

Measuring Measurement Skill in Children

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ABSTRACT

Measurement is an important skill in our life. We use this skill in different ways in our day-to-day life since our childhood. Initially, children use non-standard units. More often, they use this concept while playing games. This study is to assess the measurement skill in students of class 5. The objective is also to compare the measurement skill in children of Government and private schools in Lucknow city. The researcher has prepared a testing tool on the concepts of measurement keeping the age-appropriate competencies in her mind. The study will give an insight to the teachers while teaching this topic in the class.

KEYWORDS: *measurement, measurement skill, standard units, non-standards units, quantities*

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INTRODUCTION

When children come to school, they already know a lot about measuring height, width etc. They know about near and far through games. In the game of marbles, they easily hit the marbles on the target. Apart from this, there are many examples of games in which children use the concepts of measurement. They measure in their environment. These children do all these things unintentionally. That is why it is necessary to bring the attention of children to the concepts they use. In the beginning, this can be done with non-standard units and later they be introduced to standard units of measurements. It is important that all this work should be done by taking the examples of the children's environment.

In our daily life, we have to measure the length of many things. For this we use measuring tape or ruler. Initially, teachers should make children measure the things in non-standard units to understand the length. For this, it is necessary to ask the children to estimate the length and then to check their guesswork by measuring those things in the proper way.

Capacity means the capacity to fill inside any vessel. To make the children understand the concept of capacitance, we should discuss with them about daily

life situations. For example, milk in a glass, water in a bucket, rice in a bowl, etc.

Weight involves the understanding of lightness or heaviness of objects. This can be done by finding the weight of the two objects.

Measurement can be defined as assigning a number to a quantity in terms of a unit.

Length is a characteristic of an object and can be found by quantifying how far it is between the endpoints of the object.

Distance refers to the empty space between two points.

Measuring consists of two aspects, identifying a unit of measure and subdividing (mentally and physically) the object by that unit, placing that unit end to end (iterating) alongside the object. The concept of measurements should be clear right from the childhood. Measuring skill of children can be consider as an important life skill.

Review of Literature

Many researchers go beyond the physical act of measuring to investigate students.

At age 4-5 years, however, most children can learn to overcome perceptual cues and make progress in reasoning about and measuring quantities. Young children naturally encounter and discuss quantities (Ginsburg & Seo).

They first learn to use words that represent quantity or magnitude of a certain attribute. Then, they compare two objects directly and recognize equality or inequality (Boulton-Lewis, Wilss & Mutch, 1996). At this point, they are ready to learn to measure, connecting number to the quantity.

Objectives

There are two main objectives-

- To study the measurement skill of the children.
- To compare the measurement skill in children of Government and private schools in Lucknow.

Hypothesis

There would be no difference in the measurement skill in children of Government and private schools in Lucknow.

Statistical Analysis

Statistical analysis was completed by gathered information were arranged, and analyzed by utilizing Z-test on MS Excel sheet were interpreted by inferential and descriptive analysis on the basis on the objectives and the hypothesis of the study.

Results and discussion

Table 1. Shows the measurement skill of 100 children

No. of participants	Mean	SD	Low score (11-24) (%)	Moderate score (25-49) (%)	High Score (50-78) (%)
N= 100	28.57	9.34	33	56	11
Z test	0.5				

The scores of the participants ranged between 11 to 78. On average, the participants scored 28.57 with the standard deviation of 9.34. While the majority of the individuals are in the moderate group, the low scored group also has a significant number of participants. The high scored group has the lowest number of individuals.

Table 2. To show the comparison the measurement skill in children of Government and private schools in Lucknow.

No. of participants	Mean	SD	Low score (11-24) (%)	Moderate score (25-49) (%)	High Score (50-78) (%)
N= 50 (Government Schools)	30.16	9.208	12	30	7
N=50 (Private Schools)	26.98	9.347	21	26	4
Z test	1.21				

The mean of the scores indicates that 50 children from government schools is 30.16 and Standard Deviation score is 9.208 while the corresponding mean of 50 children from private school is 26.98 and Standard Deviation is 9.347. 12 out of 50 children from government schools fell in the category of low score, while 21 out of 50 children from private schools fall under low score group. 30 children from government schools fell in the category of moderate score, whereas 26 children from private schools are falling in the moderate scored category. 7 children from government schools fell in the category of high score, whereas only 4 children from private schools are falling in the high scored category. Since it is observed that significant level=0.5, $z=1.21$, (p-value), it is concluded that the null hypotheses is rejected.

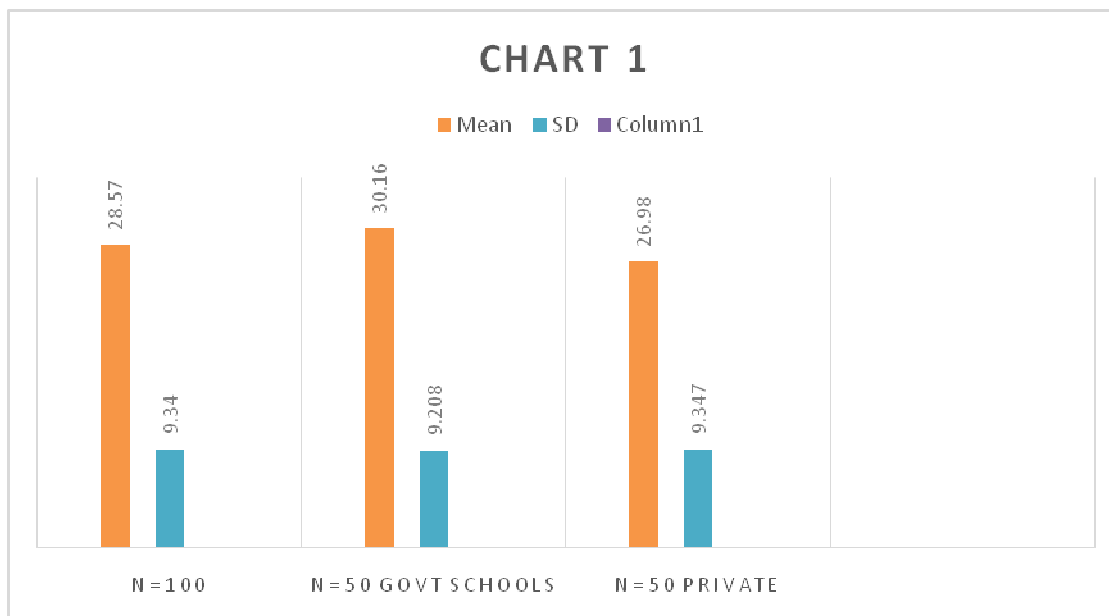
Research Methodology

Sampling

100 children studying in schools of Lucknow are selected. 50 students of class 5 studying in government schools and 50 children of class 5 studying in private schools are selected for the study.

Procedure

The study was conducted on 100 children studying in schools of Lucknow. The Participants were appropriately informed about the purpose of the study. The data was collected by a MCQ and a performance test prepared by the researcher. The participants were requested to answer all the questions genuinely. They were assured of the confidentiality of the information given by them. They were also informed that their analysis would be shared with them if they were willing to know the results.



Conclusion

The present research focused more about the level of measurement skill in primary school going children. The research also says that there is a difference in the measurement skill in children of Government and private schools in Lucknow. The results are showing that the condition is not so satisfying in this field and if the steps are taken in the right direction the children may start discovering their abilities and strengths of measurement skills themselves.

Teaching activities should be meaningful for children and related to their interests, needs, and questions. Teachers should take advantage of young children's informal knowledge, curiosity, high motivation to learn, and spontaneous engagement with Mathematics in their daily activities, play, and interactions by turning those moments into an opportunity to deliver both structured and integrated Mathematics education especially, for development of their measurement skills.

References

- [1] Arthur J. Baroody, Douglas Clements & Julie Sarama, Teaching and Learning Mathematics in Early Childhood Programs [https://www.researchgate.net/publication/331148046_Teaching_and_Learning_Mathematics_in_Early Childhood Programs](https://www.researchgate.net/publication/331148046_Teaching_and_Learning_Mathematics_in_Early_Childhood_Programs)
- [2] Boulton-Lewis, G. M. (1992). 'The SOLO taxonomy and levels of knowledge of learning', *Research and Development in Higher Education* 15, 482–489.
- [3] Boulton-Lewis, Wils & Mutch, 1996 Teachers as adult learners: their knowledge of their own learning and implications for teaching, *Higher Education* volume 32, pages 89–106 (1996)
- [4] Brannon, E. M. (2002). The development of ordinal numerical knowledge in infancy. *Cognition*, 83, 223–240.
- [5] Cassia, V. M., Picozzi, M., Girelli, L., & de Hevia, M. D. (2012). Increasing magnitude counts more: Asymmetrical processing of ordinality in 4-month-old infants. *Cognition*, 124(2), 183-193.
- [6] Ginsburg & Seo what is developmentally appropriate in early childhood mathematics education? https://www.researchgate.net/publication/242738332_What_is_developmentally_appropriate_in_early_childhood_mathematics_education_Lessons_from_New_Research