

# Knowledge oriented or competence oriented?

## Debate on mathematics curriculum standard in China

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Since 2000 the eighth national mathematics curriculum innovation has been ongoing in China, one of the special events is to develop a mathematics curriculum standard for grade 1 to grade 9. (Liu, Jian & Sun, Xiaotian, 2002) Within this standard some core ideas about mathematics education have been changed, it seemed to challenge our traditional background of mathematics education. So the debate on the actual mathematics curriculum has been happened. This paper will only focus on one debate viewpoint: should the mathematics curriculum standard knowledge oriented or competence oriented? (Fan, Lianghuo & Huang, Yiyang & Cai, Jinfa & Li, Shiqi, 2004)

In order to make understanding why knowledge as well as competence has been discussed, in the first part of this paper I will analyze the knowledge oriented mathematics teaching in China in brief. The knowledge oriented mathematics teaching has been taken root in Chinese tradition, and Chinese students have profit from this mathematics education, for instance, Chinese students are good at basic knowledge and basic skill which are important foundation of mathematics understanding, so the idea of “two basic mathematics education” has become primary thought of mathematics teaching in China. (Zhang, Dianzhou, 2006) Of course this thought has also some disadvantages, for instance students are short of viewing world actively from mathematics vision.

In the second part I will report the actual national mathematics curriculum innovation, and specially will explain what innovation from the view of mathematics curriculum standard means, it can be characterized by “competence oriented”. Making use of some examples from lower secondary level I will explain how we understand the exchange from knowledge oriented idea toward competence oriented idea and also analyze the debate upon the actual mathematics curriculum standard. Not only the mathematics educators but also Chinese mathematicians have taken part in this debate, (Jiang, Boju, 2005; Wang, Cesan, 2004; Zhong, Qiquan & You, Baohua, 2004)

so it has given us consideration how we regulate our innovation so that we can find balance between knowledge oriented and competence oriented.

In the third part of this paper I will focus on the profit from this debate. Now our national mathematics curriculum standard has been modified through an expert commission, the traditional thought "two basic mathematics education" has been also developed. (Xu, Binyan, 2005; Neubrand, Michael, 2004) Using some mathematics examples from lower secondary level I will interpret the trends and challenges of our mathematics curriculum standards and also the impact on our mathematics teaching in china.

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