

# ISSUES OF PERCEIVING EQUALITY IN A CO-LEARNING PARTNERSHIP IN PAKISTANI SCHOOLS

RAZIA FAKIR MOHAMMAD

This article is premised on the idea of shared ownership between mathematics teachers and mathematics teacher-educators in order to support and examine new ways of teaching mathematics for them, resulting from the learning in a teacher education course. I discuss issues related to the establishment of a co-learning partnership, resulting from my participation as a mathematics teacher-educator in collaborative work with mathematics teachers. The theoretical perspective underlying the collaborative work was driven by the notion of *co-learning agreement* (Wagner, 1997; Jaworski, 2002). I performed two roles:

- the role of teacher-educator supporting teachers who were trying out their new aims of teaching in the classroom
- the role of researcher, collecting data during the teachers' engagement in their learning.

I was also engaged in self-inquiry into my role as a teacher-educator by reflecting on the processes and issues of teachers' learning as well as my participation in the two roles. The analysis of my participation in our collaborative partnership reveals that, although I tried not to dominate, I recognized that my own ethical and theoretical perspectives of being a teacher-educator in the Pakistani context made me react in ways that could be regarded as directing the teachers' thinking and behaviour. This issue became one of the major tensions in my study. I was not aware of it until I experienced the reality of the teachers' practices.

## Theoretical understanding of 'co-learning agreement'

Wagner introduces the term of *co-learning agreement* in research relationships between the participants in research. He discusses three modes of co-operation in educational research namely those of *data extraction agreement*, *clinical partnership* and *co-learning agreement*. The differences between these three forms of research relationship determine social arrangement, expectations of the participants, and implications of the research project. In a co-learning agreement, the research is seen as a more interactive social approach for the educational reform process, where

researchers and practitioners are both participants in processes of education and systems of schooling. Both are engaged in action and reflection. By working together, each might learn something more about the world of the other. Of equal importance, however, each may learn something more about his or her world and its connection to institutions for schooling (Wagner, 1997, p. 16).

Jaworski (2002) extends the co-learning idea to the relationship between teachers and teacher-educators, as well as between teachers and researchers. She states, 'a co-learning partnership implies an explicit arrangement agreed between participants' (p. 42). According to Jaworski, the consequences of such a negotiation would be a growth of knowledge for both the participants (*e.g.*, teacher and researcher, or teacher and teacher-educator) with recognition and resolution of everyday dilemmas of teaching, and teachers' learning. Examining the interaction between researchers and teachers under the co-learning agreement, she recognizes the value of discussion among the participants as a mechanism to deepen the understanding of the teaching practice as well as the researchers' learning about teaching:

Interaction between teacher and researcher encouraged the articulation and growth of knowledge on the part of the teacher, and the teacher's communication allowed the researcher to contribute to a wider knowledge base in teaching. (Jaworski, 2002, p. 43)

Jaworski adds, 'Teachers' engagement in inquiry and reflection at a pedagogical level is central to the development of a co-learning partnership' (p. 50).

It is important to recognise that the quality of relationship is central to achieving a collaborative culture of learning. Also, that a commitment to learning together fosters shared understanding through mutual dialogue, leading the participants to achieve ownership and confidence in knowledge creation.

Fullan (1999), Raymond *et al.* (1993), and Hargreaves (1992) have also suggested that collegiality aids shared understanding, shared responsibility in taking risks, shared goals through meetings and projects, or other means that are congruent with teachers' needs in attempting change in the classroom. For example, Fullan (1999) suggests that

[t]here is a great deal of team building, diverse group working together, and intense communication and information sharing (pp. 36-37)'.

To support the notion of collegiality, Rogoff (2001), in her study of collaborative partnership between parents and teachers, states that learning through collaboration requires respect for participants' ideas, views and opinions. The differences between participants' views are resources to others and enhance opportunities for learning. Conflicts and differences of opinion should be dealt with by conversation and problem-solving in trusting non-judgmental environments.

This literature suggests that teachers are neither immobilised nor passive but are self-conscious owners of their learning and have the capacity to reflect. A culture of collaboration,

interesting as part of the clarification of both the notions of foreground and background.

[2] Brentano's main work *Psychologie vom empirischen Standpunkte* is from 1874. An English translation is found in Brentano (1995). Searle (1983) analyses conceptual connections between action and intentionality.

[3] With reference to classic philosophic interpretations, meaning is assumed to be a referential property. The meaning of a concept is the set of objects or entities to which the concept refers. According to this interpretation, when we in mathematics education are able to expand the references of notions such as function, exponential function and metric space we provide extra meaning of such concepts.

## References

- Alrø, H. and Skovsmose, O. (2002) *Dialogue and learning in mathematics education: intention, reflection, critique*, Dordrecht, The Netherlands, Kluwer Academic Publishers.
- D'Ambrosio, U. (2001) *Etnomatemática: elo entre as tradições e a modernidade*, Belo Horizonte, Brazil, Autêntica.
- Bishop, A. (1990) 'Western mathematics: the secret weapon of cultural imperialism', *Race and class* 32(2), 51-65.
- Bopape, M. (2002) *Mathematics school based in-service training (SBINSET): a study of factors contributing towards success or failure of SBINSET in the South African school context*, unpublished doctoral dissertation (contact e-address: Bopapem@nu.ac.za), Aalborg, Denmark, Department of Education and Learning, Aalborg University.
- Bourdieu, P. (1991) *Language and symbolic power* (edited and introduced by Thompson, J.), Cambridge, UK, Polity Press.
- Bourdieu, P. (1996) *The state nobility: elite schools in the field of power*, Cambridge, UK, Polity Press.
- Brentano, F. (1995, second edition) *Psychology from an empirical standpoint*, London, UK, Routledge.
- Castells, M. (1998) *The information age: economy, society and culture. Volume III, End of millennium*, Oxford, UK, Blackwell.
- Civil, M. and Planas, N. (2004) 'Participation in the mathematics classroom: does every student have a voice?', *For the Learning of Mathematics* 24(1), 7-12.
- Ginsburg, H. (1997) 'The myth of the deprived child: new thoughts on poor children', in Powell, A. and Frankenstein, M. (eds), *Ethnomathematics: challenging eurocentrism in mathematics education*, Albany, NY, State University of New York Press, pp 129-154.
- Gorgorió, N. and Planas, N. (2000) 'Researching multicultural classes: a collaborative approach', in Matos, J. and Santos, M. (eds), *Proceedings*

- of the 2nd International Mathematics Education and Society Conference, Lisbon, Portugal, Centro de Investigação em Educação da Faculdade de Ciências, Universidade de Lisboa*, pp. 265-274.
- Gorgorió, N. and Planas, N. (2001) 'Teaching mathematics in multilingual classrooms', *Educational Studies in Mathematics* 47(1), 7-33.
- Khuzwayo, H. (1997) *[A report on] Mathematics Education in South Africa: a historical perspective from 1948-1994*, (contact e-address: hbkhuzyw@pan.uzulu.ac.za), Copenhagen, Denmark, Department of Mathematics, Physics, Chemistry and Informatics, Royal Danish School of Educational Studies.
- Khuzwayo, H. (2000) *Selected views and critical perspectives: an account of mathematics education in South Africa from 1948 to 1994*, unpublished doctoral dissertation (contact e-address: hbkhuzyw@pan.uzulu.ac.za), Aalborg, Denmark, Aalborg University.
- Lins, R. (2001) 'The production of meaning for algebra: a perspective based on a theoretical model of semantic fields', in Sutherland, R., Rojano, T., Bell, A. and Lins, R. (eds), *Perspectives on school algebra*, Dordrecht, The Netherlands, Kluwer Academic Publishers, pp. 37-60.
- Penteado, M. (2001) 'Computer-based learning environments: risks and uncertainties for teachers', *Ways of Knowing*, 1(2), 23-35.
- Penteado, M. and Skovsmose, O. (2002) *Risks include possibilities*, a report, Copenhagen, Roskilde and Aalborg, Denmark, Centre for Research in Learning Mathematics, Danish University of Education, Roskilde University and Aalborg University.
- Planas, N. and Civil, M. (2002) 'Understanding interruptions in the mathematics classroom: implications for equity', *Mathematics Education Research Journal* 14(3), 169-189.
- Searle, J. (1983) *Intentionality: an essay in the philosophy of mind*, Cambridge, UK, Cambridge University Press.
- Skovsmose, O. (1994) *Towards a philosophy of critical mathematics education*, Dordrecht, The Netherlands, Kluwer Academic Publishers.
- Valero, P. (2002) *Reform, democracy, and mathematics education: towards a socio-political frame for understanding change in the organization of secondary school mathematics*, unpublished doctoral dissertation (contact e-address: paola@learning.aau.dk), Copenhagen, Denmark, Department of Curriculum Research, The Danish University of Education.
- Volmink, J. (1994) 'Mathematics by all', in Lerman, S. (ed.), *Cultural perspectives on the mathematics classroom*, Dordrecht, The Netherlands, Kluwer Academic Publishers, pp. 51-68.
- Wedegé, T. (1999) 'To know - or not to know - mathematics, that is a question of context', *Educational Studies in Mathematics* 39(1-3), 205-227.
- Wittgenstein, L. (1953) *Philosophical investigations*, Oxford, UK, Blackwell.

---

*These notes and references follow on from page 15 of the article "Issues of perceiving equality in a co-learning partnership in Pakistani schools" that starts on the opposite page (ed.)*

## Notes

- [1] The textbook suggests "percentages are special fractions".
- [2] Zakat is one of the fundamentals of Islam according to which Muslims are obliged to share 2.5% of annual savings with the poor.

## References

- Frost, D. and Durrant, J. (2002) 'Teachers as leaders: exploring the impact of teacher-led development', *School leadership and management* 22(2), 143-161.
- Fullan, M. (1999) *Change forces: the sequel*, London, UK, The Falmer Press.
- Hargreaves, A. (1992) 'Cultures of teaching: a focus for change', in Hargreaves, A. and Fullan, M. (eds), *Understanding teacher development*, Columbia, OH, Teacher College Press.
- Jaworski, B. (2002) 'The student-teacher-educator-researcher in the mathematics classroom: co-learning partnerships in mathematics teaching

- and teaching development', in Bergsten, C., Daland, G. and Grevholm, B. (eds), *Research and action in the mathematics classroom, Proceedings of MADIF2, the second Swedish Mathematics Education Research Seminar, 2000* Linköping, Swedish Society for Research in Mathematics Education, pp. 37-54.
- Ma, L. (1999) *Knowing and teaching elementary mathematics*, London, UK, Lawrence Erlbaum Associates.
- Macmurray, J. (1961) *Persons in relation*, London, UK, Faber and Faber Ltd.
- Mohammad, F. R. (2002) *From theory to practice: an understanding of the implementation of in-service mathematics teachers' learning from university into classroom practice*, unpublished doctoral dissertation, Oxford, UK, University of Oxford.
- Mohammad, F. R. (forthcoming) 'Problems of teachers' re-entry in schools after in-service education', in Farah, I. and Jaworski, B. (eds), *Partnerships in educational development*, Karachi, Pakistan, Oxford University Press.
- Rogoff, B. (2001) *Learning together: children and adults in a school community*, Oxford, UK, Oxford University Press.
- Wagner, J. (1997) 'The unavoidable intervention of educational research: a framework for reconsidering researcher-practitioner cooperation', *Educational Researcher* 26(7), 13-22.