



From the Chair

ALM enters the year 2000 as a relatively mature international organisation. Increasingly its voice is being heard on behalf of adults learning mathematics through the concerted efforts of the association and its members. It is particularly appropriate as we enter the new millennium that we be prepared as an association, in every way possible, to maintain a strong voice for adults learning mathematics among the din of competing voices. I am confident that as a result of the unanimous decision taken at AGM 1999 to apply for incorporated charity status for ALM, we will be better placed as an organisation to make a bigger impact in adult mathematics education world-wide. I expect to report the completion of this process in the next issue of the newsletter.

As ALM matures the cornerstones of its international activity are showing more clearly. The annual international conference is the association's flagship. This is a major undertaking each year for the trustees and the local organisers and thanks to their combined efforts it has been hugely successful. We look forward to ALM-7 at Tufts University near Boston in the USA next July. This event is jointly sponsored by the National Center for Adult Learning and Literacy, Harvard University Graduate School of Education, Department of Education, Tufts University and the Adult Numeracy Network (US).

ALM publications serve an important function. The conference proceedings are well regarded and now they are indexed by ERIC and ZDM. Under the current editorial team the newsletter is making an impact and is growing in stature. As we look to the future I think we can do more in this area by harnessing the enthusiasm and expertise of members. Should we expand the role of the newsletter? Can we publish monographs on specific topics of interest? Here I am re-stating some member's aspirations, perhaps we could do something positive? I would like to hear from members.

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ALM: the next phase

Diana Coben, Sue Elliott and Dhamma Colwell

When Diana Coben's article 'What Do We Need to Know? Issues in Numeracy Research' was published in 'Adults Learning' in September 1992, she never dreamed that it would lead to the establishment of a thriving international research forum, bringing together researchers and practitioners and helping to put adults learning mathematics on the map. The huge postbag generated by that article convinced her that others felt as she did, that this was an important and neglected area of work and that it was hampered in its development by a lack of relevant research and by a huge gap between research and practice, researchers and practitioners. Together with some like-minded friends and colleagues, we set out on the path which has led first to the establishment of ALM in 1994 and after half a dozen international conferences, newsletters and published conference proceedings, ALM now has 140 members in 19 countries and ALM Agents coordinate members in Argentina, Australia, Brazil, Eire, The Netherlands, New Zealand, UK and USA.

The latest initiative is for ALM to become an international Incorporated Charity: a Company Limited by Guarantee under English and Welsh law, and registered with the Charity Commission for England and Wales. In order to do this, we rescinded our old Constitution at the Annual General Meeting in July 1999 and in its place adopted a Memorandum and Articles of Association, which give us the necessary legal framework. We are now in the process of registering as a Company and as an International Charity.

It was necessary to update the statement of our objects, which now reads: 'The Charity's objects are the advancement of education by the establishment and development of an international research forum in the life-long learning of mathematics and numeracy by adults by:

- 1) encouraging research into adults learning mathematics at all levels and disseminating the results of this research for the public benefit;
- 2) promoting and sharing knowledge, awareness and understanding of adults learning mathematics at all levels, to encourage the development of the teaching of mathematics to adults at all levels, for the public benefit.'

So what will the new structure mean for ALM as we enter the new millenium?

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What do we gain and will we lose anything by becoming a Company? Will being registered under English and Welsh law detract from our international focus? These are some of the questions that have been thrashed out within the ALM Steering Group and at Annual General Meetings. The general view has been that the gains outweigh any losses. In particular, as ALM has grown it has become clear that we need to operate within a clear legal and financial framework.

This will enable us to enter into legal contracts as an organisation, for example with conference venues and publishers, while limiting the financial liability of any Trustee or member to £1 Sterling. (Members will be asked to sign a statement that they will pay this in the event of bankruptcy when they renew their membership.)

The new legal framework will also enable us to receive credit card payments for membership fees, conference bookings and publications, thus circumventing currency exchange costs and hassles. If we want to apply to other bodies for funding for particular projects, they are more likely to look upon us with favour. We should be able to contribute to discussions by organisations such as UNESCO like other NGOs.

Under the new arrangements, what was 'the Steering Group' is now known as 'the Trustees'. Individually and collectively we now have legal responsibilities to run the organisation and spend any money we collect in pursuit of our objects. This will be monitored by the Charity Commission.

In the new governing documents we tried to retain the spirit of ALM as it has developed over the last 5 years as far as we could: the Trustees and Officers will still be elected every year by the members at the Annual General Meeting and will only hold these positions for a limited number of years, to ensure that ALM can continue to grow and develop with new people, new ideas, and new energy. As far as possible, decisions will be made by consensus, both by the Trustees and at the AGMs. But we now have provision for postal votes when we need them, so that Trustees and members all over the world can participate in decision-making.

The question of where ALM should be based exercised us for a long time. As a truly international organisation it seemed a pity to have to plump for a base in any one country. However, even in these times of globalisation, international law has not been developed to enable companies or charities to be registered globally. Everybody's got to be somewhere, as they say, and in ALM's case it was logical to base the organisation in the country where it all started: England.

This does mean that by law, half the Trustees, including the Company Secretary, must be resident in England and Wales and that the Registered Company Office will also have to be in England and Wales. However, we made sure at the Annual General Meeting that the other half of the Trustees were not

from England and Wales. They are residents of Austria, Brazil, Ireland, the Netherlands, and the USA: ALM will continue to be as international as ever.

These are the new Officers and Trustees of ALM:

Chair:

Professor John O'Donoghue
Department of Mathematics and Statistics, University of Limerick, Limerick, Rep.Ireland

Company Secretary:

Dhamma Colwell, 56B Hanley Road, London N4 3DR, UK

Treasurer:

Professor Sylvia Johnson, School of Education, Sheffield Hallam University, 36 Collegiate Crescent, Sheffield, S10 2BP, UK

Membership Secretary:

Sue Elliott, Centre for Maths Education, Sheffield Hallam University, 25 Broomgrove Road, Sheffield, S10 2NA, UK

Trustees:

Pat Drake (Administrative Secretary)
Institute of Education, University of Sussex, Falmer, Brighton, BN1 9RG, UK

Dr Diana Coben
Mieke van Groenestijn (Newsletter)
Eliana Maria Guedes
David Kaye
Dr Juergen Maas
Dr Kathy Safford
Mary Jane Schmitt

We look forward to a bright future for the new ALM! ▲

Have a look at our new ALM Internet site:
<http://www.euronet.nl/~groenest/alm>





Fun with mathematics

Frank Haacke, Regional Education Center, Eindhoven, The Netherlands,

Fun with mathematics is for many people a joke. How can it be that symbols, numbers, formulas and graphs are fun. According to them, math is something for the abstractionists who don't live in the normal world.

For the Regional Education Center, REC, in Eindhoven, The Netherlands, this is a recurrent problem with each new group of students who do a course in the basic education department.

One can divide our student population in three groups. Youngsters who dropped out of school and do a preparation course for vocational education. Dutch adults and adults from abroad who didn't have enough schooling in the past. The objective for all students is to improve their functioning in their professional/educational and/or social life. The society nowadays asks for people who have a high level of key skills, social-communicative and strategic skills. For the REC that is the main reason to integrate the key skills in the basic mathematical education.

Our program, based on independent learning, is organized in such a way that each student can follow his individual route which is composed after an assessment time. During an assessment time of eight weeks, the personal goals for cognitive skills and key skills and the gaps in the necessary knowledge are determined.

The mathematics lessons in the basic education department have three distinct parts. First, the group does an Integrated Mathematical Activity. Second, the students on lower levels do mental arithmetic. The third activity is the individual learning route.

The training of the mathematical and key skills are trained during all three moments. During the Integrated Mathematical Activity the training of key skills like problem solving and social-communicative skills and mathematical skills are trained in the group. A training only succeeds if the subject is realistic and so connected to the life of the students, than it can be fun to do.

Students love to do IMAs, because the question is posed very open and can have more than one answer. Discussion is possible and everyone is encouraged to ask for or give help to each other. The structure is very simple. A problem is posed to the group. The students are told to work with the principle 'Plan-Do-Review' and that each phase has its own type of questions.

The most important part of the IMA is the review. During the review all results are discussed and criticized. The main question is which of the found solutions is best, practically and mathematically. Thus the cognitive level will be enhanced.

The working process and the key skills that are used, are also discussed. The progress students make, are openly talked about.

The role of the teacher isn't instructive, but more supervising. The questions he poses to the students are done to clarify the way of thinking of the students or to get them on the right track. His role is to observe the process and to stimulate the students ,

Another task of the teacher is to create IMAs which belong to the world of the students and have the possibility to increase the mathematical knowledge of the student. Keywords are 'Realistic Mathematics' and 'Structure'. We try to work with the three phases Van Hiele posed: the concrete phase, mental phase and abstract phase.

These demands ask for special knowledge of the social and cultural background of the students. To get this knowledge we use IMAs as a research tool for students and teachers. The students become conscious of the structures in their life. The teachers get the knowledge to make realistic, so better IMAs. The fun part of it is that the students learn a lot about mathematics, the structures in their lives and they discover that mathematics consists of symbols, numbers, formulas and graphs they can use meaningfully in their lives.

Frank Haacke, fphaacke@iae.nl ▲

From the Chair

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A less overt cornerstone of ALM activity, but for many a deeply cherished aspect, is the informal network of practitioners and researchers. We have worked hard at this over the years and we are beginning to use technology more effectively for this purpose. We encourage discussions on our list serve and have started developing an ALM website. These are exciting new developments which deserve our support. In particular we would welcome suggestions for implementation/improvements.

Finally, it is important to acknowledge that individual members through the quality of their own practice, scholarship and research in the area of adults learning mathematics benefit ALM. We take pride in their contributions and achievements. I would like to remind readers to submit proposals for presentations to ALM-7 (details elsewhere in this issue) and to ICME-9, WGA6: Adult and Lifelong Education in Mathematics, Tokyo, 2000 (see Newsletter 7 for details).

I blame the imminent approach of the new millennium for this lapse into reflective mode. Some of you may be similarly afflicted in the weeks ahead but don't despair it will pass!

*Prof John O'Donoghue, Chair, ALM
Dept of Mathematics and Statistics
University of Limerick
Limerick, Ireland.*

Fax: +353 61 334927 email: John.ODonoghue@ul.ie ▲

ALM6: A personal view

David Kaye

It is always exciting to arrive at the ALM annual conference. For me it is a complete break from my usual teaching environment in a further education college in central London. I am looking forward to being immersed in research ideas and innovative practices on how, why, when and where adults learn mathematics. I am looking forward to having lazy attitudes and unimaginative techniques challenged. I am looking forward to meeting again friends who I can only see at ALM.

We gather at Sheffield Hallam University. Shortly after arriving as we mingle and register, there is a growing ripple of excitement as we recognise each other from previous years, re-establish friendships and continue discussions from a year before. I am pleased to re-enter debates about defining the boundaries of numeracy. I am encouraged on learning how research projects are progressing. I am concerned to learn how progress is hindered by financial constraints, organisational timidity and political confusion. What is more disturbing is that as the conference progresses I learn that these obstacles are repeated world-wide.

At ALM6 it takes a while to get the geography right. (I do not mean the geography of Sheffield, South Yorkshire or England, but of the Sheffield Hallam campus.) We all begin with a complex guided route in and out of various buildings until we reach the wonderfully named "Mary Badlands Lecture Theatre", where the plenary sessions take place. Throughout the rest of the conference I explore alternative paths across gardens and around the backs and sometimes through various buildings.

The mixed pattern of plenary lectures, research reports, workshops, topic discussions and poster presentations worked well for me. The varied structures helped maintain my interest. I particularly liked the topic group idea - where a broadly similar group of people return to the same discussion later in the conference. In fact, I would have liked the topic groups to go across three separate sessions.

I always like to feel I can place where I am in context. To get some idea of the city (or country) I am in. At ALM6 I was lucky as I was attending with a colleague who grew up in Sheffield. Taking advantage of her local knowledge I was able to walk the very hilly streets surrounding the campus, to experience the speedy new tram system and best of all, to view the city silhouette at dusk from the surrounding hills.

One important ALM event took place at Sheffield Hallam University - the organisation 'ALM' formally confirmed its intention to become a registered charity and limited company. This formal, legal activity was particularly relevant to me as I was asked one morning, before I even had wet my cornflakes with milk, if I would consider being a "trustee". (This is the

new legal title for a steering group member.) I was actually quite pleased to say 'yes'; and can now reveal that this has led me to become part of a fascinating, virtual, trustees meeting in continual session electronically.

I came away from the ALM conference full of ideas. I am inspired by the work ALM colleagues are pursuing. My teaching began in September, and as I met each group of students I looked for evidence that supports this theory about numeracy in the workplace; or that theory about the empowerment of mathematics. In my first few weeks back at College five to ten different research projects pass across my mind, with neither the time nor the resources to rescue them from the graveyard of good ideas.

I know that somewhere a few good ideas are being pursued. I know that as I re-write a worksheet, or give advice to a colleague, or discuss a problem with a student a little bit of ALM research makes that bit of practice a little better than it would have been, if I had not been to ALM6 at Sheffield. ▲

Electronic Discussion List - learning-maths

The learning-maths mailbase list is a discussion forum based around Adults Learning Maths Research Forum and the Maths Support Association. The purpose of the list is to promote discussion in all aspects of non-traditional mathematics support in further and higher education. The focus is mainly on adults or other students for whom mathematics is an ancillary subject. It aims to combine grass roots relevance with current research.

To join the list send the command: join learning-maths
To: mailbase@mailbase.ac.uk

The list is managed by Poppy Pickard
e-mail p.pickard@unl.ac.uk

Poppy Pickard
e-mail p.pickard@unl.ac.uk
tel 0171-607-2789 x 7006 fax 0171-753-7009

Snippets about
the language of
mathematics

from Dave



Maths
Talk

"One student when interviewed about volume responded:
Interviewer: "Do you know what volume means?"
Child: "Yes"
Interviewer: "Could you explain to me what it means"
Child: "Yes, its what is on the knob on the TV set."

From: Hart, K.M. (ed.), 1981, *Children's Understanding of Mathematics: 11-16*, John Murray, UK



How do you do maths?

Sandra Wilson & Alison Tomlin, London, UK

A student discovered that you can do sums different ways from what you are taught in school. Alison is a researcher and Sandra a student at Bede Education Centre in London. Sandra decided to do some research of her own. She put a light on the sums, and questioned why do we have to do it this way?

We agreed we would talk to students in Bede, even if they were not attending maths. Ask questions! Carry a little notebook around. We could ask them four ordinary sums, and some problems, and ask them, What way would you do the sum? We only had time to do take aways. We would be interested if other students did multiply, divide and adding.

We started with this one: 426-328

Sandra said, 'Oh, that would be a problem seeing it like that,' and set it out with the 328 underneath the 425.

This is what Sandra says to herself as she does it:

8 from 6 I can't do.
 Go to the bank.
 8 from 16, and pay one back to the bottom number.
 I ask myself 3 from 2, I can't do.
 So I go to my bank again.
 I put 3 away from 12 now, 9,
 and pay one back.
 And then the third row I add the 1 to the 3,
 so it's 4 away from 4 is nothing,
 so it's 98.

$$\begin{array}{r} 426 \\ - 328 \\ \hline 098 \end{array}$$

Margaret joined in the discussion. She puts the minus sign on the left hand side. She says:

8 from 16,
 I borrowed a 10.
 Then I cross the 2 out and put a 3.
 I borrow another 10,
 so that's 3 from 12 is 9.
 Cross that 3 out, put a 4,
 and 4 take away 4 is nothing,
 so the answer is 98.

$$\begin{array}{r} 426 \\ - 328 \\ \hline 98 \end{array}$$

Alison does it more like Sandra, though the 'pay back' ones are to the left rather than the right of the number they are added to.

$$\begin{array}{r} 426 \\ - 328 \\ \hline 98 \end{array}$$

Sandra said she thought Antoinette did it like this:

$$\begin{array}{r} 3426 \\ - 328 \\ \hline 98 \end{array}$$

Jenny says

I need to take 9 away from 8 and you can't do it.
 So I look at what I've got here
 and it's 40.
 So I make that into 39,
 and I put 1 there.
 So now I've got 9 from 18
 which is 9.
 6 from 9 is 3,
 and 2 from 3 is 1.

$$\begin{array}{r} 3408 \\ - 269 \\ \hline 139 \end{array}$$

The minus sign

Sandra thinks Ann puts the minus sign on the right hand side, and Sandra puts it on the left. Margaret puts it on the left.

Sandra said when she sees Ann doing take away sums

I'm looking at that line,
 it's foreign,
 it's in the wrong place.

What we learned

We found out the layout of a sum is very important. Because of the layout, there is no way Sandra could grip Antoinette's and Jenny's ways of doing it. Eventually Sandra would have got Margaret's. With Alison's, Sandra would say she forgot to put the zero in the answer.

What we say - the patter - is also important. Sandra says she goes to the bank. She can relate to the sum by thinking the 426 is 426 pounds. You cannot take £8 from £6 so you make the £6 into £16, but you have to pay it back, so the £2 is now £3, and so on.

Alison would have said there were two ways to do take aways shown here - change the top line like Jenny or Antoinette, or change the bottom line like Sandra, Alison or Margaret. What she learned is the students see these as five ways because the layout and the patter are so important.

Sandra got enjoyment learning from other students that there are different ways, and doing the research, and thus became more confident.



News and Events

ICME-9/Tokyo 2000

The 9th International Congress on Mathematical Education (ICME9) will be held in Tokyo/Makuhari, Japan, from July 31 to August 6, 2000.

The conference webpage is: <http://www.ma.kagu.sut.ac.jp/~icme-9/index.html>

Working Group for Action (WGA) 6: Adult and Lifelong Education in Mathematics - Call for proposals

This working group for action (WGA) has been placed on the ICME program following the successful 1996 WG on Adults Returning to Mathematics Education, in recognition of the growing importance of this complex field which spans all educational levels, and is likely to be linked with issues of class, gender and race.

This WGA welcomes the contributions of educators with experience of teaching mathematics to adults in any sector of education, whether on a formal or informal basis. For a working group to function productively, it is important to facilitate genuine and fruitful exchange of opinion and development of ideas. Accordingly, it is intended that much of the business of the working group should be conducted in smaller groups, based around short presentations and discussions, and that the programme will be responsive to the proposals elicited by this call.

We are calling for proposals for activities such as key-note lectures, panel discussions, or short presentations (approx 20 minutes). It will also be possible for participants to present a paper, but without making an oral presentation.

Proposals are invited by 31 January 2000, and we will respond to them by 31 March. The proposal should be in English and should list: (a) the style of presentation activity; (b) the title of the presentation; (c) the name(s), affiliation(s) and address(es) of the presenter(s); and (d) a 400-word (maximum) summary of the presentation.

CHIEF ORGANISER:

Gail FitzSimons
34 The Boulevard, Warrandyte
Victoria 3113, AUSTRALIA
Tel: + 613 9844 2902 email:
gfitsimons@swin.edu.au

ASSOCIATE ORGANISERS:

Diana Coben, University of Nottingham, UK
email: diana.coben@nottingham.ac.uk

John O'Donoghue, University of Limerick, IRELAND
email: john.odonoghue@ul.ie

First Announcement ALM-7 'Adults Learning Mathematics' Conference

6-7-8 July 2000

Seventh International Conference on Adult Learning of Mathematics to be hosted in the US for the first time.

The ALM Conference in the Year 2000 (ALM-7) will be locally hosted by the National Center for Adult Learning and Literacy at the Harvard University Graduate School of Education, in conjunction with the Department of Education at Tufts University, and the NCTM-affiliated Adult Numeracy Network. The meeting site will be on the Tufts campus (near Boston, MA, USA).

The theme of the conference will be "A Conversation between Researchers and Practitioners"

The local organizing team are: Mary Jane Schmitt, Kathy Safford, Analucia Schliemann, and Esther Leonelli. Information about the conference program will be available at the ALM website: <http://www.euronet.nl/~groenest/alm/index.htm> where an initial call for papers will be posted in November.

For more detailed information, please contact:

Mary Jane Schmitt
ALM-7 Local Organizer
NCSALL
101 Nichols House
Harvard University Graduate School of Education
Cambridge, MA 02138 USA
email: Mary_Jane_Schmitt@gse.harvard.edu
tel: +1 - 413 - 967-3503

ANN Annual Meeting

April 15, 2000 In the United States

The Adult Numeracy Network (ANN) Annual Meeting will bring together math teachers in adult basic education, high school equivalency (GED), and developmental college math courses in conjunction with the National Council of Teachers of Mathematics Annual Meeting in April in Chicago, Illinois. The ANN meeting will be a one day workshop on Saturday, April 15, 2000 at Roosevelt University. Our focus this year will be the new GED 2002 test and related topics. For more information, please contact the conference chairperson: Jan Phillips, email: jphillip@harper.cc.il.us or go to the ANN website: <http://www.std.com/anpn/>

Mary Jane Schmitt Email:
Mary_Jane_Schmitt@gse.harvard.edu Harvard University
Graduate School of Education



Learning Mathematics with an Austrian CD ROM “Mathe Tutor Oberstufe 2.0”

Dr. Jürgen Maaß, Universität Linz

Many adults remember their mathematics lessons at school as a bad time in their life. „Why should I learn this?“ is a question posed frequently. Now you can get an answer on CD ROM made by Andreas Stoeckl and Juergen Maasz. They use multimedia to show how and where mathematics is used to understand and solve real world problems. Five examples are presented with video, computer animations, text, formulas, graphics and interactive parts.

The CD ROM has two other chapters. One is a glossar with a short summary of the mathematics that is presented on this CD ROM. It has some interactive parts. For example the variation of graphs of typical functions are shown. If you change a parameter the computer changes the graph simultaneously. The third chapter contains a lot of training tasks about functions, linear and quadratic equations, elementary and analytical geometry, calculus and linear optimization. The feedback for each task is not only „right“ or „wrong“ but a solution and sometimes a hint what else should be learned.

The program is written in German. It needs a PC with Windows 95/98/NT, 16 MB RAM (32 MB is better), graphic solution 800x600, 65000 colors, CD-ROM and soundcard. Mathe Tutor Oberstufe 2.0, ISBN 3-901878-04-1, EVK 49,95 DM

If you have any questions please contact:
A. Univ. Prof. Univ. Doz. Dr. Jürgen Maaß, Universität Linz,
Abt. für Didaktik der Mathematik, Universität Linz,
Altenberger Str. 69, A - 4040 Linz
email: juergen.maasz@jk.uni-linz.ac.at
Tel.: 0043/732/2468/9182 /9189 Sekr. /9188 Fax



More News and Events

Maths Year 2000 in the UK

The year 2000 promises to be a year of fun with math in the UK. An inaugural MathFest is planned for Oxford on January 29th.

Please confirm details from John Bibi at
JohnB@mathsyear2000.org
or tel. (+44)- (0)1904-424242

Conference Meeting for Maths Students in ABE

Tracy, London, UK

Two years ago a group of adult basic education students organised a *Meeting for Maths Students for Beginners* to discuss basic maths education. About forty people came. This is Tracy's account of the conference, taken from a longer article in *Research and Practice in Adult Literacy Bulletin* No. 38, Spring 1999, which also describes the group's workshop at a RaPAL conference. A magazine called *Global Maths* came out of the group's work. You can get the magazine copyright free from Alison Tomlin, 32 Foulser Rd, London SW17 8UD or alison.tomlin@kcl.ac.uk, cost £2.50 sterling plus postage for overseas.

The conference went great. This is the first time something like this has ever taken place. At the beginning we were able to have food and wine which was lovely and helped us to mingle.

Everyone agrees that maths is important, we need it in everyday life from checking our change to paying our bills. We also found that the way of teaching has changed a lot, as well, a good student teacher relationship is essential.

Some people were saying that when they were at school, that if they couldn't do a sum or answer a question properly that they would get the cane, so under all the pressure and embarrassment they had trouble learning.

We also found that fractions and decimals are such a common problem. It's great knowing you're not the only one who can't reduce a fraction off hand. The atmosphere was great; everyone got on great as well. We had a lot in common as well, apart from maths.

When I found out a few tutors were coming, I started to panic, but some listened to us, and heard our ideas and thoughts.

We agreed that both textbook learning and group learning were important. We like learning about who invented maths, where it came from, and how maths has developed over the years. Maths is taught so differently in some countries, which is important for us to know.

People's learning problems were discussed as well, such as dyslexia. Dyslexia is widely recognised now, but not so long ago you were branded a dunce and other things, which made your self-confidence take a turn for the worse.

Bullying was also a large topic. You can get bullied for being either clever or not so clever and this again does not help at all.

We had a list of questions to ask, but with the atmosphere there the questions just seemed to flow, so quickly in fact, I could not write most of them down.



About ALM

Adults Learning Maths - A Research Forum (ALM) is an international research forum bringing together researchers and practitioners in adult mathematics/numeracy teaching and learning in order to promote the learning of mathematics by adults.

About ALM

ALM was formally established at the Inaugural Conference, ALM-1 in July 1994 as an international research forum with the 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 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.

Since 1994, ALM has gone from strength to strength and now has 140 members in 19 countries.

What does ALM offer?

ALM membership brings with it opportunities to:

- contribute to an international forum of researchers and practitioners in the field
- share concerns, insights and research at ALM annual conferences, and to attend at a reduced rate
- receive ALM newsletter (free)
- receive ALM conference proceedings (free of charge to conference delegates). These proceedings constitute the most significant and authoritative collection of papers on adults learning mathematics available today
- network, electronically and otherwise, with practitioners and researchers in the emerging field of adults learning mathematics.

ALM Officers

Chair: Prof. John O'Donoghue, University of Limerick

Secretary: Dhamma Colwell, London

Treasurer: Prof. Sylvia Johnson, Sheffield Hallam University

Membership Secretary: Sue Elliott, Sheffield Hallam University

Join ALM today!

ALM is actively seeking to expand its membership worldwide. Membership is open to all individuals and institutions who subscribe to its aims. For details contact Sue Elliott, Membership Secretary at the Centre for Mathematics Education, Sheffield Hallam University, 25 Broomsgrove Road, Sheffield S10 2NA, UK email: S.Elliott@shu.ac.uk or your regional ALM membership agent:

AUSTRALIA Dr Janet Taylor, OPACS, Uni. of Southern Queensland, Toowoomba, Australia.

Email: taylorja@usq.edu.au

BRAZIL Eliana Maria Guedes, Dept. of Architecture, Mathematics and Computing, UNITAU, University of Taubaté, Sao Paulo, Brazil. Email: emg@aquarius.com.br

DENMARK Tine Wedege, IMFUFA, Roskilde Uni., PO Box 260, 4000 Roskilde, Denmark. Email: tiw@mmf.ruc.dk

NEW ZEALAND Barbara Miller-Reilly, Student Learning Centre, The University of Auckland, Private Bag 92019, Auckland, N.Z. Email: Barbara@math.Auckland.ac.nz

REPUBLIC OF IRELAND Prof. John O'Donoghue, Dept of Maths and Statistics, University of Limerick, Limerick, Ireland. Email: John.ODonoghue@ul.ie

THE NETHERLANDS Mieke van Groenestijn, Hogeschool van Utrecht, PO Box 14007, 3508 SB, Utrecht, The Netherlands. Email: Mieke.v.Groenestijn@feo.hvu.nl

UNITED KINGDOM Sue Elliott, Centre for Mathematics Education, Sheffield Hallam University, 25 Broomsgrove Road, Sheffield S10 2NA, UK email: S.Elliott@shu.ac.uk

USA Dr Katherine Safford, Saint Peter's College, Kennedy Boulevard, Jersey City, NJ 07306, USA.

Email: SAFFORD_K@spvxa.spc.edu

Membership fees

| | |
|-----------------|---------|
| Individual | stg £15 |
| Institution | stg £30 |
| Student/unwaged | stg £3 |

Editorial Committee

Brian Cann University of Maryland University College (UMUC): Maryland in Europe

Mieke van Groenestijn Hogeschool van Utrecht

Dave Tout Language Australia

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Mieke van Groenestijn, Faculty of Ed., Hogeschool van Utrecht, PO Box 14007, 3508 SB, Utrecht, The Netherlands.

Email: Mieke.v.Groenestijn@feo.hvu.nl