



Research Paper

## “Influence of Decision Making Capacity on Life Skill Mathematics: A Study among Higher Secondary School Students”

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### ABSTRACT

Life Skill Mathematics helps the student to manage different difficult situation successfully. Teaching of Life Skill Mathematics will help the students to generate generic and transferable skills for learning, skills for life, skill for correct decision and skills for work. Decision-making capacity can be defined as, ‘the speculation process of selecting an accurate choice from the available options’. The present study explores the influence of Decision Making Capacity on Life Skill Mathematics among higher secondary school students. The tools used were Life Skill Mathematics test and Decision Making Capacity inventory which were developed and standardised by the investigators. Relevant data was collected from a sample of 420 higher secondary school students and found the influence of Decision Making Capacity on Life Skill Mathematics. The collected data were analysed using Pearson’s Coefficient of correlation and its test of significance, ANOVA, Post hoc test Tuckey’s HSD. The findings revealed that Decision Making Capacity has a positive influence on Life Skill Mathematics of higher secondary school students. Life Skill Mathematics and Decision Making Capacity are helpful in the proper development of students in such a way that each student will be able to understand the life problems and take the logical decisions in different situation efficiently.

**KEY WORDS-** Life Skill Mathematics, Decision Making Capacity

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### I. INTRODUCTION

Mathematics helps the students to give exact interpretation of ideas and conclusions. It is the numerical and accurate decision making part of man’s life and knowledge. It plays a predominant role in student’s everyday life and it has become an indispensable factor for the progress of their present day world. Life Skill Mathematics generate comprehensive idea that students and adults need for independent living. Life Skill Mathematics (Scottish Qualification Authority, 2012) helps the learners to select and apply Mathematical techniques to tackle a range of real-life problems and situations. Decision Making Capacity is essential quality for all students. Decision Making Capacity is a feasible goal for learners. By analysing the Life Skill Mathematics, its correct decision making capacity skill is very important in daily life situations.

### HYPOTHESES OF THE STUDY

1. There is significant positive relationship between Life skills Mathematics and Decision Making Capacity among Higher Secondary School Students.
2. Decision Making Capacity has significant positive influence on Life skills Mathematics of Higher Secondary School Students.

### OBJECTIVES OF THE STUDY

1. To find out the extent of Life Skill Mathematics and Decision Making Capacity of Higher Secondary School Students.
2. To find out the relationship between Life skills Mathematics and Decision Making Capacity of Higher Secondary School Students.

3. To find out the influence of Decision Making Capacity on Life skills Mathematics of Higher Secondary School Students.

## II. METHODOLOGY

In the present study, normative survey method was employed. Stratified random sampling technique was used for the selection of the sample. The sample selected for the study was 420 Higher Secondary School Students. For collecting necessary data standardized Test on Life skill Mathematics and Decision Making Capacity Inventory were used. For preparing test on Life Skill Mathematics five components were selected, which are Numerical Skill, Financial Skill, Statistical Skill, Measurement Skill and Geometrical Skill. The following steps are adopted in the preparation of the Life Skill Mathematics Test. Preparation of the draft items, Try out of the test, Item Analysis. After conducting the try out 5 items were discarded from the draft Test on Life Skill Mathematics. The multiple choice questions with their options were arranged and one mark was given for each correct response. The final test with 30 items was administered to a small group of 10 students. The time taken to complete the test was also noted. The average of the time taken by the students was calculated and it is fixed on the time of the test. The time for the test was fixed as 15minutes. The reliability coefficient of the test was 0.65.

For the preparation of Decision Making Capacity inventory five components were selected for the study they were Motivating and Influencing Factors, Adapting and changing, Thinking and analyzing, Righteous, Opinion and Support. The following steps are adopted in the preparation of the Decision Making Capacity Inventory. Preparation of the draft items, Try out of the test, Item Analysis. After conducting the try out, the investigator discarded 5 items from the draft Decision Making Capacity Inventory. The three choice questions with their options were arranged in positive question carries 3,2,and 1 mark similarly negative questions carries 1,2,and 3 mark was given for each response. The final test with 30 items was administered to a small group of 10 students. The time taken to complete the test was also noted. The average of the time taken by the students was calculated and it is fixed on the time of the text. The time for the test was also fixed as 15minutes.. The reliability coefficient of the test was 0.65.

### ANALYSIS

Life Skill Mathematics and Decision Making Capacity were collected and calculated the measure of central tendency, dispersion, skewness and kurtosis. The details are given in the table1

**Table 1**  
*Measure of central tendency, dispersion, skewness and kurtosis of Life Skill Mathematics and Decision Making Capacity*

Variable	N	M	Mdn	Mo	SD	QD	Sk	Ku
Life Skill Mathematics	420	17.13	16	16	5.55	4	0.27	- 0.70
Decision Making Capacity	420	77.4	79	80	6.97	4	-0.40	-0.52

The table shows the arithmetic mean of Life Skill Mathematics and Decision Making Capacity is an average level.

### RELATIONSHIP BETWEEN LIFE SKILL MATHEMATICS AND DECISION MAKING CAPACITY

The relationship between Life Skill Mathematics and Decision Making Capacity was analysed by computing ‘r’ and tested its significance.

**Table 2**  
*Result of test of Significance of ‘r’ between Life Skill Mathematics and Decision Making Capacity*

N	df	r	t
420	418	0.79	26.62**

\*\*P<0.01

The calculated t-value is 26.62 and the table value for t-test for degrees of freedom 418 is 1.96 at 0.05 level and 2.58 at 0.01 level. The obtained r = 0.79 which is significant at 0.01 level. Thus, it can be inferred that there is significant positive relationship between the Life Skill Mathematics and Decision Making Capacity of higher secondary school students. Hence hypothesis 1 formulated is sustained.

**INFLUENCE OF DECISION MAKING CAPACITY ON LIFE SKILL MATHEMATICS OF HIGHER SECONDARY SCHOOL STUDENTS**

In order to find out Influence of Decision Making Capacity on Life Skill Mathematics of Higher Secondary School Students. i.e., high Decision Making Capacity average Decision Making Capacity and low Decision Making Capacity groups were identified. The mean and standard deviation of Decision Making Capacity scores for total sample is 77.49 and 6.97 respectively. Those who are having higher scores 80.97 ( $M + \frac{1}{2}\sigma$ ) has come under high group. Those who are having scores between 80.97 ( $M + \frac{1}{2}\sigma$ ) and 74.01 ( $M - \frac{1}{2}\sigma$ ) is considered as average. And those who are having scores below 74.01 ( $M - \frac{1}{2}\sigma$ ) has come under low group.

**Table 3**  
*Mean and standard deviation of Life Skill Mathematics of High, Average, Low Decision Making Capacity group*

Group	N	M	SD
			3
High	154	23.21	
Average	132	16.21	1.36
Low	134	11.04	2.02

To test the significance of difference between the mean values of Life Skill Mathematics score of the high, average and low Decision Making Capacity groups ANOVA is used. Details are given in table 4

**Table 4**  
*Summary of ANOVA*

Source of Variation	df	Sum of squares	mean square variance	F value
Between groups	2	10774.08	5387.03	
Within groups	417	2175.72	5.21	1032.48**

\*\* P<0.01

The table value of F for df (2, 417) is 3.02 at 0.05 level and 4.66 at 0.01 levels. It indicates that there is significant difference on Life Skill Mathematics among the three groups. Since ANOVA is significant the Post hoc test Turkey’s HSD was carried out.

The HSD value calculated is 0.61 at (0.05) level and 0.76 at (0.01) level. The difference for all possible pairs of sample means are computed which is represented in table 5

**Table 5**  
*Tukey’s Post –hoc analysis for the comparison of the Life Skill Mathematics among the three group with different Decision Making Capacity.*

	High	Average	Low
High (23.21)	0	7 **	12.17 **
Average (16.21)		0	5.16 **
Low (11.04)			0

\*\* P<0.01

From the table it is seen that the difference between High and Average group is 7 between High and Low groups is 12.17, Average and Low group is 5.16. These values are greater than the HSD value at 0.05 (0.64) and 0.01 (0.80) levels of significance. Hence it is inferred that there exists significant difference between means of High group and Low group as well as Average group and Low group. It is clear that Decision Making Capacity has a positive influence on Life Skill Mathematics of student at higher secondary level. Hence Hypothesis 2 formulated is sustained.

**III. CONCLUSIONS AND IMPLICATIONS**

The findings of the study indicate that Decision Making Capacity has a positive influence on Life Skill Mathematics of higher secondary school students. The results of the study help to the optimum development of the child. Intellectual planning of interaction and implementing knowledge based on Life Skill Mathematics and Decision Making Capacity is the very important. While preparing Curriculum the learning strategies should be planned in such a way to suit the proper development of the child. Every topic has to be linked with life so that education system can proceed to the development of Life Skills of students. This type of training students will overcome the life problems in future. Life Skill Mathematics and Decision Making Capacity is very essential for all. Hence the teacher, curriculum designers etc. should give proper weightage to their development.

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