CERME 8
Guidelines for authors and for reviewers: some comments
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This short document aims to foster reflection about some problems met during the preparation of the Conference. The occasion was the quality of reviewing processes (for both Conference presentation and publication in the Proceedings) and the way to exploit it in order to match the CERME spirit and to construct collaboratively an original way to fulfil ERME's aims.

I do not wish to be misunderstood. I believe that, in the CERME spirit (Jaworski, da Ponte & Mariotti, 2011), it is important to spread an acceptable style in scientific communication to strengthen weak papers especially when they are authored by less experienced participants.

Both the authoring and the reviewing processes are described in the guidelines which are supposed to meet the standard criteria of major international groups (e. g. PME) and journals (e. g. ESM). The criteria for reviewing are more carefully described than the criteria for authoring. Hence, if an author wishes to produce an acceptable paper, s/he has to mould his/her manuscript in order to meet the review guidelines.

Two types of papers are suitable for CERME:

A. Reports of studies (involving empirical or developmental research)
B. Theoretical and philosophical essay.

For each kind of paper a different form is prepared for the reviewers.

My **first** observation is that in some cases, in our WG, reviewers were dubious about paper classification. In one case a reviewer wrote: *It was difficult to know what kind of paper this one was – empirical or theoretical/philosophical as it did not fit easily into either category. I have decided to view it as empirical because it provided some data.*

My first suggestion is **to ask authors themselves to select the appropriate category** when they submit the paper. In some cases it might be tricky (an issue to be discussed):

- What about studies concerning **empirically grounded theory?** Are they theoretical essays (as they aim at creating/describing a theory) or empirical studies (as they need data)?

A **second** issue deserves reflection, i. e. the required presence of a theoretical framework (for empirical/developmental and theoretical papers as well) with references to the related literature: if only the papers which draw on a fully fledged theoretical framework are accepted, there is the risk that "academic exercises" of application of an existing theoretical framework find more easily place in CERME without any discussion about **relevance**.

- What about **innovative papers** which, in a sense, may be forerunners of future development in mathematics education?

To defend ourselves against "a-scientific papers" we might ask an author to explain in which sense his/her idea is new, if compared with the existing literature.

- What about papers coming from **different cultures** (e.g. Eastern cultures of the Confucian area) which have shaped in a very strong way ICME12 in Seoul?

The role played in the West by theoretical framework is often substituted in those papers by the description of founding elements of the local culture that might explain the rationale of some educational choices.

The case of papers from Confucian area hints at a **third issue**. Boero & Guala (2008) call the attention on the cultural analysis of content in teacher education. Andrews (2010) offers

evidences of the importance of acknowledging the cultural dimension in mathematics teaching and learning research. Surprisingly (for people thinking of a shared European culture about mathematics education) Andrews' examples are all from Europe and highlight substantial national variation in the teachers' values and beliefs. We need to encourage in the CERME papers (and not only in the papers of the WG about comparative studies!) a previous **elaboration of the founding elements of the local culture**. I do not find the place for the presentation of this elaboration in the list below (CERME guidelines to review, but also to prepare, reports about empirical / developmental studies):

1) a statement about the focus of the paper;
2) an indication of the theoretical framework of the study reported, including references to the related literature;
3) an indication of and justification for the methodology used (including problem, goals and/or research questions; criteria for the selection of participants or sampling; data collection instruments and procedures);
4) results;
5) final remarks or conclusions.

The above structure 1-5 seems to suit well a "small" study on a short term process involving either an individual or a classroom, where the starting point and the end point are clearly defined together with the way of going from the former to the latter.

- What about the cultural background where the study is located which might challenge in a very serious way the issue of reproducibility of the experiment and of the use of outcomes in another context (Bartolini Bussi & Martignone, to appear)?

A final comment on **guidelines**.
Preparing guidelines is a popular sport in all the learned societies I have entered in my professional life. Guidelines are the way to hand one the baton when one has ended his/her term. In the CERME8 website, GUIDELINES is one of the main keyword in the top frame. Guidelines are good scaffolding for novices, as means for more effective actions. Yet, they may become an obstacle against innovative ideas. To avoid this risk, are we willing to reflect collectively on the guidelines and to try to understand whether some modification/integration is necessary? It may be a very long and demanding collective process, but the CERME spirit deserves this effort.

References:

Andrews P. (2010), The Importance of Acknowledging the Cultural Dimension in Mathematics Teaching and Learning Research, *Acta Didactica Napocensia*, 3 (2), 3-16.
Bartolini Bussi M. G. & Martignone F. (to appear March 2013), Cultural issues in the communication of research on mathematics education, *For the Learning of Mathematics*.
Boero P. & Guala E. (2008), Development of mathematical knowledge and beliefs of teachers: the role of cultural analysis of the content to be taught. In: Sullivan, P., & Wood, T. (Eds.) *International handbook of mathematics teacher education*. Vol.1, p. 223-244. Rotterdam, The Netherlands: Sense Publishers.
Jaworski B., da Ponte J.P. & Mariotti M. A. (2011), The CERME Spirit: Issues of Quality and Inclusion in an Innovative Conference Style, in B. Atweh et al. (eds.), *Mapping Equity and Quality in Mathematics Education,* 457-477, Springer.