

## **Factors Determining the Readiness of Preschool Students in Southern Nations, Nationalities and People's Region, Ethiopia**

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**Abstract:** The main purpose of this study was to investigate the extent of readiness of preschool students for primary school education and pinpoint its most determinant factors in South Nations, Nationalities and People's Region (SNNPR). The study employed descriptive survey research design and methodology and gathered information from primary and secondary sources using qualitative and quantitative approaches of data collection. As instruments, the study used in-depth interviews, questionnaire, FGD, field observation and standard readiness test to collect data from respondents. The collected data were analyzed by descriptive and inferential statistical techniques of analysis using SPSS software. To achieve the intended objectives, the study used different testing procedures and models of inferential statistical analysis such as one sample t-test, independent sample t-test and multiple linear regression analysis. The result of the study strongly indicated that the average performance of preschool students in the region was 36.55 which is significantly below the standard (i.e. 50) set by MOE to join primary schools. The study concluded success in readiness of preschool students was below the standard and recommended the concerned stakeholders (REB, ZEDs, WEOs, CTEs, NGOs, private sectors and communities) should work hard in collaboration to improve the readiness of preschool students in the in the region.

**Keywords:** Early childhood education, Determinants factors, Standard, Readiness

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### **I. INTRODUCTION**

Early childhood education is among the most contributing factors to bring the desired well-founded experience and healthy personality. It is quite important for child's holistic development; particularly in mental, social, language and personal developments. Education is not optional requirement for early childhood children; rather it is a fundamental right that they are entitled with. The 1990's World Summit on "Education for All" states that regardless of any condition, every person has the right to education. From the six goals aimed at providing education for every citizen, the first goal states that "expanding and improving early childhood care and education." While the Dakar declaration on "Education for All" has ended in 2015, the intended goal of achieving "Education for all" is not met yet. As a result of wide range of its importance in one hand and the increasing concern for child right on the other, the attention given to make early childhood education accessible for all children is dramatically increased across the globe. Particularly, in member states of Organization for Economic Co-Operation and Development (OECD) – which incorporated 30 States from developed nations (OECD, 2006) [1]– expanding and enhancing the practices of early childhood education and care is seen as primary role of the governments (OECD, 2006) [1]. Research pointed out that the advantages of high-quality preschool program include improved school readiness; reduced grade retention; reduced need for costly remedial and special education services; and improved educational test scores and promote long-term educational success (Clark and Waller, 2007) [1].

In most African countries, education got momentum only after independence from colonialism (Ansell, 2005) [2]. The attention given for preschools was unsatisfactory until the beginning of 21<sup>st</sup> century. As UNESCO noted, no country in Sub-Saharan Africa adopted preschool education policy until 2010. Due to pressing wide ranges of challenges Africa had been facing in the continent, the goal of achieving early childhood education for all by 2015 became unrealistic.

Ethiopia is among African countries in which the accessibility and equity was low until the last five years. It is clear that the National Policy Framework and various research evidences has suggested the critical importance of pre-school education program for the future harmonious development of the children in particular and their social, cultural and economic development in general (Girma Lemma, 2014) [5]. Studies revealed that

the accessibility preschool education was only about 4% in rural six years ago (Woodhead, 2009) [2]. Besides, more focus was given to urban areas where parents relatively afford to pay for their children's education because the aim of private sector in expanding education is profit maximization. Therefore, currently, there is uneven distribution and quality of preschool education between urban and rural areas. Nevertheless, due to high quality concern in primary school, on one hand, and the need to implement the educational rights of children set in the World Summits on the other, there has been growing concern to expand preschool education across the country in the last five years. Due to this fact, starting from 2008, the government designed a strategy to expand preschool education in the country.

Accordingly, the "O" class, child-to-child programs, and community and religious organization owned centers were introduced (MoE, 2016) [5], particularly since 2011. The launching of "O" class in government primary schools and community and religious centers has been uplifted the gross enrolment rate from the level of below 10 to 39 as of (MoE, 2015) [5]. The government was also committed to the extent of preparing policy framework, strategy, guidelines and standards and Ministry of Education is given prime responsibility in implementing the policy. The program, which once was left for private owners, are being carried out largely by nations now in quality of delivery and financial support (OECD, 2006) [1]. However, Pre-school education program is still limited to date to meet the demands of the growing number of preschool age children.

As one of the regions of the country, Southern Nation Nationalities Peoples Regional State (SNNPRS) also has been implementing preschool education in its different forms such as "O" Class in formal primary schools, community and religious organization owned preschools and Child-to-Child and private kindergartens. Particularly, the research results on school performance of grade 2 and grade 3 school children across the country by USAID indicated quite frustrating and more magnificent in SNNPR (USAID, 2010) [5]. Lack of preschool education has been seen as the major contributing factor. This result forced the country to think differently and take immediate action to address the problem. Since then, "O" classes had been opened in primary schools and in other social gatherings (MoE, 2016) [5]; and preschool teachers training program was launched at diploma level in CTEs. As a result, the enrolment is relatively increased. Even though there is a progress in the enrolment of preschool children, there is high concern with regard to ensuring quality of preschool education in the region. In spite of its relative expansion, going to school by itself does not give guarantee to achieve the goal of making them ready for primary school particularly grade one which requires investigation through practical research. In addition, the region is failed in providing adequate and qualified teachers, existing schools are poorly furnished, the curricula lack adequacy in addressing the context, and there is no appropriate assessment system.

Even if, the Regional Education Bureau included the preschool program in its 2<sup>nd</sup> Growth and Transformation Plan (GTP) as a priority area to maximize the access and quality of education, there is no empirical evidence about the extent of readiness of preschool students, and how the mentioned hindering factors are mitigated. Good practices that should be scaled up and problems hindering the performance of the program were not well identified. Hence, the main purpose of the study is to investigate the level of readiness of preschool students for the next segment of education in the region. In addition, it assesses the significant factors that hinder the readiness of students in the region. In so doing, the extent of readiness of preschool students in urban and rural setting preschools and major factors contributing to the improvements of the readiness are the main goal of this research paper.

## **II. PURPOSE AND SCOPE OF THE STUDY**

### **2.1 Purpose of the Study**

The general objective of this research was to statistically investigate the most determinant factors of readiness of preschool in the region. The specific objectives of the research were:

1. To test whether the readiness of preschool students for primary education is above or below the standards set by Ministry of Education.
2. To compare the readiness of preschool students between urban and rural areas
3. To identify the determinant factors that significantly affect the readiness of the preschool students to primary schools particularly grade one.

### **2.2 Scope of the Study**

This study work focuses in the following area.

1. From four pillars of ECCE (Parental education, Health and Early Stimulation Program (Prenatal to 3+ years), Pre-schools: community-based kindergartens (4 - 6+ years) and Community-based Non-formal school readiness), the study research was delimited to preschool program.
2. Due to time and resource constraint, it was difficult to conduct the research on all aspects of preschool including privately owned kindergartens. Therefore, the research was delimited to readiness of government owned preschool students at 'O' class and child-to-child level.

3. Geographically, for more effective manageability, the research was delimited to four zones (Sidama, Gurage, Wolaita, and Bench Maji), Hawassa City Administration and one Special Woreda (Halaba) of the region.

### **III. TECHNICAL APPROACH AND METHODOLOGY**

#### **3.1 Research Design**

This study work was conducted in Sothern Nation's Nationalities' and People's Regional State. Particularly, as representative of the region, four zones (Sidama, Wolaita, Gurage and Bench Maji zones), Hawassa City Administration and Halaba Special Woreda were selected as a sample in the first stage of cluster sampling. The study focused on investigating the current extent of readiness of preschool students and pinpointing the factors that significantly affect it mainly in the context of governmental schools of the region. To achieve this intended objective, the study was conducted based on participatory approach analysis where by all key stakeholders namely, preschool students, preschool teachers, PTAs, Principals and program coordinators at the Woreda Education office, Zone Education Department and Regional Bureau were directly involved in the study.

Furthermore, the study used a combination of both qualitative and quantitative approaches to gather and review the data. The qualitative assessments provided in-depth information to supplement results obtained from quantitative data analysis and facilitated triangulation. In addition, different statistical testing procedures such as one sample t-test, independent sample t-test and multiple linear regression were used to test whether preschool students performance (readiness) is above or below the standard set by Ministry of Education, compare readiness of preschool students between urban and rural settings and the significance of included explanatory factors effect on readiness of preschool students.

#### **3.2 Data Sources and Data Collection Instruments**

Both primary and secondary sources of data were utilized to obtain information about the subject under the study. The primary data were collected from people who were involved in implementing and running the program at regional, Zonal, Wereda and school levels (directors and supervisors), parent Teachers' Associations (PTAs), preschool teachers and preschool students. In addition to this, secondary data were collected from Annual Education Abstracts, reports, strategies, different research results and national and regional Preschool Education Frameworks on practices of preschool education.

The instruments, which were used, for data gathering include in-depth interview, questionnaire, focus group discussion, field observation using checklist, documents and performance test using standard level of preschool children competency test. Questionnaire was employed to collect data from preschool teachers. The questionnaire was developed based on the existing relevant review of literatures, knowledge and experience of the researchers and translated from English to Amharic before it was administered to preschool teachers. It consists of more close-ended questions and few open-ended questions. The pilot survey was conducted to identify the vague and unnecessary items and omit irrelevances. In addition the validity of instruments was tested by using Cronbach's alpha to measure the reliability of results. In-depth interview was employed to gather data from coordinators of the program at Woreda Education office, Zone Education Department and Regional Education Bureau. In addition, focus group discussion was used to gather data from PTAs. Observation (field note and field observation checklist) was another important tool that was employed in the data gathering process to check whether a teacher delivers the contents of the curriculum in the way it has to be for preschool children; teacher's love and care for children inside and outside classroom; availability and use of instructional materials in the class; teacher's classroom management; and availability of play facilities outside classroom.

The data from documentary sources such as preschool children's enrolment progress and attendance from year to year; preschool policy documents and implementation guideline; and contents of the curriculum were collected by reviewing the secondary data sources. Another very important tool which was used to collect the data from preschool students was performance test. In this case the selected preschool students were asked on sets of standard indicators set by ministry of education; namely, whether they were able to write letters, write words, read words, read sentences, read numbers, read numbers on flash cards, ordering numbers, naming pictures and naming geometric figures.

#### **3.3 Sampling Design**

In order to select the research participants, multistage cluster sampling was used. The study used cluster sampling because samples would be taken from different geographical locations (location wise study) and sampling unit may be made at different level of selection such as units of zones, woreda, kebele and schools. Besides, there was no up-to-dated list of preschool centers. Moreover, there was considerable heterogeneity of response variable (readiness of preschool students) with in zones, special woredas and city

administrations (clusters) and more or less homogeneous readiness of students between these clusters. In the first stage, 4 Zones (Sidama, Wolayta, Gurage and Bench Maji) out of 14 Zones and one Special Woreda (Halaba Special Woreda) from 4 special woredas of the region were selected using cluster sampling. Besides to this, Hawassa City administration was selected to represent urban settings. In the second stage, from 65 woredas available in the selected zones, 13 woreda (5 woredas from Sidama, 3 from Gurage, 3 from Wolayta, 2 from Bench Maji) were selected. Similarly, 1 sub-woreda from Halaba special woreda and 2 sub-cities from Hawassa City Administration were also selected in this stage.

Accordingly, out of 405 schools available in selected woredas and sub-cities, 57(27 schools from Sidama Zone, 12 schools from Gurage, 10 schools from Wolayta, 5 schools from Bench Maji; 1 school from Halaba and 2 schools from Hawassa) were selected. At the ultimate stage, the participants of the research were 117 preschool teachers (56 teachers from Sidama, 33 teachers from Gurage, 18 teachers from Wolayta, 7 teachers from Bench Maji, 1 teacher from Halaba and 2 teachers from Hawassa City Administration) were selected using cluster proportionate sampling, 560 preschool students (5 preschool students from each selected preschools) were selected by simple random sampling. In addition, 57 principals and PTA members (1 principal and 1 PTA members from each selected schools) were selected by availability sampling. Besides, 23 preschool experts (16 experts from each selected education offices, 4 experts from each selected zonal education departments, 1 expert from Hawassa City administration and 1 expert from Halaba Education Office and 1 expert from SNNPR Education Bureau) were selected from targeted areas purposively. In addition, observation with check lists and field notes was used by the research team at each center in order to supplement the results obtained by analysis of data obtained from the above different stakeholders by different instruments.

### 3.4 Method of Data Analysis

In analyzing the data of the study, both descriptive and inferential statistical analysis methods were used. Descriptive statistics such as frequency distributions, diagrams, pie-charts and graphs were employed to describe the general characteristics of the data. Statistical Package for Social Science (SPSS) software was used for quantitative data analysis to determine frequency, percentages, mean, standard deviation and other inferential results. In addition; qualitative data obtained through interview from preschool focal persons of selected woredas and zones and focus group discussion responses from PTA members were analyzed qualitatively and triangulated with quantitative results.

The study used Multiple Linear Regression model to identify the determinant factors of readiness of student and put the problem of preschool students of SNNPR into linear statistical models so as to make it predictable and simple to take remedial action while making improvements in readiness of students. In general, the study has used statistical models namely, multiple linear regression analysis, independent sample t-test and one sample t-test.

The model of multiple linear regression used by the study was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 x_2 + \dots + \beta_r X_r + \varepsilon_j \quad (1)$$

Where Y: is readiness of preschool students,  $X_i$ 's: are independent variables

$\beta_i$ 's: are regression coefficients to be estimated and  $\varepsilon_i$ 's: are unexplained error term

The regression coefficients were estimated using least squares estimation which selected the estimated regression coefficients so as the sum of squares of residuals will be minimized. as:

$$\hat{\beta} = (X'X)^{-1} X'Y \quad (2)$$

Independent sample t-test was also used to compare the readiness of preschool students between urban and rural areas of the study. One sample t-test statistical model was conducted to test the significance of readiness of the preschool students of the study.

## IV. RESULTS AND DISCUSSION

### 4.1 Demographic and Socioeconomic Characteristics of the Respondents

The data used in the analysis of the study were collected from preschool teachers; preschool experts at woreda education office (WEO), zone education department (ZED) and Regional Education Bureaus (REB); and, PTA. In addition to this, preschool students were given a standardized exam to test whether they are ready or not to join grade one of primary schools. From the target of 117 preschool teachers, 116 preschool teachers i.e. only one preschool teacher questionnaire was rejected due to error in response which showed that there was no non response rate with respect to questionnaires filled by preschool teachers. Moreover, all preschool experts from woreda, zone and Region were interviewed without any difficulty.

In addition, FGDs, interview, observation and photograph were conducted by the research team in targeted areas of the study. Taking 5 students from each 101 preschools, 560 preschool students were given performance test. Besides, 27 readiness test was rejected due to errors in response while 46 was rejected due to

non-completed responses. Finally, 487 preschool students test was included in the analysis. Therefore, the study analyzed the data gathered from different sources and using different instruments and the decisive results were found accordingly.

**Table 4. 1: Demographic and socioeconomic characteristics of teachers from rural and urban settings**

Characteristics of the respondents		Teachers' response in %
Residence of preschool teachers	Urban	20.8
	Rural	79.2
Sex of preschool teachers	Male	50.7
	Female	49.3
Zone/City/Special Woreda of respondents	Hawassa	9.2
	Sidama	36.1
	Halaba	8.2
	Wolaita	18.6
	Gurage	19.8
	Bench Maji	10.1
Education level of preschool teachers	Grade twelve complete	3.9
	Grade tenth complete	46.9
	Certificate	41.1
	Diploma	8
	Degree and above	0

From the total of teachers included in the study, 9.2% of teachers were from Hawassa City Administration; 36.1% of teachers were from Sidama Zone; 8.2% of teachers were from Halaba Special Woreda; 18.6% of teachers were from Wolaita Zone; 19.8% of teachers were from Gurage Zone and 9.2% of teachers were from Bench Maji Zone. As it can be seen from the above Table, majority of both teachers were from rural preschools i.e. 79.2% of teachers were from rural preschools and the rest 20.8% of teachers were from urban preschools. The result shown in Table 4.2 above indicated that among 117 teacher respondents, 50.7% were male and 49.3% were female. With regard to the qualification of the respondents, 50.8% of teachers were tenth and twelve grade complete, 41.1% were certificate holders and 8.2% were diploma graduates. Among the teacher respondents, it is possible to see that 42.0% of respondents were married; 57% were single and 0.5% were divorced. As the results depicted in the above Table, the employment base of preschool teachers was striking; i.e. from the total of preschool teachers, 74.8% were employed in contract base; 9.2% were employed in permanent base and 16% were employed in other bases. Other base employment in this study refers to employment without contract, providing free service to community and the like. Accordingly, the following Table represents the mean score of preschool students.

**Table 4.2: Mean performance of preschool students**

Factor	n	Mean	Std. Deviation	Std. Error Mean
Readiness of students	487	36.55	21.765	1.513

The overall average performance of students in the region is 36.55 with standard deviation of 21.765. It seems that the average score of preschool students is below the standard value (i.e. 50) set by Ministry of Education.

#### 4.2 Test of Readiness of the Preschool Students

The study used one sample t-test to check the readiness of the preschool children for primary education (specially grade one) in order to judge whether preschool students in the region are ready enough or not for next segment of education. Table 4.17 below presented one-sample t-test to check whether the score of preschool student is below or above the standard value set by Ministry of Education.

**Table 4.3: Test of readiness of students**

Factor under consideration	One-Sample Test (Test Value = 50)					
	t	df	Sig.	Mean Difference	95% C.I of the Difference	
					Lower	Upper
Readiness of students	-8.891	486	.000	-13.450	-16.43	-10.47

From the above Table one can see that the mean difference -13.450 shows that the score of preschool student was 13.45 mark below the standard value i.e. 50. Moreover, Significance value  $p=0.000$ , we reject the null hypothesis and conclude that there is statistically significant difference between the score of preschool students and the standard value. Therefore, the result of One-Sample Test strongly indicated that preschool students in the region scored significantly below the standard value (Test Value = 50 set by Ministry of Education) which is taken as threshold value for preschool students to get in to grade one.

However, in this study, the performance of students was measured using nine factors namely, readiness of the students in writing letters, writing words, using letters, reading words, reading sentences, reading numbers, reading numbers on flash cards, naming pictures, ordering numbers and naming geometric figures. Hence, the study was interested to identify those factors that were responsible for less performance of the students. The following Table represents the performance of students in each of factors, which constitute the readiness of students.

**Table 4. 4: Mean Performance of Students in All Readiness Factors**

Factors of Readiness	n	Mean	Std. Error Mean
Writing letters	487	65.80	1.55777
Writing words	487	29.50	1.82039
Reading words	487	21.50	2.77294
Reading sentence	487	9.72	13.61609
Reading numbers	487	61.43	4.28914
Reading numbers from flash cards	487	52.41	1.71069
Ordering numbers	487	31.27	2.1314
Naming pictures	487	46.30	2.91002
Naming geometric figures	487	33.12	1.65516
Readiness of students	487	36.55	21.765

As it can be seen from above Table, it is possible to see that the students scored good (above pass) value in writing letters, reading numbers and reading letters from flash cards; i.e. 65.80, 61.43 and 52.41 respectively. However, with exception of these factors, students performed below pass value for primary education. Specifically, students' performance was almost negligible (only 9 mark out of 100) in writing sentences.

### 4.3 Comparison of Readiness of Preschool Students Between Urban and Rural

The study compared the degree of readiness of preschool students between urban and rural schools in the region. This was depicted as descriptive part in following Table 4.5 and inferential part (test the significance of difference in scores) in Table 4.6 below.

**Table 4.5: Comparison of Readiness of Students between Urban and Rural Schools**

Factor	Residence of respondents	n	Mean	Standard deviation	Standard error of the mean
Readiness of students	urban	102	45.58	19.723	3.008
	rural	385	34.18	21.709	1.695

The result depicted in the above Table showed that the average performance of students in urban preschools was 45.58 with standard deviation of 19.73 while the average performance of students in rural schools was 34.18 with standard deviation of 21.71. This indicated that the performance of urban students was better than that of rural ones.

**Table 4. 6: Significance of difference in Readiness between Urban and Rural Preschool Students**

Factors	t	Sig. value	Mean Difference	Standard Error
Readiness of students	3.121	.002	11.400	3.652

From the above Table, since the significance value  $p=0.003 < 0.05 = \alpha$  (level of significance), the study rejected the null hypothesis concluding that there is statistically significant difference in readiness of students between urban and rural preschool in the region. The statistically significant difference in performance is attributed to better (45.58) performance of students in urban areas.

To supplement the result obtained from quantitative data analysis, the research team conducted interviews, focus group discussions and field observations. The results obtained through qualitative data analysis shows that in urban areas, most of the parents are literate and hence give support during their free time and check whether their children attended the classes well and acquired the necessary knowledge and skill. However, in rural area most of the parents are illiterate and do not follow up what their children learned every day. The other factors that contributed to the difference as research team noticed could be better existence of appropriate indoor and outdoor materials and games; teachers' qualification and training, and relatively urban schools were better equipped and furnished than rural ones. In this regard, the results from both qualitative and quantitative data analysis revealed better readiness of preschool students in urban areas than their counterparts.

The next question under interest to be tested by the study was which factors make difference between urban and rural preschools. In these regard, the following Table presented results on some expected factors of making the difference using independent t-test of comparison.

**Table 4.7: Significance of Difference in some Factors between Urban and Rural Preschools**

Factors under consideration	Calculated value	df	Sig. value	Mean Difference
Support related	-2.447	205	.015	-.33846
Curriculum related material related	.378	205	.706	.05576
Equity related	-1.112	205	.267	-.22712
Nutrition and health	.743	205	.459	.08210
Indoor game	8.308	205	.000	1.25908
Outdoor game	11.232	205	.000	1.36270
Parents related	.081	205	.000	.81110
Teachers related	3.802	205	.000	.66824

As can be seen from the Table above, the difference is statistically significant in supports given from different organizations, outdoor games, indoor games, parents related factors and teachers related factors since their corresponding significance value (p-value) is strictly less than 0.05 (level of significance). These factors have larger values in urban schools as compared to rural ones. This can be seen from Table 4.7 above. Hence, it is possible to conclude that the significant difference occurred only in five factors. Since other three factors can be taken as an inputs for readiness of students, the significant difference in performance of students between urban and `rural area may be due to the significant difference in availability of support, availability of outdoor and indoor materials and games; parents related factors and teachers related factors. But for all other factors, since the corresponding p-values of each factor (p=0.871, p=0.618 and p=0.360) is greater than  $\alpha = 0.05$ , we simply accepted the null hypothesis and concluded that there is no significance difference between the considered factors.

#### 4.4 Results of Multiple Linear Regression Analysis

The adequacy of the model was examined before using results. Accordingly, multiple linear regression was found to be adequate and fits the data. In addition, the scatter plots of differences between standardized predicted values and standardized residuals showed errors are uncorrelated with predicted values and have approximately zero mean and constant variance indicating that the assumption of the model is satisfied. Moreover, the percentage of variation in dependent variable (readiness of students) was displayed from the following Table.

**Table 4.8: Regression Model Test**

R	R Square	Standard Error
.873 <sup>a</sup>	.762	.281

The result from above Table revealed the correlation coefficient was high. i.e. R=0.873 showing that coefficient of determination  $R^2 = R^2 \times 100 \% = (0.873)^2 \times 100 \% = 76.2\%$ . This result asserted that about 76.2% of variation in readiness of students is explained by the explanatory factors included in the model (Teachers related, Support related, Equity related, Outdoor materials, parents related, nutrition related, curriculum related, and indoor material related). The values of estimated regression coefficients were presented in the following Table.

**Table 4.9:** Results of Regression Coefficients

Explanatory factors	Coefficients		t	Sig.
	$\beta_i$	Standard Error		
$\beta_0$ (constant)	.934	.116	8.058	.000
Support related factors	.112	.027	4.228	.000
Curriculum related Factors	.068	.032	2.099	.037
Equity related factors	.020	.020	1.026	.306
Nutrition related factors	.117	.038	3.122	.002
Indoor games and material	.187	.031	-5.953	.000
Outdoor games and material	.176	.031	-5.708	.000
Parents related factors	.027	.025	1.077	.283
Teachers related factors	.057	.020	-2.909	.004

The study used multiple linear regressions to determine the significance of effect of explanatory variables (support related factors, relevance of curriculum material, equity related factors, health and nutrition related factors, indoor games and materials, outdoor games and materials, parents and teachers related factors) on response variable (readiness of students). The Intercept  $\beta_0 = 0.97$  is the performance of students when they are not given any service related to all independent variables. This small portion represents the part of readiness of students, which does not depend on explanatory variable of the study.

All signs of values of regression coefficients in this Table were found to be positive indicating that all explanatory factors included in the model were positively related with readiness of students. This means that any improvements made on these factors would improve the readiness of students. Although all explanatory factors are positively related with response factor, their relative effect varies as their corresponding magnitude of regression coefficient changes. This means that the factor corresponding with larger regression coefficient plays larger role in determining the readiness of students. Considering to the significances of coefficients, regression coefficients corresponding to support related, relevance of curriculum material, nutrition related, indoor material, outdoor material and teachers related factors are significant since their significance value  $p = 0.000 < 0.05 = \alpha$  for these factors. This means that these factors have statistically significant effect on readiness of students.

However, according to this study, the significance value of equity and parents related factors i.e.  $p = 0.306$  and  $p = 0.283$  respectively are greater than  $\alpha = 0.05$  (level of significance). This means that the two factors have no statistically significant effect on readiness of students. The test for multi-collinearity showed that the parents related factor has condition index greater than one thousand. This means that the reason for non-significance value of parents' related factor is that the information held by the factor has already been entered in to the model by support related factor.

## V. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

The overall average performance of preschool students in the region was significantly below the pass mark (standard value=50) in order to be ready enough to primary education particularly grade one. The less performance of preschool students was mainly manifested in writing and reading words, reading sentences, naming pictures, ordering numbers and naming geometric figures. Hence, the study concluded that the program was focusing on writing and reading letters and numbers only. The most determinant factors affecting the performance of preschool students were found to be support related factors, relevance of curriculum material, nutrition related factor, availability of indoor and outdoor games and material and teacher related factors. Hence, these factors are the most important areas of consideration in order to make any improvement of preschool students' performance. There were significant differences in performance of the students between urban and rural preschools where the urban students scored better result than rural ones. The better readiness of urban preschool students was due to better availability in support, outdoor and indoor games and materials, better follow up of parents and relatively existence of more qualified preschool teachers. From this, we concluded that rural preschool students may not have the same opportunity of getting better qualified and experienced teachers; availability of indoor and outdoor games and materials, and follow up of their parental.

### 5.2 Recommendations

Based on the findings of the study, the following recommendations were suggested for improving the readiness of preschool students in the region.

1. The study identified through performance test that the preschool students scored much below the average (pass mark) to become ready for primary schools. Their performance was low in many variables which

were used to test them. Therefore, in order to enhance the performance of the learners in writing and reading words, reading sentences, naming pictures, ordering numbers and naming geometric figures and to make them ready enough for primary schools, all concerned bodies should work hand in hand and focus on capacity building and recruitment of preschool teachers, fulfill the teaching and learning materials, furnish indoor and outdoor classroom environment, enhance the awareness of the community on the importance of the program and improve supervision and management practices.

2. In general, the most determinant factors affecting the performance of preschool students were found to be support related factors, relevance of curriculum material, nutrition related factor, indoor and outdoor games and material and teachers related factors. Hence, in order to improve the overall performance of the children, these factors should be given the maximum consideration.
3. Although the overall performance of preschool student was below the pass mark (standard value=50) in order to be ready enough to primary education particularly grade one, the performance of rural preschool students was far below than the urban ones. Therefore, rural preschool should be provided with better-qualified and experienced teachers; the necessary indoor and outdoor games and materials, and adequate parental supports.

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