

## 目次

### 数学教育概论

- 走向数学教育哲学研究.....谢明初(1)  
中国数学文化发展与数学文化学构建.....徐乃楠, 刘鹏飞, 王宪昌(4)  
数学教学内容知识(MPCK)的构成成分表现形式及其意义.....李 渺, 宁连华(10)  
60年来初中数学教材编写的历史沿革与启示——以人教版为例.....杨慧娟, 裴昌根(15)  
论数学计算及其教学.....徐彦辉(19)

### 调查与实验

- 自我解释对等差数列概念和通项公式远近迁移的影响.....连四清, 曾 辉(23)  
初中生数学学习观调查研究.....伍志鹏, 吴庆麟(26)  
北京市中小学生数学解决问题能力学习质量评价报告.....杜文平(30)  
小学数学习困生的学习情感心理特征及影响因素研究.....罗少成, 景 敏(34)  
透视高效数学课堂教学行为——基于优秀初中数学教师的个案研究.....杨 田, 王广辉(37)  
初中数学教师教学设计能力研究.....左 坤(41)  
新课改下小学生数学真实性问题解决能力的调查研究.....张永雪(45)  
地方师范院校文科大学生数学素养的现状和提高.....吴晓红, 周明儒, 苗正科(49)

### 数学教育改革

- 地方高校分析类数学课程教学内容及体系的改革与实践.....曹广福, 叶瑞芬(53)  
新课改后数学教学中仍存在的问题与对策——基于“教承包着学”“学跟着教”形态的调查研究.....夏玉钦, 李千路(57)  
以考研辅导应对高等数学课时减少的分析与建议.....丁 胜(61)  
关于高职院校微积分教学软件的若干思考.....袁立新(65)  
知识元与问题活性化设计研究.....蒋志萍(69)

### 争鸣与评论

- 数学教育研究方法:多元并存 各尽其用.....黄兴丰, 翟红村 编译(73)  
关于中学数学教育研究的元研究——基于2005—2009年中国期刊网数据的分析.....王宽明, 夏小刚(78)  
如何让学生用数学语言说话.....高全胜, 杨 华(82)  
数学概念教学应该帮助学生形成七种数学观念.....李吉宝(88)

### 比较数学教育

- 美国《中学数学教与学》教材的特点及其对中国数学教师教育的启示.....吕世虎, 高 丽(90)  
代数教科书中的“因式分解”沿革研究.....张 伟, 代 钦(94)  
韩国职前数学教师教育的评价与分析.....仲秀英, 陈 婷(98)

### 会议纪要

- 数学英才教育的国际比较.....李亚玲, 张英伯(102)

# JOURNAL OF MATHEMATICS EDUCATION

Vol.20 No.2 Apr. 2011

## CONTENTS

|   |  |
|---|--|
| Stepping into Philosophy of Mathematics Education.....  | XIE Ming-chu ( 1 )                               |
| Development of Mathematics Culture in China and Construction of Mathematics Culturology.....  |  |
| .....   | XU Nai-nan, LIU Peng-fei, WANG Xian-chang ( 4 )  |
| Study about the Component and Form of Mathematics Pedagogical Content Knowledge and Its Meaning.....  |  |
| .....   | LI Miao, NING Lian-hua ( 10 )                    |
| Development and Enlightenment of People Education Press's Mathematics Textbooks of Middle School in the Late Sixty Years.....   |  |
| .....   | YANG Hui-juan, PEI Chang-gen ( 15 )              |
| On Mathematical Computing and Its Teaching .....  | XU Yan-hui ( 19 )                                |
| Self-explanation Effect on the Far-transfer and the Near-transfer of Arithmetic Progression Concept and Its General Term Formula.....   |  |
| .....   | LIAN Si-qing, ZENG Hui ( 23 )                    |
| Study on Middle School Students' Conceptions of Mathematics Learning.....   | WU Zhi-peng, WU Qing-lin ( 26 )                  |
| Report on Evaluating the Quality and Problem-solving Skills in Mathematics among Elementary and Middle School Students in Beijing.....  |  |
| .....   | DU Wen-ping ( 30 )                               |
| Research on the Mental Characteristics of Learning Emotion on Primary Math and Its Influencing Factors.....   |  |
| .....   | LUO Shao-cheng, JING Min ( 34 )                  |
| Case Study about High-effective Mathematics Teaching Behaviors Based on A Mathematics Teacher in Middle School.....   |  |
| .....   | YANG Tian, WANG Guang-hui ( 37 )                 |
| Research on the Ability of Teaching Designing of Middle School Math Teachers .....  | ZUO Kun ( 41 )                                   |
| Survey Research on Pupils' Ability of Solving Mathematics Authenticity Problem under New Curriculum.....  | ZHANG Yong-xue ( 45 )                            |
| Present Situation and Improvement of Mathematics Literacy for Liberal Arts Undergraduates in Local Normal Universities.....   |  |
| .....   | WU Xiao-hong, ZHOU Ming-ru, MIAO Zheng-ke ( 49 ) |
| Reform and Practice of the Content and System of the Mathematical Courses in Analysis Class for Local Universities .....  |  |
| .....   | CAO Guang-fu, YE Rui-fen ( 53 )                  |
| Mathematics Teaching in the Still Existing Problems and Countermeasures—Based on Investigation “Class But Will Not Understand Problem Solving” .....                            | XIA Yu-qin, LI Qian-hu ( 57 )                    |
| Analysis and Recommendations on Dealing with the Reduction of Class Hours of Higher Mathematics via Graduate Entrance Examination Counseling.....                               | DING Sheng ( 61 )                                |
| Some Thoughts on Teaching Software of Calculus in Higher Vocational Colleges .....  | YUAN Li-xin ( 65 )                               |
| On Fundamental Knowledge Elements and Design of Active Knowledge System.....  | JIANG Zhi-ping ( 69 )                            |
| Research Methods in Mathematics Education: Diversification and Multipurpose.....  | HUANG Xing-feng, ZHAI Hong-cun ( 73 )            |
| About Meta-study on Mathematics Education Studies in Middle School under the Background of New Curriculum Reform——Based on A Analysis in CNKI Databases in 2005—2009 Years..... | WANG Kuan-ming, XIA Xiao-gang ( 78 )             |
| How to Teach Students Speaking in Mathematics Language.....   | GAO Quan-sheng, YANG Hua ( 82 )                  |
| Mathematical Concepts Should Help Students to Form Seven Mathematics Idea .....   | LI Ji-bao ( 88 )                                 |
| Learning and the Revelation for Our Mathematics Teacher Education.....  | LV Shi-hu, GAO Li ( 90 )                         |
| Study on the History of “Factorization” in the Algebra Textbooks.....   | ZHANG Wei, DAI Qin ( 94 )                        |
| Review of Pre-service Mathematics Teacher Education in Korea .....  | ZHONG Xiu-ying, CHEN Ting ( 98 )                 |
| Summary.....  | LI Ya-ling, ZHANG Ying-bo ( 102 )                |