

Professor Zigmās Žemaitis (1884-1969) as a reformist of mathematics teaching in Lithuania

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At the beginning of the 20th century when Lithuania as an independent state was just being formed the building of modern education system seemed to be an important aim. In achieving this aim especially in developing mathematics teaching at school a mathematics professor Z. Žemaitis's merit is obvious.

After successful mathematics studies in Odessa (Novorossijsk) University in 1903-1908, Zigmās Žemaitis returned to Vilnius where he worked at a private gymnasium school for girls. During World War I he retreated to Voronezh. In Voronezh in M. Yčas's gymnasium school for Lithuanian war refugee boys Z. Žemaitis taught mathematics in 1915-1918. At this period Z. Žemaitis coined some Lithuanian terms of mathematics.

After returning to Lithuania in 1918 Z. Žemaitis founded Lithuanian gymnasium in his native town Švenčionys and was assigned its first Head. When Vilnius region was occupied by the Poles Z. Žemaitis retreated to Kaunas and became the Head of a commercial school. In January 27, 1920 the group of the representatives of the Lithuanian intelligentsia opened so called High Study Courses in Kaunas having in mind that later they will open Lithuanian university. Z. Žemaitis who was one of the members of that group became the first Head of the High Study Courses. In February 16, 1922 when Lithuanian university was being established Z. Žemaitis formed the kernel of the Faculty of Mathematics and Nature. In July 6, 1922 Z. Žemaitis was elected an extraordinary professor.

Z. Žemaitis as a professor, having experience of pedagogical work especially in teaching mathematics at secondary school, alongside with other university subjects taught methods of mathematics teaching, too. It was a very important subject for future teachers of mathematics.

After 1920-1924 reform of Lithuanian system of education Lithuanian secondary schools implemented 12-year study model. The syllabi of subjects taught at school were revised. Z. Žemaitis in detail discussed ongoing changes in Lithuanian schools in the

article “The fundamentals of high mathematics in curriculums of high schools”. A professor Z. Žemaitis as an advocate of a German mathematician F. Klein’s ideas pointed out the importance of the subject of mathematics in developing students’ thinking, developing power of soul, and providing practical life-oriented knowledge. Z. Žemaitis following Western Europe idea that “functions, their fluxions and the notion of their geometrical interpretation mainly depend on general culture” proposed to change mathematical programmes in two directions: including analytical geometry and analysis of mathematical infinite smallness. Taking into consideration Merane syllabus (1905) Z. Žemaitis decided to prepare schoolchildren for understanding of the notion of “function” already in junior classes. Later on, after studying proportion in arithmetic, the notion of “function” was developed in algebra and geometry study courses. Alongside with the aforementioned things differentiation, integration, function extremes were introduced as things related to geometry. These ideas were approved in January 3-5, 1928 during the first conference of Lithuanian teachers of mathematics, physics and cosmography in Kaunas. Besides, the professor mentioned 2 main aims of the teachers of mathematics, i.e. “formal” and “material”, and highlighted the importance of the content for the development of students’ mind and their faculties applicable in natural and social sciences and practical life. The course of reformed mathematics according to Z. Žemaitis is taught in three stages: the first stage (lower) takes up counting, the second (middle) deals with systemic theoretical analysis of materials, their development and deepening, the third one (higher) scientifically and philosophically reviews the whole course.

Thus, with the beginning of the 4th decade of the 20th century syllabi of mathematics in Lithuania were reformed as a result of influence of European traditions in teaching. Z. Žemaitis suggestions had a great influence over it.

In Soviet times professor Z. Žemaitis continued teaching of mathematics methods at Vilnius University and published several publications on the topic.

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