

Preface

This collection of reports on the state of mathematics teaching in Sweden is due to the first international movement for reforms in mathematics education as launched by the first ICMI, established in 1908 by the fourth International Congress of Mathematicians in Rome —then under the non-English name *Internationale Mathematische Unterrichtskommission* (IMUK) and resp. *Commission Internationale de l'Enseignement des Mathématiques* (CIEM). This committee had been founded upon the proposal of David Eugene Smith, one of the first professors for mathematics education, at Teachers College, Columbia University in New York.

The original task as voted by the ICM had been a rather compilatory one, that the invited countries should report about the situation of mathematics teaching in their secondary schools. Felix Klein, who was elected president of the IMUK, succeeded in extending the task considerably. Not only were 15 more countries—from all continents—invited to participate, beyond the originally 18 “civilised” countries, but the scope was enlarged to all types of schools: all schools for general education, including primary schools, and even professional schools. Moreover, the national reports should be complemented by thematic reports, focussing on key issues of mathematics teaching and serving as a means to disseminate concepts for reforming that teaching.

The first IMUK had been established with a limited mandate only, originally just four years. Since the—extended—task had not yet been accomplished by 1912, the mandate was prolonged until 1916. Due to World War I, work became halted and the committee became even dissolved in 1920, as an effect of WW I. The main tasks, the thematic reports and the national reports had been realized to a large extent until 1914 already.

The list of the publications within the mandate of IMUK, published upon the dissolution in 1920, shows an impressive number of important reports, all in all 294 reports from the active countries.

The Swedish reports show clearly that the organizers had adapted the general vision of the IMUK in elaborating the national state of the art. They embraced not only all types of institutions providing general education, i.e. from primary school over realist and classical secondary schools and secondary schools for girls to university, but also the technical and vocational part of institutions with mathematics teaching, thus *Gewerbeschulen* and *technische Mittelschulen* up to the technical colleges.

Moreover, as shows already the introduction to the volume by the two editors, the Swedish national committee for mathematics teaching had embraced also the core of the genuine reform program, namely to introduce the elements of the infinitesimal calculus into the syllabus for secondary schools.

In fact, Sweden had actively participated in the works of IMUK/CIEM. It had been invited by the ICM in Rome to constitute a national subcommittee of IMUK and to be represented within the *Comité central* by one *délégué*, like Denmark and Norway. This had been due to a formal criterion—a regular participation by mathematicians at the earlier ICMs.

By 1909, H. von Koch had been nominated as this Swedish *délégué*. He was busy in constituting a Swedish national committee and succeeded in establishing such a body, with ten members. The committee was enormously effective in producing the various national reports according to the format desired by the *Comité central*. The general report of IMUK to the 1912 Congress in Cambridge underlined that nine countries had already achieved their task of delivering national reports, naming these nine in chronological order: the first one being Sweden (*L'Enseignement Mathématique*, vol. 14, 1912, p. 450).

It seems that financial reasons impeded that the Swedish representative participated of the meetings of the *Comité central*.

Moreover, early in 1914, Koch had to resign, due to health reasons; he became substituted by his colleague Göransson. While regretting Koch's resign, the IMUK expressly remembered his efficiency in organizing the national reports (ibid. vol. 16, 1914, p. 179).

Göransson's report in this volume has been used for Beke's monumental general report on the key thematic issue for the reform of mathematics teaching: the results obtained by the introduction of the elements of the differential and integral calculus into secondary schools (ibid., p. 256). The fact that the 1916 meeting had been scheduled, at the meeting of April 1914 in Paris, to be held in Stockholm documents the international appreciation of the Swedish works.

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