

# **A cultural-historical perspective on the promotion of mathematical giftedness in Germany**

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With industrialization at the beginning of the 19th century and the growing importance of technology, natural sciences and mathematics in business, trade and administration in Germany, the state's interest in discoveries and developments in mathematics and the possibilities of diagnosis and promotion of giftedness also grew. The promotion of mathematical giftedness in the school context was therefore also linked to the state's interest in economic growth and thus to the promotion of elites. The understanding of mathematical giftedness as a potential for later successful mathematical activity, as a disposition to effortlessly grasp conceptual mathematical structures meant for the school context mathematically highly qualified teachers (Krutetskii, 1976). Another approach to mathematical giftedness is the concept of performance as measurable success. The latter is not based on potential, but on given criteria for assessing an activity. The development of such measurable criteria has determined the research since the end of the 19th century (Kössler, 2018, Böker & Horwarth, 2018). At the same time, the importance of mathematics as a school subject grew. Looking at the major international reforms in mathematics education over the past 150 years, one of the recurring themes was to narrow the gap between modern, rapidly developing mathematics and, by contrast, backward school mathematics (Kitz, 2018, Krüger, 2000). The differentiation of mathematical research areas and the associated broader perspective on the promotion of mathematical gifted pupils changed also the concept of mathematical talent in the school context.

The talk examines from a cultural-historical perspective, the development of the concept of mathematical giftedness and its promotion in the school context in Germany over the last 150 years. In doing so, connections are worked out with the perspective of critical mathematics education with regard to various interest groups in mathematical talent (Ernest, 1991).

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