
Seminar in Mathematics Education แนะนำวารสาร Educational Studies in Mathematics (ESM)

2011.06.00 โดย นางสาวกาญจนา เวชบรรพต ป.เอก รุ่นที่ 4

การแนะนำวารสาร Educational Studies in Mathematics (ESM)

Vol. 19, No. 4/ November,1988

Editor	Han Freudenthal
Publisher	D. REIDEL PUBLISHINNG COMPANY
Pages	419-512
Donated by	Emeritus Professor Dr. Alan J. Bishop, Monash University, Australia
แหล่งสืบค้นเพิ่มเติม	ห้องสมุดจีน แบรี่ คณะศึกษาศาสตร์ มหาวิทยาลัยขอนแก่น

ช่วงที่ 1 บทความในเล่ม ประกอบด้วย

1. Publisher's announcement ()
2. Editorial () ผู้แต่ง Alan J. Bishop
3. Anna Sophia Krygowska () ผู้แต่ง Stefan Turnau
4. Composants de l'activité mathématique qui devraient jouer le rôle essentiel dans la mathématique pour tous () ผู้แต่ง Krygowska Zofia
5. Sex differences in the learning of post-secondary mathematics in a neo-literate society () ผู้แต่ง G. S. Kaeley
6. Mathematical discussion and mathematical understanding () ผู้แต่ง S. E. B. Pirie and R. L. E. Schwarzenberger
7. Societal differences and their influences on children's mathematics understanding () ผู้แต่ง Fou-Lai Lin
8. Book reviews () ผู้แต่ง Brian Greer and George Booker
9. Call for proposals ()
10. Announcement ()

ช่วงที่ 2 focus paper

Mathematical discussion and mathematical understanding () ผู้แต่ง S. E. B. Pirie and R. L. E. Schwarzenberger

บทนำ

A longitudinal study is being undertaken into the question of whether or not discussion in the mathematical classroom is an aid to understanding. Preliminary analysis shows that, while the hypothesis that discussion aids understanding is very attractive, evidence to support the hypothesis has been limited. Classroom observations during the first year of the study have led to a method of classification of mathematical talk in the classroom which we expect will prove useful in investigating links between mathematical discussion and mathematical understanding.

The ability to ‘say what you mean and mean what you say’ should be one of the outcomes of good mathematics teaching .... Pupils need the explicit help, which can only be given by extended discussion, to establish these relationships (between different mathematical topics); even pupils whose mathematics attainment is high do not easily do this themselves. (Cockcroft, 1982, England)

In all other topics, we saw teachers there (Kitamaeno School in Tokyo) using peer group dialogues ... (they) justified their use of group dialogue because of their large classes (35–43) and the unusually independent spirit of many of the 600 pupils. Mathematics achievement was very high by American standards. (Easley, 1984, on a Japanese project)

We need to recognise the importance of verbalisation. Putting thoughts into words requires students to organise their thinking and to confront their incomplete understanding. Listening to others affords them the opportunities to contemplate the thinking of others and to consider the implications for their own understanding. (California State Department of Education, 1987)

This article is based on the first year of a longitudinal study intended to shed light on the question of whether or not discussion in the mathematics classroom is an aid to mathematical understanding. Before looking further at the research context in which this project is set, we wish to offer our definitions of the two notions in the title.
