primary education and their future life, based on a consideration of their child's community needs, including their economic, social, cultural and technological needs.	The philosophy is informed by a child-centred approach, aimed at helping children to reach their holistic potential by learning as they work independently in a harmonious environment.
Target Group	The target group of the Pre-primary Education Curriculum is all children aged five years, including those with special needs. Children aged three to four years may be allowed to enrol in pre-primary schools if early assessment indicates their readiness for school. The assessment will consider the following indicators: the ability to be independent, the ability to express him/herself, the interest of the child and the ability to follow simple instructions.	The approach utilizes mixed-age classrooms. Children start school far earlier, at the age of 12 months. The age groupings are based on the premise that every child learns at his/her own pace, regardless of their age. Therefore, the first grouping under Montessori is toddler age, including children aged from 12 months to two years and 11 months old. The next age grouping at a Montessori school is ages three to six years. This grouping includes pre-school, pre-kindergarten, and Kindergarten.
Objectives	<ul style="list-style-type: none"> -Promote the child's ability to learn by doing -Develop the child's ability related to self-awareness, self-confidence, self-worth and valuing others -Develop the child's ability to protect the environment -Promote the child's ability to value and sustain cultures acceptable in communities -Identify children with special needs and provide appropriate interventions -Develop the child spiritually and morally -Provide basic services to the child -Develop pre-academic skills -Promote creative and logical thinking skills -Develop the child's fine and gross motor skills 	
Child Competences	<ul style="list-style-type: none"> Ability to Relate to each other Ability to Communicate Ability to Care for his/her health Ability to Care for the environment Ability to Master artistic skills Ability to apply mathematical concepts 	<ul style="list-style-type: none"> Practical life activities Sensorial activities Mathematical activities Literacy activities Cultural activities
Competency-based and Inclusiveness	The child is at the centre of the learning process and emphasis is placed on enabling him/her to develop life-long learning behaviour. By its nature, the Pre-primary Education Curriculum is inclusive because it addresses the needs of all children, including those with special needs, by facilitating development according to their needs and ability to perform specific actions.	Holistic development

Salient Feature	The 2016 Curriculum and Syllabus for PPE	Montessori Pedagogical Approach
Principles Guiding the Provision of Pre-primary Education	<ul style="list-style-type: none"> -Creation of child-friendly environments -Children have the right to be involved in decision-making, protected and valued -Build on the child's experiences based on things that he/she knows and can do -Holistic development occurs quickly during the early years of life -Teacher-planned and child-initiated play activities 	<ul style="list-style-type: none"> -The prepared environment -Respect for the child -The absorbent mind -Sensitive periods -Directress
Teaching and Learning Environment	The environment should be prepared in such a way that children will learn in the absence of the teacher. Both indoor and outdoor environments must provide children with opportunities to learn by doing, with the environment as their third teacher, after the parents and the school. Also, in pre-primary classes, there should be learning corners with various learning aids which the children can use during class learning or in their own time, according to their interests. Among the corners are the Numeracy corner, Science corner, Home corner, Art corner, Shop corner, Language corner (Reading and Writing), Play corner and Sand and Water area, which should be outside the classroom. However, the Numeracy, Language and Play corners must be available in every pre-primary education class.	The environment is the vehicle for learning in a Montessori's classroom. It is prepared to provide children with a harmonious atmosphere for learning with materials that are designed around six focal areas: room care and practical life; art; geography; maths and science; cultural; and sensorial.
Teaching and Learning Methods	A participatory teaching and learning method is recommended, whereby learning takes place through the performance of different activities, with play as the main children's activity. The methods that are recommended in pre-primary schools are: demonstrations, observations, project methods, role-play, songs, plays, storytelling, poems, gallery walks, questions and answer sessions, brainstorming and discussions.	Play-based, Child-based
Teaching and Learning Materials	Teaching and learning rely on the contextually relevant materials that promote a child's interest in learning. The curriculum and syllabus state that the materials should be clean, attractive, ability- needs-, interest- and age-appropriate, strong and durable. The materials include puzzles, board games, playing cards, abacuses, dominoes, draughts, counters and toys. Other materials are flash cards, number cards, picture cards, wood pieces, videotapes, television, radio, telephone, Braille machines, Tactile, sign language dictionaries and sign language alphabets. The teaching and learning materials that may be used outside the classroom are sand, a variety of see-saws, slides, balls, tyres, and ropes.	Useable materials
Assessment of Child Development	An authentic assessment is carried out through naturalistic observations on an ongoing basis. The methods or techniques used may include observations, interviews and the use of pictures that show different learning episodes of the child and audio and video recordings. The tools involved in the assessment of child development include checklists, portfolios, questionnaires, and child development forms.	Individualised assessment plans

GLOBAL DIFFUSION OF MONTESSORI SCHOOLS: A REPORT FROM THE 2022 GLOBAL MONTESSORI CENSUS

Montessori education is distinct for its implementation in 154 countries around the world. Lacking a Montessori trademark or comprehensive overseeing body, the expansion of the Montessori approach has often been diffuse and fragmented among competing organizations. The absence of centralized, accurate, and consistent accounting has made it difficult to document the scope, growth trends, and diverse populations of students served in Montessori schools. The primary objective of this study was to gather evidence to support a robust estimate of the number of Montessori schools worldwide. This estimate relies on national and regional organizations' broadest definitions of what constitutes a Montessori program. The study included two components: a survey of regional and national Montessori organizations and supplemental sources, including other published estimates and direct inquiries within key countries. Multiple sources allowed for triangulating data to reach a more confident estimate for the number of schools in each country and for synthesizing global perspectives on significant elements of Montessori fidelity worldwide. Through these sources, we document a total of 15,763 Montessori schools around the globe, roughly 9% of which are government funded. Countries with the largest number of Montessori schools are the United States, China, Thailand, Germany, Canada, and Tanzania; the United States, Thailand, the Netherlands, and India have the largest number of government-funded or public Montessori programs. Results of the fidelity analysis identified six practices that emerge consistently as central pillars of Montessori implementation.

Figure
Estimated Counts of Montessori Schools by Country



Note. Scale ranges from yellow for the lowest numbers to dark green for the highest numbers (1,100+). Gray represents countries where no data exists. An interactive map is available at <https://public.tableau.com/views/GlobalMontessoriCensus2022/MontessoriCensusMap>



MONTESSORI COMMUNITY OF TANZANIA

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