

NEEDED: TEACHER-LEADERS FOR ELEMENTARY MATHEMATICS

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Mathematics teacher-leaders can be the key to successful implementation of the NCTM Standards in the elementary schools. The need for a teacher-leader in each elementary building is recognized by recommendations of professional groups, individuals and the recently completed Kramer Project. (NCTM; Romberg, 1986; *Everybody Counts*; Friesen, 1990; Wesson, 1990)

After observing the active and effective role teacher-leaders played in the Kramer Project, a successful implementation of a primary mathematics program which went far toward meeting the demands of the Standards, the writers decided to try to characterize the contributions and activities of these leaders. Demographic methods adapted to this problem resulted in both structured and open-ended interviews with the teachers and teacher-leaders involved in the project. All interviews were conducted after the study was completed and the program was moving forward on its own.

Compilation of teachers' answers to interview questions and their comments during the open-ended portion of the interviews led to the following generalized set of characteristics leading to success for a elementary teacher-leader.

- The first and most nearly unanimous response was that an effective elementary mathematics teacher-leader must be secure in dealing with content mathematics and be knowledgeable about materials and instructional processes for the elementary grades.
- Interviewees felt strongly that the teacher-leader must be a full-time, effective classroom teacher at the grade levels concerned. They also felt that the leader should be assigned to the same building.
- Participating teachers saw the effective teacher-leader as an active collector of materials and activities, a person willing to share these ideas with colleagues. A frequent parallel comment was that the teacher-leader should be willing to accept and use ideas for activities developed by other teachers.

- An important characteristic of such a leader is the ability to listen, to listen to a teacher's ideas and especially to listen to a problem that is difficult to verbalize.
- An effective teacher-leader must be knowledgeable about outside professional resources. These resources include such things as consultants, professional meetings, publications, materials, and catalogues. Thus, the teacher-leader brings the outside professional world into the building.
- Equal in importance to the preceding characteristic is the ability to encourage active teacher participation in professional activities, local, regional and national.
- The teacher-leader must be skilled in conducting inservice activities for peers and for other adult groups. Closely related is the need for this leader to take responsibility for communication with administrations, parents and other community groups.
- As a further characteristic, it should be recognized that the teacher-leader may be most effective in informal unscheduled one-to-one contacts.

Although these characteristics may not be exhaustive, they are ambitious and may seem intimidating to the prospective holder of the teacher-leader position, but all are seen as important by a significant portion of the teachers participating in the interviews. Teachers with an interest in elementary mathematics should recognize the importance of the teacher-leader and seek the role. Lack of any one of the characteristics listed above can be overcome by a commitment to work toward acquisition of that characteristic while other significant contributions continue.

Building level and district administrators must recognize the benefits that can accrue from the presence of a teacher-leader as improvements in the elementary mathematics program are sought. Interviews with teacher-leaders as well as teachers produced a number of simple ways in which administrators can enhance the effectiveness of the person willing to accept the leadership role. A clear designation of who is to fill the role needs to be made. This designation should include a job description which makes it clear to all concerned that the leader is in a supporting role. This designation should be further strengthened, perhaps gradually, by

tangible support such as small amounts of released time, control of materials budget, discretionary travel funds, and responsibility for scheduling professional activities related to mathematics. Further enhancements can include extra travel allocations for the teacher-leaders, support for further training through conferences, courses and workshops, and support for establishing and maintaining a professional library. Even if these benefits are necessarily small, their existence conveys a sincere administrative commitment to improving the elementary mathematics program.

Not all schools or all districts can immediately have teacher-leaders or resources as described here, but all schools and all districts must begin and work toward filling this role, toward meeting this need. Existence of active elementary mathematics teacher-leaders is essential to the successful and timely implementation of programs such as those envisioned by the Standards.

Bibliography

- Abell, Sandra K. "A Case for the Elementary Science Specialist." *School Science and Mathematics*, 90 (April, 1990).
- Friesen, Elvin. "Hamilton County's Shared Inservice Programs," A presentation at the Ohio Mathematics Education Leadership Conference. Zanesville, OH, March 22, 1990.
- Mathematical Sciences Education Board, *Everybody Counts. A Report to the Nation on the Future of Mathematics Education*. Washington, D.C.: National Academy Press, 1989.
- National Council of Teachers of Mathematics. *Curriculum and Evaluation Standards for School Mathematics*. Reston, VA: NCTM, 1989.
- Romberg, Thomas A. Chairman's Report of a Conference, *School Mathematics: Options For The 1990's*. Washington, D.C.: U.S. Department of Education (and other groups) June, 1984.
- Weirsmas, William. *Research Methods in Education—An Introduction, 4th edition*. Boston, MA: Allyn and Bacon, Inc., 1986.
- Wesson, James B. "The Kramer Story," Unpublished report of an implementation study conducted at Kramer Elementary School in Oxford, OH, March, 1990.
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