



ELSEVIER

Contents lists available at ScienceDirect

International Journal of Educational Research

journal homepage: www.elsevier.com/locate/ijedures

Impact of curriculum reform: Evidence of change in classroom practice in mainland China

Qiong Li ^a, Yujing Ni ^{b,*}

^a Center of Teacher Education Research, Beijing Normal University, Beijing, China

^b The Chinese University of Hong Kong, HKSAR, China

ARTICLE INFO

Key words:

Curriculum reform
Primary mathematics
Curriculum evaluation
Classroom observation
Instructional tasks
Classroom discourse

ABSTRACT

The study examined the impact of curriculum reform on teaching practice in primary mathematics in mainland China. The participants included 58 fifth grade mathematics teachers from 20 schools. Thirty-two of the classrooms had utilized a reform curriculum for 5 years prior to conducting the study, and the remaining 26 had been using the conventional curriculum. Each of the 58 teachers was videotaped for 3 of his/her classes during a 3-day period and the videotaped class sessions provided the data source for the study. The focus of the study was on the instructional tasks that were implemented in the classrooms and on the teacher and student interaction. Results indicated that a greater proportion of high cognitive level tasks were implemented in the reform classrooms when compared to those in the non-reform classrooms. Numerical symbolic representation as well as single-solution strategies were dominant in the instructional tasks for both groups. However, in the reform classes a higher proportion of instructional tasks were used that involved visual illustrations and hands-on manipulation and multiple-solution strategies. An analysis of classroom discourse showed that most of the teacher questions were related to memorizing exercises and explanations of answers. However, the teachers from the reform classrooms were more likely to ask students to describe the procedure that led to an answer and to inquire further into students' responses. The results indicated positive changes in classroom practice resulting from implementation of the new curriculum.

© 2011 Elsevier Ltd. All rights reserved.

The present study addressed the apparent lack of empirical evidence on whether or not the recent curriculum reform in China¹ has influenced classroom practice as intended by this reform. The study focused on two aspects of evidence for changes in classroom instruction: (1) whether or not teachers implemented high-cognitive demand tasks and (2) whether or not teachers fostered productive discussion and provided encouragement for students to share and communicate their ideas. We begin by providing a sketch of the background and conceptualization of the study, then we report the results of the study. Finally, we discuss our interpretations of the results and provide suggestions for future research.

* Corresponding author at: Department of Educational Psychology, The Chinese University of Hong Kong, Hong Kong, China.

E-mail address: yujing@cuhk.edu.hk (Y. Ni).

¹ The reform curriculum was implemented in People's Republic of China. Thus, in this special issue, all instances of the word 'China' refer to the People's Republic of China.

1. Background and conceptualization of the study

1.1. Background

The most recent curriculum reform in China, begun in 2001, entails a series of measures to reform the current practices of primary and secondary education that include curriculum standards, textbooks, teaching methods, and assessment systems. According to the *Curriculum Reform Guidelines for the Nine-Year Compulsory Education*, issued by Ministry of Education (2001a, 2001b), the main objectives of the new curriculum reform include the following:

1. Change of the trend toward overemphasizing knowledge delivery and putting more emphasis on students' active participation to develop their abilities such as collecting and processing new information, gaining new knowledge independently, analyzing and solving problems, and communicating and cooperating with others;
2. Change in the curriculum structure from an overemphasis on separate school subjects to courses that are more integrated with one another;
3. Change of the difficult, complicated, and outdated curriculum content with its overemphasis on textbook knowledge and replacing it with the curriculum content that reflects students' reality and the new developments of modern science and technology; and
4. Decrease of control by the central government over curriculum material and encouragement for developing local curriculum by local educational authority and community.

More specifically, the new mathematics curriculum embraces a three-dimensional objective, which includes knowledge and skills, processes and methods, as well as affective demeanor and value. Each dimension is intended to nurture all-around development of students (see Ni et al., in this issue, for detailed information about the objectives). The new reform also is intended to initiate fundamental changes in the function, content, and pedagogy of the curriculum. It seeks to shift the focus away from transmitting knowledge by teachers toward the construction of knowledge by students, enhancing the connection between school subject matter and real-life applications. Finally, the reform curriculum also aims to change the emphasis from passive, reception-oriented learning to an emphasis on participatory, exploratory, and hands-on experiences for students (Ministry of Education, 2001a, 2001b; Xu, 2001).

The new mathematics curriculum was first implemented in 2001 with 38 pilot districts from 27 provinces in China. By the fall of 2006, almost every region in China had started to implement the new curriculum. The ultimate goal of the reform effort is to bring about changes in classroom practice and consequently to improve teaching and learning for large numbers of students. Therefore, the question posed by the present study is whether, in fact, curriculum reform has made a difference in both classroom practice and student learning outcomes. Among the few empirical studies in China that investigated the impact of the new curriculum, Yu (2003) found that teaching practice in the reform classrooms became more varied and included more active participation by students. Classroom teaching included a range of activities such as obtaining knowledge through reading, exploration, reflection, observation, manipulation, and questioning. Ma (2005) conducted a survey in reform classrooms and found that the students in those classrooms were encouraged to state their views, explain their ideas, and respond to the ideas of their classmates.

On the other hand, the studies also found that teachers who were piloting the new curriculum were having significant problems teaching effectively using the new reform approach. For instance, 'classroom discussion' was sometimes little more than teacher-centered question-and-answer sessions, where teachers were inclined to pressure students to agree with them. 'Self-directed' learning often became situations where some teachers permitted students to do whatever they liked, without guidance, feedback or requirements. Group work was sometimes ineffective, particularly when teachers assigned students to groups for discussion of questions regardless of the difficulty or value of these questions and without purpose, conditions, time limits, or guidance from the teachers (Yu, 2003). There was also a tendency to concentrate on the textbook rather than the standards defined by the curriculum (Shan, 2002). These observations highlight the inherent problems associated with attempts to mechanically apply teaching methodologies without the philosophical intent of the prescribed curriculum goals.

Findings such as those discussed above have provided valuable information on the subject of reform implementation in China. However, these studies had several limitations. The first of these was the lack of comprehensive evaluation frameworks for teacher classroom practice. The studies only examined the changes of teaching methods, teacher questioning, and classroom activities in reform contexts from a single and narrow perspective (Ma, 2005; Shan, 2002; Yu, 2003). However, the classroom is a dynamic place where the interaction between teacher, students, and resources produces engagement and learning (Brophy & Good, 1986). Consequently, it is difficult to present an accurate assessment of changes in teaching practice within the context of reform by simply focusing on one specific dimension of teaching and learning. A second limitation was the obvious omission of non-reform samples as a comparison group in the research design. Thus, there was no direct evidence to demonstrate the impact of the reform on classroom practice. A third limitation was the lack of large-scale video studies to describe the dynamics of teaching and learning in the classroom. Video recording is a powerful tool that enables more precise, complete, and subtle analyses of interactive teaching practice (Janík & Seidel, 2009; TIMSS Video Mathematics Research Group, 2003). Because previous research was limited to data based on self-reporting by teachers and unstructured observations, many important details were overlooked.

Download English Version:

<https://daneshyari.com/en/article/357116>

Download Persian Version:

<https://daneshyari.com/article/357116>

[Daneshyari.com](https://daneshyari.com)