

The FLM conversation

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In the first issue of FLM, David Wheeler (Editorial, p. 2) describes the journal as a product or byproduct of “people talking to people.” He points to the journal as a conversation and mathematics educators as natural conversationalists. Who are these math educators? What do they talk about? How do they talk about it?

Launching the FLM conversation in 1980

Having been involved with FLM from the time it was only a gleam in David Wheeler’s eyes, I found it an interesting challenge to step back and look at the FLM conversation, how it began and how it has evolved over the years. I tried to look “with fresh eyes” at the start of the FLM conversation in **1**(1).

Who is to participate in the FLM conversation?

[FLM] is intended for the mathematics educator who is aware that the learning and the teaching of mathematics are complex enterprises about which much remains to be revealed and understood. (Inside front cover in all issues)

This is a call for humility. The conversation is not for those who feel they have all the answers but for those who are searching and willing to contribute their understandings and questions to the ongoing inquiry.

Mathematicians and psychologists are offered as examples of those who are welcome to join the conversation and in **1**(1) we find contributions by a mathematician, a philosopher, university mathematics educators and authors not affiliated with any university.

The international scope of the conversation is visible in the provenance of its original advisory board members (17 institutions in 7 countries) and contributors (8 institutions, 5 countries). On the other hand, only one of the original 17 advisory board members and one of the 9 authors in **1**(1) were women.

What are we to talk about? All conversations are awkward at the beginning. Participants bravely try to express their interests and concerns without knowing those of others. To some extent they are still strangers. There is no peeking into past issues of the journal to get some idea of the tone and thread of the conversation. Some of their contributions will be picked up in future issues; some will not.

It is therefore quite amazing to find conversational threads that have wound their way through FLM publications to the present. Reflections on the history, nature and teaching of geometry, with two contributions in the first issue is one such thread. Dick Tahta’s “About geometry” reflects on the nature of geometry, its importance, and much more (myths, magic, social aspects, the nature of mathematics itself, ...). He expresses his hope that “others will take the discussion further with “new terms of reference,” as is appropriate for “a new journal of mathematical education” (p. 9). A second article, “The foundations of geometry,” is the edited transcript of a conversation between the editor and Caleb

Gattegno about a film for which the latter was scenarist. Gattegno explains that: “What film can do that no language can compete with is to offer a multitude of notions, intermingled and separated by the artifice of film making and do it very quickly several times over” (p. 10). We can see here the start of a conversational thread on geometry software.

The challenging of the *status quo* should also be considered a theme or strand of the FLM conversation. In **1**(1), Joseph Agassi opens this door, promising neither to offer “platitudes or homilies,” to “neither soothe nor preach” but rather “to make quite a lot of trouble in a short time.” He harshly critiques the established frameworks in which educators work and proposes a “Lakatosian” revolution that starts with treating students with respect.

Other recurring themes that appear in that first issue include teaching and teacher education, the type of problems, often *static*, that are presented to students in arithmetic, and student errors. Although no contributor delves into Piaget and constructivism, the hint of that future conversation (defining constructivism, then radical constructivism and the implications for the classroom) can be found in articles by Jack Easley and Pearla Nesher.

What is to be the nature of the FLM conversation? In the first issue we learn that it is to be a creative and respectful conversation, which involves the exploration and expression of new ideas: “It is a place where ideas may be tried out and presented for discussion” (inside back cover). It is a humble conversation; conversational narcissism is not welcomed. Backing up one’s statements with dozens of references does not appear to be necessary. In fact three of the nine articles have no bibliography whatsoever. Commenting on the first issue, Gattegno (**1**(2), p. 24) says “Your writers are given room to be able to develop their idea to the point where they think they have said all they want to say, as they want to say it.” He admits the writers “made me think.”

The conversation today

Although FLM looks much the same today as it did in 1980 (same binding, same cover with rotation through orange, gold, green, same statement of aims, ...) it is worth looking at the conversations since 1980 with a view to detecting any shifts.

Who participates? The invitation to participate is wider and more explicit in current issues: “It draws upon a number of more established cognate disciplines, including psychology, mathematics, sociology, linguistics and philosophy...” (inside back cover for a number of years). The diversity of voices appears to have diminished in that all authors in recent issues (as compared to only 3 in the first issue) come from education or mathematics departments of universities. On the other hand, the range of disciplinary interests of some of those voices is quite impressive. References in many articles go well beyond publications related to mathematics education.

The international scope of the conversation has broadened. Advisory board members now come from 10 countries and 5 countries are represented among the authors in the recent issue **33**(2). Gender balance has been achieved both in the advisory board and authorship of articles. Editors have worked to include mathematics educators from countries that

have been relatively quiet. I'm remembering here an article I reviewed for David Wheeler, one that I thought was not suitable for publication. He responded that he intended to work with the author and publish it because it was the first contribution he had from that country. The many authors over the years who have taken the time to contextually situate their contributions have shown respect for the international nature of the conversation.

What do we talk about? While geometry dominated the first issues, over the years its declining presence in the conversation paralleled its decline in classroom teaching: geometry software took the stage for a while but by 2012, only one of 25 articles alludes to geometry.

Challenging the *status quo* is still very much a part of the FLM conversation. The call for a wider critique eventually produced many uncomfortable and liberating conversations. As early as 1984, there were calls for mathematics educators to address problems of a socio-political nature—race, culture, class and gender. And, in time, address them we did.

Mathematics teacher education has become a major conversational strand. Almost absent from Volume 1, in every recent issue the theme is addressed in one or more articles. The constructivist conversation, hinted at in 1(1), dominated for quite a while, but recent issues indicate that we have set that theme aside to a certain extent (“got over it” as one author described abandoned problems). The theme comes up in Ernest’s contribution to 32(3):

Thus, for example, radical constructivism’s account of the learner as a cognitive alien making sense of a world of experience, constructing other persons as regularities in that world, in effect denies the social and ethical foundation of being human (Ernest, 1994). In its broadest claims it fails. Do more recently adopted theories, such as enactivism, pass this test? I leave this question open for others to address. (p. 14)

It is perhaps too early to expect a reply to his question about enactivism, although in the very next issue, Amy Hackenberg challenges Ernest on the supposed failure of radical constructivism. So perhaps the constructivist conversation is not over yet.

Between that first issue in 1980 and the 99th issue in November 2013 contributors have developed so many rich strands of the FLM conversation. I have identified only a few that emerged in the very first issue.

What is the nature of the conversation? Not surprisingly, the conversation has become more “academic,” perhaps less readable by an outsider to mathematics education and sometimes even by an insider. The pull towards a “scientific” publication, the safety of having a theoretical framework, a recognized methodology, a long list of references and so on, can be felt in submissions for publication and to some extent in published articles. Hackenberg (33(1), p. 16) describes how “scary” it is to “present unpolished thoughts and responses [...] I’m heeding the editor’s encouragement in 31(1).” Authors needed to be reminded that FLM is “a place where ideas may be tried out and presented for discussion” (inside back cover in all issues).

The conversation has remained respectful even when authors challenge, as they often do, each other’s positions. These challenges within the FLM community are the most

encouraging indicators of the health of the conversation and indeed the strength of that community.

Are we always humble? Do contributors feel they “get to say all they want to say, as they want to say it?” Would contributions without references in the first issue be accepted for publication today? Even Hackenberg, struggling with publishing “unpolished thoughts,” backed up her brief contribution with a dozen references.

For the future

John Mason’s reflection on his work over 50 years, published in 30(3) raises some troubling issues for mathematics education in general and mathematics education publications in particular:

Journals have recently become so obsessed with theoretical frameworks that papers get longer and longer, without any growth in substance. I suspect that colleagues want to see mathematics build a coherent and well-founded structure of knowledge. They like to see people building on each others’ work, adding to, refining, rather than starting afresh. (p. 7)

I suspect this impossible and perhaps “undesirable” project (if we agree with Mason) has been a temptation not just for editors but for contributors as well. As the conversation continues do we want to strive to solve once and for all the problems of mathematics education or do we want to continue in the spirit of that first issue: to try out ideas, to provoke thoughtfulness, or as Mason put it “to participate more fully in the evolution of awareness”?

Quoting Paul Ernest in 32(3) seems an appropriate way to end this particular contribution to the FLM conversation. The italics are mine:

educational researchers are participants in the great, age-old human conversation that sustains and extends our common knowledge and cultural heritage. By sharing our thoughts, we are part of the public conversation from which we and others benefit and grow. Oakshott’s (1967) great conversation is an end in itself, and is inescapably ethical because *it requires valuing the voices of others; it requires valuing the young who represent the future of the conversation, protecting its integrity; and it requires acknowledging that the conversation is greater than ourselves.* Mathematics education is one of the strands in the great conversation and we can be proud that our predecessors and our own efforts have built and are extending it. (p. 13)

References

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