# Collaborative Team Writing of Assessment Tasks as Professional Development

It was evident that teachers developed increased self-efficacy and confidence in their teaching and assessment skills. They also stated that they now believed they could successfully add new teaching and assessment techniques to their repertoire.

*Feedback:* Participants consistently expressed their appreciation of the advice and constructive criticism they received from colleagues at the meetings. They felt that receiving immediate feedback through the meetings not only helped future planning, but further added to the belief that colleagues were interested in one another's work. They stated that they would have been disappointed if the sharing of experiences had stopped.

Participants clearly expressed that the bottom line for them was whether their practice made a difference to student learning in their classrooms. The time element turned out to be important - it was optimal for teacher's to be able to perceive an improvement in student outcomes during classroom activities, be they especially highlighted for assessment or otherwise. Instances where student interaction during an assessment activity was immediately perceived as positive were particularly motivating for the teachers. The teachers perceived interactions as positive if they felt there was an improvement on the kind of student interaction formerly elicited in such situations.

The following comments from participants illustrate the importance they gave to feedback:

- provided an opportunity to obtain feedback advice on assessment tasks
- re-affirmed my beliefs about teaching learning and assessing
- my ideal was always that teaching and learning tasks could be used for assessment, but that "nervousness" of "that it may not be enough" has been allayed more
- I'm more selective - willing to discard activities which are limiting in results
- feedback made me think more carefully about what I am assessing and adjust tasks to suit
- has given me more ideas on how to assess and set tasks that are relevant

*Reflection:* Participants were clearly changed by the collaborative writing process. The aspect of the collaborative writing program that seemed to produce these changes was the reflections that were an essential component of the group activities. The structure of the program was such that participants were given opportunities to share with their colleagues the tasks they had written and their students' responses to these tasks. This sharing encouraged reflection, both on the assessment practices and on the collaborative writing process itself. This had two outcomes. The reflection on assessment provided the participants with a depth of understanding that they would not have otherwise gained and improved the quality of the written products. The reflection on the process highlighted the positive role of the other teachers and the success of the program. This in turn improved the morale of participants and promoted confidence and self esteem. The following comments from participants lend support for this:

- I am aware of not limiting the students to what they can demonstrate they are capable of doing (i.e. certain forms of writing assessment as those which appear in the sourcebook)
- while trying to ensure the basic facts and concepts are thoroughly covered, I am introducing more varied and challenging task - not all for assessment
- I have gained more of an insight into assessment and how it affects me and my teaching style

- I'm more aware of varying abilities
- I now have the children write more of what they verbalise during maths lessons because I see this skill as being vital part of documentation and it must be taught so that children gain experience in it
- I am aware of children's difficulties when writing response - this is a whole new ballgame for them
- I use more ways in which students are given opportunities to verbalise and explain the outcomes of math situations.

*Confidence:* The project also appeared to provide participants with a sense of reassurance that their own personal feelings of insecurity in implementing SPS were common amongst fellow teachers, as the following comments show:

- Realisation that you are not alone (mathematics wise)
- the ultimate ego boost of seeing that what you're doing is OK
- appreciating that the same difficulties are faced by others
- to discover that people have same concerns as I have
- to know that other teachers were experiencing the same difficulties as oneself is encouraging and supportive
- exchanging fears and frustrations [the meetings] have increased my awareness of fellow teachers problems in applying SPS to their teaching

*Knowledge and understanding of SPS:* Participants commented that they found this professional development exercise had had a positive influence on their attitude to SPS, as supported by the following comments:

- definintely clarified the link between the syllabus and SPS outcomes
- demonstrated a more effective method of data collection
- I have oscillated from negative to positive to negative to positive to reserved positive as I have had more involvement with SPS
- probably my attitude is more positive than previously
- because I am much more familiar with SPS, I no longer find it threatening
- reaffirmed (rather than changed) I'm on the right track. [Meetings have] certainly made [SPS] less ominous, not to be dreaded; boosted confidence, even raised enthusiasm.
- I understand the positive aspect of SPS, ie children's control over assessment, children's responsibilties for assessment; assessment of what children can do.
- a broader understanding of SPS levels and strands, and therefore confidence in assigning levels to students work.

## Discussion and Conclusions

The findings above support the conclusion that participation in the collaborative writing activity was an effective means of changing teacher practice and increasing confidence. In particular, participation in collaborative writing professional development appears to be a viable means for effecting change in practice while, at the same time, nurturing teacher confidence. The reasons for this are that all seven factors from the research of Clandenin and Connelly (1991 and McLaughlin (1990) that promote effective professional development are satisfied by collaborative writing. Especially prominent were the following: collegial support in the form of regular meetings and discussions is an important factor to the change process; experience and reflection are necessary for effective change and input is needed from sources outside the schools to facilitate this reflection and to clarify and introduce different ways of considering situations; teachers' perceptions of successful and improved student learning is crucial to the success of the change process; and teachers need experience with new strategies before they will change their attitudes and beliefs to them (awareness and knowledge of new strategies is not sufficient for their adoption to the classroom).

Participants were clearly influenced by whether their practice made a difference to student learning in their classrooms. The time element turned out to be important - it was optimal for teacher's to be able to perceive an improvement in student outcomes during classroom activities, be they especially highlighted for assessment or otherwise. Especially motivating were instances of students interacting directly with the teacher in the context of activity based assessment tasks in ways perceived by the teacher to be an improvement on the kind of interaction formerly elicited in such situations.

Therefore, the results support the following three conclusions:

(1) the collegial support of the collaborative writing process resulted in increased confidence for the participants with respect to teaching and assessment;
(2) the collegial feedback from the classroom trials and discussion with other teachers improved the teaching and assessment ideas of the participants; and
(3) the reflection encouraged by the process on classroom practice improved the teaching and assessment practices of the participants and improved students' learning outcomes.

Factors that were strongly affected throughout the program were the attitude and beliefs of the participants, particularly confidence and self-esteem. Therefore, the program supported the findings of Clarke and Hollingsworth (1994) that changes in teaching practice is preceded by changes in attitudes and beliefs. As well, the program supported the findings of Berliner (1986) that beliefs and attitudes change when student outcomes are seen to improve, and the findings of Guskey and Sparks (1991) that trialing and sharing are crucial for effective inservice.

## References

Australian Education Council (1990). *A national statement on mathematics for Australian schools*. Carlton, Victoria: Curriculum Corporation.

Australian Education Council (1994). *Mathematics - A curriculum profile for Australian Schools. Carlton, Victoria: Curriculum Corporation.*

Berliner, D. (1986). In pursuit of the expert pedagogue. *Educational Researcher, 15*, 5-13.

Blau, S. (1988). Teacher development and the revolution in teaching. *Journal of English, 77*(4), 30-33.

Bleicher, R., Cooper, T.J., Dole, Nisbet, S., & Warren, E. (1996, Apr.). *A grassroots model for professional development: Teachers inservicing teachers in an Australian context.* Paper presented at Annual Meeting of the Americal Educational Research Association, New York.

Clarke, D., & Hollingsworth, H. (1994). Reconceptualising teacher change. In G. Bell, B. Wright, N. Leeson & J. Geeke (Eds.), *Challenges in mathematics education: constraints on construction* (pp. 153-163). Lismore, New South Wales: Mathematics Education Research Group in Australasia.

Clarke, D., & Peter, A. (1993). Modelling teacher change. In B. Atweh, C. Kanes, M. Carss & G. Booker (Eds.), *Contexts in mathematics education* (pp. 167-175). Brisbane, Queensland: Mathematics Education Research Group in Australasia.

Clarke, D., Carlin, P., & Peter, A. (1992). Professional development and the secondary mathematics teacher: A case study. In B. Southwell, B. Perry & K. Owens (Eds.), *Space - the first and final frontier* (pp. 197-208). University of Western Sydney: : Mathematics Education Research Group in Australasia.

Dole, S. (1996, July). *Searching for classroom RATs (rich assessment tasks).* Paper presented at the 19th Annual Meeting of the Mathematics Education Research Group in Australasia (MERGA), Melbourne, Australia.

Clandinin, D.J. & Connelly, F.M. (1991). Teacher as curriculum maker. In P. Jackson (Ed.). *Handbook of research on curriculum..* New York: American Educational Research Association.

De Lange, J. (1992). Critical fators for real changes in mathematics learning. In, G. Leder (Ed.), *Assessment and learning of mathematics.* Victoria: ACER.

Department of Education, Queensland. (1987). *Years 1-10 Mathematics Syllabus.* Brisbane, Queensland: GoPrint.

Grimison, L. (1993). Attitudes of some NSW secondary mathematics teachers to alternative methods of assessment in mathematics. In B. Atweh, C. Kanes, M. Carss & G. Booker (Ed.), *Contexts in mathematics education* (pp. 321-326), Brisbane, Queensland: the Mathematics Education Research Group in Australasia.

Guba, E., & Lincoln, Y. (1989). *Fourth generation evaluation.* Beverly Hills, CA: Sage.

Guskey, T. (1985). Staff development and teacher change. *Educational leadership, 42*(7), 57-60.

Guskey, T. & Sparks, D. (1991). What to consider when evaluating staff development. *Educational Leadership, 49*(3), 73-76.

McLaughlin, M. (1990). The Rand change agent study revisited: Teachers' perceptions of and attitudes to change. In F. Furinghetti (Ed.), *Proceedings of the fifteenth Conference of the International Group for the Psychology of Mathematics Education (PME) (3rd ed).* Assisi, Italy: International Group for the Psychology of Mathematics Education.

Mousley, J.A. (1991). Reconstruction of mathematics education: Teachers' perceptions of and attitudes to change. In F. Furinghetti (Ed.), *Proceedings of the fifteenth Conference of the International Group for the Psychology of Mathematics Education (PME)* (3rd ed). Assisi, Italy: International Group for the Psychology of Mathematics Education.

Santa Barbara Classroom Discourse Group. (1992a). Constructing literacy in classrooms: Literate action as social accomplishment. In H. Marshall (Ed.), *Redefining learning: Roots of eductional restructuring.* Norwood, NJ: Ablex.

Shulman, L.S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*(2), 4-14.

Smylie,M. (1988). The enhancement function of staff development: Organizational and psychological antecedents to individual teacher change. *American Educational Research Journal, 25*(1), 1-30.

Spradley, (1980). *Paricipant Observation.* New York: Holt, Rinehart & Winston.