

WHAT IS THE IMPACT OF HOSTING AN ICME FOR THE ORGANIZING COUNTRY? THE CASE OF ICME8 IN SPAIN

Claudi Alsina

Summary. In this presentation we will describe what were the goals of Spain for organizing ICME8 and what were the positive consequences derived from this event for our mathematics education.

*To Gonzalo Sánchez-Vázquez and to
Miguel de Guzmán, in memoriam*

1. WHY WE DECIDED TO HOST AN ICME

Let me review, briefly, which was our situation in the 80's concerning mathematics education and why we decided to host an ICME.

For many years the Real Sociedad Matemática Española (Royal Society of Mathematics, Spain) had almost no activities in mathematics education and mathematical teacher associations did not exist. There were in the 70's some active innovative groups of math teachers (Grupo Cero, Grup Zero, Periodica Pura,...) and later three societies were founded in Canarias (Isaac Newton), Seville (Thales) and Granada. In 1985 I became (for 12 years) the Spanish delegate in IMU and ICMI nominated by the CSIC (Consejo Superior Investigaciones Científicas) which at that time had all international representations in ICSU (International Council for Science). The Thales Society represented by Gonzalo Sánchez-Vázquez and Antonio Perez had the first idea of hosting an ICME in Seville so they approached me and I decided to be involved in the project and to help them as much as possible. It was clear for us that *promoting an ICME in Spain was a great opportunity to improve mathematics education in the country and, in particular, to articulate a national development of math teachers' associations.*

2. WHAT WE DID TO HOST ICME8

We decided to work simultaneously on two different levels, at the national level promoting activities, joining efforts and convincing authorities and, at the international level, establishing contacts with ICMI Executive Committee and promoting our candidature. The first action was to have a big society in Andalucía (SAEM Thales) and then to look for a Federation that could articulate different regional initiatives. The development was spectacular so authorities became interested.

On the other level J. Margalef and myself approached ICMI Executive Committee in Berkeley at an ICM, the Thales Society applied to host ICME7 in 1992, G. Howson visited Seville... but ICME 7 was awarded to Quebec.

We decided then to apply for ICME8. To this end we organized a large group of attendants for ICME 6 in Budapest where I made a National Presentation, we organized the ICMI Study on assessment in Calonge, we attended the ICMI Study on Popularization. But a key fact was that Miguel de Guzmán was elected President of ICMI. We finally got the responsibility of hosting ICME8 in Seville.

To sum up this historical notes we may say that *the full process of working at the same time at the national and the international level motivated a lot of people to become active in mathematical education activities.*

3. ICME8

ICME8 was for us a successful congress (3600 participants plus 400 accompanying persons) with a very rich scientific and social program. But what was really interesting was the 1992-1996 period when the Federation developed and many new educators became involved in the preparation. Miguel de Guzmán as President of ICMI, played a prominent role. Gonzalo Sánchez-Vázquez as President of the Federation and the SAEM Thales was the key person to agglutinate Spanish teachers and societies. Antonio Pérez, Antonio Aranda and the big group of the SAEM Thales were dedicated and efficient local organizers. I myself, as the Chair of the IPC dedicated a lot of efforts to have a rich scientific program. We had only a meeting of the IPC in Seville but e-mail was already there and by exchanging thousands of e-mails we could do the work. ICMI Executive Committee and the full IPC made essential contributions. On this occasion, as in many other ICMI initiatives, it is necessary to mention the great contributions of Mogens Niss and Bernard Hodgson.

4. IMPACTS FROM ICME8

Perhaps without hosting ICME8, all the positive initiatives that we generated with an ICME as a goal could be already sufficient to imply a positive change in mathematics education in Spain. But we host ICME8 and since then the last 12 years have been very fruitful for mathematics education development. Let me point out some outcomes that became reinforced by ICME8.

F.E.S.P.M.: The Spanish Federation of Societies of Mathematical Teachers has been growing since 1996 with more regional societies founded and incorporated to the F.E.S.P.M. and generating as we will see new activities at all levels (<http://fespm.es/sociedadesdatos.html>)

SOCIETIES	REGIONS
Federació d'Entitats per l'Ensenyament de les Matemàtiques a Catalunya	Catalonia
Organización Española para Coeducación Matemática "Ada Byron"	Nacional
Sociedad Andaluza de Educación Matemática "Thales"	Andalucia
Sociedad Aragonesa Pedro Sánchez Ciruelo	Aragón
Sociedad Asturiana de Educación Matemática "Agustin de Pedrayes"	Asturias
Sociedad Canaria "Isaac Newton"	Canarias

Sociedad Castellano-Leonesa de Profesores de Matemáticas	Castilla-León
Sociedad de Ensinantes de de Galicia (ENCIGA)	Galicia
Sociedad Extremeña de Educación Matemática “Ventura Reyes Prósper”	Extremadura
Sociedad Madrileña “Emma Castelnuovo”	Madrid
Sociedad Matemática de Profesores Cantabria	Cantabria
Sociedad Navarra “Tornamira” Matemática Iraskasicen Nafar Elkarte Tornamira	Navarra
Sociedad “Puig Adam” de Profesores de Matemáticas	Madrid
Societat d'Educació Matemática de la Comunitat Valenciana “Al-Khwarizmi”	Valencia
Sociedad Castellano Manchega de Profesores de Matemáticas.	Castilla – La Mancha
Sociedad de Educación Matemática de la región de Murcia. SEMRM	Murcia
Sociedad Riojana Profesores de matemáticas. A Prima	La Rioja
Asociacion Galega Profesores de Educación Matemática AGAPEMA	Galicia
Sociedad Melillense de Educación Matemática SBM – XEIX	Melilla
Societat Balear de Matemàtiques	Balears

J.A.E.M.: Every two years the F.E.S.P.M. holds the national meeting of mathematical education with 800 participants. The last one was the XIII JAEM in Granada (July 2007) and the next one will take place in Girona in 2009.

Regional Activities. All societies organize their regional congresses, distribute their publications and news, i.e., there is a perfect combination of national and regional activities, seminars, courses, etc.

SUMA. In a meeting held in Granada we decided to publish a journal to be distributed among all members of the FESMP and devoted to mathematics education questions that could be of interest to all associates. The first issue was published in 1988 and its directors have been Rafael Pérez-Gómez; Sixto Romero; Emilio Palacios and Julio Sancho, Francisco Martín and Inmaculada Fuentes. So far 53 issues were published and 6000 copies were distributed, the journal has a lot of articles and it is a full color publication. It is an extremely useful vehicle for the exchange of ideas and informations (<http://revistasuma.es>).

The F.E.S.P.M. has also a Publication Service coordinated by Ricardo Luengo which publishes monographs, books of special educational interest, etc.

Mathematical competitions. At regional and national level, with an exponential growth of participation there are many competitions: mathematical Olympiads, Cangur competition, Fem matemàtiques, Ginkamas, etc.

A Mathematical Day in the School. Every 12th of may (anniversary of Pere Puig-Adam’s birthday) in many schools there is a mathematical day devoted to a topic fixed by the F.E.S.P.M. which distributes a working document.

ESTALMAT. Initiated and designed by Miguel de Guzman in Madrid, the program Estalmat devoted to develop the mathematical talent of 11-12 year-old students has been a great initiative that many societies have also been developing in the last years.

Comisión de Educación. The Spanish Committee of Mathematics (CEMAT) coordinates today international activities related to IMU and promotes many different educational and research initiatives. The organization of the ICM 2006 in Madrid was for the CEMAT the equivalent that the organization of ICME8 was for the F.E.S.P.M. Among other commissions the CEMAT has an Educational Commission (<http://www.ce-mat.org/educ/educ.htm>) whose president (at this moment professor Tomas Recio) is the delegate of Spain in ICMI. Several societies of teachers and mathematics are represented and concrete national initiatives are promoted.

International projection. The F.E.S.P.M. has been growing by involving in the iberoamerican congresses CIBEM, in the FISEM since 2003 (Federación Iberoamericana de Sociedades de Educación Matemática) which includes societies from Argentina, Brazil, Chile, Colombia, Peru, Portugal and Uruguay) and in the European federation F.E.A.P.M.

In the last decade there has been a wider participation of spanish mathematics educators in all kinds of international activities CIAEM's, NCTM's, ICME's, ICMI studies, etc.

Mathematics Education Research. Universities in Granada, Valencia and Barcelona (UB and UAB) have been offering master and PhD studies on mathematics education. There is also a society devoted to research in mathematics education and an expanding number of full and assistant professors in the area.

5 CONCLUSION

Other countries may be interested in hosting a future ICME. The Spanish case of ICME8 shows that such a "one-week congress" may be an excellent motivation for organizing and promoting new challenges for the national community of mathematics education. It's a lot of work but it's a good bet for the future.

REFERENCES

1. C. Alsina, J.M. Alvarez, M. Niss, A. Pérez, L. Rico, A. Sfard (Editors) (1998) Proceedings of the 8th International Congress on Mathematical Education, Sevilla, Pub. S.A.E.M. Thales.
2. C. Alsina, J.M. Alvarez, M. Niss, A. Pérez, L. Rico, A. Sfard (Editors) (1998) 8th International Congress on Mathematics Education. Selected Lectures. Sevilla, Pub. S.A.E.M. Thales.