Assessment of Learning and Teaching Environment for Pre-Primary Education in Tanzania

2019







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Acknowledgements

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Executive Summary

Pre-primary education is increasingly recognised as a critical level for children's physical, mental and psychosocial development. Enrolment in Tanzania's pre-primary education has increased from 37% in 2009 to 47% in 2016. As more children are enrolled in pre-primary education, there is also a demand for creating not only a safe learning environment but also innovative teaching methods that will enhance the children's school readiness, development and learning. As part of the strategies to improve the teaching and learning environment and pre-primary teachers' practices, HakiElimu as a lead partner in collaboration with VIA University College under UKAid through the Human Development Innovation Fund (HDIF) is implementing a Mwanzo Mzuri Innovation Action Research Project.

Mwanzo Mzuri is a three-year project which aims at ensuring that young Tanzanian's are enrolled in high quality and safe pre-primary education in order to improve these children's school readiness and support them to reach their full potential. To inform the Mwanzo Mzuri intervention, the current study assessed the existing teaching and learning conditions and their implication on school readiness and learning outcomes in pre-primary schools in Tanzania. Specifically, the study focused on analysing enrolment trend for the past three years by gender, disability status, geographical location and age; assessing the extent to which the teaching and learning conditions constrain or support school readiness and learning outcomes of children aged 0-6 years; examining the status of teacher-parent collaboration and their implications on children's quality early education; and, examining pre-primary teachers' awareness of classroom management skills and child-centred approach in ECE.

Data were collected from 33 primary schools located in nine districts namely; Kilosa, Arumeru, Moshi, Mpwapwa, Korogwe, Masasi, Tunduru, Babati and Iramba. The schools were purposively selected from HakiElimu programme schools. In a bid to achieve the Mwanzo Mzuri project objective, the 33 primary schools were divided into three categories. First, 10 schools were selected as experimental schools in which they will receive full intervention, that is, both curriculum and community awareness programmes on ECD will be provided. Second, 14 schools will receive partial intervention, where only community awareness on ECD will be provided. Third, 9 schools are treated as control schools, where they will neither receive curriculum nor community awareness programmes on ECD.

The study employed a mixed-method approach which was informed by a causal comparative research (ex-post factor) design to collect both quantitative and qualitative data. Both quantitative and qualitative data were collected and analysed concurrently in the same phase with both approaches having an equal emphasis. A total of 543 respondents were involved in this study, made up of 33 head teachers, 38 pre-primary teachers, 451 parents, 12 Ward Quality Assurers, and 9 District Education Officers. These respondents were purposively selected based on their virtual of their position as far as education matters are concerned.

In particular, semi-structured interviews were conducted with all head teachers, pre-primary teachers, Ward Quality Assurers, and District Education Officers to explore their views on how teaching and learning conditions support or constrain learning at pre-primary levels in their areas and provide practical recommendations in line with the study's objectives. Similarly, 14 focus group discussions were conducted with 125 parents in all Districts to ascertain their views in relation to access to education, teaching and learning conditions and their engagement in education matters related to their children. At least one focus group discussion was conducted in each district. In addition to interviews and focus group discussions, physical observations were carried out around the school compounds for purposes of documenting teaching and learning contexts that support or constrain children's learning. This included a general school mapping to examine the school climate which involved observing the general conditions of the school, classrooms, amenities and children safety conditions.

Further, 326 parents were involved in quantitative part of the study by filling in the questionnaires. A questionnaire with close and open-ended questions as well as multiple choices was developed to collect information about teachers' and parents' views on general teaching and learning environment in the targeted areas. Qualitative data obtained in this study were analysed using thematic approach while quantitative data were descriptively analysed using Statistical Package for Social Sciences (SPSS 22) to obtain the frequencies and percentage along each data set. Inferences were made in line with the objectives guiding the study.

The study found that the question of access to education is not a big challenge as enrolment to early childhood education had been increasing for the past three years with variations across districts. On average, Iramba was found to have highest participation rates (124.3%), followed by Kilosa (116.3%) and Mpwapwa (92.8%) between 2016 and 2018. Further, with exception of Mpwapwa District, the actual number of pupils enrolled in pre-primary classes exceeded the expected one. In terms of gender, the study shows that enrolment of female pupils at pre-primary school were about 50% both in Kilosa and Iramba districts and more than 55.4% in Iramba District. Besides, increase in number of children in schools as a result of fee free education policy has not matched with the quality of learning environment. It was evident in this study that the teaching and learning conditions were largely not supporting inclusive safe learning in pre-primary education. Key inputs for pre-primary teaching and learning such as special toilets and kitchen for pre-primary classes, clean water, classroom furniture including chairs and desks were lacking in the schools under study. Indeed, almost all surveyed schools had teaching and learning environment which does not support inclusive education especially for children with disabilities.

Moreover, the findings have shown that although a good number of teachers (52.6%) have a general understanding of early childhood education, they were less informed of fundamental concepts and facts related to early childhood education as far as the pre-primary curriculum is concerned. Furthermore, the results of this survey show that 50% of teachers had low understanding of the concept of child-centred approach in early childhood education. On the part of parents, findings indicate that the majority (56.7%) have limited knowledge on early childhood education.

Parent-teacher collaboration and community involvement in the provision of quality early childhood education was also the focus of this study. The findings reveal that some parents were not fully engaged in education matters of their children. Based on teachers' views, 60.5% agreed that parents collaborate and involve themselves in various education matters through school meeting, monetary contribution and provision of education support to their children.

Finally, the current study has found that managing children behaviour in classroom has been one of the major challenges and concerns to pre-primary teachers. The findings show that 50% had limited knowledge of classroom management strategies. For example, more than 50% of pre-primary teachers reported to use punishment and threats to ensure that the children abide to the rules and regulations. The implication from the study's findings is that the quality of pre-primary education provided to children is questionable given the presence of unsupportive learning environment, unstable teacher-parent collaboration and unfamiliarity of teachers with pre-primary classroom management strategies and early-childhood pedagogy.

Based on the findings and conclusion, the study offers the following recommendations:

- The government should employ more teachers and caregivers for pre-primary education. One teacher as per current set up cannot manage all children at a time, given that children below six years of age tend to be playful and cannot help or take care of themselves when they need to attend the call of nature;

- The government should improve infrastructure for pre-primary classrooms. Attending classes under the shade of tree and open space is unsafe and could not provide effective learning to young children;

- The government should ensure the availability of sanitation facilities and safe drinking water. Sanitation facilities and hygienic condition/environment is a necessary first step in the creation of friendly learning environment for pre-school children;

- There is a need for MoEST to provide in-service training programmes to build capacity among pre-primary teachers in various areas including classroom management and assessment strategies and child-centered approaches in early childhood education;

- The government should provide more textbooks and non-print materials for pre-primary education in Tanzania by increasing the budget for education sector;

- Schools should reinstate feeding programmes to promote pre-primary children's attendance, participation and achievement of learning outcomes; and

- Schools should increase awareness campaigns on teacher-parent collaboration and its implications to access and quality pre-primary education.

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List of Abbreviations

CBOs	Community-Based Organisations
DEOs	District Education Officers
ECD	Early Childhood Development
ECE	Early Childhood Education
FBOs	Faith-Based Organisations
HDIF	Human Development Innovation Fund
MoEST	Ministry of Education, Science and Technology
MUCE	Mkwawa University College of Education
PQTR	Pupil-Qualified Teacher Ratio
SPSS	Statistical Package for Social Sciences
WQAs	Ward Quality Assurers

1. Background of the Study

1.1 Context of the Study

Pre-primary education is globally recognized as a critical level for children's physical, mental and psychosocial development. As such, young children (aged 0-6years) who are enrolled in pre-primary schools require a safe and caring environment to ensure their healthy, security, confidence, attentiveness and ability to learn. National enrolment for pre-primary has increased from 37% in 2009 to 47% in 2016 (MoEST, 2016), as a result of fee free basic education policy, community sensitisation and strong partnership between government, parents, faith-based organisations (FBOs) and community-based organizations – CBOs (MoEST, 2016). Nevertheless, the expansion in pre-primary education has not matched with the improvement of safe and conducive learning environment for inclusive learning. Research shows that qualified teachers and parents' involvement in young children's education are critical conditions for their school readiness and effective learning (Hedge & Cassidy, 2009). Desforges and Abouchaar (2003) and Warner and Sower (2004), for example, have noted that parents' involvement in young children's education is linked to school enjoyment, retention, school readiness and learning to read. Indeed, specialized training in early childhood education and community involvement are two closely related factors that may influence each other and promote learning among children.

Moreover, the available data show that pupil-qualified teacher ratio (PQTR) for pre-primary school is 1:131 against the required standard of 1:25 (MoEST, 2016). Several studies on pre-primary and primary education have shown that poor quality of interaction between children and their teachers, lack of learner-centered teaching methods, poor quality of teaching and learning infrastructure, inadequate teaching and learning materials, teachers' incompetence are among of the attributes for poor quality pre-primary education in Tanzania (Machumu, 2013; Mtahabwa, 2007; Irvine, 2010; Mosha, 2011; Gabriel, 2011; Tandika, 2015; Oduro, Dachi & Fertig, 2008). There is also a long way to go to increase enrolment for children with disabilities at all levels of education in Tanzania to assist these children attain their potentials. For example, statistics show that pupils living with disabilities - such as albinism, autism and physical, mental, visual or hearing impairments - make up around 1% of the total enrolment, and pupils from low income families consist of 7.5% of the total enrolment (MoEST, 2016). Obviously, the more the increase of children's enrolment in pre-primary schools, the more the the demand for creating safe learning environment and innovative teaching methods that will enhance the children's school readiness, development and learning.

As part of the strategies to improve teaching, learning environment and pre-primary teachers' practices, HakiElimu as a lead partner in collaboration with VIA University College under UKAid through the Human Development Innovation Fund (HDIF) is implementing a Mwanzo Mzuri Innovation Action Research Project. The Mwanzo Mzuri Project aims at ensuring that young Tanzanian's are enrolled in high quality and safe pre-primary education, which improves school readiness and support them to reach their full potential. This is a three-year project which will pilot an innovative new action learning approach to pre-school teacher training focusing on teacher's ability to use child centred approach, observe, reflect and act. Teachers will design their own individual activities in the institutions and share knowledge between institutions through collective seminars for all institutions. As a result, schools will have a better equipped workforce of qualified teachers and educators. These qualified teachers n turn can respond to everyday challenges they face in their work and accommodate specific needs of the children in Tanzania's early year's education. The ultimate beneficiaries are children, who will benefit from enrolment in safe and quality pre-primary education. Therefore, this study aimed at assessing existing teaching and learning environment, teaching practices, teachers and parents' collaboration and their implications to children's quality of early childhood education in the targeted areas. The results of the study will inform the intervention in terms of the current prevailing situation at school levels.

1.2 The General Objective of the Study

The general objective of this study is to assess teaching and learning conditions and their implication to school readiness and learning outcomes in pre-primary schools in Tanzania.

1.3 Specific Objectives

i. Establish and analyse enrolment trend for pre-primary pupils for the past three years by gender, disability status, geographical location and age;

ii. Assess the extent to which the teaching and learning conditions constrain or support school readiness and learning outcomes of children aged 0-6 years;

iii. Examine the status of teacher-parent collaboration and their implications to children's quality early childhood education;

iv. Examine pre-primary teachers' awareness of classroom management skills and child-centred approach in ECE.

1.4 Methodology

This section describes the main components of the methodology that guided the conduct of the study; tools that were used for data collection and the analysis procedures employed in line with the key research questions.

1.4.1 Research Design

Experimental research design was adopted for this study. The experimental research design was selected because the study sought to investigate whether there would be differences between control and experimental groups after the interventions. Thus, the design allows researchers to systematically control, introduce an intervention, and measures the differences that the intervention makes (Cohen et al., 2007; Ary et al., 2010). In the context of this study, an innovative action learning approach among others, is piloted to pre-school teachers in the experimental schools and later on, assessment will be done to see whether or not the interventions in targeted areas have brought changes to teachers' practices and ultimately to pre-primary children in terms of their school readiness and learning outcomes. Moreover, the use of experimental design in this study allows comparison of changes that would be brought by the intervention between experimental and non-experimental schools. Both quantitative and qualitative data were collected and analysed concurrently in the same phase. After a separate collection, analysis, and interpretation phases, the researchers integrated the results for a better understanding of the problem understudy.

1.4.2 Respondents and Selection Procedures

A total of 543 respondents were involved in this study. These include 33 head teachers, 38 pre-primary teachers, 451 parents, 12 Ward Quality Assurers, and 9 District Education Officers. The officers dealing with education matters were purposively selected based on their virtual of their leadership position. Their experiences and perceptions informed the study about teaching and learning environment and their implications to school readiness and learning outcomes from 33 targeted primary schools. Semi-structured interviews were conducted with all head teachers, pre-primary teachers, Ward Quality Assurers, and District Education Officers, while 14 focus group discussions were conducted with 125 parents in all Districts. Further, 326 parents with children in pre-school classes were randomly selected for quantitative part of the study by filling in the questionnaires, thus making a total of 451 parents. The researchers prepared cards which equal the class size and through the help of pre-class teachers, the pupils were asked to pick the cards. Those who picked card with number 1-10 were then given invitation letters for their parents to participate in the study.

1.4.3 Selection of Study Sites

Data were collected from 33 primary schools located in nine districts namely; Kilosa, Arumeru, Moshi, Mpwapwa, Korogwe, Masasi, Tunduru, Babati and Iramba. The schools were purposively selected from HakiElimu programme schools. In a bid to achieve the Mwanzo Mzuri project objective, the 33 primary schools were divided into three categories. First, 10 schools were selected as experimental schools in which they will receive full intervention, that is, both curriculum and community awareness programmes on ECD will be provided. Second, 14 schools will receive partial intervention, where only community awareness on ECD will be provided. Third, 9 schools are treated as control schools, where they will neither receive curriculum nor community awareness programmes on ECD. Table 1 shows the sampling of both districts and schools.

Table 1: Study Sites Selection

S/N	District	No of Experimental Schools (curriculum & Community awareness)	No of Control Schools (with community awareness)	No of Control Schools (without community awareness and curriculum)
1.	Kilosa	4	-	3
2.	Iramba	4	-	4
3.	Mpwawa	2	-	2
4.	Masasi	-	2	-
5.	Tunduru	-	2	-
6.	Arusha DC	-	4	-
7.	Moshi	-	2	-
8.	Babati	-	2	-
9.	Korogwe	-	2	-
	Total	**10**	**14**	**9**

1.4.4 Data Collection Methods

In this study, multiple sources of data collection tools were employed. The study used in-depth interviews, questionnaires, focus group discussions, observation and documentary review to assess the teaching and learning environment in relation to school readiness and early learning in pre-primary settings. In-depth interviews were conducted with key informants (head teachers, pre-primary teachers, DEOs and WQAs) to explore their views on how teaching and learning conditions support or constrain learning at pre-primary levels in their areas and provide practical recommendations in line with the study's objectives. Further, a questionnaire with close and open-ended questions as well as multiple choices was developed to collect information about teachers' and parents' views on general teaching and learning environment in the targeted areas. Focus group discussions were conducted with parents in each of the participating schools to ascertain their views in relation to access to education, teaching and learning conditions and their engagement in education matters related to their children.

In addition to interviews and focus group discussions, physical observations were carried out around the school compounds for purposes of documenting teaching and learning contexts that support or constrain children's learning. This included a general school mapping to examine the school climate which involved observing the general conditions of the school, classrooms, amenities and children safety conditions. Also, there were observations on physically displayed classroom teaching and learning artefacts that may be useful in facilitating pre-school teaching and learning, including print materials such as books, maps, drawings, charts and numbers. The observations were recorded through field notes and photographing. Appendix 1 shows the data specification matrix which outlines key areas of assessment, research questions, type of data which were collected, research tools and respondents.

1.4.5 Data Analysis and Management Plan

The analysis of data in this study combined both deductive and inductive strategies. In this regard, the researchers neither approached the data with rigid set of pre-conceptions nor fully inductively, but rather a combination of the two. This orientation is based on the assumption that a better and broader understanding of the phenomenon under investigation would be informed by both research questions and emerging insights from the data (Laverty, 2003; Finlay, 2012). Specifically, qualitative data obtained in this study were analysed using thematic analysis. This involved preparation and organisation of the data, creation of themes, coding, presentation and interpretation. Specifically, interview proceedings were recorded using digital voice recorders. To familiarise with the data, the audio taped interviews were listened carefully before the transcription begins. Then, the interviews were transcribed verbatim to preserve respondents' words. Transcripts were labelled accordingly and stored in a computer. The next step was the creation of themes, coding, presentation and interpretation of data in line with the research questions. Interviews and focus group discussions were audio-recorded, transcribed and later translated into English. Quantitative data were descriptively analysed through Statistical Package for Social Sciences (SPSS 22) to obtain the frequencies and percentage along each data set and inferences were made in line with the objectives. To ensure consistency during data entry, a frequency run was check for any value that was either missing or wrongly entered in the SPSS programme.

1.4.6 Ethical Considerations

Ethical consideration in research involves adhering to official procedures, including obtaining research permits and getting informed consent of respondents, as well as a constant reflection of the researchers' practice and behaviour. In this research, research clearance was sought from the University of Dar es Salaam. This research permit enabled the researchers to have access to relevant regional and district authorities, which provided the permission to enter the schools. Although relevant authorities officially permitted to access the respondents, each participant was individually requested to participate in the study by the researchers. Oral informed consent was sought from all respondents before they were interviewed/took part in this study. Respondents were assured of confidentiality and anonymity. Respondents were told that the findings will only be used for the purpose of this study. Respondents were also told to feel free to withdraw from participation at any time as they please and not responding to any question which they consider inappropriate for them. Similarly, during reporting of the findings and throughout the report, respondents have not been identified by their names or school/institution which they come. Only generic titles of their occupations were used and indeed, no mention of where they are hailed from. On the other hand, ethical considerations involved training of the research assistants on research ethics to ensure the data collection process is conducted diligently and ethically.

2. Findings

2.1 Pre-primary School Access and Participation Rate

The study established trend in enrolment of pre-primary pupils for the past three years in the surveyed districts. Table 3 indicates that enrolment has been fluctuating over the years under study. In the experimental districts, a total of 94007 pupils aged between 3-7 years were enrolled in pre-primary school against 85668, equivalent to 109.7%. Iramba was found to have highest participation rates (124.3%), followed by Kilosa (116.3%) and Mpwapwa (92.8%) as an average for the years 2016-2018. This means that with exception of Mpwapwa District, the actual number of pupils enrolled in pre-primary classes exceeded the expected one. In terms of gender, the study shows that enrolment of female pupils at pre-primary school were about 50% both in Kilosa and Iramba districts and more than 55.4% in Iramba District. Generally, the results indicate that access to early year's education in Tanzania abides to national and international standards and commitments as both boys and girls have equal chance to access education. In the control Districts, the results of this survey show that of six districts, only Masasi and Tunduru Districts had shown a significant decrease in enrolment from 108.2% in 2016 to 76.9% and 110.2% to 66.1% respectively. While Arusha District Council and Babati Town Council recorded highest participation rate in the control districts (115.5%) and (111.8%) respectively, Tunduru District had the lowest participation rate (87.6%).

In terms of disability status, the study found that in the experimental districts a total of 160 pre-primary pupils had varied types of disabilities. Out of these, 90 (56.2%) were males and 70 (43.8%) were females. In terms of disability type, six types of disabilities were evident namely: Autism, visual impairment, cognitive disability, and physical disability, multiple disabilities and albinism. Cognitive and physical disabilities were more evident across all districts than other types of disabilities. The study reveals further that in the experimental districts, Mpwapwa recorded high number of children with disabilities (72) followed by Iramba (48) and Kilosa (40). Moreover, analysis in the control district shows that a good number of children with disabilities came from Arusha (575) while in Babati the statistics indicate that there were 60 children with disabilities in the period under review. Specific analysis of status of children with disabilities by category of disability and gender is attached as appendix III.

Conclusively, even though education policy and plans in Tanzania aim at ensuring equal access in pre-primary education, the findings suggest that some districts are still lagged in meeting the expected milestones. Thus, more initiatives are needed to ensure that all school-aged children access quality education.

Table 2: Disability Status in Pre-School Classes 2016-2018 (N=1114)

District	2016			2017			2018			Total		Grand Total
	Male	Female	Total	Male	Female	Total	Male	Female	Total	**Male**	**Female**	
Kilosa	07	04	11	03	02	05	09	15	24	19	21	40
Iramba	12	15	27	03	03	06	08	07	15	23	25	48
Mpwapwa	8	04	12	17	08	23	23	12	35	48	24	72
Moshi	30	17	47	31	14	45	33	13	46	94	44	138
Arusha DC	81	74	155	84	100	184	124	112	236	289	286	575
Tunduru	7	5	12	8	7	15	9	8	17	24	20	44
Babati	10	08	18	11	07	18	15	09	24	36	24	60
Korogwe	40	21	61	18	27	45	16	15	31	74	63	137
Masasi	0	0	0	0	0	0	0	0	0	0	0	0
Total										**607**	**507**	**1114**

(Source; Survey data)

Table 3: Pre-Primary School Access and Participation Rates (2016-2018)

I: Experimental Districts								
District	**Year:**	**Expected**			**Actual**		**Total**	**Participation Rate (%)**
		Males	Females	Total	Males	Females		
Iramba	2016	5331	3028	8359	4453	4429	8882	106.2
	2017	1919	1903	3822	4373	4206	8579	224.5
	2018	4836	4630	9466	4831	4625	9456	99.8
Total		12086	9561	**21647**	13657	13260	**26917**	**124.3%**
Mpwapwa	2016	5412	5871	11283	5213	5747	10960	97.1
	2017	4892	4941	9833	4478	4682	9260	94.1
	2018	4889	5461	10350	4414	5786	8998	87
Total		15193	16273	**31466**	14105	16215	**29218**	**92.8%**
Kilosa	2016	5303	5852	11155	6214	6136	12350	110.7
	2017	6224	4402	10626	6564	6777	13341	125.5
	2018	5179	5595	10774	6213	5968	12181	113
Total		16706	15849	**32555**	18991	18881	**37872**	**116.3**
II: Control Districts								
Tunduru	2016	2016	3815	5831	3220	3211	6431	110.2
	2017	3914	3942	7856	3934	4204	8138	103.5
	2018	4013	8040	12053	3947	4025	7972	66.1
Total		9943	15797	**25740**	11101	11440	**22541**	**87.6**
Arusha DC	2016	3696	4193	7889	4243	4415	8658	109.7
	2017	3996	4088	8084	5912	5542	11454	141.6
	2018	6271	6164	12435	6468	6228	12696	102
Total		13963	14445	**28480**	16623	16185	**32808**	**115.5**
Babati	2016	1470	1285	2755	1505	1362	2867	104
	2017	1218	1175	2393	1596	1461	3057	127.7
	2018	1513	1468	2981	1604	1560	3164	106.1
Total		4201	3928	**8129**	4705	4383	**9088**	**111.8**
Masasi	2016	3385	3860	7245	3902	3937	7839	108.1
	2017	3363	4009	7802	3775	3802	7577	97.1
	2018	3814	4089	7903	3041	3044	6085	76.9
Total		10562	11958	**22950**	10718	10783	**21501**	**93.7%**
	2016	5138	5091	10229	4757	4413	9170	89.6
Korogwe	2017	5088	5062	10150	4028	3865	7893	77.7
	2018	3853	3879	7732	4084	3940	8024	103.7
Total		14079	14032	**28111**	12896	12218	**25087**	**89.2%**
Moshi	2016	5431	5143	10574	5441	5086	10527	99.5
	2017	4792	4753	9545	5127	4838	9965	104.4
	2018	5982	5738	11720	4936	4665	9601	82
Total		16205	15643	**31839**	15504	14589	**30093**	**94.5%**

(Source: survey data)

2.2 Teaching and Learning Environment

The focus in this objective was to assess the extent to which the teaching and learning conditions constrain or support school readiness and learning outcomes of children aged 0-6. In this study, teaching and learning conditions meant all physical contexts which facilitate teaching and learning. For example, general classrooms conditions, safety conditions, teaching and learning artefacts for effective learning, availability of print materials, availability of space for playful learning and special toilets and kitchens for pre-school pupils. Opinions were obtained from parents, teachers and head teachers. Generally, results from both teachers and parents indicated that the teaching and learning conditions in all surveyed schools were not supporting learning of pre-school children.

For example, all teachers (100%) in all districts reported lack of toilets for pre-school children. Similarly, except for Arumeru district, all teachers (100%) reported that their schools lack enough textbooks for pre-primary children. Furthermore, 83% of teachers in Kilosa, Iramba and Mpwawa districts reported a lack of in-door and out- door space for children to effectively learn and play, lack of enough chairs and tables and lack of non-print materials for teaching pre-school children.

With regard to the availability of clean water, the results show that more than 60% of parents in Kilosa and Iramba, and 50% of parents in Mpwapwa reported that there is no clean water in their schools. Also, 100% of parents in Mpwapwa and Iramba, and 87.5% of parents in Kilosa reported a lack of supportive environment for children with disabilities for effective learning. Both infrastructure and facilities were not supporting inclusive teaching and learning in the pre-primary schools. Unsupportive building designs and a lack of teaching and learning materials for inclusive education imply that once a child with any disability is enrolled to one of these schools will be experiencing hardship to access quality early childhood education. Indeed, the results showed that 50% of teachers from Kilosa and Mpwapwa reported that there is no dedicated classroom for pre-school children. Table 4 presents teachers' views on the teaching and learning conditions in all the surveyed districts.

Table 4: Teachers' Opinions on Teaching and Learning Environment

	Enough and adequate textbooks		Adequate indoor space for children interaction and learning		Adequate classroom furniture		Enough toilets		Sufficient print and non-print materials		Enough and secured outdoor space for play and learning		Supportive environment for children with disabilities for effective learning		Availability of clean water		Kitchen/ cooking space for pre-primary students		Classroom setting	
Districts	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Tunduru	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
Arumeru	16.7	83.3	33.3	66.7	33.3	66.7	0.0	100.0	33.3	66.7	33.3	66.7	16.7	83.3	66.7	33.3	0.0	100.0	33.3	66.7
Kilosa	0.0	100.0	12.5	87.5	2.5	87.5	0.0	100.0	0.0	100.0	50.0	50.0	12.5	87.5	62.5	37.5	25.0	75.0	37.5	62.5
Moshi	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	50.0	50.0	0.0	100.0
Mtvvara	0.0	100.0	0.0	100.0	50.0	0.0	0.0	100.0	50.0	50.0	50.0	50.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
Korogwc	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
Mpwapwa	0.0	100.0	16.7	83.3	0.0	100.0	0.0	100.0	16.7	83.3	66.7	33.3	0.0	100.0	50.0	50.0	0.0	100.0	66.7	33.3
Iramba	0.0	100.0	0.0	100.0	12.5	87.5	0.0	100.0	0.0	100.0	25.0	75.0	0.0	100.0	62.5	37.5	25.0	75.0	37.5	62.5
Babati	50.0	50.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	50.0	50.0	50.0	50.0	0.0	100.0	0.0	100.0

(Source: Survey data)

Results from the parents concur with what was reported by teachers in almost all districts. For example, Table 5 indicates that more than 80% of parents in Kilosa, Mpwapwa and Iramba districts reported that there were no adequate textbooks and non-print materials. This means that teaching and learning materials were not enough to cater for the children's needs. Similarly, the findings indicated that more than 80% of parents in experimental schools reported a lack of enough toilets for pre-school children. This is an indication that pre-school children in the surveyed schools were less protected. Further, the findings revealed that 87.9% of parents in Kilosa, 65% of parents in Mpwapwa and 78.7% of parents in Iramba reported a lack of adequate indoor space of children interaction and learning. Similarly, results showed that most parents (more than 60%) reported that classroom setting did not provide opportunity for teachers to provide stimulating and developmentally appropriate activities to children. This implies that children do not have opportunity to play and learn at the classroom which is critical to their social, emotional and cognitive development.

The results further indicated that three-quarter of the parents in experimental schools (Kilosa, Iramba and Mpwapwa) reported the unavailability of classroom furniture such as chairs and desks. Moreover, 93% of parents in Iramba, followed by Mpwapwa (77.5%) and Kilosa (63.8%) reported that there was enough and secured outdoor space to support playful learning. In addition, the findings indicate that 65% of parents in Mpwapwa, and more than 50% of parents in both Iramba and Kilosa reported that their children have no access to clean and safe water in their schools. This means that children are exposed to risk of being affected by diseases resulting from poor sanitation. The study further found that 87% of parents in Kilosa, 80% in Mpwawa and 60% in Iramba reported a lack of dedicated kitchen or cooking space for pre-primary children in the schools. Similarly, the findings show that more than 75% of teachers indicated that there was no special dedicated kitchen for pre-primary classes. With respect to children with disability, the findings indicate that the teaching and learning environment was not supportive and inclusive for children with disabilities to fulfil their potentials. Table 5 presents the parents' opinions on the status of teaching and learning conditions by district.

Table 5: Parents' Opinions on Teaching and Learning Environment

	Enough and adequate textbooks		Adequate indoor space for children interaction and learning		Adequate classroom furniture		Enough toilets		Sufficient print and non-print materials		Enough and secured outdoor space for play and learning		Supportive environment for children with disabilities for effective learning		Availability of clean water		Kitchen/ cooking space for pre-primary students		Classroom setting	
Districts	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Tunduru	20.0	80.0	25.0	75.0	20.0	80.0	10.0	90.0	5.0	95.0	70.0	30.0	15.0	85.0	20.0	80.0	40.0	60.0	50.0	50.0
Arusha	25.6	74.4	23.7	76.3	17.9	82.1	25.6	74.4	15.4	84.6	35.9	64.1	23.1	76.9	65.8	34.2	23.1	76.9	52.6	47.4
Kilosa	6.3	93.7	12.1	87.9	16.7	83.3	17.4	82.6	17.9	82.1	63.8	36.2	7.6	92.4	46.4	53.6	13.0	87.0	14.7	85.3
Moshi	10.0	90.0	40.0	60.0	20.0	80.0	15.0	85.0	20.0	80.0	85.0	15.0	10.0	90.0	80.0	20.0	30.0	70.0	45.0	55.0
Masasi	0.0	100.0	0.0	100.0	21.1	78.9	5.0	95.0	10.0	90.0	65.0	35.0	20.0	80.0	0.0	100.0	5.0	95.0	21.1	78.9
Korogwe	0.0	100.0	9.1	90.9	0.0	100.0	36.4	63.6	9.1	90.9	52.4	47.6	0.0	100.0	9.1	90.9	4.5	95.5	9.1	90.9
Mpwapwa	17.5	82.5	35.0	65.0	22.5	77.5	17.5	82.5	22.5	77.5	77.5	22.5	15.0	85.0	35.0	65.0	20.0	80.0	35.0	65.0
Iramba	13.3	86.7	21.3	78.7	24.0	76.0	18.7	81.3	8.0	92.0	93.3	6.7	17.3	82.7	42.7	57.3	40.0	60.0	36.5	63.5
Babati	31.6	68.4	55.0	45.0	35.0	65.0	30.0	70.0	21.1	78.9	75.0	25.0	30.0	70.0	35.0	65.0	25.0	75.0	57.9	42.1

(Source: Survey data)

For triangulation purposes, opinions from key education leaders/stakeholders were also obtained in all districts. These include Head Teachers, District Education Officers and Ward Education Officers. The qualitative analysis of their views indicated similar results that the teaching and learning conditions were not conducive to support effective learning at early stages. One respondent commented on the inadequate desks and chairs as follows:

> *The classroom is small, desks are few, some children sit on the floor. When I walk in the class, I take off my shoes to avoid stepping on them. There are 40 desks while children are 227, more than 60 children miss desks and they sit on the floor (Head Teacher, Kilosa)*

Indeed, qualitative data indicated that 40% of experimental schools under study had no building for pre-primary classrooms, as a result, children were attending classes under the shade of trees (see photo 1 and 2). Given the scarcity of classrooms, the teaching and learning process become difficulty, as explained by the following respondent and reflected in the following pictures.

> *As a Department, we need 1168 pre-primary classrooms in our area. There are only 236 classrooms. We have a deficit of 932 classrooms which is equivalent to 80%. Such a situation brings challenges in teaching and learning (District Education Officer).*



Photo 1: Lesson Taking Place under Trees in One of the Experimental Schools



Photo 2: Congested Classroom in One of the Experimental Schools



Photo 3: Children Sitting on the Floor in One of the Experimental Schools



Photo 4: Children Sitting on the Floor in One of the Experimental Schools

Photos 1, 2, 3 and 4 suggest that the teaching and learning environment is not conducive in most of the pre-primary classrooms in Tanzania. The use of outside classes under the trees or open spaces is the only option, which is risky in terms of children's health and unreliable in terms of learning because it all depends on the weather of the day.

The findings also revealed that all schools under study did not have adequate number of teachers to accommodate the number of available children, thus registering a high teacher-child ratio. All the 10 experimental schools had more than 60 children taught by only one teacher, while the standard teacher-child ratio per the Government of Tanzania's Education Training Policy is 1:25 (MoEST, 2016).

Moreover, the findings showed that most schools lacked qualified teachers and the available teachers complained missing regular in-service (on the job) training to sharpen their knowledge and skills on dealing with early childhood education. Some teachers maintained that they have attended only one training in January 2017 provided by the Tanzania Institute of Education as a result of curriculum change, and the training focused on learning six competences including art, language and mathematics.

> *When I combine my one-year training with that of ten days, I am different from the one who did not attend completely. Anyone who has never gone there he/she will teach the kids to pronounce a as aaa, with triple a, instead of single a (Pre-primary Teacher, Mpwapwa).*

As the foregoing statement suggests, respondents were asked whether the training improved their teaching and learning of early childhood, most of them agreed that the training did improve their teaching quality. This explains the need of more in-service training of that nature to promote teachers' competence in early childhood education.

Furthermore, the findings indicate that nine out of ten schools under study (90%) had no school feeding programme. These schools did not provide breakfast (porridge) to the children nor do the schools had kitchens. Respondents explained that the absence of porridge made some children not to attend school regularly, others crying during the lesson, and while others sleeping.

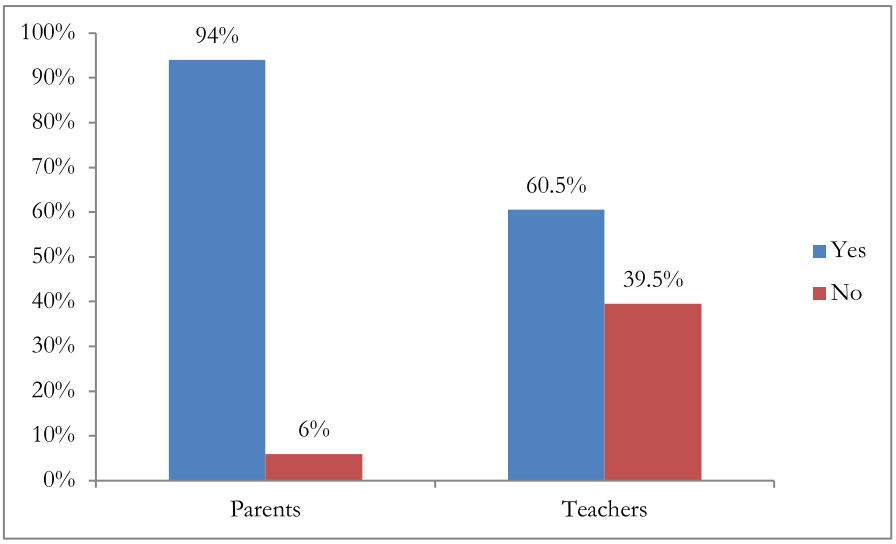
Respondents maintained that before the introduction of fee-free education policy, some of these schools were providing food to the children, through parents' contribution of cash or cereal crops. Later after the policy, parents misinterpreted the policy and suggested that they would no longer contribute because everything now is free, which resulted in the demise of the school feeding programme, as explained in the following statement.

> *Children do not have breakfast at school. Since the President announced free education, parents have perceived it negatively. They don't want to contribute. I once told them they need to contribute, they reported me to the District Commissioner that I collect food and money while education is free (Head Teacher, Mpwapwa).*

The school feeding programme is not part of the government's package of free education. The government has left the feeding programme in the hands of heads of school to supervise the programme through parents' contributions. In general, feeding programme is important in schools to capture children attendance and attention in classes, without which the lesson becomes dull and uninterested to the hungry children. Generally, data generated both through quantitative and qualitative methods across all schools and respondents indicate that the teaching and learning conditions in schools under study were not supporting effective teaching and learning of pre-school children.

2.3 Teacher-Parent Collaboration

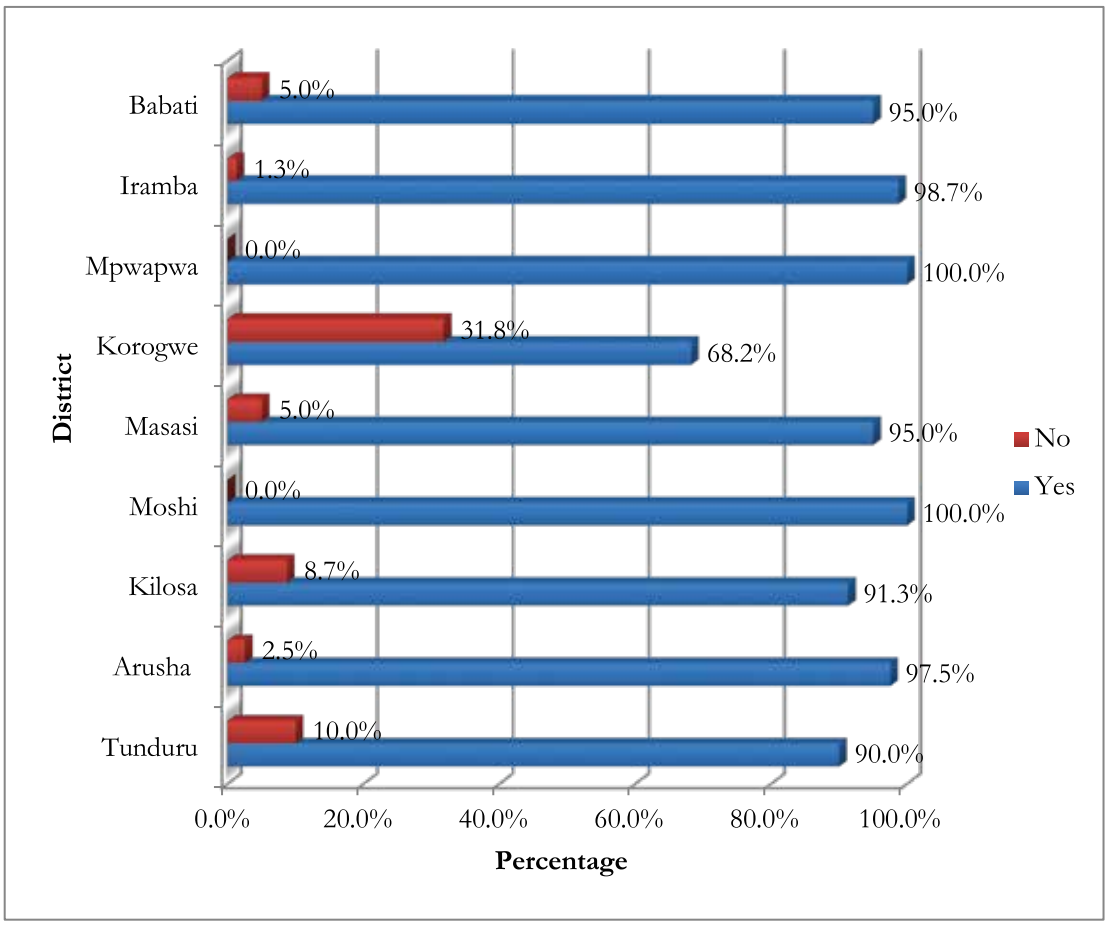
This section presents findings on the status of teacher-parent collaboration in the surveyed areas. The survey assessed the status of parent-teacher collaboration across various education matters such as parents' engagement in school meeting, contribution of funds for improving learning, and assisting children learning while at home. The findings indicate that 94% of parents reported that there is collaboration between them and teachers in enhancing the quality of pre-primary education, 60.5% of teachers reported the same as shown in Figure 2.



(Source: Survey data)

Figure 1: Parents and Teachers Responses on their Collaboration in Education Matters

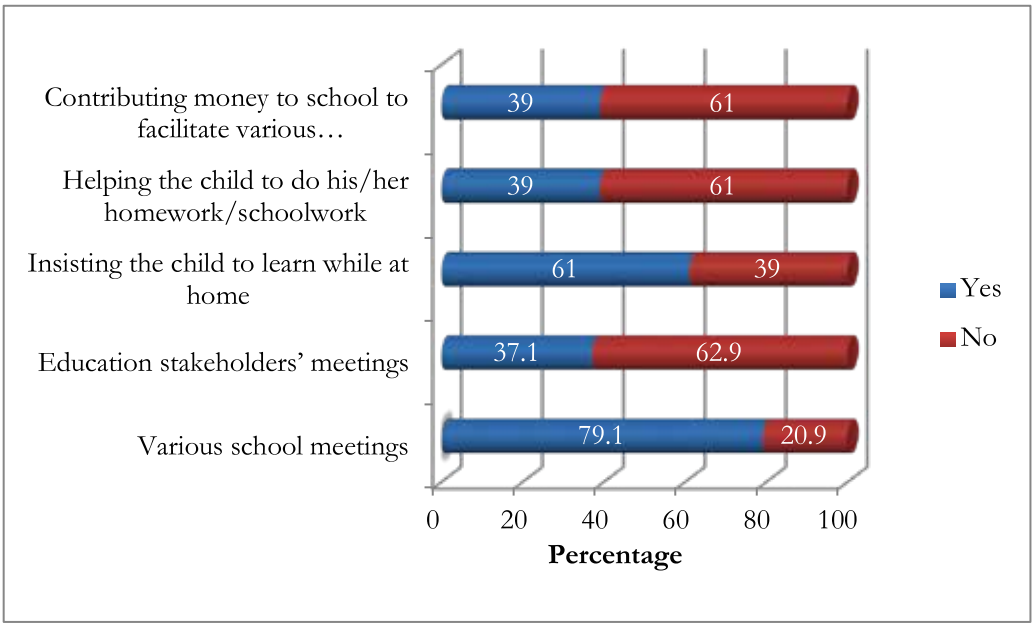
When parents' responses were done district wise, it was found that less than three quarter of parents in Korogwe district responded to cooperate with teachers in enhancing quality pre-primary education while participation was high in both Moshi (100%) and Mpwawa (100%) districts. Figure 3 shows parents-teacher collaboration status by districts.



(Source: Survey data)

Figure 2: Parents' Views on the Status of their Collaboration with Teachers by District

The study inquired further the type of activities that parents and teachers cooperate with in enhancing quality pre-primary education in their schools. The findings show that a good number of parents collaborate with teachers through school meetings (79.1%) and insisting pupils to learn while at home (61%). Moreover, less than 40% of parents indicated to collaborate through contribution of money, helping pupils to do their homework and participate in meeting with other stakeholders as reflected in Figure 4. Similarly, the results from teachers also indicated that the majority of parents were cooperating through school meetings (94.7%) and assisting their children to learn while at home (73.7%) and little was done by parents as far as contribution of money is concerned (31.6%). Generally, except for financial contribution, the quantitative results show that the status of teacher-parent collaboration is satisfactory as most parents pay attention on education matters of their children through meetings, assisting children to learn at home and participation in other stakeholders' meetings as shown in Figure 4.



(Source: Survey data)

Figure 3: Parents' Responses on Specific Activities that They Collaborate with Teachers

Similar findings were obtained from qualitative inquiry which indicates that the teacher-parent collaboration was satisfactory. Few parents were participating in school voluntary activities and making follow-ups of their children's academic development. All schools under study indicated that they have school committees which are made by parents. There are also general school meetings which from time to time are convened by the school leadership team. Some notable successes were identified during interaction with the respondents as a result of teacher-parent collaboration. In some schools, parents had managed to provide their monetary and in-kind contributions to facilitate the erection of classes and toilets, as captured in the following statement.

> *Success obtained from teacher-parent collaboration is the building of school infrastructure such as toilets and classes through parents' efforts and the improvement of children's attendance and performance at school (Head Teacher, Iramba).*

On the other hand, most parents were not participating in meetings due to lacking awareness of the importance of their participation in school meetings and the fear that the meetings intended to solicit funds from them. The following statement explains in detail:

> *In my opinion, we parents are not good respondents in school meetings, you will find that we have 80 children in pre-primary class, but when we are called for a meeting only 10 or 20 come. In the street you'll hear parents gossiping; they just call us to milk our money while the President has announced free education (Parent, Iramba).*

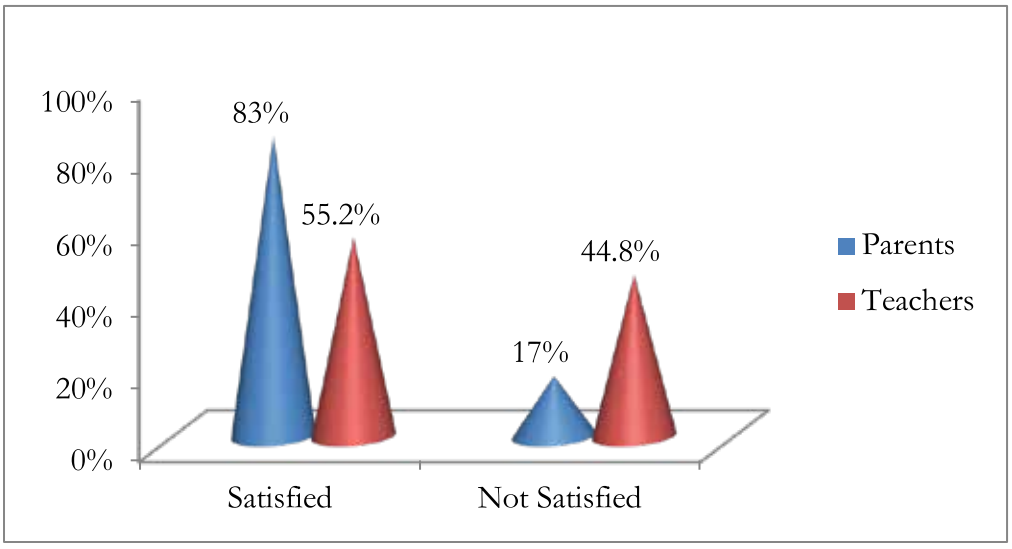
Another respondent further explained:

> *The way I see it, parents do not recognize their responsibility because one would not expect to see parents leave their children staying at school for a long time without food. And this may be because they are not conscious of the importance of education to their children (Pre-school Teacher, Iramba).*

The foregoing analysis suggests that most parents are unaware of the importance of their involvement in school activities to improve children learning. The issue of fee-free primary education has become a hiding shrub for these parents not to involve in academic and development activities within schools.

Furthermore, the study examined other stakeholders who participate and collaborate in pre-primary education in the targeted study areas. The results show that members of the parliament (88.3%) were the leading stakeholders, followed by religious institutions (87.4%) and non-government organizations (80.6%). Less than 75% of government education officials were found to participate and collaborate with parents as far as early child hood education is concerned.

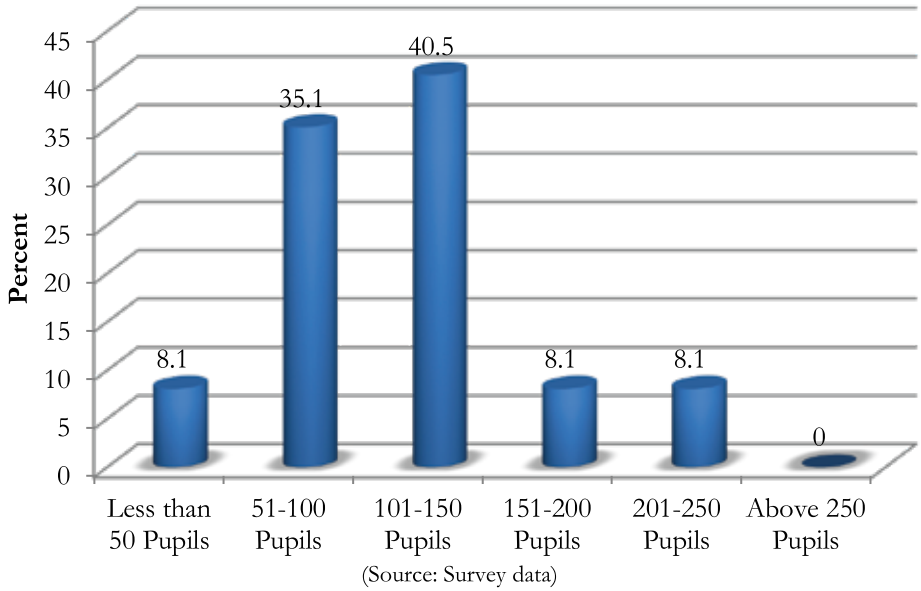
The study assessed whether parents and teachers are satisfied with the quality of pre-primary education in the study areas. The findings in Figure 5 indicate that pre-school teachers (55.2%) were less satisfied with the quality of pre-primary education provided to the pupils at the schools than parents (83.4%). This variation can partly be explained by the fact that teachers are the key curriculum implementers thus, were more informed than parents about the quality of teaching and learning in pre-primary settings. Furthermore, parents' dissatisfaction can be explained by the poor teaching and learning environment as shown in Table 3 and 4, where 80% of parents in Kilosa, Mpwapwa and Iramba districts reported that there were no adequate textbooks and non-print materials.



(Source: Survey data)

Figure 4: Parents' and Teachers' Satisfaction with the Quality of Early Childhood Education

The poor early childhood education can be attributed to poor teaching and learning conditions in the schools as reflected in the teachers' and parents' responses in both Table 4 and 5; big class size as most of the pre-school classes (75.6%) had more 100 pupils which is equivalent to 1:100 teacher-pupil ratio. This situation contradicts with the government circulars and standards of 1:25. As such, big class size affects teachers-students interaction and attention to children's needs; a practice which does not support child-centred teaching approaches in early childhood education. Figure 6 shows class size in pre-primary classrooms.

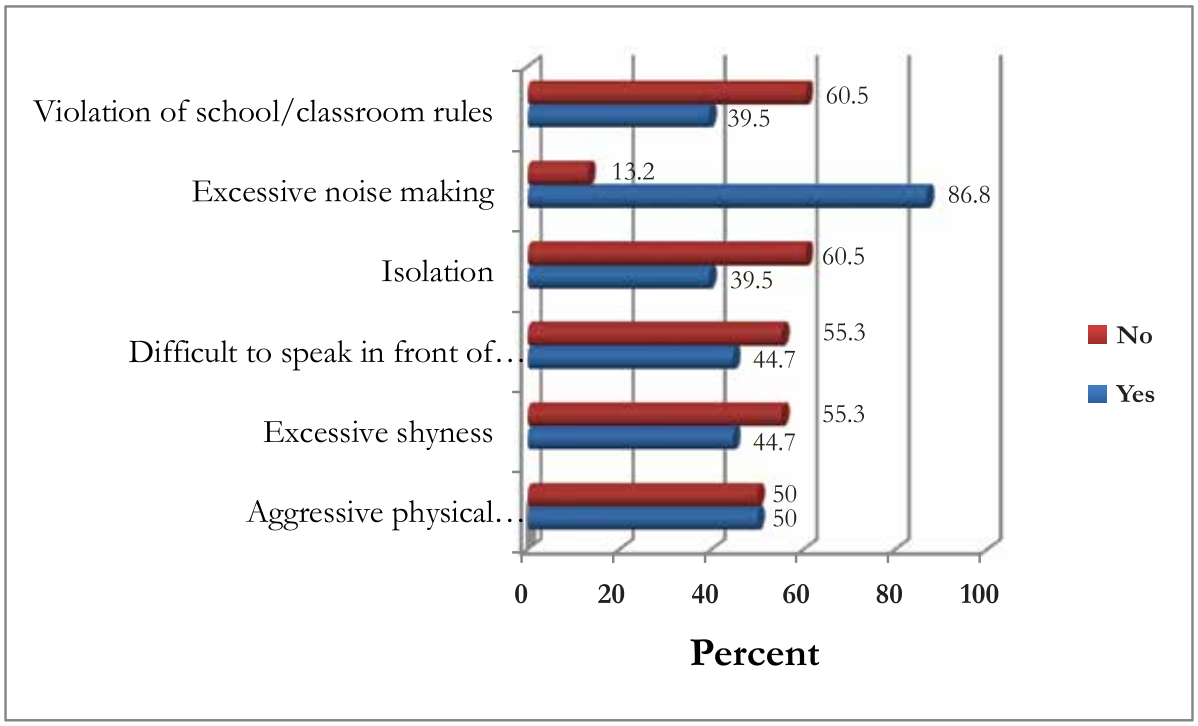


(Source: Survey data)

Figure 6: Class Size in the Pre-Primary Schools

2.4 Classroom Management Skills

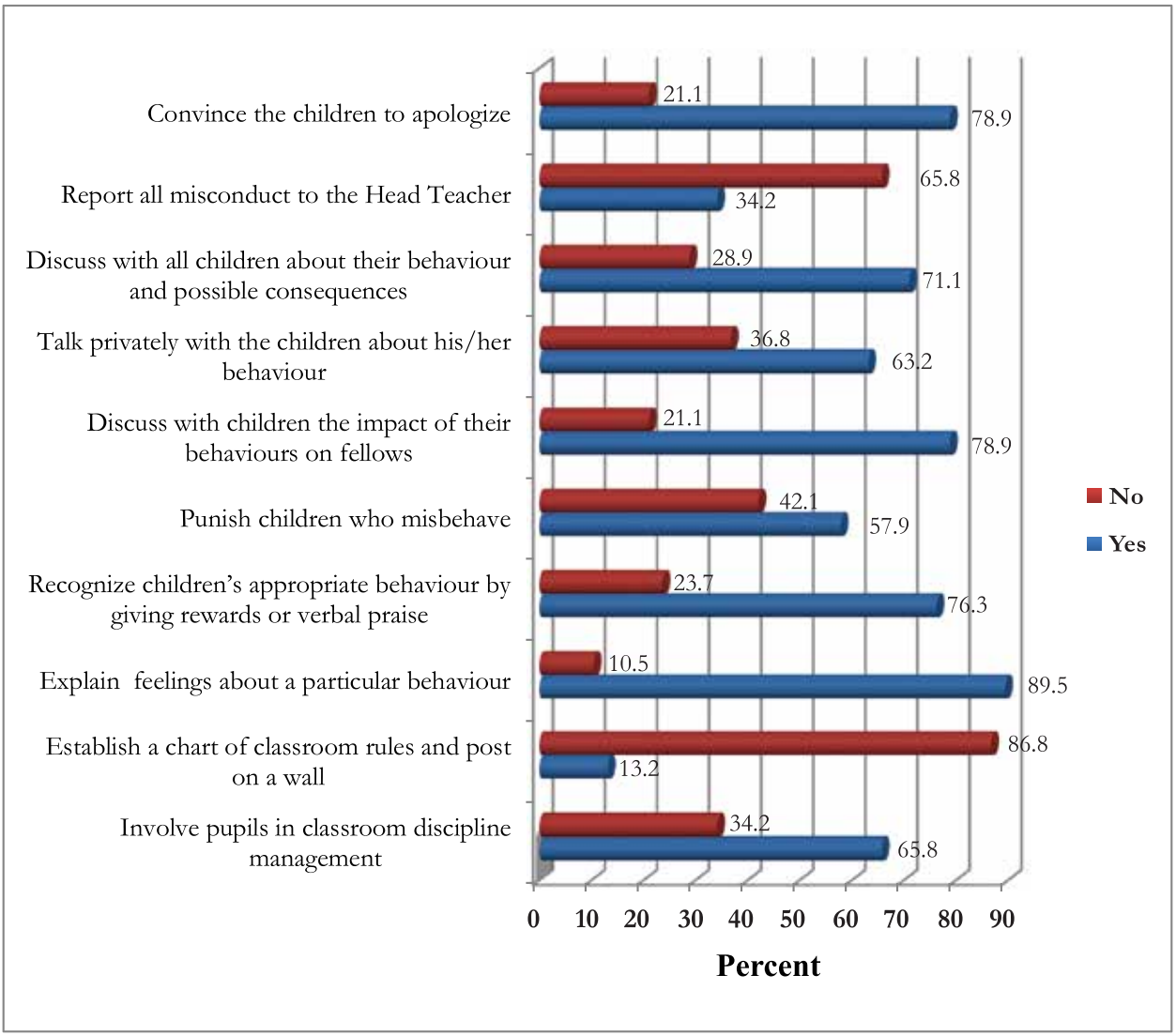
This section intended to explore pre-school teachers' awareness of classroom management skills. The study inquired teachers to list common behaviours that are exhibited by their children at school and strategies they commonly use to address them. The results indicated that most students' behaviour was noise making (86.8%) while the least was isolation and violation of class rules (39.5%). Other behaviours which were pointed out by teachers include aggressiveness (bullying), excessive shyness and difficult to speak in front of the teacher/fellow pupil(s) as indicated in Figure 7.



(Source: Survey data)

Figure 6: Common Pre-Primary Pupils' Behaviours at School

This study examined strategies used by teachers to manage diverse children behaviour. In this regard, ten items were developed to assess classroom management practices by teachers. Based on coding, the descriptive statistics indicate that the minimum score was 1 while the maximum score was 10 with the mean of 6.3. The scale was further re-categorized into two ranges. Higher scores (that is above the mean) are an indication of high knowledge of classroom management strategies while scores below the mean are an indication of low knowledge of classroom management skills. The results from this survey show that 19 (50%) of teachers scored above the mean thus, were using appropriate classroom management strategies in their classrooms. This implies that half of the teachers were knowledgeable with best strategies as far as classroom management is concerned. Specific responses across each strategy indicated that both proactive and reactive strategies were used by the teachers to promote positive discipline in their classrooms (see Figure 8). Proactive strategies focused on preventing inappropriate behaviours by increasing compliance while reactive strategies focused on the consequences of the behaviour by terminating the existing misconduct. Example of proactive strategies reported to be used by teachers include recognizing children's appropriate behaviour by giving rewards or verbal praise (76.3%) and displaying a chart of classroom rules (86.8%). On the other hand, the reactive strategies included corporal punishment (57.9%), discussing with children the impact of their behaviours on fellows (78.9%) and convince the children to apologize (78.9) as shown in Figure 8.



(Source: Survey data)

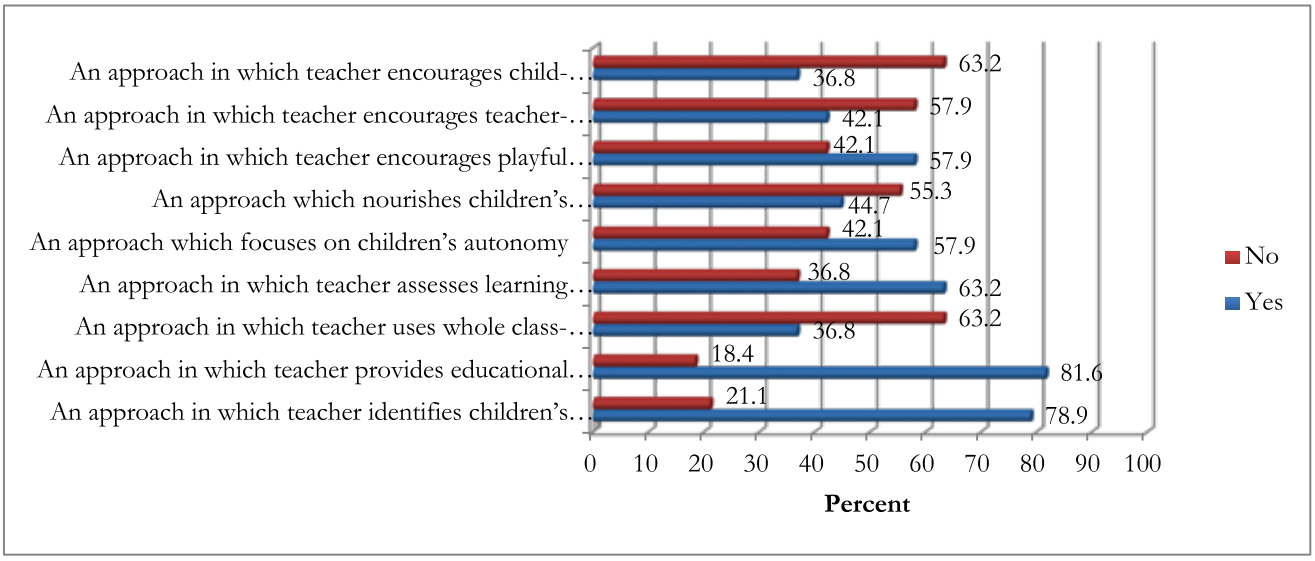
Figure 7: Classroom Management Strategies Used by Teachers

2.5 Teachers' Understanding of the Child-Centred Approach

Nine items assessed pre-school teachers' general knowledge of learner centred approach in pre- school teaching. Based on coding, the expected minimum score was zero and the highest score was 9. Item number 3 and 8 were re-coded for internal consistency. Cronbach alpha value for this scale was r =.77 indicating that the items correlated with each other fairly strongly. Descriptive statistics indicated that actual minimum score as per the teachers' responses was 1 while the maximum score was 10 with the mean value of 5.1. Further analysis revealed that 19 (50%) of teachers scored above the mean, thus they had a general understanding of the concept of child-centred approach pre-school learning. Responses across each item as indicated in Figure 9 show further that more than 50% of teachers agreed with the statement that the child-centred approach focuses on the children's needs, autonomy and playful learning. Indeed, more than 50% of teachers did not agree with the fact that child-centred approach encourages children's ability to think independently and be creative. Moreover, above 50% of pre-school teachers were not informed that child-centred approach fosters creativity and independent thinking and 63.2% did not agree with the statement that child-centred approach encourages child-teacher interaction and observations (see Figure 9). This implies that teachers lack basic knowledge of the concept of child-centred approach as far as early childhood teaching and learning is concerned. Analysis from of qualitative data provides more evidence on teachers' low level of awareness of child-centred approach based on few selected cases.

> *The ability of the teacher to teach the child to be able to read, write and count. (Pre-primary teacher, Kilosa)*
>
> *It's the teaching that focuses on all the criteria that the child needs. (Pre-primary teacher, Iramba)*
>
> *I have never heard, maybe teaching the child by following his/her requirements. (Pre-primary teacher, Kilosa)*
>
> *It is the teaching that based on the age of the child as well as those who need special needs. Looking also at their environmental and infrastructural needs, for example toilets, water issues, environmental issues, and a place to stay in the classroom. (Pre-primary teacher, Mpwapwa)*

From the above findings it is clear that most of teachers lack clear understanding of child centred approach in pre-school teaching and learning. This calls for capacity building through training so that our teacher's pedagogical knowledge improves, hence quality teaching.

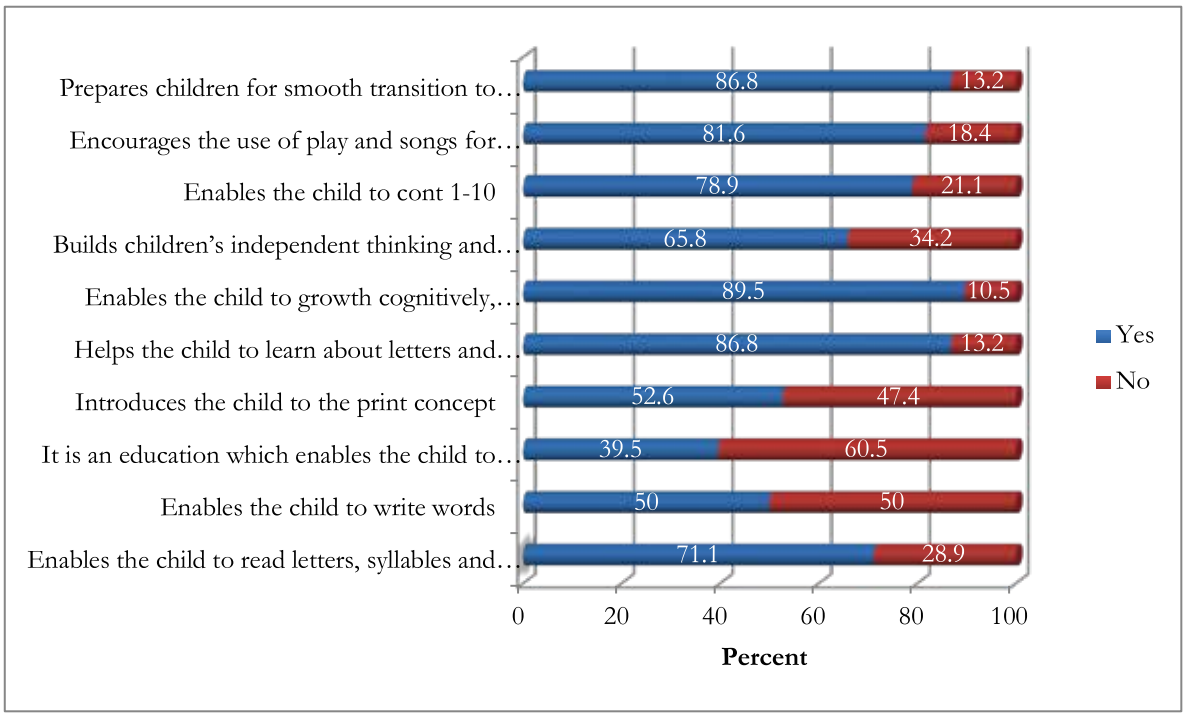


(Source: Survey data)

Figure 8: Teachers' Understanding of Child-Centred Approach in Early Childhood Education

2.6 Teachers' Understanding of the Early Childhood Education

Ten dichotomous items were developed to measure teachers' level of awareness of early childhood education. Item number 2 and 3 were re-coded for internal consistency. Alpha reliability for this scale was r =.75, indicating that the items correlated with each other fairly strongly. Based on coding, the minimum score was zero and the highest score was 10. Descriptive statistics indicate that the minimum score was 1 while the maximum score was 10 with the mean of 7.1. Teachers who scored below the mean value were regarded as having low awareness with regards to early childhood education (ECE) while scores greater than (7.1) indicated a high knowledge on ECE. The findings indicate that 20 (52.6%) of pre-school teachers demonstrated high knowledge on early child hood education while 18 (47.4%) had low knowledge. Responses on specific items also indicate that a good number of teachers were aware of basic issues with regards to early childhood education. For example, more than 80% of teachers were aware of the fact that early childhood education is the type of education which helps the child to learn about letters and sounds, grow cognitively, socially and emotionally, use plays and songs for learning and prepare children for smooth transition to class one. However, the results indicated that about 70% of pre-school teachers agreed with the statement that early childhood education enables the child to count from 1-50. Also, 50% of pre-school teachers agreed that early childhood education enables children to write words. This implies that pre-school teachers in the schools under study were unfamiliar with the curriculum intentions for pre-schooling with regard to writing and arithmetic. Figure 10 indicates pre-school teachers' responses on the meaning of early childhood education.



(Source: Survey data)

Figure 9: Pre-primary Teachers' Understanding of Early Childhood Education

Analysis of qualitative data also validates the fact that a good number of teachers demonstrated general understanding about the meaning of early childhood education. Some few quotations from pre-primary teachers have been selected to elaborate the matter from experimental schools as follows.

Early education is the education given to a child to prepare him/her for the standard one. The child is being prepared to be able to comprehend, identify and distinguish different sounds, letters and numbers. (Pre-Primary Teacher, Iramba)

Early class education as I understand, is that education that prepares a child for joining primary education (mh). It is a major foundation for a child to enable him even to join basic education. (Pre-Primary Teacher, Kilosa)

Early education is the education offered to children under 4-5 years. (Pre-Primary Teacher, Mpwapwa)

2.7. Number of Pre-primary Teachers Trained on Early Childhood Education

Teachers are ingredients of quality education at any level of education. Thus, it was worth exploring the status of their professional training in early childhood education in the target areas. The study revealed that in both experimental and non-experimental district, all teachers were not trained to teach pre-primary classes. This means that, they do not possess required qualifications as far as early years education is concerned. However, it was reported that the teachers received short in-service training on 3Rs through various initiatives from both the government and other education partners through LANES, Tusome Pamoja, Equip-T programmes. In addition, specific information from the schools involved in this survey indicate further that 63.2% of teachers attended short training on early childhood education while 36.8% did not attend any training but they teach pre-primary classes. This situation questions their ability to deliver quality pre-primary education as per the intended curriculum. It also calls for immediate intervention to build capacity among teachers to deliver quality pre-primary education with child-centred approaches and other innovative teaching strategies relevant to early schooling. Table 5 shows number of pre-primary teachers in all districts by gender.

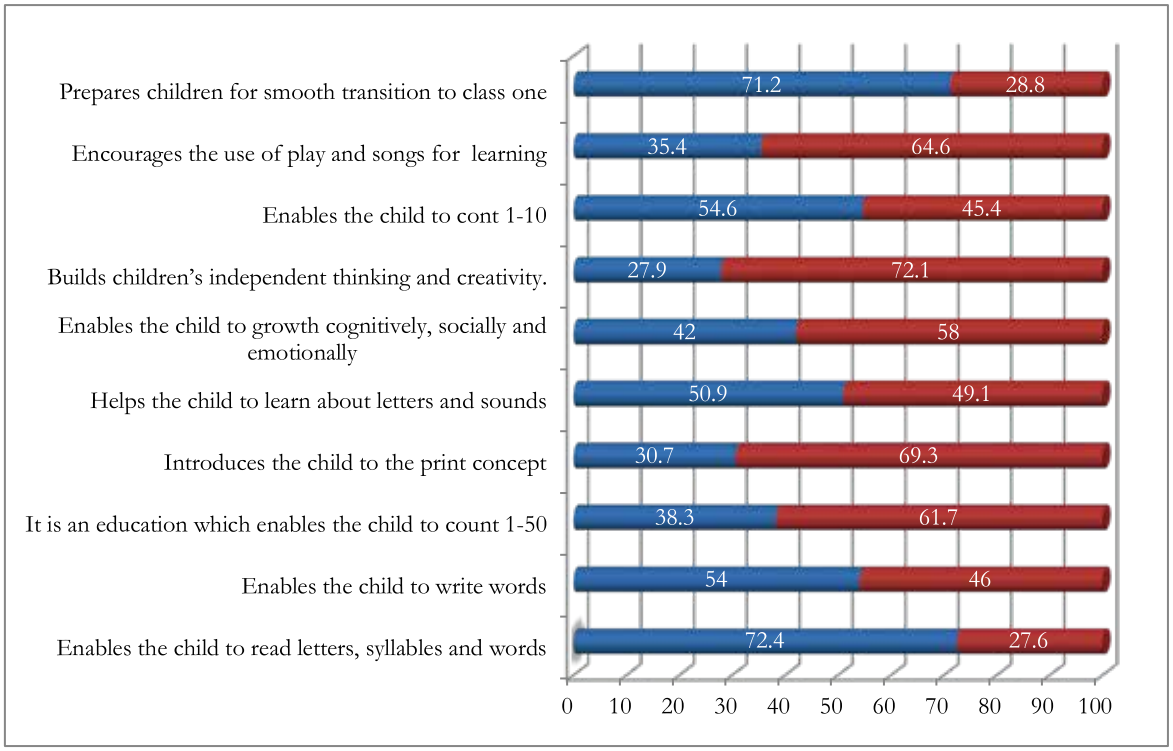
Table 6: Number of Pre-primary Teachers by Districts

District	Males	Females	Total	Number of Teachers Trained on Early Childhood Education
Kilosa	22	135	157	None of these teachers are qualified to teach early childhood education. They are not trained on ECE but rather received short in-service training on 3Rs. This situation questions the quality of pre-primary education delivered in these Districts.
Mpwapwa	37	80	117	
Iramba	94	94	188	
Moshi	40	205	245	
Arusha DC	11	81	92	
Tunduru	183	187	370	
Babati	2	29	31	
Korogwe	14	124	138	
Masasi	64	65	129	
Total	**467**	**1000**	**1467**	

(Source: Survey data)

2.8 Parents Awareness of the Early Childhood Education

Parents have a big role to play in education of their children. Their awareness of the meaning and importance of early childhood education is imperative. For example, they are expected to ensure that their children attend school and provide necessary support to ensure that their learning needs are met. Thus, this study also assessed parents' knowledge and awareness of early childhood education. The intention was to examine how parents understand early childhood education and its rationale in their children's learning and development. Descriptive analysis indicates that the minimum score under this category was 0 while the maximum score was 10. Scores above the mean value (M=4.5) indicate high level of awareness among parents with respect to general understanding of early childhood education. Results of this survey show that the majority of parents (56.7%) have limited knowledge on early childhood education while 43.3% have high awareness with respect to early childhood education. Further analysis was done across each item and results are indicated in Figure 11.



(Source: Survey data)

Figure 11: Parents' Awareness of Early Childhood Education (n=326)

For example, more than 72.4% of parents were aware of the fact that early childhood education enables children to read letters and syllables and it also prepares smooth transition to Standard I (71.2%). With exceptions of these two items, the results indicate that more than 50% of parents were not aware of what does early childhood education entails to their children as far as their development and learning of literacy and numeracy are concerned. In particular, the results show that about half (45.4%) of parents were unaware that early childhood education enables their children to learn how to count. Moreover, less than 50 % of parents were knowledgeable about the fact that through early childhood education their children are prepared to develop writing competences, creativity and independence in terms of their thinking ability. This implies that children are less likely to get education support from their parents to enable them grow and learn as per their needs.

When the analysis was done across regions, the findings reveal that parents from Moshi District were more knowledgeable in understanding basic issues in early childhood education than other districts (see Appendix II). With regard to experimental districts, the findings indicate that while more than 60% of parents in all experimental districts agreed that early childhood education prepares children for smooth transition to Standard I, majority of them were less informed that ECE also enables their children to count and identify numbers, write letters and simple word, and the importance of play in child development and learning. For example, the results show that only 27.5 % of parents from Mpwapwa and 15% in Kilosa Districts were aware about the role of play and songs in children's' early learning and development. Furthermore, only 25% of parents in Mpwapwa District were aware that through early childhood education their children will be exposed to knowledge about different letters and words. In the same District, 55% of parents were not aware that early childhood education enables their children to count numbers. The results imply that the level of awareness of early childhood education varies across districts. This can be attributed to varied cultural practices and the value attached to education across districts. Thus, intervention is worthwhile in order to raise awareness to parents as they are the first teachers of their own children. Basic knowledge about early learning and its relationship to child development is imperative to parents as they will also be supporting their children at home in building the required competencies for social, emotional and cognitive wellbeing.

3. Discussion, Conclusion and Recommendations

3.1 Discussion of Findings

Early childhood education is viewed as a critical stage for children's physical, mental and psychosocial development. Further, it is well scientifically established that quality pre-primary education is a function of many variables. Thus, an investigation of the extent to which young Tanzanian children (aged 0-6years) are enrolled in a safe and caring environment was worth undertaking. Although the study found that both girls and boys had equal access to early childhood education, the teaching and learning conditions in the respective schools were largely not supporting safe learning. As explained earlier, the study found that the majority of parents and teachers reported a lack of key inputs for pre-primary teaching and learning such as special toilets for pre-primary classes, clean water, inadequate classroom furniture including chairs and desks, as well as lack of kitchen/cooking space for pre-primary children. Indeed, in almost all surveyed schools the study found that teaching and learning environment was not supportive and inclusive for children with disabilities. The study also found a lack of adequate indoor and outdoor space for children to play and learn as per their needs.

These findings not only question about the quality of pre-primary education provided in the schools but also the extent to which young children are enrolled in unsafe learning environment and its implications to primary school readiness. Lo´pez, Menez and Guzma (2005) urge that classroom context influences the quality of teaching and learning especially children's sustained attentiveness and motivation to learn. It is the nature of young children to actively pursue meaning in all of their encounters with their environment. As such, the lack of safe an caring enviroment to children affects their motivation to learn and grow through play.

Children's play is often mistaken as time-wasting and indulgence and its role in holistic development and learning have often been undermined. However, research has systematically found that that play has a crucial role in the optimal growth, learning, and development of children from infancy through adolescence (Gosso & Carvalho, 2013; Peng, 2011). Play is essential to physical, social, cognitive, emotional development and learning of children. Through play, young children come to know and understand better the world around them. Indeed, Kejo's study (2017) also underscores the importance of play in early childhood education in Tanzania. However, large class size and teachers' limited competence were found to impede the use of play in the pre-primary classroom. The study's findings match with previous investigations undertaken in Tanzania. For example, Mtahabwa and Rao (2009) found that the presence of unfavorable physical setting and

inadequate teaching and learning in rural pre-schools. Mtahabwa and Rao's study further found that while the urban classroom walls were in relatively good condition and had some pictures, number charts and alphabets, the rural classrooms were less favorable and lacked wall displays. Similarly, in Monduli district, Enos and Francis (2016) found that the management of pre-primary education is affected by multiple factors such as a shortage of classrooms, a shortage of qualified teachers, a lack of teaching and learning materials, long distance from schools to home and readiness of parents to enrol students.

Moreover, since teachers play an instrumental role in influencing learning, the study assessed whether they are first, trained on early childhood education, second, have knowledge on two basic concepts namely, early childhood education and child-centred approach and their rationale in pre-primary education. The findings reveal that none of the pre-primary teachers in all surveyed Districts was trained on early childhood education. All teachers do not possess required qualification to teach pre-primary classes. However, it was reported that these teachers had received short in- service training on 3Rs through various partners of education in Tanzania such as HakiElimu, US Aid through Tusome Pamoja and Equip-T programme. Additionally, the findings show that although more than a half of teachers (52.6%) demonstrated understanding of early childhood education; they were less informed of fundamental concepts and facts related to early childhood education as far as the pre-primary curriculum is concerned. Furthermore, the survey results show that 19 (50%) of teachers were both found to have low understanding of classroom management strategies and low understanding of the concept of child-centred approach in early childhood education. This suggests the provision of pre-school teacher training which focuses on enhancing teachers' ability to implement the curriculum while considering the holistic development and learning of the children that emphasizes child-centred teaching and learning, children's interactions, and teacher reflection. Mtahabwa and Rao (2010) stressed that the availability of competent and adequate number of teachers is one of the most important factors for promoting school readiness and learning outcomes of pre-primary children.

With respect to the parent-teacher collaboration and involvement of community in the provision of quality early childhood education, teachers indicated that most of parents are not fully engaged in education matters of their children. This affects not only the nature of support they provide to their children but also limit an ideal opportunity for parents and caregivers to fully engage with the children and explore their personality and potential. The findings concur with previous studies which demonstrated that quality teachers and community members' involvement in young children's education are critical for promoting learning in early childhood education settings (Gol-Guven, 2009; Hedge & Cassidy, 2009; Desforges & Abouchaar, 2003; Warner & Sower, 2004).

Managing children behaviours in the classroom has been one of the major challenges and concerns to teachers at various levels of education. In the current study, an attempt was made to explore classroom management strategies used by teachers in pre-school setting. As indicated in Figure 11, teachers used both proactive and reactive strategies to manage children's inappropriate behaviours. These findings concur with previous studies (Ritz, Noltemeyer, Davis & Green, 2014; Mtahabwa & Rao, 2009). Ritz et al., (2014), for example, examined behaviour management strategies used by pre-school teachers to address non-compliance in the classroom. The study found that pre-school teachers used both preventive and reactive strategies such as warning, praise/positive reinforcement, guided compliance, ignoring the behaviour, reviewing classroom rules, verbal reprimand and repeating the instructions. Similarly, Mtahabwa and Rao (2009) found that most of pre-school teachers used time-out, classroom rules, neglect children accusations and use of threats to punish children.

As explained earlier, the current study found that more than 50% of teachers used punishment. Insights from qualitative data also revealed some teachers apply threats to ensure that the pupils abide to the rules and regulations. One of the plausible explanations for teacher's use of inappropriate classroom management strategies is a lack of training. As observed by Mtahabwa and Rao (2009) that teachers who did not have professional qualifications in pre-primary education tended to make excessive use of time-out, threats and disciplinary orders and their pupils were quieter and less active than other pupils. Generally, research on

discipline practices indicate that children-centred learning environment and teacher-children problem solving activities are more effective in reducing behavioural problems than punishment. Punishment has been reported to be one of the ineffective strategies as it reinforces hostility, increases drop-out and discourages the development of appropriate behaviour. Therefore, teachers' knowledge through training is imperative so that teachers can apply appropriate classroom management strategies.

3.2 Conclusion

Pre-primary education is not only recognized as a basic right for children but also a critical stage for children's physical, mental and psychosocial development. This study has found that children in Tanzania have access to education with slight variation across districts. This implies that the quest for access to education is currently not a big challenge as a result of fee free education policy. However, the increase in enrolment does not match with the quality of learning, infrastructure as well as other school input factors. The present study has clearly shown that the teaching and learning environment for pre-primary education in Tanzania is below standard. Most schools housed inadequate number of qualified and competent teachers and possessed inadequate and irrelevant teaching and learning materials. Indeed, most schools had unreliable water supply and there was no school feeding programme. Based on the findings it can be concluded that children in the surveyed schools are not enrolled in high quality and safe pre-primary education, which can improve their school readiness and support these children to reach their full potential. Indeed, teacher-parent collaboration was found to be satisfactory although it needs an intervention. Lastly, pre-primary teachers lack relevant skills and knowledge as far as interactive teaching and child-centred approach is concerned. Hence, an intervention is called for to address the existing challenges to enhance the provision of quality pre-primary education in Tanzania.

3.3 Recommendations

Based on the findings and conclusion, the following recommendations are put forward for policy and practice change:

i. The government should employ more teachers and caregivers for pre-primary education. One teacher as per current set up cannot manage all children at a time, given that children below six years of age tend to be playful and cannot help or take care of themselves when they need to attend the call of nature;

ii. The government should improve infrastructure for pre-primary classrooms. Attending classes under the shade of trees and open space is unsafe and could not provide effective learning to young children;

iii. The government should ensure the availability of sanitation facilities and safe drinking water. Sanitation facilities and hygienic condition/environment is a necessary first step in the creation of friendly learning environment for pre-school children;

iv. There is a need for MoEST to provide in-service training programmes to build capacity among pre-primary teachers in various areas including classroom management strategies and child-centered approaches in early childhood education;

v. The government should provide more textbooks and non-print materials for pre-primary education in Tanzania by increasing the budget for education sector;

vi. Schools should reinstate feeding programmes to promote pre-primary children's attendance, participation and achievement of learning outcomes; and

vii. Schools should increase awareness campaigns on teacher-parent collaboration and its implications to access and quality pre-primary education.

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