

PEARSON

教育学经典教材 · 英文影印版

Educational  
Psychology:  
Developing Learners (7<sup>th</sup> Edition)

# 教育心理学

(第七版)

[美] Jeanne Ellis Ormrod 珍妮·E·奥姆罗德 著

 中国人民大学出版社

PEARSON  
Education

教育学经典教材 · 英文影印版

Educational  
Psychology:  
Developing Learners (7<sup>th</sup> Edition)

# 教育心理学

(第七版)

[美] Jeanne Ellis Ormrod 珍妮·E·奥姆罗德 著

中国人民大学出版社

图书在版编目 (CIP) 数据

教育心理学: 第七版: 英文/(美) 奥姆罗德著. —影印本. —北京: 中国人民大学出版社, 2011. 9  
(教育学经典教材·英文影印版)  
ISBN 978-7-300-14423-8

I. ①教… II. ①奥… III. ①教育心理学-教材-英文 IV. ①G44

中国版本图书馆 CIP 数据核字 (2011) 第 191594 号

教育学经典教材·英文影印版

**Educational Psychology: Developing Learners (7<sup>th</sup> Edition)**

教育心理学 (第七版)

[美] Jeanne Ellis Ormrod 珍妮·E·奥姆罗德 著

---

出版发行	中国人民大学出版社	邮政编码	100080
社 址	北京中关村大街 31 号		
电 话	010-62511242 (总编室)	010-62511398 (质管部)	
	010-82501766 (邮购部)	010-62514148 (门市部)	
	010-62515195 (发行公司)	010-62515275 (盗版举报)	
网 址	<a href="http://www.crup.com.cn">http://www.crup.com.cn</a>		
	<a href="http://www.ttrnet.com">http://www.ttrnet.com</a> (人大教研网)		
经 销	新华书店		
印 刷	涿州市星河印刷有限公司		
规 格	185 mm×260 mm 16 开本	版 次	2011 年 9 月第 1 版
印 张	40.5 插页 1	印 次	2011 年 9 月第 1 次印刷
字 数	831 000	定 价	78.00 元

---

版权所有 侵权必究

印装差错 负责调换

# 导读

珍妮·E·奥姆罗德教授在布朗大学获得心理学学士学位，在宾夕法尼亚州立大学获得教育心理学的硕士和博士学位。后来在坦普尔大学和科罗拉多大学波尔多分校进行博士后研究并获得了学校心理学家的执照。她还当过多年的中学地理教师，一直到1998年，她都是北科罗拉多大学的教育心理学教授，现在在新罕布什尔大学工作。

奥姆罗德教授因为她的这本《教育心理学》教材而广为人知。自从1995年培生教育公司出版奥姆罗德的《教育心理学》以来，该书广受师生好评。具体来说，该书有以下特色：

## 1. 强调自主学习和建构

作者在每一章都设计了亲身体验活动，帮助读者掌握重要的论点，构建对教育心理学更全面、更有意义的理解。在每章开头和结尾都设计了案例，为学习者构建了一个贴近现实的情境，有利于读者加深对教育心理学理论的理解，对真实问题构建自己的解决方法。

## 2. 理论与实践紧密结合

每章都以案例开头，在内容展开过程中密切联系案例，引导学习者利用教育心理学的理论对案例进行分析。每章的末尾也以案例结尾，并提出问题，让读者运用本章知识结合案例回答问题，学以致用。除此之外，书中的许多栏目，如“原理/假设”表格、“发展趋势”表格和“走进课堂”以及“分析教师策略”栏目引导读者如何将理论应用到学习和教学实践中去。“创建一个建设性的课堂环境”栏目则重视帮助读者理解该书的核心概念如何与课堂管理相关联。

## 3. 关注学生的多元化和差异性

重视学生的文化背景和群体亚文化对个体学习的影响，并重视在这种大的背景下考虑学生的个体差异，尤其强调对弱势群体和有特殊需要群体的教育。很多章都包括“考虑学生的多样性”这样一个主题，引导教师关注学生的个别差异。每章都设有“在全纳环境中的学生”栏目，将每章主题与有特殊需要的学生的教育联系起来。

## 4. 内容与时俱进

与第六版相比，第七版除了在每一章开头新增了教学目标之外，还增加了反映教育心理学各领域新近研究进展的内容。例如，在第3章，新增了“技术与同伴关系”，并对“网络欺侮”进行了讨论；第4章新

增了“情绪表达的文化多样性”；第5章新增了“Cattell-Horn-Carroll的认知能力理论”、“对于干预的反应”等内容。新增的内容更好地反映了教育心理学的理论和研究进展。

全书共分四部分。第一部分阐述了教育心理学和教师决策的关系，是教材的第1章。主要介绍了作为基于证据实践的教学、理解研究、收集关于自己学生的数据并作出推论，同时也阐述了教育心理学与教师发展的关系，最后介绍了学习本书的有效策略。

第二部分为教材的第一篇，论述发展与多样性，包括第2章至5章的内容。第2章主要介绍了人类的认知和语言发展。包括的主题有：人类发展的基本原则、脑在学习和发展中的作用、皮亚杰和维果斯基的认知发展理论以及语言发展。第3章主要介绍人格和社会性发展，包括人格发展、自我意识的发展、同伴关系和人际关系的发展，以及道德和亲社会性发展。第4章主要介绍了群体差异。包括的主题有文化和种族差异，性别差异，社会经济差异，有风险的学生的特点、辍学的原因以及对此类学生的支持。第5章着重介绍了个体差异与特殊教育需要。涉及的主题有：智力、认知风格和思维倾向、在一般教育课堂中教育有特殊需要的学生、有特殊认知或学业困难的学生、有社交和行为问题的学生、在认知和社会功能上普遍迟滞的学生、有身体障碍或感知困难的学生、认知发展超前的学生、当确定和关注特殊需要时考虑多样性、与有特殊需要的学生工作时的—般建议等。

第三部分为教材的第二篇，论述学习与动机，包括第6章至第11章的内容。第6章是学习与认知过程，主要阐述了认知心理学的基本假设、人类记忆模型、长时记忆存储、长时记忆的提取、认知过程中的多样性。第7章是知识建构，主要介绍了在学习和记忆中的建构过程、组织知识、促进有效的知识建构、当知识建构出错：错误观念的来源、建构过程的多样性等。第8章介绍了高级认知过程，主要阐述了元认知和学习策略、迁移、问题解决、创造力、批判性思维，以及在创造性、批判性思维和其他复杂思维过程中的多样性。第9章是行为主义学习观，主要介绍了行为主义的基本假设、巩固现有的刺激—反应联结：经典条件作用、从结果学习：操作条件作用、鼓励建设性行为的策略、不鼓励不期望行为的策略、应对特别困难的课堂行为、学生行为及对结果反应的多样性、行为主义方法的优势和潜在局限。第10章是社会认知学习观，主要阐述了社会认知理论的基本假设、社会认知观的强化与惩罚、示范、自我效能、自我调节、重温互为因果、比较三种学习观。第11章是动机与情感，主要介绍了动机的本质、人类的基本需要、动机中的认知因素、情感及其影响。

第四部分为教材的第三篇，论述课堂策略，包括第12章至第15章的内容。第12章是教学策略，主要介绍了制定教学计划、讲解式策

略、实际操作和练习活动、互动协作的方法，以及如何考虑学生的多样性进行有差异的教学等。第13章是营造一个建设性的学习环境，涉及的主题有：营造一个有助于学习的环境、协调与他人的努力、处理不良行为、重视校园攻击和暴力行为。第14章是课堂评估策略，主要涉及不同形式的教育评估、将评估用于不同的目的、好的评估的重要特性、非正式评估、纸笔评估、表现性评估、在正式评估中的其他考虑、在课堂评估时考虑学生的差异。第15章主要介绍了如何对学生的成就和能力进行总结。涉及的主题有：单次评估结果的总结、确定课程总评成绩、使用档案袋、标准化测验、高风险测验与职责、考虑学生的多样性、评估结果的保密与交流。

本教材虽然是基于西方的文化背景，但其中的内容大多也适合我国文化，可以作为心理学专业学生、师范类专业学生以及未来从事教育工作的学习者的教材或重要参考书，同时对我国中小学教师的教育实践也有重要的参考价值。本书影印版的出版对我国心理学工作者和教育工作者来说无疑是一件幸事。

**龚少英**

2011年6月于桂子山

[龚少英，华中师范大学心理学院教授，中国心理学会教育心理学分会理事，华中师范大学心理学院发展与教育心理学专业学科带头人。]

# CONTENTS

## 目录

<b>第1章 教育心理学和教师决策</b>	1	概览	133
个案研究：自我描述	1	资格考试练习：主动的和被动的	134
作为基于证据实践的教学	2	<b>第5章 个体差异与特殊教育需要</b>	137
理解研究	4	个案研究：提姆	137
收集关于自己学生的数据并作出推论	10	智力	138
教师发展	12	认知风格和思维倾向	147
有效学习的策略	13	在一般教育课堂中教育有特殊需要的学生	149
概览	14	有特殊认知或学业困难的学生	154
资格考试练习：新软件	15	有社交和行为问题的学生	161
		在认知和社会功能上普遍迟滞的学生	166
		有身体障碍或感知困难的学生	168
		认知发展超前的学生	172
		当确定和关注特殊需要时考虑多样性	174
		与有特殊需要的学生工作时的 一般建议	175
		概览	176
		资格考试练习：安静的艾米	176
<b>第一篇 发展与多样性</b>		<b>第二篇 学习与动机</b>	
<b>第2章 认知和语言发展</b>	19	<b>第6章 学习与认知过程</b>	179
个案研究：苹果馅饼	19	个案研究：骨骼	179
人类发展的基本原则	20	认知心理学的基本假设	180
脑在学习和发展中的作用	23	人类记忆模型	183
皮亚杰的认知发展理论	26	长时记忆存储	190
维果斯基的认知发展理论	38	长时记忆的提取	204
语言发展	49	认知过程中的多样性	210
概览	57	概览	213
资格考试训练：石头课	58	资格考试练习：时间是怎样流走的	214
<b>第3章 人格和社会性发展</b>	61	<b>第7章 知识建构</b>	217
个案研究：隐藏的宝藏	61	案例研究：新世界	217
人格发展	62	在学习和记忆中的建构过程	218
自我意识的发展	66		
同伴关系和人际关系的发展	75		
道德和亲社会性发展	90		
概览	99		
职称考试练习：红字	100		
<b>第4章 群体差异</b>	103		
个案研究：杰克为什么不去上学	103		
文化和种族差异	104		
性别差异	118		
社会经济差异	125		
有风险的学生	130		

组织知识	222	<b>第11章 动机与情感</b>	361
促进有效的知识建构	228	个案研究：通过代数考试	361
当知识建构出错：错误观念的来源	236	动机的本质	362
建构过程的多样性	243	人类的基本需要	365
概览	245	动机中的认知因素	374
资格考试练习：视觉单元	246	情感及其影响	399
<b>第8章 高级认知过程</b>	249	概览	408
个案研究：接管	249	资格考试练习：当“完美”	
元认知和学习策略	250	还不够好时	410
迁移	261		
问题解决	265		
创造力	273		
批判性思维	275		
在创造性、批判性思维和其他复杂			
思维过程中的多样性	279		
概览	281		
资格考试练习：会见艾米丽	282		
<b>第9章 行为主义学习观</b>	285		
个案研究：想获得注意的人	285		
行为主义的基本假设	286		
巩固现有的刺激—反应联结：			
经典条件作用	287		
从结果学习：操作条件作用	291		
鼓励建设性行为的策略	301		
不鼓励不期望行为的策略	310		
应对特别困难的课堂行为	313		
学生行为及对结果反应的多样性	316		
行为主义方法的优势和潜在局限	317		
概览	319		
资格考试练习：充满敌意的海伦	320		
<b>第10章 社会认知学习观</b>	323		
个案研究：你会法语吗？	323		
社会认知理论的基本假设	324		
社会认知观的强化与惩罚	326		
示范	329		
自我效能	335		
自我调节	341		
重温互为因果	352		
比较三种学习观	356		
概览	357		
资格考试练习：教师的悲哀	357		
		<b>第三篇 课堂策略</b>	
		<b>第12章 教学策略</b>	413
		个案研究：俄勒冈州的踪迹	413
		制定教学计划	415
		讲解式策略	423
		实际操作和练习活动	430
		互动协作的方法	436
		考虑学生的多样性	451
		概览	454
		资格考试练习：合作学习项目	456
		<b>第13章 营造一个建设性的学习环境</b>	459
		个案研究：一个感染性的环境	459
		营造一个有助于学习的环境	460
		协调与他人的努力	477
		处理不良行为	485
		重视校园攻击和暴力行为	495
		概览	500
		资格考试练习：好孩子	500
		<b>第14章 课堂评估策略</b>	503
		个案研究：数学测验	503
		不同形式的教育评估	504
		将评估用于不同的目的	507
		好的评估的重要特性	511
		非正式评估	522
		纸笔评估	524
		表现性评估	535
		在正式评估中的其他考虑	541
		在课堂评估时考虑学生的差异	547
		概览	548
		资格考试练习：选择	550

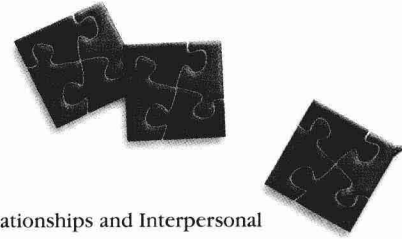


<b>第15章 总结学生的成就和能力</b>	553	附录 A: 用相关系数描述变量间的联系	591
个案研究: 历史学科得了 B	553	附录 B: 决定信度和可预测的效度	593
总结单次评估结果	554	附录 C: 将本书及 My EducationLab	
确定课程总评成绩	561	的内容与《教与学测验法则》的习	
使用档案袋	565	题匹配	597
标准化测验	568	术语	625
高风险测验与职责	576	参考文献*	
考虑学生的多样性	581	人名索引**	
评估结果的保密与交流	584	主题索引***	
概览	589		
资格考试练习: 乔尼能读懂吗	589		

---

\* \*\* \*\*\* 请参见 <http://www.crup.com.cn/gggl>。

# Contents



## Chapter 1

### Teaching and Educational Psychology 1

---

- CASE STUDY: Picture Yourself 1
- Teaching as Evidence-Based Practice 2
- Understanding Research 4
- Collecting Data and Drawing Conclusions About Your Own Students 10
- Developing as a Teacher 12
- Strategies for Studying and Learning Effectively 13
- The Big Picture 14
- PRACTICE FOR YOUR LICENSURE EXAM: New Software 15

## PART I

### Development and Diversity

---

## Chapter 2

### Cognitive and Linguistic Development 19

---

- CASE STUDY: Apple Tarts 19
- General Principles of Human Development 20
- Role of the Brain in Learning and Development 23
- Piaget's Theory of Cognitive Development 26
- Vygotsky's Theory of Cognitive Development 38
- Language Development 49
- The Big Picture 57
- PRACTICE FOR YOUR LICENSURE EXAM: Stones Lesson 58

## Chapter 3

### Personal and Social Development 61

---

- CASE STUDY: Hidden Treasure 61
- Personality Development 62
- Development of a Sense of Self 66

Development of Peer Relationships and Interpersonal Understandings 75

Moral and Prosocial Development 90

The Big Picture 99

PRACTICE FOR YOUR LICENSURE EXAM: *The Scarlet Letter* 100

## Chapter 4

### Group Differences 103

---

CASE STUDY: Why Jack Wasn't in School 103

Cultural and Ethnic Differences 104

Gender Differences 118

Socioeconomic Differences 125

Students at Risk 130

The Big Picture 133

PRACTICE FOR YOUR LICENSURE EXAM: The Active and the Passive 134

## Chapter 5

### Individual Differences and Special Educational Needs 137

---

CASE STUDY: Tim 137

Intelligence 138

Cognitive Styles and Dispositions 147

Educating Students with Special Needs in General Education Classrooms 149

Students with Specific Cognitive or Academic Difficulties 154

Students with Social or Behavioral Problems 161

Students with General Delays in Cognitive and Social Functioning 166

Students with Physical or Sensory Challenges 168

Students with Advanced Cognitive Development 172

Considering Diversity When Identifying and Addressing Special Needs 174

General Recommendations for Working with Students Who Have Special Needs 175  
The Big Picture 176  
PRACTICE FOR YOUR LICENSURE EXAM: Quiet Amy 176

## PART II Learning and Motivation

---

### Chapter 6 Learning and Cognitive Processes 179

---

CASE STUDY: Bones 179  
Basic Assumptions of Cognitive Psychology 180  
A Model of Human Memory 183  
Long-Term Memory Storage 190  
Long-Term Memory Retrieval 204  
Diversity in Cognitive Processes 210  
The Big Picture 213  
PRACTICE FOR YOUR LICENSURE EXAM: How Time Flies 214

### Chapter 7 Knowledge Construction 217

---

CASE STUDY: The New World 217  
Constructive Processes in Learning and Memory 218  
Organizing Knowledge 222  
Promoting Effective Knowledge Construction 228  
When Knowledge Construction Goes Awry:  
Addressing Learners' Misconceptions 236  
Diversity in Constructive Processes 243  
The Big Picture 245  
PRACTICE FOR YOUR LICENSURE EXAM: Vision Unit 246

### Chapter 8 Complex Cognitive Processes 249

---

CASE STUDY: Taking Over 249  
Metacognition and Learning Strategies 250  
Transfer 261  
Problem Solving 265  
Creativity 273  
Critical Thinking 275  
Diversity in Creativity, Critical Thinking, and Other Complex Thinking Processes 279

The Big Picture 281  
PRACTICE FOR YOUR LICENSURE EXAM: Interview with Emily 282

### Chapter 9 Behaviorist Views of Learning 285

---

CASE STUDY: The Attention Getter 285  
Basic Assumptions of Behaviorism 286  
Building on Existing Stimulus-Response Associations:  
Classical Conditioning 287  
Learning from Consequences: Instrumental Conditioning 291  
Strategies for Encouraging Productive Behaviors 301  
Strategies for Discouraging Undesirable Behaviors 310  
Addressing Especially Difficult Classroom Behaviors 313  
Diversity in Student Behaviors and Reactions to Consequences 316  
Strengths and Potential Limitations of Behavioral Approaches 317  
The Big Picture 319  
PRACTICE FOR YOUR LICENSURE EXAM:  
Hostile Helen 320

### Chapter 10 Social Cognitive Views of Learning 323

---

CASE STUDY: Parlez-Vous Français? 323  
Basic Assumptions of Social Cognitive Theory 324  
The Social Cognitive View of Reinforcement and Punishment 326  
Modeling 329  
Self-Efficacy 335  
Self-Regulation 341  
Revisiting Reciprocal Causation 352  
Comparing the Three General Perspectives of Learning 356  
The Big Picture 357  
PRACTICE FOR YOUR LICENSURE EXAM: Teacher's Lament 357

### Chapter 11 Motivation and Affect 361

---

CASE STUDY: Passing Algebra 361

The Nature of Motivation 362  
 Basic Human Needs 365  
 Cognitive Factors in Motivation 374  
 Affect and Its Effects 399  
 The Big Picture 408  
 PRACTICE FOR YOUR LICENSURE EXAM: When Perfect Isn't  
 Good Enough 410

## PART III

### Classroom Strategies

---

#### Chapter 12 Instructional Strategies 413

---

CASE STUDY: Oregon Trail 413  
 Planning for Instruction 415  
 Expository Strategies 423  
 Hands-On, "Head-On," and Practice Activities 430  
 Interactive and Collaborative Approaches 436  
 Taking Student Diversity into Account 451  
 The Big Picture 454  
 PRACTICE FOR YOUR LICENSURE EXAM: Cooperative  
 Learning Project 456

#### Chapter 13 Creating a Productive Learning Environment 459

---

CASE STUDY: A Contagious Situation 459  
 Creating a Setting Conducive to Learning 460  
 Coordinating Efforts with Others 477  
 Dealing with Misbehaviors 485  
 Addressing Aggression and Violence at School 495  
 The Big Picture 500  
 PRACTICE FOR YOUR LICENSURE EXAM: The Good Buddy 500

#### Chapter 14 Classroom Assessment Strategies 503

---

CASE STUDY: The Math Test 503

The Many Forms of Assessment 504  
 Using Assessment for Different Purposes 507  
 Important Qualities of Good Assessment 511  
 Informal Assessment 522  
 Paper-Pencil Assessment 524  
 Performance Assessment 535  
 Additional Considerations in Formal Assessment 541  
 Taking Student Diversity into Account in Classroom  
 Assessments 547  
 The Big Picture 548  
 PRACTICE FOR YOUR LICENSURE EXAM: Pick and Choose 550

#### Chapter 15 Summarizing Students' Achievement and Abilities 553

---

Case Study: B in History 553  
 Summarizing the Results of a Single Assessment 554  
 Determining Final Class Grades 561  
 Using Portfolios 565  
 Standardized Tests 568  
 High-Stakes Testing and Accountability 576  
 Taking Student Diversity into Account 581  
 Confidentiality and Communication about  
 Assessment Results 584  
 The Big Picture 589  
 PRACTICE FOR YOUR LICENSURE EXAM: Can Johnny Read? 589

**Appendix A: Describing Associations with Correlation  
 Coefficients 591**

**Appendix B: Determining Reliability and Predictive  
 Validity 593**

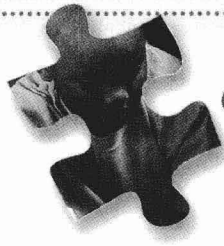
**Appendix C: Matching Book and MyEducationLab  
 Content to the Praxis® *Principles of Learning and  
 Teaching Tests* 597**

Glossary 625

References

Name Index

Subject Index



# Teaching and Educational Psychology



## CASE STUDY: Picture Yourself

Picture yourself standing in front of a class of twenty-five children or adolescents. Your goal is for your students to *learn* something—perhaps how to distinguish between nouns and pronouns, interpret bar graphs, dribble a basketball, or diagnose the problem in a malfunctioning automobile engine. Some of your students are clearly engaged in your lesson, but others appear to have different priorities. Sarah and Marta, the best of friends, are whispering and giggling. Clifton and Lenesa seem lost in their thoughts. Danny, Joe, and Friedrich are shoving one another, and their behavior seems to be escalating into a

major conflict. At the back of the room, Nicole is slumped deep in her chair with her arms crossed and a “you-can’t-make-me-do-it” expression on her face.

- As the teacher in this situation, what things might you immediately do to increase the likelihood that your students will benefit from your lesson? What things might you also do over the next few days and weeks to increase your students’ ability and desire to learn the things you want to teach them?

**T**EACHING OTHER PEOPLE—especially teaching the generation that will follow you into the adult world—can be one of the most rewarding professions on the planet. It can also be a very complex, challenging profession. Certainly, effective teaching involves presenting a topic or skill in such a way that students can understand and master it. Yet it involves many other things as well. For instance, teachers must get students’ attention (consider Clifton and Lenesa), motivate students to *want* to learn the subject matter (consider Nicole), and transform existing interpersonal relationships—some friendly, some not—into a cohesive, respectful, and productive learning community. Furthermore, effective teaching requires determining where students are currently “at” in their learning and development—what they know and don’t know, what they can and can’t do, what cognitive and social skills they have and have not acquired, and so on. And it requires accommodating students’ diverse backgrounds, beliefs, and family circumstances, as well as the physical, cognitive, and behavioral disabilities that some students may have.

Mastering the multifaceted nature of teaching takes time and practice, of course. But it also takes knowledge about human learning and motivation,



developmental trends, individual and group differences, and effective instruction and assessment practices. Such topics are the domain of **educational psychology**. This book will help you understand children and adolescents—how they learn and develop, how they are likely to be similar to but also different from one another, what topics and activities are apt to “turn them on” in the classroom, and so on. It will also give you a toolbox of strategies for planning and carrying out instruction, creating an environment that keeps students motivated and on task, and assessing students’ progress and achievement.



## Teaching as Evidence-Based Practice

You have been a student for many years now, and in the process you have undoubtedly learned a great deal about how children learn and change over time and about how teachers can foster their learning and development. But exactly how much *do* you know? To help you find out, I’ve developed a short pretest, Ormrod’s Own Psychological Survey (OOPS).



### EXPERIENCING FIRSTHAND

#### Ormrod’s Own Psychological Survey

Decide whether each of the following statements is *true* or *false*.

True/False

- \_\_\_\_\_ 1. Some children are predominantly left-brain thinkers, whereas others are predominantly right-brain thinkers.
- \_\_\_\_\_ 2. When we compare boys and girls, we find that the two groups are, on average, similar in their mathematical and verbal abilities.
- \_\_\_\_\_ 3. The best way to learn and remember a new fact is to repeat it over and over.
- \_\_\_\_\_ 4. Although students initially have many misconceptions about the world, they quickly revise their thinking once their teacher presents information that contradicts their existing beliefs.
- \_\_\_\_\_ 5. Taking notes during a lecture usually interferes with learning more than it helps.
- \_\_\_\_\_ 6. Students often misjudge how much they know about a topic.
- \_\_\_\_\_ 7. When a teacher rewards one student for appropriate behavior, the behavior of other students may also improve.
- \_\_\_\_\_ 8. Anxiety sometimes helps students learn and perform more successfully in the classroom.
- \_\_\_\_\_ 9. When teachers have children tutor their peers in academic subjects, the tutors gain very little from the process.
- \_\_\_\_\_ 10. The ways in which teachers assess students’ learning influence what and how students actually learn.



**educational psychology** Academic discipline that (a) systematically studies the nature of learning, child development, motivation, and related topics and (b) applies its research findings to the identification and development of effective instructional practices.

Now let’s see how well you did on the OOPS. Here are the answers, along with an explanation for each one:

1. *Some children are predominantly left-brain thinkers, whereas others are predominantly right-brain thinkers.* **FALSE.** With the development of new medical technologies in recent years, researchers have learned a great deal about how the human

brain works and which parts of it specialize in which aspects of human thinking. The two halves, or *hemispheres*, of the brain do seem to have somewhat different specialties, but they continually communicate and collaborate in tackling even the simplest of daily tasks. Practically speaking, there is no such thing as exclusively left-brain or right-brain thinking. We'll look at the brain and its development in Chapter 2.

2. *When we compare boys and girls, we find that the two groups are, on average, similar in their mathematical and verbal abilities.* TRUE. Despite widespread beliefs to the contrary, boys and girls tend to be similar in their abilities to perform mathematical and verbal tasks. Any differences in the average performance of boys and girls in these areas are usually too small for teachers to worry about. We'll explore gender differences—and similarities as well—in Chapter 4.

3. *The best way to learn and remember a new fact is to repeat it over and over.* FALSE. Although repeating information numerous times is better than doing nothing at all, repetition of specific facts is a relatively *ineffective* way to learn. Students learn information more easily and remember it longer when they relate it to things they already know. One especially effective strategy is **elaboration**: using prior knowledge to expand or embellish on a new idea in some way, perhaps by critiquing it, thinking of an example of it, or generating potential applications of it. We'll revisit elaboration later in the chapter and examine it in more depth in Chapter 6.

4. *Although students initially have many misconceptions about the world, they quickly revise their thinking once their teacher presents information that contradicts their existing beliefs.* FALSE. As you will discover in Chapter 7, students typically have many misconceptions about the world. For instance, they may believe that the earth is round only in the sense that a pancake is round or that people would fall into space if they traveled to the South Pole. Students often hold strongly to these misconceptions, even in the face of contradictory evidence or instruction. As teachers, one of our biggest challenges is to help students discard their erroneous beliefs in favor of more accurate and useful perspectives. We'll identify strategies for promoting such *conceptual change* in Chapter 7.

5. *Taking notes during a lecture usually interferes with learning more than it helps.* FALSE. In general, students who take notes learn more material from a lecture than students who don't take notes. Note taking appears to facilitate learning in at least two ways: It helps students put, or *store*, information into memory more effectively, and it enables them to review the information at a later time. We'll look at research concerning the effectiveness of note taking and other study strategies in Chapter 8.

6. *Students often misjudge how much they know about a topic.* TRUE. Contrary to popular opinion, students are usually *not* the best judges of what they do and don't know. For example, many students think that if they have spent a long time studying a textbook chapter, they must know its contents very well. Yet if they have spent most of their study time inefficiently (perhaps by “reading” while thinking about something else altogether or by mindlessly copying definitions), they may know far less than they think they do. We'll consider this *illusion of knowing* further in Chapter 8.

7. *When a teacher rewards one student for appropriate behavior, the behavior of other students may also improve.* TRUE. When a teacher rewards one student for behaving in a particular way, others who have observed the student being rewarded sometimes begin to behave similarly. We'll identify numerous roles that observation plays in learning as we explore social cognitive theory in Chapter 10.



Effective teachers consider their students' diverse backgrounds, abilities, and needs when planning and delivering instruction.



**elaboration** Cognitive process in which learners embellish on new information based on what they already know.

8. *Anxiety sometimes helps students learn and perform more successfully in the classroom.* **TRUE.** Many people think that anxiety is always a bad thing. Yet for some classroom tasks, and especially for relatively easy tasks, a moderate level of anxiety actually *improves* learning and performance. In Chapter 11, we'll discover that the specific effects of anxiety, whether helpful or counterproductive, depend on the situation.

9. *When teachers have children tutor their peers in academic subjects, the tutors gain very little from the process.* **FALSE.** When students teach one another, the tutors often benefit as much as the students being tutored. For instance, in one research study, fourth graders who were doing relatively poorly in mathematics served as arithmetic tutors for first and second graders; the tutors themselves showed a substantial improvement in arithmetic skills (Inglis & Biemiller, 1997). We'll look more closely at the effects of student-to-student tutoring in Chapter 12.

10. *The ways in which teachers assess students' learning influence what and how students actually learn.* **TRUE.** What and how students learn depend, in part, on how they expect their learning to be assessed. For example, students typically spend more time studying the things they think will be on a test than the things they think the test won't cover. And they are more likely to organize and integrate class material as they study if they expect assessment activities to require such organization and integration. In Chapter 14, we'll identify a variety of ways in which classroom assessment practices can influence students' learning.

How many of the OOPS items did you answer correctly? Did some of the false items seem convincing enough that you marked them true? Did some of the true items contradict certain beliefs you had? If either of these was the case, you are hardly alone. College students often agree with statements that seem obvious but are, in fact, completely wrong (Gage, 1991; Lennon, Ormrod, Burger, & Warren, 1990). Furthermore, many students in teacher education classes reject research findings that appear to contradict their personal beliefs and experiences (Gregoire, 2003; Holt-Reynolds, 1992; Wideen, Mayer-Smith, & Moon, 1998).

It's easy to be persuaded by common sense and assume that what seems logical must be reality. Yet common sense and logic don't always tell us the true story about how people actually learn and develop, nor do they always give us accurate information about how best to help students succeed in the classroom. Instead, our knowledge about learning and instruction must come from a more objective source of information—that is, from systematic research. Increasingly, educators and policy makers alike are calling for **evidence-based practice**—the use of instructional methods and other classroom strategies that research has consistently shown to bring about significant gains in students' development and academic achievement (e.g., Darling-Hammond & Bransford, 2005; Waterhouse, 2006).



**evidence-based practice** Instructional method or other classroom strategy that research has consistently shown to bring about significant gains in students' development and/or academic achievement.

**quantitative research** Research yielding information that is inherently numerical in nature or can easily be reduced to numbers.

**qualitative research** Research yielding information that cannot be easily reduced to numbers; typically involves an in-depth examination of a complex phenomenon.



## Understanding Research

Historically, most research related to learning, development, and educational practice has been **quantitative research**; that is, it has involved collecting data that either take the form of numbers or can easily be converted into numbers. These numbers are tabulated and usually statistically analyzed to determine underlying trends and other patterns in the data. For example, we are apt to get quantitative information from students' performance on achievement tests, students' responses to rating-scale questionnaires, and school district records of students' attendance and dropout rates.

In recent years, educational researchers have also made considerable use of **qualitative research**, in which they examine complex phenomena that cannot be easily reduced to numerical values. For example, a qualitative research study might involve lengthy interviews in which students describe their hopes for the future, a detailed case study of interpersonal relationships within a tight-knit clique of adoles-



cent girls, or in-depth observations of several teachers who create distinctly different psychological “climates” in their classrooms.

Ultimately, teachers gain a better understanding of students and effective classroom practices when they consider findings from *both* quantitative and qualitative research. It is important, then, that you understand what these two different kinds of research can—and also what they *cannot*—do for you.



**descriptive study** Research study that enables researchers to draw conclusions about the current state of affairs but not about correlational or cause-and-effect relationships.

## Quantitative Research

Most quantitative research studies fall into one of three general categories: descriptive, correlational, or experimental. These three categories yield different kinds of information and warrant different kinds of conclusions.

**Descriptive Studies** A **descriptive study** does exactly what its name implies: It *describes* a situation. Descriptive studies might give us information about the characteristics of students, teachers, or schools. They might also provide information about how often certain events or behaviors occur. In general, descriptive studies enable us to draw conclusions about the way things are—the current state of affairs. The second column of Table 1.1 presents examples of questions we could answer with descriptive studies.

Topic	Quantitative Research				Qualitative Research
	Descriptive Studies	Correlational Studies	Experimental Studies		
Reading	How pervasive are gender stereotypes in books commonly used to teach reading in the elementary grades?	Are better readers also better spellers?	Which of two reading programs produces greater gains in reading comprehension?	What things do high-achieving students say they do “in their heads” when they read and study their textbooks?	
Abstract Thinking	What percentage of high school students can think abstractly about academic topics?	Are older students more capable of abstract thought than younger students?	Can abstract thinking skills be improved through specially designed educational programs?	What misconceptions are often seen in high school students’ explanations of abstract concepts?	
Aggression	What kinds of aggressive behaviors occur in schools, and with what frequencies?	Are students more likely to be aggressive at school if they often see violence at home or in their neighborhoods?	Which method is most effective in reducing aggressive behavior: reinforcing appropriate behavior, punishing aggressive behavior, or a combination of both?	What distinct qualities characterize high schools in which members of violence-prone adolescent gangs interact congenially and respectfully?	
Achievement Tests	How well have students performed on a recent national achievement test?	Do students who get the highest scores on multiple-choice tests also get the highest scores on essay tests dealing with the same content domain?	Do different kinds of tests (e.g., multiple choice vs. essay tests) encourage students to study in different ways and therefore affect what students actually learn?	In what ways do teachers’ instructional practices change when their jobs and salaries depend on their students’ scores on statewide or national achievement tests?	