# Chapter 19
# Design of Crowd Creative Collaborative Education Model Based on PBL: Background, Reflection, and Teaching Practice in Northeastern University in China

**Xinbo Sun**
*Northeastern University, China*

## ABSTRACT

*The global information technology revolution puts forward the following requirements for higher education: education mode transforms from experience education to overall education; education mechanism transforms from traditional management to comprehensive governance; the educational goal transfers from the traditional knowledge to the ability training. In such a macro educational background, the structural contradictions in China's higher education have triggered the supply-side reform of education. The implementation of this reform to Northeastern University requires us to vigorously promote the excellent education action plan in view of the current teaching reality and local difficulties in Northeastern University to change the logic of unilateral teaching into the logic of co-creating education. Based on comprehensive learning of PBL education paradigm, the author of this chapter, based on his own teaching practice and reflection of educational philosophy, puts forward the collaborative education mode of crowd innovation and gives the basic framework of this model. On this basis, specific cases and suggestions are given.*

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## INTRODUCTION

Problem-Based Learning (PBL) is a student-centered education method based on the real world. It was initiated by American neurology professor Borrows in McMaster University in Canada in 1969 and has become a popular teaching method in the world.

Different from the traditional subject-based teaching method, PBL emphasizes students' active learning rather than teachers' teaching in traditional teaching. PBL links learning to larger tasks or problems to engage learners in the problem; it designs realistic tasks, emphasizes setting learning in complex and meaningful problem situations, and solves problems through learners' independent exploration and cooperation, to learn the scientific knowledge hidden behind the problems and develop problem-solving skills and independent learning ability.

Problem-oriented teaching method, problem-based, student-centered, teacher-oriented heuristic education, to cultivate students' ability as the teaching goal. The essence of PBL teaching method lies in giving full play to the guiding role of problems in the learning process and arousing students' initiative and enthusiasm.

## BACKGROUND

### The Global Information Technology Revolution Puts New Demands on Chinses Higher Education

As so far, human society has experienced the pre-agricultural society, agricultural society, industrial society, and information society. Today's human beings are in the early stage of the information age. Under this circumstance, the global reality of informatization poses new challenges to Chinese higher education, and the challenges mainly include the following three aspects:

First, the education model has transformed from traditional experience education to integrated education. The traditional higher education model is a segmented, single-field empirical education. The teachers engaged in higher education mainly come from a certain major or a certain subject in a university. The basic logic of educational activities is from books to books, and research to the research. Such a logic lacks experience and test of the practical process. In other words, this single-experienced education model has already not adapted to the needs of the cross-disciplinary integration of higher education in the context of big data in the information age. The age of information network asks for the integration of the natural and social science education models to cope with the challenges of digital civilization. The integrated education concept, based on humanity's destiny community and world citizenship and lifelong education, is increasingly important. So, based on the requirements of the global information network, higher education has emerged as an interdisciplinary, cross-regional and cross-cultural integration of "teaching, learning, and education". At the same time, information technology elements are more quickly integrated into education, schools, and classrooms which enrich the selectivity, diversity and inclusiveness of learning resources. Thus, learners can choose their own learning style more freely. Besides, the development of artificial intelligence (AI) has shown a great impact on education and teaching, and also teachers and students. Nowadays, the classes selection model is being gradually promoted. Personalized learning that can meet the individual needs of learners has also become an important form of learning. All these are the reality under technical logic that the integrated education concept must face in the future.