

EDITORIAL

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If you were to compile a set of key research problems in mathematics education, what would you include? This is, in essence, the question David Wheeler posed in 1983 to around 60 of his colleagues. His precise formulation, sent in a letter, was to ask for “a number of specific problems whose solution would be likely to advance substantially our knowledge about mathematics education” (FLM 4(1), p. 40). He received a good number of responses, many of which appear, unedited, in the three issues of Volume 4 of this journal. Some presented lists of research problems, some considered what a “problem” in mathematics education might be (or, indeed, a “solution”), and one correspondent questioned whether such problems could even be formulated.

Over the intervening period, almost 30 years, the domain of research known as “mathematics education” has changed considerably. There are more researchers, more publications and more topics than ever before. Do we know more as a result? Or are we simply making more noise? Have we dealt to our satisfaction with the key challenges and problems of 1983, or have the problems themselves changed? Is it more sobering to feel that what seemed like urgent problems con-

cerning, for example, the use of “microcomputers” appear now to be redundant . . . or are more urgent than ever?

Wheeler wrote at the time, “One of the outcomes of the exercise may be to show how we perceive the extent of our field.” It is interesting and instructive to review them now and to reflect on “the extent of our field” in 2011 in comparison with the early 1980s. Which problems have been satisfactorily addressed? Which remain relevant? Which seem quaintly of-their-time? What new problems have arisen? And how has the way we frame such problems changed?

I have included, here and there in this issue, brief excerpts from some of the responses that he received (largely, it should be noted, without the authors’ explanations of their ideas). I may include more in future. The original responses can be found in Volume 4, available in JSTOR if you have suitable access, as well as at <http://film.educ.ualberta.ca>. Readers are invited to submit comments on the original research problems, to propose new ones, or to reflect on any other aspect of what I have raised. As Wheeler wrote at the time, anyone can join in.

What are the criteria by which we would recognise a solution to a problem in mathematical education?

(Dick Tahta, FLM 4(1), p. 46)

It would help me to have a better theoretical framework within which to consider/ study/ investigate mathematics education. (Here I am for the moment not asking for a *theory*, just the framework which might help to develop one).

(Geoffrey Howson, FLM 4(1), p. 41)

Quel cadre théorique, quel cadre expérimental pour les recherches sur l’enseignement des mathématiques?

Quels sont les processus à l’origine d’une décision heuristique déterminée?

(Nichals Balacheff, FLM 4(1), p. 44)
