

**PROBLEM FACED ON TEACHING-LEARNING
PROCESS IN GEOMETRY**

**A
THESIS
BY
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Recommendation Letter

This is to certify that Mr. Bhoj Raj Bhurtel, student of Academic Year 2064/2066 with Campus Roll No. 211/066, T. U. Registration No. 5-1-2-1020-98 and Exam Roll No. 2140256 has completed his thesis under my supervision during the period prescribed by the rules and regulations of Tribhuvan University, Nepal. The thesis entitled "**Problem Faced on Teaching-learning Process in Geometry**" is based on the result of his investigation conducted in Bhojpur district during the period of 6 months, under the Department of Mathematics Education, Tribhuvan University, Sukuna Multiple Campus, Indrapur, Morang. I recommend and forwarded this thesis for the evaluation as the partial requirements to award the degree of Master of Education.

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Approval Letter

This thesis by Bhoj Raj Bhurtel, Entitled, "**Problem Faced on Teaching-learning Process in Geometry** " has been approved in partial fulfilment of the Requirements of the Degree of Master of Education.

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ABSTRACT

The topic of this study was "Problem Faced on Teaching-learning Process in Geometry". The main objective of this study was to find out the problems faced on teaching-learning process in geometry at lower secondary level. The specific objectives of this study were; to identify the problems related to teaching geometry due to students' poor geometrical concepts, to identify the problems faced by students due to their various characteristics background, to compare the problems of students by gender, to identify the problems related to languages, to identify the problems faced by teachers related to professional development, to identify the problems related to teaching aids, techniques, materials and methods, to identify the problems related to school's administration, to compare the problems faced by trained teachers and untrained teachers and to suggest some measures for the solutions of problems.

The research was survey in design. All the students and mathematics teachers of lower secondary level at Bhojpur district of the academic year 2071 were taken as the population of the study. 40 students, 4 mathematics teachers and 4 head-teachers were selected from 4 schools as sample for the study. The sampling was done by personal convenience. The researcher had adopted purposive sampling for the collection of sample for this study. The researcher had used Questionnaires, Interview Guideline and Students' Attendance Register to gather information for the research as tools.

There were various problems on teaching-learning process in geometry due to poor geometrical background of students at lower (primary) level. There was also a problem to students on learning geometry due to inability of students to read well and to understand clearly about the new geometrical terms, concepts, facts, relations and vocabulary. Also, as the students didn't have any basic and pre-requisite knowledge in geometry, the teachers had felt geometry teaching as a great problem. There were also problems on teaching-learning process in geometry related to languages such as understanding geometrical terms translated in English or Nepali language for different ethnic groups and problems on implementing constitutional provisions about native languages managed by Government of Nepal due to inadequacy of manpower in appropriate places. Compulsion to take more classes because of low number of mathematics teachers was a major problem for most of the mathematics teachers. Lack of facilities and award for the good performance and lack of refreshment

training to teach difficult and rigor topic and unavailability of mathematical journals, dissertation, reference books and new books were the more relevant problems for teaching geometry.

The implications or recommendations of this research had to improve the teaching-learning situation of geometry suggested for different levels. The curriculum development and instruction must consider hierarchical order of Van-Hiele's levels of geometrical thought. The curriculum and evaluation standards should be consistence with the methodologies advocated by the Van-Hiele's model, especially the phases of learning. School administration should gather students, teachers and guardians for open interaction so that problems could be identified easily. Time to time modern and refreshment trainings should be provided to the teachers. A lot of feedback should provide students as they learn to construct proof. From this study, it had been found that pre-concept of learning geometry on student is poor and there not adequate mathematics teachers who teach geometry effectively. Therefore, similar study can be made in primary as well as in secondary levels. Similar studies are essential in Algebra, Arithmetic, Set and other subjects to better off the curriculum of lower secondary level.

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ABBREVIATIONS

BC	Before Christ
CERID	Research Centre for Education Innovation and Development
HSS	Higher Secondary School
LSS	Lower Secondary School
MALATI	Mathematics Learning and Teaching Initiatives
MOE	Ministry of Education
MR	Mean Responses
MW	Mean Weightage
NCED	National Centre for Education Development
NCTM	National Council of Teachers of Mathematics
NEC	National Education Commission
PCL	Proficiency Certificate Level
SD	Standard Deviation
SLC	School Leaving Certificate
SMS	Short Message Service
SN	Statement Number or, Serial Number
S^2	Variance of Sample
TT	Trained Teachers
TU	Tribhuvan University
UT	Untrained Teachers
VFSG	Vision for School Geometry
VHL	Van-Hiele's Level