

**SOCIAL COGNITION, LEARNERS' NEEDS AND
MATHEMATICAL PROBLEM-SOLVING SKILLS OF
GRADE 5 LEARNERS: A BASIS FOR AN
INTERVENTION PROGRAM**



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Research Aim

- This study aimed to determine the Social Cognition, Learner's Needs and Mathematical Problem-Solving Skills of Grade 5 Learners of Highway Hills Integrated School that as Basis for an Intervention Program.



Research Questions

1. What is the students' assessment on their social cognition in terms of:
 - 1.1 self-esteem;
 - 1.2 self-efficiency; and
 - 1.3 learning motivation?



Research Questions

2. What is the status of the respondents' learning environment with respect to their:

2.1 concentration;

2.2 teacher's teaching behavior;
and

2.3 attitude towards mathematics?



Research Questions

3. Is there a significant relationship between the learner's social cognition and learning environment?
4. What is the performance level of the learners in problem solving?



Research Questions

5. Is there a significant relationship between respondents' problem solving skills, social cognition and learning environment?
6. What intervention program can be developed to improve the learners' skills in mathematical problem solving?



Research Methodology

- The study used a descriptive correlational research design.
- Out of 423 total population of Grade 5 learners 45 were identified purposively based on the result of their 1st and 2nd quarter grades.



Results

SOP1

Students' Assessment on their Social Cognition

INDICATOR	WEIGHTED MEAN	LEVEL
Self-esteem	3.87	High
Self-efficiency	3.77	High
Learning Motivation	3.89	High

Status of the Respondents' Learning Environment with Respect to;

SOP2

INDICATOR	WEIGHTED MEAN	LEVEL
Concentration	3.87	High
Teacher's teaching behavior	3.89	High
Attitude Towards Mathematics	3.87	High

Results

SOP3

Relationship Between the Learner's Social Cognition and Learning Environment

Pearson r- value	Degrees of Relationship	t-test value	Remarks
0.718	High Positive	6.7643	Significant
<i>Tested at 0.05 level of significance</i>			

Learners' Problem Solving Skills

SOP4

Skill	No. of Correct Responses	Percentage	Verbal Interpretation
Determining the missing term in a problem	30	66.67%	Beginning
Identifying given data to be used in solving	14	31.11%	Beginning
Discernment of Methods to Solve the Problem	11	24.45%	Beginning
Solving	10	22.23%	Beginning
Total	16.25	36.11%	Beginning

Results

Relationship Between Respondents' Problem-Solving Skills in Their Social Cognition and Learning Environment

	Pearson r-value	Degree of Correlation	t value	Verbal Interpretation
Social Cognition	0.24	Low Degree	1.621	Not Significant
Learning Environment	0.0065	Low Degree	0.043	Not Significant

Proposed Instructional Program to Improve Learners' Mathematical Problem Solving Skills

Program/Project Title	PROJECT FOCUS (Fostering Optimum Comprehension and Understanding Sessions in Mathematics)
Objectives	This instructional plan aims to: <ul style="list-style-type: none">•Determine the challenges encountered by selected elementary school students in their mathematics subject.•Identify the average failure rate of the students per grade level before and after the implementation of Project FOCUS.•Test for significant difference between the average failure rate of the junior high school students before and after the implementation of Project FOCUS.
Recipients of Instructional Plan	This project's respondents are all the students in 5th grade at Highway Hills Integrated School for the Academic year 2022-2023.
Budget and Source	Php15,360.00 -MOOE
Duration	3 Months
Persons Involved	Grade 5 Learners; Parents; School Head; Mathematics Teachers and ;Department Coordinators



Conclusions

Based on the findings of the study, the following conclusions are drawn.


The learners' social cognition (self-esteem, self-efficiency, and motivation to learn) is high. Learners' learning environment (concentration, teacher's teaching behavior, and learners' attitude towards mathematics) is high.

There is no significant relationship between learners' problem solving skills and their status of social cognition. Additionally, there no significant relationship between learners' problem solving skills and the status of their learning environment.



The learners' problem solving skills are in beginning in terms of determining the missing term in a problem, identifying given data to be used in solving, discerning methods to solve problem, and solving the problem within time constraints.

There is a low degree correlation between learner's problem solving skills and their social cognition variables such as self-esteem, self-efficiency and motivation to learn. Additionally, there is a low positive correlation between learner's problem solving skills and the condition of their learning environment which includes learners' concentration, teacher's teaching behavior, and learners' attitude towards mathematics. Also, there is a significant relationship between these variables.



Finally, Project FOCUS or Fostering Optimum Comprehension and Understanding Sessions in Mathematics was proposed as an intervention program to improve learners' problem solving skills.

Recommendations

1. Learners' self-esteem, self-efficiency and motivation to learn may be sustained so that their problem solving skills are improved.
2. Learners' condition of learning environment may be maintained in excellent condition for optimum problem solving skills to be attained.
3. Project FOCUS may be adopted by school mathematics coordinators to foster improvement in social cognition and problem solving skills among learners.
4. To ascertain effectivity of the suggested instructional plan, studies on results of Project FOCUS may be evaluated.
5. Another study may be conducted using another method of assessment to a wider subject to confirm the result of the study



Thank you for listening!

