

INDIGENOUS MATHEMATICAL CONCEPTS OF GOPALI COMMUNITY FROM THEIR CULTURAL PERSPECTIVE

BY
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This thesis is submitted to the Tribhuvan University
In partial fulfillment of the requirements for
The Master of Philosophy in Education.

December, 2007

Acceptance and Recommendation

The undersigned certify that we have read, approved, and recommended to the Faculty of Education, Tribhuvan University for acceptance, a thesis entitled **INDIGENOUS MATHEMATICAL CONCEPTS OF GOPALI COMMUNITY FROM THEIR CULTURAL PERSPECTIVE** submitted by Ramchandra Dahal in partial fulfillment of the requirements for the degree of **MASTER OF PHILOSOPHY IN EDUCATION WITH SPECIALIZATION IN DEVELOPMENT STUDIES**.

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Dedication

To my mother

Mrs. Bhuwan Kumari Dahal

Acknowledgement

I would like to express my sincere thanks to my thesis supervisor Prof. Dr. Santosh Man Maskey, Central Department of Education, Tribhuvan University, Kirtipur whose encouragement took me into such an emerging and open inquiry that helped me to reflect on and explore my own values. I am really grateful to him for his scholarly guidance on various issues that emerged during my inquiry for the field work and writing phase of this study.

My sincere thanks go to Prof. Dr. Bidya Nath Koirala, Coordinator, M. Phil. Program in Education, Tribhuvan University for providing me an opportunity to participate in M. Phil. Program and his encouragement in the study.

My grateful thank extends to Prof. Dr. Mana Prasad Wagle, Dean, School of Education, Kathmandu University for the appropriate guidelines in the initial stage of the study.

I take this opportunity to express my gratefulness to Mr. Karna Bahadur Gopali and Mr. Manoj Kumar Gopali and their family members who assisted me during my field work.

I appreciate my wife, Sita for her patience, support and love.

I am equally indebted to my family members for their help and cooperation.

An Abstract of the Thesis

This study is focused on the perception of mathematical knowledge among illiterate Gopali people of Chitlang village of Makwanpur district. The Gopalis taken for the study are recognized as *gwala/ sapu* in the social community of Nepal. They have the identity of first ruler of ancient Nepal. So, the study concerned with ethno-mathematics this community is the appropriate one. The traditional practices followed by them were the main area of the study. Especially the ethno-mathematical practices, existing in Gopali people were the sources of the study. The study is focused on their measurement system, numerical system, and geometrical practices among them. Illiterate children, women and men were considered for in-depth study and common practices were achieved from the religious as well as cultural activities in the group participation.

The participant observation and interview were two tools adopted for the collection of information. The study was guided by ethno-methodology as well as grounded theory.

The study concluded that the ethno-mathematical practices has supported in preserving their cultural identity. Naturally, the ethno-mathematics and culture are interlinked. The perception of mathematics preserved by Gopalis differs from the school mathematics. There is discontinuity between traditional and modern measurement system but similar practices are found still among the illiterate group. Natural units are still practiced in present context. In the case of domestic purpose, mathematical concepts adopted by them are sufficient. The study is also concluded that the origin of ethno-mathematics is preserved by them. We can not claim that the formal mathematics is adopted in their traditional practices. Whatever mathematical concepts they have seem practical.

The study demands the cultural preservation and academic application at their primary level education from which cultural identity as well as importance of indigenous knowledge is preserved. For these a serious planning is required while designing curriculum and in teaching-learning process as well. The study tried to relate their ethno-mathematical practices in the educational implication.

The transformation of learning from old generation to new generation can be exited in the similar context but in different situation it cannot be applicable and has great chance to disappear. The new generation of Gopalis are involved in different occupations and some of them have been migrated which may led to the non existence of indigenous knowledge. So, the documentation and implementation of practices of ethno-groups should give priority for the preservation of cultural identity.

The conclusion drawn from the study is the identification of ethno-mathematics existing in their cultural and religious practices which should be preserved and at the same time, it has to chanalyzed in the formal education of the community. It is being the study of ethno-mathematics, the events, and practices of the Gopalis were observed in the mathematical sense or their knowledge related to mathematics is tried to cover by the study. Whatever information was mentioned here is based on the Gopalis situated in Makawanpur area. The interpretation of collected information carefully given priority for the cultural preservation, but it is not good to modify the cultural practices.

Ramchandra Dahal

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Declaration

I hereby declare that this thesis has not been submitted for the candidature for any other degree.

I understand that my thesis will become a part of permanent collection of Tribhuvan University Library. My signature below authorizes release of my thesis to any readers upon request.

Ramchandra Dahal,

13th December, 2007

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