



Goldsmiths
UNIVERSITY
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Adults Learning Maths - A Research Forum

**ADULTS
LEARNING
MATHEMATICS - 4**

Proceedings of ALM-4

the

Fourth International Conference

of

Adults Learning Maths - A Research Forum

held at

University of Limerick, Limerick, Ireland

4 - 6 July 1997

Compiled by

Diana Coben, ALM Secretary

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ISBN 0 902 98632 5

First published in Great Britain in 1998 by Goldsmiths College, University of London, London SE14 6NW, UK, in association with *Adults Learning Maths - A Research Forum* (ALM).

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Printed by Goldsmiths College, University of London, London SE14 6NW, UK.

Additional copies are available, price £10 including postage and packing from:

**Avanti Books
8 Parsons Green
Boulton Road
Stevenage
SG1 4QG
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ABOUT ALM

Adults Learning Maths - A Research Forum (ALM) was formally established at the Inaugural Conference (ALM-1) in July 1994 as an international research forum with the following aim:

to promote the learning of mathematics by adults through an international forum which brings together those engaged and interested in research and developments in the field of adult mathematics teaching and learning.*

**Within ALM we understand the term 'mathematics' to include 'numeracy'.*

ALM is a forum for experienced and first-time researchers to come together and share their ideas and their reflections on the process as well as the outcomes of research into the hitherto neglected area of adults learning mathematics. ALM puts people in touch with each other, providing a framework for collaboration and helping to stimulate and develop research plans. We are especially keen to encourage practitioners to undertake research. We publish a Newsletter and Conference Proceedings in conjunction with Goldsmiths College, University of London. The latest edition of the ALM Newsletter may be found on the internet at:

<<http://www.gold.ac.uk/alm/welcome.html>>

Since 1994, ALM has gone from strength to strength and now has 140 members in 19 countries: Australia, Austria, Belgium, Brazil, Canada, Denmark, Finland, Germany, Ireland, The Netherlands, New Zealand, Slovenia, South Africa, Spain, Sweden, Uganda, U.K., U.S.A., and Zimbabwe.

MEMBERSHIP

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ALM Conference Proceedings are distributed by Avanti Books. Proceedings for ALM-4 and past conference proceedings can be ordered direct from:

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U.K.
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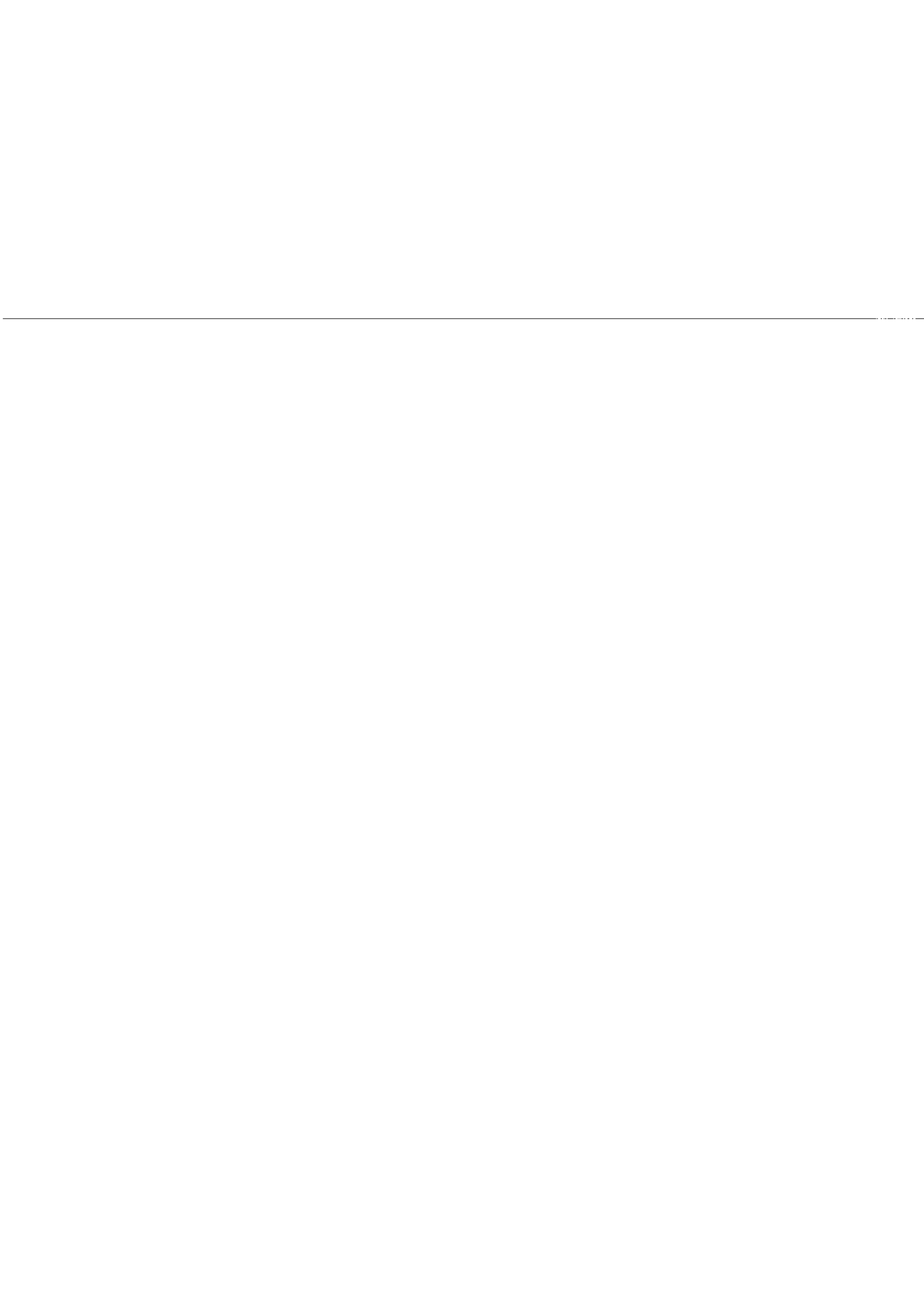
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PREFACE

The papers that follow are the Proceedings of the Fourth International Conference of *Adults Learning Maths - A Research Forum* (ALM) held at the University of Limerick, Ireland, 4-6 July 1997. The emerging field of adults learning mathematics continues to show signs of robust development as evidenced by the conference contributions from members and non-members alike. The truly international nature of ALM is underlined by the attendance of researchers and practitioners from Austria, Brazil, Denmark, Germany, Ireland, the Netherlands, UK, USA. We praise the Steering Group's commitment to the *international* nature of ALM and its issues which is given further concrete expression by siting ALM-4 in Ireland.

This time the conference organisers, working with the benefit of feed back and experience of previous ALM conferences, addressed some concerns regarding organisation and planning. A number of new events/activities were added including two plenary presentations, a poster session, internet session and additional social events. We are happy to say that feedback from delegates confirms our initial positive impressions that these changes were generally well received. The new organisation is reflected in the proceedings. These proceedings group authors' contributions in three sections:

- I Plenary Papers
- II Conference Papers
- III Posters and other activities

We are delighted to be able to continue the practice of presenting abstracts of conference papers in Spanish translation, a feature introduced in the Proceedings of ALM-3.

These Proceedings give a good indication of current issues and research activity in the field of adults learning mathematics around the world. The papers represent several strands of activity in the field viz the importance of mathematics in and for everyday living (Con Power, keynote address); a pragmatic approach to issues which must be resolved under pressures of demanding daily deadlines e.g. provision of materials, interpretation of national guidelines, assessment and tutor training; while others report on planned research; yet others gathered to reflect on and discuss (led by Tine Wedege) the nature of this new field of adults learning mathematics. It is fitting in the year of Paulo Freire's death that a conference like this on adults learning should honour the man, his work and his legacy with a paper aptly titled 'Paulo Freire's Legacy for Adults Learning Mathematics'.

A number of authors experienced last minute difficulties and could not attend the conference. We are pleased to include these papers (Cock; Kaahwa; Ward) in the proceedings since they were part of the original conference programme.

It is difficult to capture the essence of a poster session in a publication such as this but with the help of the presenters we have made an attempt in Section 3. While the number of posters was small, nevertheless they made a big impact on the conference.

Our abiding impression is that people felt the activity was worthwhile and posters should feature in subsequent ALM conferences.

ALM members are making important contributions to the field of adults learning mathematics in other ways through their scholarship. It is very exciting to see members' books promoted at these conferences. Flyers for *Adults Count Too* by Roseanne Benn and *Carefree Calculations for Healthcare Students* by Diana Coben & Elizabeth Atere-Roberts were available at ALM-4. We are delighted to recognise and support this activity by ALM members.

As an organisation, ALM will continue to make a contribution through its members to the field of adults learning mathematics. We believe that our conference proceedings including these, the Conference Proceedings of ALM-4, members books and publications and projects and practice are making an impact in the field. We note with satisfaction that ERIC has asked for permission to include selected papers in their data base and accept the challenge that this implies.

Finally, if you the reader find these papers stimulating, challenging and informative we invite you to go beyond these pages and join in the work of ALM. If you are so moved we may find your paper in Conference Proceedings for ALM-5 to be held in Utrecht, the Netherlands in Summer 1998.

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ACKNOWLEDGEMENTS

We are grateful to all those who joined in discussions and shared their research at ALM-4, the Fourth International Conference of *Adults Learning Mathematics - A Research Forum* (ALM). We are especially grateful to Dr. Con Power, our keynote speaker, for honouring ALM by taking time out from a busy schedule to deliver a most stimulating address.

The ALM-4 Conference was held at the University of Limerick, Ireland from 4-6 July 1997 : our thanks to all those who helped to make the week-end such a lively, productive and enjoyable weekend.

We wish to record our special thanks to the Department of Mathematics and Statistics for hosting the conference and providing administrative support; those other agencies and departments within the university and outside who supported conference activities and events including Vice President, Academic Affairs (UL), National Centre for Quality Management (UL), Information Technology Department (UL), and Tipperary (NR) Vocational Education Committee. Sponsorship in kind and money enabled the organisers to provide extra supports and activities without adding to overall costs.

The conference was conducted in English but we are delighted that these Proceedings include Spanish translations of abstracts, continuing a practice begun last year in ALM-3. This year the Spanish translations are provided by the Department of Languages and Cultural Studies (UL). Please note: the translations are from the original versions of abstracts submitted to the organisers and published with the conference programme. Consequently there may be some differences in wording of titles or abstracts as submitted in final copy for publication.

Finally, we would like to acknowledge with thanks the contributions of Ms. Jackie O'Shaughnessy and Ms Martina O'Halloran who helped us meet our deadlines by coordinating our activities; by contacting authors and doing whatever typing was necessary to prepare for printing.