Professional Development in the *Adult Numeracy Initiative:* A Project of the United States of America Department of Education

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In October, 2005, the United States Department of Education (USED) funded the first large-scale federal numeracy project, the Adult Numeracy Initiative (ANI). It was envisioned as the first of a series of numeracy projects that will be based on the findings and needs identified by the ANI. This paper will introduce the overall purposes of the initiative and focus on one of the six tasks, a survey of professional development currently offered across the United States.

The Adult Numeracy Initiative was charged with four basic objectives:

- Define the state of the adult numeracy discipline in the United States

- Identify major issues and topics critical to the development of math skills in adults

- Conduct an environmental scan of existing programs and practice

- Assist in the development of a research agenda in adult numeracy.

A series of six different tasks were defined to accomplish these objectives. These are discussed elsewhere in these proceedings in a paper by Anestine Hector-Mason of the American Institutes of Research, the research organization that was awarded the *ANI* grant. This paper concentrates on one task, the environmental scan of existing numeracy professional development (PD) in the United States.

The ED request for proposal (RFP) defined seven research questions for the initiative to investigate and answer. Three of those questions are directly related to the environmental scan task:

What types of programs have been implemented at the state and local levels through federal funding that incorporate or focus on adult mathematics instruction?

What practices exist in professional development and certification requirements for teachers of adult mathematics education that are worthy of replication?

What types of programs have been implemented at the state and local levels through federal funding that focus on adult mathematics instruction related to adult English language acquisition learners?

Of all the tasks in the initiative this one presented the greatest challenge because of a mismatch between the question being asked, "What programs have been implemented…" and the Education Department request that the project team focus on professional development. Nevertheless, we proceeded on the ED assumption that programs with good PD would contain quality content and materials.

The project team met in late 2005 and developed a set of tasks to be undertaken in order to conduct the environmental scan. These were:

- Develop Criteria for Program Selection

- Identify Potential Programs

- Review Existing Materials

- Develop Guided Questions

- Collect Data From

- Program Directors

- Participants

- Analyze Findings

- Prepare Report.

Develop Criteria for Program Selection

The first task facing the project team was the definition of a "program." Professional development in the United States can be as brief as a half-day lecture by an expert on some topic or as extended as multi-year programs that meet regularly to discuss topics and materials that they have used or will try in their classrooms. After review by a panel of education and numeracy experts, a set of criteria was defined to be used to determine whether a PD effort qualified as a program and would, therefore, be included in the scan. Some criteria were considered essential while others were determined to be desirable but not necessary. The resultant criteria are as follows:

Essential

- Occurs over time, not "one-shot"

- Built upon activities that advance teacher concept and content knowledge

- Reflect authentic materials

- Based on andragogical principles

- Materials conform to state or national (NCTM, ANN, AMATYC) standards

- Participants are from adult basic or secondary education settings

- Program materials are publicly available and accommodate varying backgrounds of participants.

Desirable

- Evidence exists of an evaluation component

- Program explicitly incorporates an affective factor intervention

- Technology plays a role in the PD administration or materials.

Concurrent with the definition of criteria, the project team began to seek out numeracy projects with PD components. Originally the RFP had limited the scan to federally funded projects but it was apparent early on in the initiative that a more inclusive net would have to be cast, so in the end we included any project that had been grant-funded by either private organizations or public agencies. Publically funded grants are listed on the websites of the granting agency. We searched the sites of the Department of Education, the Department of Labor, and the National Science Foundation. Adult education funds in the United States are locally controlled by the states. Therefore, state adult basic education administrators and their professional development staff, where they exist, were contacted and asked to describe any numeracy work being done through their state agency. A request went out on the Adult Numeracy Network (ANN)-sponsored numeracy listserv as well as the National Association of Developmental Educators (NADE) special interest mathematics listserv. Print requests were included in the Mathematical Association of America (MAA) and National Council of Teachers of Mathematics (NCTM) newsletters. Officers of numeracy and developmental organizations were contacted personally. No stone was left unturned.

Review Existing Materials

The project team attempted to collect and review commercially available materials whether or not they were being used currently by numeracy projects. Vendors at the NADE, MAA, and NCTM conferences were approached and asked to send material suitable for adult numeracy instruction or professional development to the project team. Programs identified for inclusion in the environmental scan were asked to send copies of program-specific materials to AIR. A template was developed for recording data about the program and materials used. This template was expanded in the later interview phase in order to capture all the data about a program in one place to facilitate analysis. The template recorded data that identified the program, the source of support,

the instructional setting, the nature of the participants, the mathematical content, the materials used, and the program assessment and findings.

Conduct Interviews

To assure a high degree of uniformity among interviews, an interview protocol was constructed to gather information about each program. Eight areas of inquiry were addressed with specific questions and prompts within each area. Interviewers were research assistants at AIR as well as project staff. Training in using the protocol and reactions to possible interviewee responses took place before the interviews began. The interviews have actually only begun as we meet here at ALM so I cannot report any findings, even initial ones. Interviewees are notified of the impending interview in advance of the telephone call. In one case, that of the New York City Math Exchange Group (NYC MEG), the interview was conducted in person with six people who are members or leaders of the program.

Areas addressed by the interview protocol are:

- Background Information: Verify initiative name, director/designer and contact information

- Costs

- Participants: Recruitment, Characteristics, Incentives

- Type and Duration of Professional Development

- Instructional Content and Materials

- Teaching and Learning Strategies

- Program Assessments and Findings

- Summary and Reflection.

Analysis and Report

Once the individual project templates have been completed, the information will be reviewed by the interviewees for accuracy. The data will be analyzed using the qualitative method of *grounded (emergent) theory*. This will allow the project team to identify any patterns that exist and compare projects, ranking each against the others according to the emergent themes. The findings will be weighed against the counsel provided by the literature review, an early task of the *Adult Numeracy Initiative* (Condelli, *et al.,* 2006). It is expected that models of "good practice" will emerge from the process, and a future research agenda for Education Department numeracy projects

can be confidently suggested by the *ANI* project team. A report on *ANI* will be presented next year at ALM-14 in Limerick. As they say on television, "Stay tuned for further developments."

References

Condelli, L, Safford-Ramus, K., Sherman, R., Coben, D., Gal, I., and Hector-Mason, A.(2006). *A Review of the Literature in Adult Numeracy: Research and Conceptual Issues,* Washington, DC: American Institutes for Research.