PSYCHOLOGY OF MATHEMATICS EDUCATION

PME NEWSLETTER

March/April 2013

PME 37 Kiel Germany: An opportunity to reflect on the politics of representation in mathematics education

Message from PME President João Filipe Matos

We all agree that events in the social world are ambiguous and that in struggling to understand them we imbue meaning when choosing a particular form of representation. Assuming that we have a variety of forms of representation of events, people and activity, an opportunity of choice does exist in representing all kind of phenomena.

This is the case of research in mathematics education as we can observe the options made by researchers while addressing research problems and choosing a certain research paradigm. We are certainly referring to the research methods used by researchers but also looking at the way they formulate research problems and how the formulation includes a theoretical view and an epistemological dimension that shows implicitly the research paradigm chosen.

Understanding the politics of representation of research in mathematics education is crucial to identifying trends and needs in a moment when mathematicians and mathematics educators (although in different and sometimes conflicting ways) call the attention of stakeholders to the importance and relevance of a solid mathematics education to all.

Within the PME community it is a challenge to observe how research practice informs the politics of representation of research and how researchers address the social world of mathematics teaching and learning. Looking at past PME Conference Proceedings allows us to understand the vitality of the community and to identify the different forms of formulating problems and representing the phenomena addressed in research. The activity of research in mathematics education within PME is highly complex and characterized by low centralization as it approaches questions of 'Why? For Whom? Where to?' and 'How? How many?'.

Looking at the historicity of the activity of the PME community, we will celebrate next summer in Kiel 37 years of effort of a large number of researchers in mathematics education around the world in creating conditions to the improvement of the quality of teaching and learning mathematics. For me, PME37 will be the opportunity to share my reflections on the politics of representation of the key issues and phenomena in mathematics teaching and learning, analyzed and brought to public discussion through research.

I kook forward to meeting you in Kiel for PME37!

João Filipe Matos
President of PME

PME *Message from the Editors*

Welcome to our March/April 2013 Newsletter. In this issue we bring reports from the PME IC portfolio groups, articles that feature new ideas on complex instruction and on the evaluation of mathematics education research journals, and updates regarding PME 37 and 38. We are deeply saddened by the news of Kath Hart's passing and include a number of tributes from PME members in celebration of Kath's contribution to the PME community.

We are happy to welcome Maike Vollstedt of Germany to the PME Newsletter team.

Enjoy reading the Newsletter! Take care.
Cynthia Nicol <cynthia.nicol@ubc.ca>, Silvia Alatorre <alatorre.silvia@gmail.com> and Maike Vollstedt <vollstedt@math.fu-berlin.de>
Editors of PME-Newsletter

Inside this Issue

Remembering Kath Hart ....

Former PME President Dies at 78

On April 16, 2013 the PME international community lost one of its most dedicated members. Kath Hart first became a member of the PME International Committee at PME3, Warwick UK, in 1979 and then took on the position of PME President at PME14, Oaxtepec Mexico, from 1990-1992. She was very interested and involved in PME policy issues and very dedicated to PME. We have lost an elder in our PME community, one who was involved in the organization since its early beginnings, who offered historical consciousness and wisdom, and was passionately committed to keeping alive the beginning ideals of PME. Thank you Kath for your dedication and commitment to PME and mathematics education.

Margaret Brown of Kings College London and Olimpia Figueras of Mexico each provide tributes to Kath Hart in the following pages.

"Kath was a regular attender at PME conferences and not afraid to express strong views at AGMs...!"

Margaret Brown,
Kings College, London

I am sure that all PME members will be sorry to hear about the death of Kath Hart on April 16th, from ovarian cancer. She was an early member of PME, an IC member from 1979 and president in 1990-92, when she helped to establish the organisation on a secure footing.

Kath was a regular attender at PME conferences and was not afraid to express strong views at AGMs whenever she thought that anything was not being done properly!

Kath was aged 78, but looked younger. She'd never really retired from mathematics education - a month before she died she was in Bangkok where she'd been giving seminars for mathematics teachers.

Kath started as a secondary mathematics teacher in some fairly tough London schools, then became a teacher trainer at St Mary's College Strawberry Hill, where she was involved in the first Nuffield Mathematics Primary Project. She eared a Doctor of Philosophy from Kings College under the supervision of David Johnson. She also earned a Doctor of Education from Indiana University in Bloomington, Indiana, and as a result made many long term friends among the mathematics education fraternity in the United States.

Kath Hart died on April 16, 2013 aged 78

On her return in 1977 she took up a post as a researcher and, in 1990, honorary professor at Chelsea College

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Remembering Kath Hart ....

Margaret Brown remembers Kath Hart continued...

London (which later merged into King's College London). During this period she was a school inspector (HMI) for a short time, and also spent a year in Bangkok. Her final appointment was as Professor of Mathematics Education at the University of Nottingham, leading the well-established mathematics education team there.

Kath had always been very involved and committed internationally, having frequently given lectures and run workshops for groups of intending teachers, serving teachers, research students and researchers in many different countries, and for overseas students in the UK. She also supervised and supported many PhD students, and worked hard to ensure high standards of research in mathematics education were maintained throughout the world.

Huge numbers of people, especially those from developing countries in Central and South America, Africa, South and East Asia, have been grateful for her wisdom and friendship. She took a real interest in all her students, and helped support them in many practical ways. When she retired she bought a flat in Durban, South Africa, where she worked with local teachers and also had many friends.

In her own research field, Kath is probably best known for her work on the understanding and learning of ratio in the 1970s and 1980s. She lead the mathematics team for the final years of the Concepts in Secondary Mathematics and Science (CSMS) project; she edited the resulting 1981 book *Children's Understanding of Mathematics 11-16*, which was to strongly influence international research in mathematics education in the 1980s and 1990s. This work also was central to the Cockroft Report (1982) which shaped secondary mathematics teaching in the 1980s in the UK and more widely.

Her presence at PME conferences will be greatly missed.

"Kath Hart left Mexican teachers and researchers an intellectual legacy..."

Olimpia Figueras
Mexico

Kath Hart came to Mexico in 1985 as a visiting professor to the Centre for Research and Advanced Studies of the National Polytechnic Institute. Members of the Mathematics Education Department were engaged with a national programme for mathematics teachers' training (1983-1996). With enthusiasm she took a bus or a plane to travel around the country to be a teacher for our teacher education students. In this first contact with Mexican mathematics education she shared her knowledge of teaching and learning mathematics. Soon she took part in research projects set up by Mexican colleagues and was willing to participate as an examining jury of students of the master's degree study programme of the department. She also accepted to be a research advisor of graduate or postgraduate students that spend some years with her at King's College London or the Shell Centre.

Kath's theoretical framework related to the building up of the mathematics curriculum taking into account research results was used to structure the National Mathematics Curriculum for Basic Education in 1993-94. Furthermore her expertise as a curriculum developer was important in the early 2000 when she participated in projects set up by members of the Mathematics Education Department with the Ministry of Education and the Latin American Institute of Educational Communication. She worked with the team that was writing books for children and teachers, as well as preparing other teaching resources. Her critical views always conduced to reflection and enrichment.

In 2004, the chair of the Mathematics Education Department was created for senior researchers. Kath accepted to come and work during three months every year since 2005 to 2010. Her participation in the follow-up of a teacher's professional development project was a cornerstone for the reinforcement of a study programme set up for in-service mathematics teachers.

Kath Hart left Mexican teachers and researchers an intellectual legacy for teaching and learning mathematics. But most of all, she let us share her love for life, her sense of humour, her joy to learn about our culture and to travel around, her passion for opera, and hearing Placido Domingo sing and her gracious way to treat her friends with a good meal cooked with love by her.

Getting Smarter Together about Complex Instruction in the Mathematics Classroom

invited submission by Sandra Crespo, Michigan State University

Observing in a mathematics classroom it is not hard to notice the wide differences in the students' mathematical skills and knowledge–some students whiz through the assigned tasks with ease and others struggle to get started. How we interpret and act on these differences matter because our actions will either perpetuate enduring social and structural inequities or help disrupt them.

Complex instruction (CI) is a set of pedagogical strategies founded in the research of sociologist Elizabeth Cohen (1994) that explicitly attend to and address inequitable participation in the classroom, especially when students work in cooperative groups.

For the past six years, I have been working with my "Smarter Together" co-authors (Helen Featherstone, Lisa Jilk, Joy Oslund, Amy Parks, and Marcy Wood) to introduce these principles and practices into the elementary and secondary mathematics classrooms by working with practicing teachers and preservice teachers in a variety of contexts and settings.

We begin to recognize how few school mathematics tasks are deliberately designed to support students in working and getting smarter together in the mathematics classroom.

This work has entailed: (a) disrupting what it means to be "smart" in the math classroom, (b) redefining "good" math tasks as tasks that are also groupworthy, and (c) developing instructional strategies that address issues of inequitable participation in group work.

Disrupting what it means to be smart in mathematics is important because students are often constructed as

Helen Featherstone, Marcy Wood, Amy Parks, Sandra Crespo, Lisa Jilk, Joy Oslund

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Getting Smarter Together continued...

"high, medium and low" achievers in mathematics and these rankings often correlate with how they are then tracked into the low, medium, high-level math classes.

When definitions about what it means to be smart in mathematics are based on a narrow set of skills (such as computational skill) only a select few students will appear to be smart in the math classroom, and only a few students will be given the opportunity to study more advanced mathematics content. Hence the importance of paying close attention to how we think and talk about what it means to be smart in the math classroom.

Similarly, when our considerations about what makes a math task worthwhile only focuses on the cognitive demand of the task and neglect to pay much attention to the social demands of the task, we continue to perpetuate normative and widely held views about mathematics as a solitary activity that is best accomplished by and in one's mind.

When we consider whether a task is rich, engaging and cognitively demanding enough for a group to take on- is it groupworthy? - then we begin to recognize how few school mathematics tasks are deliberately designed to support students in working and getting smarter together in the mathematics classroom.

In addition to these reconceptualizations, complex instruction also offers a collection of pedagogical strategies to reinforce and support students' access, participation and contributions to their group task. In a nutshell, these strategies focus on making public and deliberate teaching moves to establish and enforce classroom norms and group roles that serve to support students' individual and group engagement and mathematical understanding.

My Smarter Together colleagues and I also realize that simply talking about these issues and becoming aware of them is not enough. Our work entails inviting teachers and preservice teachers to work with these ideas in the context of learning about lesson studies, which is unsurprisingly also a collaborative approach to teachers' professional development. We design together complex instruction math lessons and investigate together questions about students' access, participation, and learning in groupworthy math lessons.

Related readings on complex instruction

Cohen, E. G. (1994). *Designing groupwork: Strategies for the heterogeneous classroom.* New York, NY: Teachers College Press.

Crespo, S. & Featherstone, H. (2012). Counteracting the language of math ability: Preservice teachers explore the role of status in elementary classrooms (pp. 159-179). In L. J. Jacobsen, J. Mistele & Sriraman, B. (Eds). *Mathematics Teacher Education in the Public Interest.* Charlotte, NC: Information Age Publishing.

Featherstone, H., Crespo, S., Jilk, L., Oslund, J., Parks, A., & Wood, M. (2011): *Smarter Together: Collaboration and Equity in the Elementary Math Classroom.* Reston, VA: National Council of Teachers of Mathematics.

Jilk, L. M. (2010). Becoming a "liberal" math learner: Expanding secondary school mathematics to support cultural connections, multiple mathematical identities and engagement. In R. Kitchen & M. Civil (Eds.) *Transnational and Borderland Studies in Mathematics Education*. Routledge Press.

PME International Committee Reports

President's Portfolio Group (PPG) Report

submitted by Guri Nortvedt

PPG:
Olive Chapman, Marta Civil, Marj Horne, João Filipe Matos, Guri A. Nortvedt, and Leonor Santos.

During the past months the PPG has taken part in the following activity. Further activity will be necessary before each case can be decided on by the IC or the AGM. A fuller report will be presented during the AGM in Kiel.

1) In 2012 Fou-Lai Lin accepted to continue his work as Ombudsman for the PME membership. The Ombudsman's role is to receive and handle concerns made by PME members. However, the responsibility to take actions to secure fairness lies with the PPG. By March 15, 2013 no matters have been reported to the PPG.
2) The PPG is discussing what advertisements sponsors and charities might be allowed to present to conference attendees in the conference bag (for example written materials, CDs, pens etc). This discussion will continue.
3) The PPG has reviewed the guidelines for the Skemp Fund and made a proposal for guidelines and clearer criteria for awarding funding from the Skemp Fund. The proposal will be posted on the path to the AGM early May as well as presented at the AGM before the criteria might be implemented for the 2014 conference and onwards. Decision on the 2013 awarding will be made during April 2013.
4) The PPG is currently drafting standing orders to be used at the AGM. The finalized standing orders will be presented at the path to AGM late May to be decided on at the 2013 AGM.
5) During the PME36 the issue of audio- or videotaping presentations (RR, SO etc) emerged, making it apparent that new guidelines for chairs are necessary. Preliminary guidelines for chairs were circulated to the chairs in Taipei. These will be further developed and circulated before PME37 in Kiel.

Vice President's Portfolio Group (VPPG) Report

submitted by Tim Rowland

VPPG:
Tim Rowland (Vice President), Masakazu Okazaki, Núria Planas, and Wim van Dooren.

The focus of the Vice-President's Portfolio subgroup (VPPG) of the IC is the scientific activity of PME. Since July 2012, the VPPG has been working on several topics. We report of five of them here. In some cases, these carry forward the work of the VPPG in the previous year.

Improving reviewing quality. Authors of PME37 Research Reports will be invited again to comment on the quality of the reviews received on their submitted papers. They will be asked to respond to three questions (general quality; supportiveness; constructiveness) using a five point likert-scale, together with an open answer field.

This questionnaire was first implemented in the Conftool system for PME36 in 2012. Reviewers will be able to access the blinded review feedback as soon as it is entered by the contributors, so please return to the Conftool system shortly before the conference to see how people perceived your reviews. The IC invites all authors to give constructive and helpful feedback to their

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PME International Committee Reports continued ...

VPPG Report continued ...

reviewers. Stefan Ufer initiated this project in 2012 and continued this year together with Masakazu Okazaki.

Research categories. Núria Planas concluded the work begun by Stefan Ufer and JeongSuk Pang in 2011 on the revision of the categories used to describe research domains, research methods and grade levels when submitting a PME contribution. A revised set of research categories has already been implemented for PME37 with inclusion in the Conftool platform.

Minor changes have been considered on the basis of evidence and reflection provided by data from a membership survey about the experiences with research categories and ideas for improvement. The current list is not to be seen as final but revisable over time, and we suggest that it be reviewed in 2015.

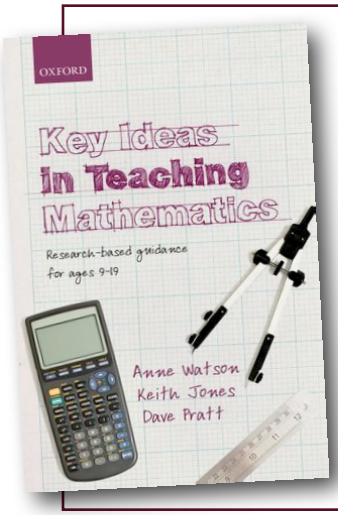
Pre-Submission Support (formerly known as the Early Bird Procedure). Richard Barwell came to the end of his term as Pre-Submission Support Co-ordinator in July 2012, and an Open Call was sent to all PME members inviting expressions of interest in the role. Several members responded to the Call. Following careful consideration by the VPPG and confirmation by the IC, Nathalie Sinclair has been appointed Pre-Submission Support Co-ordinator for a period of three years. We thank Nathalie for undertaking this important role within the PME community.

Presentation guidelines. In order to improve the quality of the individual presentation formats (RR, SO, and PP), some guidelines and hints will be provided in the PME37 second announcement. These may be particularly useful for newcomers who are not familiar with PME's presentation formats and traditions, but more experienced members may also benefit. These guidelines will be communicated on the PME37 website, and in the second announcement. Wim van Dooren has taken the lead on this item.

Symposium - a new presentation format? The VPPG is currently developing a proposal initiated by Wim van Dooren for a new presentation format: Symposium. If agreed, this would be introduced in the scientific programme of PME38.

In the new presentation format, three research report presentations that are closely linked in a specific way (e.g. the topic, the theoretical starting point or the applied methodology) would be consecutively presented in one (longer) presentation session, followed by a joint discussion about these papers with the audience (optionally preceded by a discussion by an invited reactor).

Discussion of a concrete proposal will take place at the next IC meeting (PME37), so that - if approved - this new presentation format could be implemented for PME38.



New Book! Just Released!

Key Ideas in Teaching Mathematics: Research-based guidance for ages 9-19

Anne Watson, Keith Jones, and Dave Pratt (2013)

A resource for understanding the key ideas in school mathematics for students aged 9 to 19. It shows how students learn, why they sometimes get things wrong, and the strengths and pitfalls of various teaching approaches. Designed to be the first port of call for research about teaching, an associated website summarises the key messages in the book and connects them to examples of classroom tasks that address important learning issues about particular mathematical ideas. ISBN: 978-0-19-966551-8.

http://ukcatalogue.oup.com/product/9780199665518.do
http://www.nuffieldfoundation.org/key-ideas-teaching-mathematics

PME International Committee Reports continued ...

Secretary Portfolio Group (SPG) Report

submitted by Stefan Ufer

SPG:
Stefan Ufer, Germany (Secretary), Silvia Alatorre, Mexico, Stephen Hedegus, USA, and Samuele Antonini, Italy

The Secretary Portfolio group is responsible to facilitate communication within PME and to keep records of the activities of PME. In the last years, the group focused on issues concerning the organization of conferences and the technical tools used by the organization.

Last year, Laurie Edward's term on the IC ended. During her work as a secretary of PME, she started initiatives concerning the web site of the group and the publication channels for PME proceedings volumes. We thank her very much for her work. During the conference in Taipei, Stefan Ufer took over as a secretary and continued her work together with the three experienced members of the SPG.

PME Newsletter: The PME newsletter informs you about news from the PME community, the work of the IC, news about coming conferences and much more. With the start of this year, we have an additional member in our newsletter team. The editorial team is lead by Cynthia Nicol (Canada). She and Silvia Alatorre (Mexico) are now supported by Maike Vollstedt (Germany). Leaving is Marj Horne (Australia) who was a member of the team since fall, 2012. Thank you, Cynthia, Maike, Silvia, and Marj for your commitment and the time you invest to keep everyone up to date!

PME Proceedings Volumes: The PME proceedings volumes are standard references in the field of mathematics education. During the last years, several ideas arose to improve their dissemination. During PME 36 in Taipei, the AGM decided to change the policy regarding printed proceedings and to offer print-on-demand publishing as an additional, new way to publish the volumes (see separate contribution in this newsletter).

Together with the organizing committee of PME 37 in Kiel, the SPG has been working out a proposal how to process the proceedings. We will gather first experiences about this process this year. Regarding past proceedings, a collection of proceedings is almost complete, but not all are in an electronic form. The SPG is working on options how to provide these older proceedings to PME members or a wider community. In particular, some copyright issues have to be solved. Samuele Antonini and Stefan Ufer are working on this project.

Communication within PME: At the moment, PME uses several communication tools: The Confool system for all aspects of conference organization and most payment issues, the IGPME website (www.igpme.org) with an Open Forum and the "Path to the AGM forum", an email list (PME listserver), this newsletter and a moodle system for the work of the IC. Moreover, we have been experimenting with a system to manage our user database.

The IC observed that the usage of the Forums on the IGPME web site is quite sparse. One reason might be that yet another registration is necessary to participate. Moreover, our communication is quite diverse: News about PME as an organization, information from the field of mathematics education partly with subsequent open discussion, announcements of conferences and of positions etc.

At the moment, the SPG is working on a new concept for the PME communication. Moreover we will try to reduce the number of "information channels", most likely to Conftool and a web site integrating the necessary functionality of the other systems we are using at the moment.

We hope to have a concept ready by the PME 37 conference in Kiel. Stephen Hegedus and Stefan Ufer

PME International Committee Reports continued ...

Treasurer Portfolio Group (TPG) Report

submitted by Bettina Dahl Søndergaard

TPG:
Bettina Dahl Søndergaard (Treasurer), Tai-Yih Tso, Marcia Pinto, and Olive Chapman

The work in the TPG has so far been focused on maintaining the accounts in the Nordea Bank in Finland, including paying bills and keeping track on income such as cash payments to the Skemp fund.

We have two accounts in Nordea Bank where one account currently holds a sum of 82,707 EUR the other a sum of 215 USD. A UK based account holds a sum of 1,044 GBP. The TPG has also assisted in budget questions from the former, present, and future IPC's.

A lot of the time has been spent in collaboration with the Vice President Tim Rowland in finding a suitable bank in England to which we can later transfer all our money. There are several reasons for this. The main one being that we anticipate that this will better support our Charity Application in England and Wales. Another reason is language. The main language currently is Finish (naturally) and it can sometimes be a challenge to find the English options. In any case, we always get good service from Nordea and our personal bank customer contact person is always very helpful.

We have also been discussing the auditing situation. For many reasons, including our charity application, we need to make sure that our budgets are audited in a suitable manner, perhaps professionally. However, since conferences are held all over the world, the conference budgets might be best audited locally, whereas the rest of the PME budget audited either professionally or by an internal auditor.

This brings us to something where we need your help. Our auditor through many years, Markku Hannula decided last year, that this would be his last year as an auditor. Many thanks to him for his many years of service! Through our contacts we have been searching for a new auditor, but have so far been unsuccessful.

We would therefore ask the PME membership if one of you would like to become the auditor for this year. There is no pressure for being auditor more than one year! What we need is for you to look through the bank account statements and check if the payments have sufficient receipts and that all the numbers add up. Who are you: A PME member, who has not been on the IC during the last few years. If you think you would like to help us with this, please email Bettina Dahl Søndergaard at bdahls@plan.aau.dk. Please include a name of someone in the PME community who knows you well.

International Symposium Elementary Mathematics Teaching

SEMT '13 "Tasks and Tools in Elementary Mathematics"

We cordially invite you to participate in the twelfth bi-annual conference on Elementary Mathematics Teaching, SEMT '13, which is to be held from **August 18-23, 2013, in Prague.** The programme will focus on the teaching of mathematics to children within the age-range 5–12 years.

SEMT '13 PLENARY speakers:
Olive Chapman (Canada): *Engaging children in learner-focused mathematical tasks*
Rose Griffiths (United Kingdom): *Working with children in public care who have difficulties in mathematics*
Günter Krauthausen (Germany): *Digital media in elementary mathematics education*
Joanne Mulligan (Australia): *Inspiring young children's mathematical thinking through pattern and structure*
Jennifer Young-Loveridge (New Zealand): *Using multiplication and division tasks to support young children's part-whole thinking in mathematics*

For more information see www.semt.cz

Grading Mathematics Education Research Journals

Guenter Toerner
Chair of Committee for Education of the European Mathematical Society, EMS

Ferdinando Arzarello
EMS Committee for Education and
former President of the European Society for Research in Mathematics Education, ERME

Presentation of the project and initial motives

Nowadays, all researchers are aware of the increasing importance accorded to the ranking and grading of scientific journals; it is now difficult to escape their influence. The systems that currently exist are often based on crude statistical analyses that have little to do with scientific quality (see, for example, Arnold & Fowler 2011). For these reasons, the Education Committee of the European Mathematical Society (EMS), together with the Executive Committee of the European Society for Research in Mathematics Education (ERME) and supported by the International Commission for Mathematical Instruction (ICMI), decided in 2011 to organise a consultation in order to propose a grading of research journals in mathematics education based on expert judgment. A similar project has already been carried out for chemical education and science education journals (Towns & Kraft, 2011).

The approach adopted was to initiate a process which will need further elaboration and regular updating. For this reason, amongst many possible choices of method, we always opted for what appeared to be the most straightforward. We present below our methods and the results obtained.

Organisation of grading by experts

A working group, bringing together members of the ERME board and members of the EMS educational committee, was formed to take charge of the whole process. We (the members of this group) first prepared a long list comprising 49 journals. We graded the journals and compared our grades with the European Reference Index for the Humanities 2011 (https.://www2esf.org/asp/ERIH/Foreword/search.asp). This led us to retain a shortlist of 28 journals (all the mathematics education research journals mentioned as international on the ERIH list have been kept).

At the same time we constituted a panel of 91 experts in the field, representing the 42 countries members of the EMS and the ERME. Each country was represented by one to seven experts, according to the size of the mathematics education research community in each country. These experts were contacted and asked to grade the journals, using the scale presented below. They were also invited to formulate any comments they wished to make on the process and to suggest other journal titles if they considered that important journals were missing from the list.

Criteria

The experts were invited to grade the journals on a four-point scale: A*, A, B or C, or to declare that they did not know the journal and code it with an X. The scale was defined according to four dimensions, characterising each rank: recognition; review process and quality standards; editors and editorial board; and citations. For example, the ranks A and B are described as:

A

- Recognition: The journal is recognised amongst researchers around the world as a strong one in the field of mathematics education.
- Review process and quality standards: Through a systematic process of peer review the journal maintains high standards with a view to publishing research that displays the intellectual rigour, originality and significance that will be recognised as making a valuable contribution to the field.
- Editor(s) and editorial board: The editor(s) and the members of the editorial board of the journal are themselves highly regarded researchers, many already recognised as international leaders in the field of mathematics education.
- Citations: The journal is regularly cited in other journals, and many high quality research publications in mathematics education make some reference to work published in it.

B

- Recognition: The journal is recognised by researchers around the world as an estimable one in the field of mathematics education.
- Review process and quality standards: Through a process of peer review the journal sets standards of rigour, originality

Grading Mathematics Education Research Journals continued...

and significance that command international respect within the field.
- Editor(s) and editorial board: The editor(s) and the members of the editorial board of the journal are themselves well regarded researchers in the field of mathematics education.

Answers and statistical choices

We received answers from 75 experts, representing 32 countries. In some answers, certain responses were missing; we replaced these by "X". A few experts proposed letters such as "D"; we replaced these with "C". We decided to:

- Confirm a grade A* for all the journals rated A* by 50 experts or more (at least two thirds of the experts).
- Confirm a grade A (, B, C) to all the journals rated A (, B, C) or better by 50 experts or more (at least two thirds of the experts).
- Withdraw from the list all the journals that have more than 25 marked X (more than a third of the experts declare that they do not know the journal).

Some experts proposed additional titles. Nevertheless, no title was proposed by more than 8 experts; we thus decided not to add titles to the list.

Results

Following these principles: two journals received a grade A*; five journals received a grade A; five journals received a grade B; and five journals received a grade C. Eleven journals were removed from the initial list of 28 because more than 25 experts declared that they did not know these journals.

The table presents the final results of the grading process.

Grade	Title
A*	Educational Studies in Mathematics Journal for Research in Mathematics Education
A	For the Learning of Mathematics Journal of Mathematical Behavior (The) Journal of Mathematics Teacher Education Mathematical Thinking and Learning ZDM: The International Journal on Mathematics Education
B	International Journal of Mathematical Education in Science and Technology International Journal of Science and Mathematics Education Mathematics Education Research Journal Recherches en Didactique des Mathématiques Research in Mathematics Education
C	Canadian Journal of Science, Mathematics and Technology Education Journal für Mathematik-Didaktik Nordisk matematikkdidaktikk / Nordic Studies in Mathematics Education, NOMAD Technology, Knowledge and Learning (formerly: International Journal of Computers for Mathematical Learning) The Montana Math Enthusiast

Limitations of the grading process and need for further studies

Naturally, this process has a number of limitations. We note some, here, that we discussed during our work and which were also expressed by some experts in their comments.

- A grading produced by European experts risks being Europe-centric.
- Only journals overtly focused on mathematics education have been included. Journals about education at large are also very important for the researcher in the field and are not mentioned in the list.
- The list contains mainly journals written in English.
- Journals about more specific topics, such as statistics education in particular, are unknown to many experts but may be of high scientific quality.

All these remarks correspond to real limitations of our study. They evidence the need for further studies: ICMI could decide a similar grading at a worldwide level and, equally, more local initiatives could better recognise journals in languages other than English, or with specific foci. The scientific quality of journals is always evolving; a change in the reviewing process, for example, can lead to an improvement of a journal. Thus any grading should retain the possibility of updating and evolution; the grading proposed here is presented as our best attempt at assessing the current situation.

References

Arnold, D. N., & Fowler, K.K. (2011). Nefarious numbers. *Notices of the AMS* 58 (3), 434–437.

Towns, M.H., & Kraft, A. (2011). The 2010 Rankings of Chemical Education and Science Education Journals by Faculty Engaged in Chemical Education Research. *Journal of Chemical Education* 2012, 89 (1), 16–20.

**Note: This contribution is a reprint from the December 2012 issue of the EMS Newsletter, pp. 52-54 (The original publication is accessible at http://www.ems-ph.org/journals/newsletter/pdf/2012-12-86.pdf). We are very grateful to the authors as well as Lucia Di Vizio and the editorial board from EMS.*

Doctoral Studies in Didactics of Mathematics at Charles University in Prague, Faculty of Education

The Faculty of Education of Charles University in Prague organizes Doctoral studies in Didactics of Mathematics in English. The study will be first open in September 2013.

Admission Process: Candidates for doctoral studies in the Didactics of Mathematics are expected to:

- show interest in mathematics education in general (for example, by taking part in scientific conferences and conferences for teachers),
- have an overview of the most important scientific journals and books related to mathematics education,
- have an idea of the area of mathematics education he/she would like to focus on in his/her studies and be able to specify it in a written project of up to 8 pages.

Prague. Photo credit: Moyan Breen
http://www.flickr.com/photos/aigle_dore/6365106071/in/photostream/

For more information: http://kmdm.pedf.cuni.cz/Default.aspx?ClanekID=375&PorZobr=7&PolozkaID=-1

The University of British Columbia (UBC) and Simon Fraser University (SFU) are co-hosting PME 38 and PME-NA 36 in beautiful Vancouver, Canada 2014

Make your plans to attend July 15-20, 2014 at UBC Vancouver, Canada

conference co-chairs: Peter Liljedahl (SFU) and Cynthia Nicol (UBC)

New Options for Printed Conference Proceedings

submission by Stefan Ufer, Secretary PME

As decided by the AGM at PME 36 in Taipei last year, we will have a new regulation for printed conference proceedings from PME 37 on. The nice thing first: If you do not take any action, everything remains as it was before and will receive printed proceedings at the conference site.

Nevertheless, some new options arise:

First, printed proceedings are large and heavy. One big problem in the past was what to do with really large stacks of printed conference proceedings that participants left at the conference site or in the hotels. From PME 37 on, you may choose if you want to receive printed proceedings at the conference site. If you opt **not to receive them**, your conference registration fee will be reduced by the corresponding printing costs (at least about 30€ per set of proceedings in 2013).

Second, some participants either like to have their proceedings before starting out for the conference (e.g. to read them on the plane). Starting from this year PME 37, you will have the option to order printed proceedings (single volumes or the whole set) from a print-on-demand publisher. As in recent years, a limited number of left over proceedings will also be available from the Administrative Manager after the conference.

This project was started by Laurie Edwards and the Secretary Portfolio Group is implementing it this year. Since it is our first try, we are not sure about the exact online publication date of the proceedings but we hope to have them available for you at least four to six weeks in advance of the conference.

As a rough estimate, ordering the printed proceedings to your home or office will be about 50€ per set of proceedings (plus shipping). This means that the books should reach you before the conference but of course we have only little experience with our online publisher in this respect. We will publish all relevant information on the IGPME website and inform PME members as soon as possible. If you have any (positive or negative) experience with the print-on-demand proceedings afterwards, just let us know.

We hope that these new options make it easier to obtain, circulate and handle the printed PME proceedings.(ufer@math.lmu.de).

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Preparing for PME 37

Kiel, Germany

invited submission by
Aiso Heinze and Beate von der Heydt

The preparations for the PME 37 in Kiel (Germany) are in full swing. Already nearly 700 participants from more than 50 countries pre-registered. We received a huge amount of proposals for 366 Research Reports, 200 Short Orals and 74 Poster Presentations, 12 Discussion Groups and 3 Working Sessions. Although the review process is still in progress, we can already state that the conference will become scientifically promising.

Kiel at the Baltic Sea (Photo: Gunar Mattern)

Where does the PME 37 take place? Sure, in Germany, but where is Kiel? Kiel is the capital of the northern German federal state of Schleswig-Holstein and with a population of approximately 250.000 inhabitants also its largest city. The state of Schleswig-Holstein is exactly the part of Northern Germany between the North Sea and the Baltic Sea (see the map).

Kiel is situated on the south-western shore of the Baltic Sea, approximately 90 km north of Hamburg. It can be regarded as a gateway to Scandinavia and the Baltic States since passenger ferries to Sweden, Norway, and Lithuania operate from here. Furthermore, a lot of commercial and cruise traffic passes through the Kiel Canal, the world's busiest artificial waterway connecting the North Sea with the Baltic Sea.

Lock of Kiel Canal (Photo: Czeslaw Martysz, University of Kiel)

The state of Schleswig-Holstein and the city of Kiel include many natural highlights, culinary delights, cultural attractions, and sports activities in Kiel and its surrounding areas.

The state of Schleswig-Holstein and the city of Kiel include many natural highlights, culinary delights, cultural attractions, and sports activities in Kiel and its surrounding areas.

During the conference in Kiel, you will have several opportunities to explore the host city. Kiel and its surroundings can be discovered by foot, by bus or by a boat tour on the Kiel Fjord. You can visit the cruise and ferry port of Kiel which is situated in the city center. Here, cruise ships from all over the world and ferries from Sweden, Norway, and Lithuania stop and the passengers can walk from the ships

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Mathematics Learning Across the Life Span: PME37... ....

to the pedestrian zone where many interesting shops are located. When visiting the lock of the Kiel Canal you can watch how large cargo ships enter this busiest artificial waterway in the world. You can cross the canal by a small ferry which is for free. When the canal was

Sailing City Kiel (Photo: Jürgen Haacks/University of Kiel)

excavated more than 100 years ago, the state of Schleswig-Holstein was cut into two pieces and it was decided that there must be sufficient opportunities to cross the canal and all of them must be free of charge. In the evening you can visit one of the restaurants or bars and enjoy typical German food and beverages.

As announced on the PME 37 website, we offer excursions, for example, to Hamburg or Lübeck. Hamburg is the second largest city in Germany with the second largest port in Europe. The green city on the river Elbe offers remarkable historic buildings like the magnificent City Hall or the symbol of the city the St. Michael's Church, a city center with many shopping malls, the sea port with the warehouse district in a fascinating brick architecture and the modern port city, the newly formed district next to the river Elbe with the new opera, the Elbe Philharmonic Hall. You can choose between a bus trip focusing on the city history or a boat trip focusing on the port and the trading history.

The medieval town of Lübeck was recognized by UNESCO as a World Heritage Site in 1987. Winding streets and alleyways, old merchant houses, the world-famous Holsten Gate, the historic old town surrounded by water and the seven church towers make up the city of Lübeck. Three Nobel laureates originated from Lübeck. One of them is former German Chancellor Willy Brandt who got the Nobel Peace Prize in 1971. Dedicated to him, the city has a small museum where the 20th century history of Germany is presented. The city will be explored by walk and by boat.

More information about the PME 37 conference is available at www.pme37.de or www.pme2013.de. We are looking forward to welcoming you to Kiel this summer.