

# 熊晓东 教育 论文

The Analecta of Xiong Xiaodong  
**Gifted Education  
in China**  
Baijia Publishing House

百家出版社

**Bruce R. Vogeli博士**  
美国哥伦比亚大学

■贯穿熊晓东先生所有论文的一个鲜明的主题是：英才教育，要注重国家利益第一的教育和社会责任感的培养。■这卷书——《英才教育在中国》——概述了熊晓东的教育思想，并且为世界英才教育这一重要领域作出了贡献。■《英才教育在中国》一书论证、拓展了社会主义国家教育的目标并可能发生的矛盾的解决方法作了论述。中国人民会代表他们的国家，代表他们的教学、理科英才们感谢熊晓东所做的努力和取得的成就。

# 英才教育在中国

熊晓东教育论文

# 英才教育在中国

熊晓东 著

百 家 出 版 社

**图书在版编目(CIP)数据**

熊晓东教育论文:英才教育在中国/熊晓东著.

上海:百家出版社,2005.1

ISBN 7-80703-247-2

I. 熊... II. 熊... III. 教育-中国-文集

IV. G52-53

中国版本图书馆 CIP 数据核字(2004)第 129906 号

书 名 熊晓东教育论文:英才教育在中国  
编 著 者 熊晓东  
责任编辑 陈闵梁 胡国友  
装帧设计 梁业礼  
出版发行 百家出版社(上海天钥桥路 180 弄 2 号)  
经 销 全国新华书店  
印 刷 江苏句容排印厂  
开 本 720×1020 1/16  
印 张 20  
字 数 400000  
版 次 2005 年 1 月第 1 版第 1 次印刷  
印 数 1—2000 册  
ISBN 7-80703-247-2/G·109  
定 价 36.00 元

“熊老师是我国广大教师的优秀代表，他的事迹感人至深。长期以来，熊老师呕心沥血，开拓创新，无私奉献，为我国教育事业做出了杰出贡献。他为祖国培养了一大批优秀人才，真是‘桃李满天下’。”

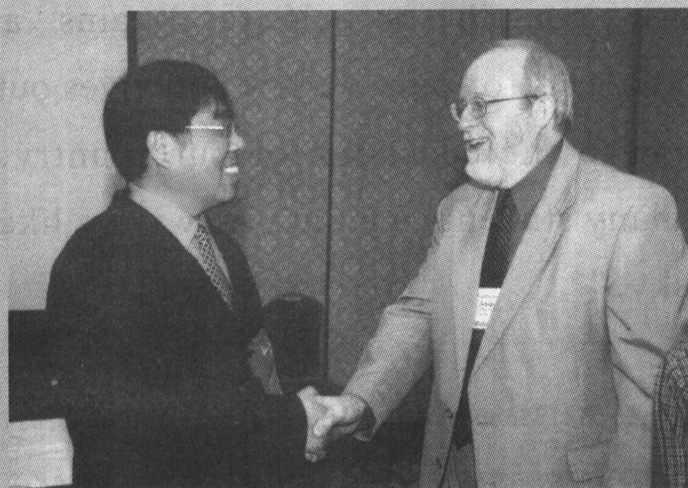
(摘自陈至立同志写给熊晓东的学生的复信)

“Mr. Xiong is an illuminant representative of our country's teachers. His deeds impressed us deeply. Mr. Xiong sheds his heart's blood, opens up innovations, contributes selfless, trains a lot of excellent students for our country and gives outstanding contribution to the education of our country. He has nurtured many students who are now truly like stars all over the sky.”

*(Chen Zhili, Member of the State Council, the People's Republic of China, highly evaluated Xiong Xiaodong's work, writing in reply to Xiong Xiaodong's students.)*



美国哥伦比亚大学教师学院  
Bruce R. Vogeli 教授与熊晓东合影



美国全美数学教师委员会主席  
Johnny W. Lott 博士与熊晓东合影

贯穿熊晓东先生所有论文的一个鲜明的主题是：英才教育，要注重国家利益第一的教育和社会责任感的培养。

这卷书——《英才教育在中国》——概述了熊晓东的教育思想，并且为世界英才教育这一重要领域作出了贡献。

《英才教育在中国》一书论证、拓展了社会主义国家教育的目标，并对可能发生的矛盾的解决方法作了论述。中国人民会代表他们的国家，代表他们的数学、理科英才们感谢熊晓东所做的努力和取得的成就。

Bruce R. Vogeli 博士  
美国哥伦比亚大学

One theme that permeates all of Mr. Xiong's work concerning gifted education is the high responsibility of the gifted for service to society.

This volume — *Gifted Education in China*—summarizes Xiong Xiaodong's thoughts and contributions in this important field.

*Gifted Education in China* reconciles, substantiates and extends the sometimes-conflicting interpretations and goals of education in a socialist republic. The Chinese people are indebted to Xiong Xiaodong for his efforts on behalf of their nation and its mathematically talented children.

Bruce R. Vogeli, Ph.D.  
Teachers College, Columbia University





## 序 一

鉴别、教育和发展那些具有特殊天赋和能力的人才 是每个国家的义务和职责。这一职责,如果能够公正地、有效地得以履行,那么,国家就可以确保拥有永不间断的专家学者、科学家、艺术家——他们中的很多人都会在国内外取得突出的成就。

近半个世纪来,中华人民共和国在教育上取得了举世瞩目的进步。这种成就尤其明显地体现在社会主义新中国在成立后的几十年里所实行的 大众普及教育。在最近的时期,那些以前没有被发现也没有给予特殊培养的中国最有天赋的孩子 们所蕴藏的巨大的潜力已经逐渐成为教育界所关注的焦点。

在整个数学教育这一重要领域内,在中国,熊晓东先生在为那些有潜力的、有希望的学生的教育培养上作出了十分专注、十分有效的努力。通过熊晓东先生在上海南洋模范中学的工作,以及他与亚洲和世界范围内教育专家的广泛联系,世界对中国的教育有了更多的认识,熊晓东先生为中国人民,特别是中国的数学、理科优秀学生们赢得了世界的认可和荣誉。这卷书——《英才教育在中国》——概述了熊晓东的教育思想,并且为世界英才教育在这一重要领域作出了贡献。不仅作为 一名数学、理科优秀学生的教师和激励者所具有的教学才能,而且熊晓东先生对 他的国家所体现的高度责任感和使命感都是一致公认的。

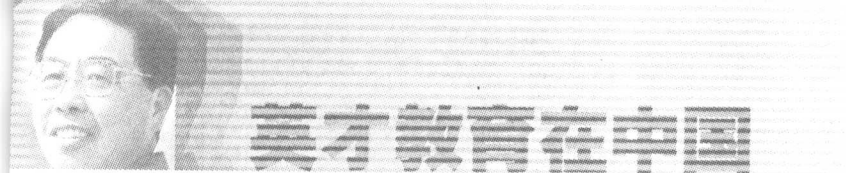
《英才教育在中国》一书论证、拓展了社会主义国家教育的目标,并对可能发生的矛盾的解决方法作了论述。中国人民会代表他们的国家,代表他们的数学、理科优秀生们感谢熊晓东先生所做的努力和取得的成就。

Bruce R. Vogeli, 哲学博士

美国哥伦比亚大学

教师学院 数学教育主任





## Preface 1

It is the obligation of every nation to identify, nurture and develop those among its citizen who have special talents and abilities. This obligation, if fairly and effectively discharged, serves the nation by insuring a never-ending succession of scholars, scientists and artists — many of whom may achieve prominence both within the nation and abroad.

The Peoples Republic of China has made remarkable educational progress in but half a century. This progress was especially evident in the education of the general population during the early decades of the socialist government. In more recent times the enormous potential, formerly neither recognized nor nurtured, of the most gifted Chinese youth has been the focus of certain educational leaders.

In the all-important field of mathematics no Chinese educator had been more involved or more effective in serving the needs of promising students than Xiong Xiaodong. Through his work at the Nanyang Model School and his extensive contacts with educators throughout Asia and the world, Xiong Xiaodong has brought recognition and honor to the Chinese people and especially to the mathematically talented student of the Peoples Republic of China. This volume — *Gifted Education: Thoughts and Practices in China* — summarizes Xiong Xiaodong's thoughts and contributions in this important field. In addition to his skill as a teacher and motivator of the mathematically talented, Xiong Xiaodong's commitment to his nation and its people cannot be underestimated.

*Gifted Education: Thoughts and Practices in China* reconciles, substantiates and extends the sometimes-conflicting interpretations and goals of education in a socialist republic. The Chinese people are indebted to Xiong Xiaodong for his efforts on behalf of their nation and its mathematically talented children.

Bruce R. Vogeli, Ph. D.

Program Coordinator

Program in Mathematics Education

Teachers College, Columbia University



## 序 二

熊晓东同志对数学理科班学生的研究,从独立性认知方式与内外倾向性格对数学学习的影响入手,以实验研究为基础,揭示独立性内向性格学生学习数学的特点,并提出相应的教育对策。这一研究,选题视角新颖,对进一步揭示数学理科优秀成长规律,促进理科优秀生的发展,对深化我国数学教育的理论与实践研究,具有重要的价值。

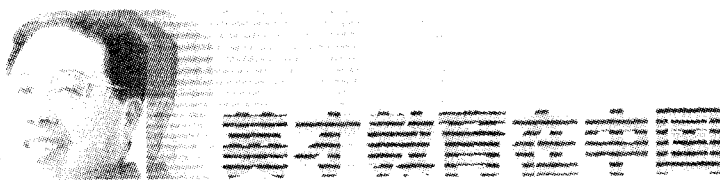
熊晓东的研究有他鲜明的特点:

第一,通过文献调查,较好地把握了场依存—场独立理论,以及英才教育的有关国内外研究现状,使他的研究和论文写作有一个较为扎实的立论点。

第二,通过实验研究,探讨独立性认知特点与数学学习的关系、对认知特点中缺点部分进行矫正的措施、培养英才教育的课程与教材的特点,以及现代教育信息技术在教学中的应用等问题。通过研究,得出数学理科班学生独立性水平的提高与性格方面,由外向性内向性变化呈正相关,与数学能力呈正相关;关于学生认知特点中的缺点,内向性格中的缺点部分,可以通过“个性社会化”进行矫正。这些认识,对同类研究将提供宝贵的启示。特别是研究所提出的“健全的人格是成才的保证”、“个性社会化”等理论观点具有一定的创新性。

第三,通过教育教学实践探索,形成了一套适合培养英才教育的课程和教材,开展了一系列的社会公益性的教育教学活动。研究有较好的实践效益。这项研究从理论与实践方面为全面迅速发展以国家利益为目标的中国英才教育提供了丰富的经验和实证分析。

第四,研究方法合理。熊晓东的研究长达十余年,历经四大实验,他以极大的奉献精神,执著的追求,对典型个案的观察、记录以及引导、培养,获得了大量丰富、生动的实证材料,为他的研究、论文撰写提供了论证的实践基础。



## *Preface 2*

The study of mathematic talented students by Mr. Xiong, based on experimental researches, started from the influence of independent cognitive style and disposition of introversion and extroversion on mathematics learning, makes people known the characteristic of mathematics learning of field independent, and puts forward its educational countermeasures with a new visual angle, which has important meanings on uncovering mathematical talented students' growing rules, promoting their development, deeping theories and practice of mathematics educational researches.

Mr. Xiong's research has its own particular characteristic:

Firstly, by literature review, this study well grasped the theory of Field-dependence and Field-Independence and the study actuality of domestic and overseas on talented education, which gives this study and paper writing a well-knit stand.

Secondly, by experimental research, this study discussed the relationship between the cognitive styles of field independence and the students' mathematics achievements, and how to improve the cognitive styles by wiping off the weak points, how to prepare and arrange courses and teaching materials for the talented, and how to apply the modern educational information technology in teaching and so on. From this research, we can find that field independent people may be introverts or extroverts and from extroversion to introversion. And it is a positive correlation. We also knew that disadvantages of the cognitive styles and field introversion can be corrected by "Individual Socialization". All of these conclusions will inspire congenetic researches. Especially, theories such as "Perfect Personality Is the Assurance of Growing into a Useful Person", "Individual Socialization", are innovations in some ways.

Thirdly, by educational and teaching practice exploration, this study formed a series of courses and teaching materials which fit for the talented, and developed a series of none-profit social teaching activities. This research made excellent practice benefit, and large amount of precious experience and case analysis have been obtained for the rapid and full-scale development of gifted education in China.



综观熊晓东同志的教育研究、教育实践活动、教育论文撰写,他的研究是有价值的,议题集中,研究思路明晰,内容丰富,有独到见解,研究方法合理,这一切都表明作者有坚实的教育理论功底、丰富的数学教育教学经验和强有力的科研能力。熊晓东研究的重要贡献是通过大量的实验研究,依据学生的学习特点、个性特点,以科学发展观,提出和实践了素质教育的丰富内涵:“以德育为核心,以实践与创新为重点”。

古人说:“博览而约取,厚积而薄发。”熊晓东的论文正是博观约取、厚积薄发之作,是熊晓东多年坚持教育科学研究、以教科研指导教育教学的集中体现。建议熊晓东同志对丰富的实证研究进一步进行概括提炼,进一步深入和拓展自己的研究。

裴娣娜(北京师范大学教育学院教育科学研究所所长,教授,博士生导师)

郭齐家(北京师范大学教育学院教授,博士生导师)

钱佩玲(北京师范大学数学学院教授)

张景斌(首都师范大学教育科学学院副院长,博士生导师)



Finally, the means of this study is reasonable. Mr. Xiong's research lasted over ten years and experienced four great experiments. He observed typical cases, noted, leaded, cultivated and obtained a great deal of vivid demonstration materials with prodigious dedication and clinging pursuit, all of which provided theory basic for his research and paper writing.

In conclusion, Mr. Xiong's educational research, educational practice activities, educational paper writing and his study are valuable. This paper has concentrative topic, transparent study thoughts, abundant content, original opinions, reasonable methods. All of these indicated that the author had stable educational theory foundation, plenty of mathematics teaching experiences and strong ability of scientific research. The significance of this research composed by a great deal experiments is to bring forward the concept of the quality-based education that moral education is the core of the whole education with cultivating the capability of creativity and practice. At the meantime, a series of new viewpoints and theories, such as "Perfect Personality Is the Assurance of Growing into a Useful Person", "Individual Socialization", were brought forward, which will surly help to carry out the further regulations of the growing of the mathematical and scientific talented.

The research indicated that Mr. Xiong has persevered in educational scientific research for many years and using that to lead his educational practice. Now we would like to make suggestions that Mr. Xiong should make more general and abstract on abundant research, and make more studies on deeping and widening this research.

Pei Dina (Professor, Tutor of doctor, Superintendent of Education and Science Research Department of School of Education of Beijing Normal University)

Guo Qijia (Professor, Tutor of doctor, School of Education of Beijing Normal University)

Qian Peiling (Professor, Department of Mathematics of Beijing Normal University)

Zhang Jingbin (Professor, Tutor of doctor, Assistant superintendent of College of Education of Capital Normal University)

## 目 录

### 熊晓东讲演

英才教育:来自中国的思考与实践 .....	1
-----------------------	---

### 熊晓东研究文献综述

世界英才教育的兴起与发展 .....	21
--------------------	----

### 熊晓东教育实验研究报告

场依存性——独立性的认知方式与内外向性格对数学学习影响的 个例实验研究 .....	75
--	----

### 熊晓东教育实验研究报告

谈数学、理科优秀生创新教育的六个方面 .....	91
--------------------------	----

### 熊晓东讲演

谈健全的人格是成才的保证 .....	143
--------------------	-----

### 熊晓东数学课堂教学

谈谈中学数学课堂教学中的思维容量、教学语言、发问和练习 .....	169
-----------------------------------	-----

### 熊晓东数学课堂教学

关于边际利润函数的讨论(数列的应用)(课堂教学实录) .....	189
----------------------------------	-----

### 熊晓东讲演

信息时代呼唤崭新的教育理念 .....	197
---------------------	-----

### 熊晓东教育谈话

谈创新教育实践中的几个问题 .....	205
---------------------	-----

### 熊晓东教育日记

在攀登卓越成功巅峰的道路上,我和孩子们同行 .....	231
-----------------------------	-----



## 熊晓东教育日记

飞越太平洋 .....	249
-------------	-----

## 熊晓东教育论文

论认知方式对理科班学生数学学习影响及其教育对策的研究(摘要) .....	259
--------------------------------------	-----

## 熊晓东教育个案

携爱而行 .....	273
------------	-----

## 附件:

1997年4月美国哥伦比亚大学邀请熊晓东赴哥大作学术访问的邀请信 .....	297
--	-----

2001年4月美国哥伦比亚大学邀请熊晓东赴哥大作学术访问的邀请信 .....	297
--	-----

2002年4月美国哥伦比亚大学邀请熊晓东赴哥大作学术访问的邀请信 .....	297
--	-----

2002年4月全美数学教师委员会邀请熊晓东作为主讲人赴美参加

(NCTM)第80届年会邀请信 .....	298
-----------------------	-----

2002年5月全美数学教师委员会给熊晓东的感谢信 .....	298
--------------------------------	-----

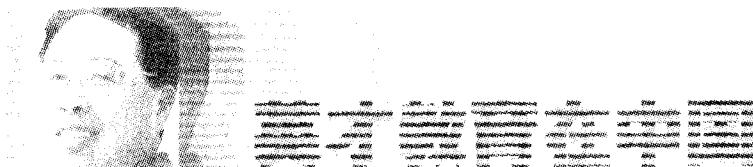
新时代先锋(熊晓东简介)——中国新闻社 .....	299
---------------------------	-----





# Content

<b>Xiong Xiaodong's Speech</b>	
Gifted Education : Thoughts and Practice in China .....	2
<b>Xiong Xiaodong's Literature Review</b>	
Origins & Development of World Gifted Education .....	22
<b>Xiong Xiaodong's Educational Research Paper</b>	
Influences of Cognitive Styles of Field Dependence and Disposition of Introversion and Extroversion on Mathematics Achievement ; A Case Study .....	76
<b>Xiong Xiaodong's Educational Research Paper</b>	
Six Aspects in Creative Education of Top Students of Mathematics and Sciences .....	92
<b>Xiong Xiaodong's Speech</b>	
Perfect Personality Is the Assurance of Growing into Useful Person .....	144
<b>Xiong Xiaodong's Mathematics Teaching</b>	
On Math Thinking Capacity, Instructional Language, Questioning and Exercising in School Classroom .....	170
<b>Xiong Xiaodong's Mathematics Teaching</b>	
Discussion on the Marginal Profit Function ( Arithmetic Sequence Application ) .....	190
<b>Xiong Xiaodong's Speech</b>	
New Idea of Theory Towards Education in the Information Era .....	198
<b>Xiong Xiaodong's Educational Talks</b>	
A Few Issues in the Practice of Innovative Education .....	206
<b>Xiong Xiaodong's Educational Diary</b>	
Accompany with My Children , on the Road to Climb the Peak of	



Success and Excellence .....	232
Xiong Xiaodong's Educational Diary	
Flying across the Pacific .....	250
Xiong Xiaodong's Dissertation	
Influences of Cognitive Styles on the Talented Students'	
Mathematics Achievement and Its Educational Countermeasures .....	260
Xiong Xiaodong's Educational Case Study	
A Journey of Love .....	274
 <b>Appendix</b>	
Invitation letter for Xiong Xiaodong Visiting Columbia University, 1997 .....	297
Invitation letter for Xiong Xiaodong Visiting Columbia University, 2001 .....	297
Invitation letter for Xiong Xiaodong Visiting Columbia University, 2002 .....	297
Invitation letter for Xiong Xiaodong attending the 80th Annual Meeting of NCTM, 2002 .....	298
Letter of thanks for Xiong Xiaodong having attended the 80th Annual Meeting of NCTM, 2002 .....	298
Pioneer of the New Era ( A Brief Introduction to Xiong Xiaodong ) — China News .....	300