

第三屆國際數學教育會議

編輯部

第三屆國際數學教育會議係由國際數學教育學會召開。參加者有各國數學家及從事實際數學教育工作者近千人，我國參加者除中央研究院推派之劉豐哲與黃武雄兩人外尚有清華大學徐道寧及政治大學薛昭雄兩位教授，此外中央研究院數學研究所編纂古學理夫婦亦以訪歐之便就近參加。

劉豐哲與黃武雄兩人除以“Summary of a report on Recent Activity in High School Mathematics Education in Republic of China”為文發表外，並張貼字報介紹我國在改進高中數學教材上之工作及所遭遇之問題，引起許多與會者之興趣，親切地交換了許多看法和意見。薛昭雄則以我國在改進國小數學教育上之努力為文發表，同樣獲致不少學者專家之注意。

會中，並因與各國與會者經常接觸，答允相互交換各國有關資料，如課程改進經過、現行教材等，於今後工作當大有助益。

劉黃兩人主要參加A部第三組「高中數學教育」及B部第一組「課程的沿革與分析」。而薛則參加A部第一組與B部第二組。一般認為：(1)數學教育旨在訓練學生操作、分析及組織的能力。(2)過份強調抽象數學將導致錯誤。(3)數學尖端研究中所常採用的「不斷嘗試與錯誤」(Try and error)的探討過程應適度揭露於課堂上的學生。

當然，會中意見不一，辯論相當激烈。唯一缺憾是本會議到此屆才擴大舉辦，會員都屬初識，了解未深，討論的問題常不免流於膚泛。

本屆會議係首次擴大舉辦，除大會之外，並依研討性質分成A與B兩部，大會主要為邀請了五位傑出學者給予專題演講。茲將其學者大名及專題報告如下：

- (1) Prof. S. J. Lighthill. (英·劍橋大學)
The Interaction between Mathematics and Society.
- (2) Prof. M. F. Atiyah. (英·牛津大學)
Trends in Pure Mathematics.
- (3) Prof. Peter Hilton. (美·西方儲備大學)
Education in Mathematics and Science Today. The Spread of False Dichotomies.
- (4) Prof. A. Kirsch, (德·Kassel 師範學院)
Aspects of Simplification in Mathematics Education.
- (5) Prof. G. Guilband, (法·巴黎高等師範學院)
Mathematics and Approximations.

A部與B部分別各再細分6小組7與小組，今將其各小組之討論主題抄錄如下：

- A1. Mathematics education at pre-school and primary Level (age 4-12).
- A2. Mathematics education at upper primary and junior high school level (age 10-16).

- A3. Mathematics education at senior high school, [college and university transition (age 15-20)].
- A4. Mathematics education at university level (excluding teacher training).
- A5. Adult and continuing education in mathematics (with reference to correspondence studies and television).
- A6. The training and the professional life of mathematics teachers.

- B1. A critical analysis of Curriculum development in mathematics education.
- B2. Methods and results of evaluation with respect to mathematics teaching.
- B3. Overall goals and objectives for mathematics teaching (why do we teach mathematics?)
- B4. Research related to the mathematics learning process.
- B5. A critical analysis of the use of educational technology in mathematics teaching.
- B6. The interaction between mathematics and other school subjects (including integrated courses).
- B7. The role of algorithms and computers in teaching mathematics at school.