Learning from the Past, Planning for the Future: Sketching Out a Research Agenda for Numeracy Education

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Topic Group A met for two sessions at ALM-14 in Limerick. The report of those sessions was inadvertently omitted from the proceedings for that conference. They have been included with the ALM-15 paper in order that a continuous record of the evolution of the research topic group be accurately maintained.

Introduction
The evidence from the reports of attendees at ALM-13 indicate that the work of ALM is far from finished and at each conference there are newcomers to the topic group who are eager to learn more. One aspect of the work of ALM is to give support and encouragement to both practitioners and researchers in adult numeracy and mathematics to overcome the political, organizational and academic systems that obstruct, sideline and deprecate our work. Recognizing the tension between inducting people into the mission of the topic group and moving the discussion forward, the ALM-14 topic group sessions were planned to accomplish both tasks.

Session One—Induction and Introduction
Juergen Maasz opened the session by giving a brief statement of the purpose of the topic group. Kathy Safford then offered a slide show that summarized the work accomplished in earlier years and the challenges suggested by Sylvia Johnson, the opening plenary speaker for ALM-14, a longtime member of both the organization and this particular topic group. Kathy began with a summary of key themes or ideas from the first ten years.

Early in the life of the topic group Roseanne Benn characterized adult mathematics as a “moorland,” a discipline with vague borders. That vagueness is due to a number of factors among these the issues of student age, institutional setting and course content. Even in a specific classroom setting there can be a substantial disparity in the mathematics background and course goals of the attending students. This blurring of borders was re-visited at ALM-9 in Uxbridge. An intricate Venn diagram emerged from a session where discussants set down the many disciplines that contribute to our field besides the obvious ones of mathematics and education: andragogy, sociology, psychology, biology, and philosophy.

The connectivity between numeracy and democracy was a theme introduced in 2001 in Copenhagen. The participants discussed the empowering characteristic of numeracy as it extends beyond the political issues to personal and economic development. One premise that underpins the topic group mirrors the mission of the organization as a whole, that is, the strong, bi-directional link between theory and practice. Finally, research in adult mathematics education can be categorized by application, for example, workplace, family literacy, basic mathematics, or financial literacy.

The two most recent conferences were summarized in more detail. Many of the topic group participants at ALM-12 in Melbourne were attending for their first time. David Kaye led both ALM-12 sessions and introduced the idea of ALM as a community of practice dedicated to the professional development of attendees. In discussing curriculum, he spoke about the need to design curricula that have appreciation for learner knowledge which is informal as well as formal.
Like many countries, Australia is accommodating increased immigrant communities with learners who are speakers of other languages. David stressed the need for adult mathematics educators to be conversant in both pedagogical andragogical learning theories. The sessions closed with a discussion of the developmental issues that confront the adult educator, namely, changes in learner identity and understanding of who they were, are, and may become.

Last year in Belfast, the topic group concentrated on national constraints that were affecting our work and, in particular, the formation of an ALM research agenda that would reflect common points of interest as well as situations unique to a particular nation. There were five major areas of concern. First, because it affects all the others, were cuts or shifts in funding that represented changes in national priorities. Second was a perceived shift towards numeracy as strictly an economic issue tied to workplace performance instead of an empowering instrument addressing the needs of individuals. The growing international shortage of qualified mathematics instructors points to a critical need to attract first-rate teachers and to provide learning opportunities for the current staff. That professional development must also address issues outside of mathematics content. Instructors need to be aware of possible factors: affective, socio/cultural, psychological, or physical. Finally, growing demands for quantitative assessment measures affect curricula and teaching in subtle and pervasive ways. Reform mathematics curricula set great store by problem-solving, cooperative learning, and realistic problem situations that may have ambiguous interpretations and multiple solutions. All of these are difficult to quantify and grade definitively. Teachers, on the other hand, know that the exit test is what matters for both student progress and their own evaluations at times.

The Belfast session concluded with a resolve to define a research agenda that reflects the problems we discussed and to form international research teams to move the field forward. It was recommended that attendees read the research reports that have emanated from the United Kingdom and United States projects on numeracy and to think about their individual role and interests as we frame a strategy for the coming years. That contribution could be:

- Sharing formal qualification frameworks
- Establishing ways to formalize the informal
- Seeking funding to run a global coaching, mentoring, and supervision network
- Facilitate information and knowledge exchange amongst the numeracy workforce in partnership with e-providers
- Establish research programmes focusing on professional development and its impact

The first session of Topic Group A ended with attendees sheepishly acknowledging that they had done no homework over the previous year but vowing to do better before ALM-15.

Session Two—A Plan of Action

Discussion at session two focused on the identification of potential sources of funding for research particularly those with an international scope. Mercedes De Aguero from Mexico described an EU VII Framework Programme (known as MARCO in Spanish) that called for collaboration between research partners within and beyond the EU (http://cordis.europa.eu/fp7/home_en.html); (http://ec.europa.eu/research/iscp/index.cfm). It was her impression that a cluster of researchers within each member country would work on project tasks.
Diana Coben spoke about the ongoing work of the National Research and Development Centre (NRDC) in England. The NRDC has completed several numeracy research projects and produced excellent reports on teacher training and learner characteristics, among others. These can be downloaded from the NRDC website [www.nrdc.org.uk](http://www.nrdc.org.uk) or ordered as hardcopies via the website. She also outlined her work in Scotland for Learning Connections ([http://www.lc.communityiesscotland.gov.uk/](http://www.lc.communityiesscotland.gov.uk/)) and NHS Education Scotland ([http://www.nes.scot.nhs.uk/nursing/patient_safety/](http://www.nes.scot.nhs.uk/nursing/patient_safety/)) reported on at this conference.

Juergen Maasz described an internal EU project upon which he recently worked called EMMA (the European Network for Motivational Mathematics for Adults, [http://www.statvoks.no/emma/](http://www.statvoks.no/emma/)). Juergen shared the fact that a new project that he termed EMMA2 is being planned. He promised to investigate it and report back to the topic group when he discovered the details.

Kathy Safford reported that the United States Department of Education Office of Vocational and Adult Education (OVAE) was in the process of accepting bids for the second stage of the Adult Numeracy Initiative project, Stage 1 of which was completed early in 2007 by American Institutes for Research (AIR) ([http://www.air.org/projects/projects_ehd_adult_ed.aspx](http://www.air.org/projects/projects_ehd_adult_ed.aspx)). Kathy said that the new project would be a domestic one focused on the learner as a worker and professional development for numeracy instructors. If awarded, the Strengthening America’s Competitiveness through Adult Math Instruction project will begin in October, 2007. The initiative tackles both curriculum development and professional development. Kathy promised to keep the topic group informed of the award and its products.

Finally, Valerie Seabright spoke about a project getting under way in Northern Ireland and agreed to keep watch on its development and report to the group. Valerie sent the address of the website for the European Belgium-based organization after the conference. It is French speaking but some of their work is translated into English, [http://www.lire-et-ecrire.be](http://www.lire-et-ecrire.be).

All attendees enthusiastically supported work on building an agenda throughout the year rather than the fits-and-starts method that has characterized our annual discussions followed by inactivity before the next conference. Specific assignments were made. Kees Hoogland offered to arrange for a listserv of topic group attendees and interested parties not in attendance this year. Ruth Moulton volunteered to design a webpage where we could post prose about the various known projects as well as those that might appear in the course of the year. Mercedes, Diana, Juergen, Kathy, and Valerie are responsible for updating the group about the projects mentioned above. In conclusion, Kathy urged everyone to read the reports from NRDC and OVAE to inform themselves of completed research that can serve as a foundation for future projects that we define.