Topic Group A

National Constraints on and Direction of Numeracy Education

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Our meeting in Belfast in June 2006 had two parts. In the first part the group decided where to put the focus of the meetings and in the second part the participants shared their experience and descriptions about the situation in their countries. What was the main focus? It was the conditions of the institutional, social and economical frame of our work as practitioners and researchers in the area of Adults Learning Mathematics.

At ALM conferences it is an ongoing theme of unofficial talks at breaks or while walking through the conference buildings: What is happening at home? What has been changed by the government or by those institutions from whom we get money? What are hidden or open rule for example to get funded by EU for a joint research project? Is there any evaluation of the effects of adult education by the government? Do we have fixed jobs or only financing by short time projects? Who is deciding about the direction of work? How the effect or success is measured? Are there any stories about crazy activities by the administration of our institutions at home? There are! A lot of stories!

All this communication is not part of our official conference communication. Maybe something is told as a joke at the beginning of a presentation. "I did not want to present this here but I have to do it to get money for the travelling costs!" "The research I am going to present now was part of a big nonsense project but I do not want to talk about this frame here."

We all had the feeling that it is more and more important for our work to talk about the frame of our working situation in a more official way. The first step to do this was very easy. Very soon we had the impression that the situation in different countries is really very different. So we decided to collect information about the different countries. The inputs given by the participants of topic group A were reported and collected by David. This paper is an informal analysis and summary of the points of convergence and divergence between the national discussions. The appendix contains the actual points made by contributors to the discussion.

Funding

The strongest support for a national numeracy effort appears in the United Kingdom. Since 2000, a series of research projects and reports have advanced the development of a national adult numeracy core curriculum accompanied by teaching and diagnostic test materials. Individuals from Sweden and Denmark spoke of historically strong support for adult numeracy but expressed concerns that there has recently been a shift in funding from adult programs to research centred on children. In the United States, the source of educational research monies has migrated from the National Science Foundation (NSF) to the Department of Education (ED). The funding for the National Center for the Study of Adult Learning and Literacy (NCSALL) ends in early 2007 and the ED-funded *Adult Numeracy Initiative* (*ANI*) is only a one-year project. There is negligible support in Germany and Austria.

Economic Influence

Virtually all participants reported an increasing emphasis on numeracy as an economic concern with research, and funding thereof, focusing on mathematics education for upgrading workplace skills. An Australian colleague spoke of the "vocationalisation" of basic mathematics education accompanied by an overall decrease in the mathematics components of the vocational courses, even those in engineering. A Swedish researcher characterized this as a shift from a personal growth model to one of economic development. In the United States, projects like *Equipped for the Future* that emphasized the importance of numeracy for citizenship and parenting as well as work, are no longer funded by the government. Competition in the global market now has prominence. In Germany, the recent growth of unemployment would likely spark a major economic reconstruction but there are currently no government decrees promoting numeracy programs.

Teacher Training

Teacher training is prominent in the UK projects funded by the National Research and Development Centre for Adult Literacy and Numeracy (NRDC) as well as the development of numeracy specialist qualifications for post-16 teaching. No other country seems to be making similar efforts although a survey of professional development practices and qualifications was a task within the American *ANI*. In fact, Austrian, Danish and Swedish colleagues reported deterioration in teacher quality resulting from funding cuts that drove experienced teachers away or privatization of numeracy instruction to firms with looser teacher criteria and lower salaries. In the Netherlands there are no specific qualifications for teachers of adult education, including numeracy.

Learner Characteristics

Immigration and school-leaving were two issues that participants saw as escalating influences on adult education. A participant from the Netherlands stated that numeracy is now subordinate to the provision of language skills for second language learners (SLL). A US colleague asserted that the highest demand in adult education was language instruction for SLL students. Increased school-leaving qualifications are causing more adolescents in the 16-19 age brackets to dropout of traditional school

instruction and into programs designed for adult students. This is challenging programs designed for older, motivated students from both curriculum and financial perspectives.

Assessment

Assessment appears to still be traditional and competence-based. No one spoke about innovations in assessment that would reflect the changes in content and delivery that are occurring on the elementary and secondary levels in the schools. A colleague from the United States alluded to federal attempts to test tertiary students via a standardized assessment tool but expressed doubt that it would occur given the level of funding available and the resistance within the higher education community.

Conclusions

The intuitive sense that there is a broad range of differences between nations would appear to be true. One path that Topic Group A might pursue is a discussion of recent research reports from the UK and US as applicable, or not, to each member's national situation. As an alternative, perhaps members can identify research project(s) that could be conducted in each country and the results compared. Whatever course we follow, Topic Group A must strive to advance research in adult mathematics education by moving forward, even if the annual effect seems infinitesimal.

Appendix

Reports on National Strategies with particular emphasis on Government interventions:

Australia

- Vocationalisation of basic mathematics
- Vocational courses (including engineering) had maths component reduced
- More generic support teaching in vocational courses – less emphasis on numeracy separately
- Research projects being encouraged on vocational topics.

Austria

- "There is no need"! (official view)
- People are put on courses so they disappear from unemployment statistics
- Increase in private providers being used – brings in competition: now paying 50 – 60 Euro per day for teaching.

Sweden

- Comparatively high level of government supported intervention in adult education
- Good investment in adult numeracy historically but recently complaints about reduction in funding – there has been a shift of funding from adults to children

- Shift from a personal growth model to one of economic development
- There is still good support for informal education
- Affected by trends from EU under "Lifelong Learning"
- More marketing in education
- Teachers in private sector are less well educated.

Denmark

- Similar situation to Sweden
- Reduction in funding over last 6 years but for electoral reasons some increases now put in place, but damage already done, e.g. teachers resigned
- In survey of practice in various teaching situations could not find evidence of 'numeracy' by name but some increase in a focus on numeracy in content
- A growing need for more 16- 19 further education.

Germany

- No government "decrees"
- No public discussion on government programmes
- Some private 'schools' and some folk 'schools'
- Recent growth of unemployment – now over 10%
- Government money going into private training – very traditional style
- Currently a problem of major economic reconstruction
- Evidence of 5-10% low achievers.

Netherlands

- Adult numeracy embedded in system of lifelong learning
- Competence based system of assessment
- Numeracy now hidden – not on list of priorities compared to provision for second language speakers
- Some research results awaited to show level of need for adult numeracy
- No specific qualifications for teachers of adult education – including numeracy
- From EMMA project some research on numeracy needs.

UK (England & Wales)

- Recent developments start around 2000 with Moser report and the launch of the government led Skills for Life Quality Initiative (SFLQI)
- This includes the development and publication of a national adult numeracy core curriculum (Literacy and ESOL produced at the same time) and training provided for current practitioners.
- Funding for production of teaching and diagnostic test materials
- Research funded through the NRDC (National Research and Development Centre for adult literacy and numeracy) and the more recent Maths 4 Life research project
- Development of numeracy specialist qualification to be taken in addition to post-16 teaching qualification
- Lack of funding to release teachers for part-time courses
- Government funding for some adult courses being reduced
- Growing emphasis (government policy) on courses for 16-19 sector linked to employment skills and vocational qualifications
- Current debate is about
- The re-writing of the post-16 teaching qualifications and within that the content of a specific numeracy pedagogy
- The term 'numeracy' and the development of 'functional mathematics' within 'functional skills'.

United States of America

- Changing curriculum and changes in teacher training in all subjects including mathematics
- There are fewer topics with greater depth
- Adult numeracy is on the fringe of literacy in USA
- NCSALL funding is coming to an end
- Government is ending direct national financial support and moving it to State funding
- Oversight of research has been moved to Department of Education which favours large scale surveys and this has taken money from math education projects
- The provision of adult numeracy is State funded, and all are different

- State budgets for adult education cut by 60%
- Evidence of adult numeracy needs ignored
- Assessment of adult numeracy/math very traditional
- The highest demand in adult education is for ESL (English for speakers of other languages)
- New proposal on college graduation – this can affect millions of people
- Possible assessments to be provided nation-wide but with so little funding is not very likely to happen.