

# Psychology 325: Educational Psychology

## Fall, 2016

Section 01: MWF 10:00 – 10:50 pm, LHH 142

Section 02: MWF 12:00 – 12:50 pm, LHH 205

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### **Required text:**

*Education*. Pearson Custom Education. This is a book created specifically for this class. It has my name on the cover, but it is a collection of chapters from three different textbooks. It is available at the campus bookstore.

Journal articles and book chapters that can be obtained through the library's website or Blackboard (you do not need to buy any of these). The References section at the end of the syllabus lists the articles we will read.

### **Prerequisites:**

Psychology 101: Introductory Psychology

### **Course objectives:**

This course is designed to provide an introduction to the Psychology of learning and how it applies to education. Psychologists who study learning use scientific methods to address issues related to memory, comprehension, reasoning, motivation, assessment, and other related topics. They also examine how conclusions can be implemented in classrooms. This course will address the methods used in research on learning, and some of the important theories and principles related to learning. In addition, we will discuss how research on learning can be relevant to what teachers do in the classroom. Some of the topics we will cover include memory, reading processes, strategies for studying and teaching, transfer of knowledge to new situations, motivation, and assessment. Throughout the course, there will be a primary focus on using psychological research methods to study how people learn, and how educational practices may be guided by research. Another goal of the course is to make you informed consumers of psychological research so that you can effectively evaluate claims about what sorts of things will help students learn effectively.

One way that might be helpful to think about this class is to consider a common phrase people use to describe teaching. Many people say that "teaching is an art." I

think what people mean by this phrase is that teachers should use their intuition, creativity, and experience to inspire and motivate students, and to get students to love learning. All of these are noble goals. But through the course of the semester, I will try to show you that a more effective phrase may be “teaching is both an art and a science.” If teachers rely solely on intuition, creativity, and experience to make decisions about what to teach and how to teach it, they will often end up using teaching methods that are ineffective. It is also important to pay attention to the scientific study of learning and teaching. Scientific studies suggest to us that there are more and less effective ways of learning. In addition, lots of studies tell us that our own intuitions about what is effective are often wrong. In many cases, people’s intuitions about what is effective for learning are the exact opposite of what is actually effective. You can think of this class as introducing you to the scientific side of the phrase “teaching is both an art and a science.”

The class periods will consist of lecture material, class discussions, smaller group discussions, some in class experiments, and occasional videos. You are encouraged to ask questions and discuss issues in class. A single experiment rarely provides a definitive answer to a question about Psychological processes. Alternative interpretations and contradictory experimental results can be common. Therefore, critical thinking about the issues we discuss will be a focus in this course.

It will be important in this course to read the relevant textbook chapter or articles **before** the classes on each topic. If you read before class, you will generally understand the class better. In fact, as part of this course, we will discuss psychological studies that show that, on average, you will understand the lectures better if you read the book before class!

### **Attendance:**

There will be material covered during lectures that is not in the textbook or the readings. This material will be included on the exams, so if you do not come to class, you will not be familiar with all of the material on the exams. In addition, the lectures will help you to better understand the material that is covered in the book and the readings. Finally, the quizzes will be unannounced and on different days of the week. You need to be present for quizzes in order to get credit for them. In short, students who come to class do better in the course.

### **Examinations:**

There will be **three** exams given in this course, two during the semester and one on the day of the final. The final exam will be cumulative. The final will have more questions from the last third of the semester than the first two thirds, but it will cover material from the entire course. Each exam will cover the material that has been presented in the textbook, lectures, videos, and discussions. All of the exams will include multiple choice and short essay questions. The first two exams will be worth 70

points each, and the final will be worth 100 points. Many of the exam questions will be written to test your understanding of the material more than just your memory for the material. This means that when you study, you should keep track of whether you understand the material. Do not simply memorize lists of definitions.

You are expected to be present for each exam. Make-up exams will **only** be given in the case of an injury or illness, or if there is a death in the family. In each case, you must notify the instructor within 24 hours of the exam, and you must be prepared to provide documentation regarding your situation. Make-up exams will be given as soon as possible after the exam, and may be multiple choice, essay, or oral at the discretion of the instructor.

### **Quizzes:**

In-class quizzes will be given ten times throughout the course of the semester. The quizzes will be what are known in the research literature as "low stakes quizzes". The point of the quizzes will be to help you retain the information we talk about in class. They will also help you to assess your understanding of class information. Quizzes will be short (about ten minutes), and the answers will be posted on Blackboard. Grading will be fairly lenient. As long as you show that you put a good effort into answering the questions, you will receive credit for the quiz for that day. Out of the ten quizzes, one grade will be dropped. For this reason, there will be no make-up quizzes. You either take the quiz in class when it is given, or you have missed it. Each quiz will be worth 5 points, for a total of 45 points.

### **Paper:**

One paper is required. The paper assignment will be to find a research article from a journal that addresses an issue relevant to education. You will summarize the article, and discuss how the findings of the research could be utilized in an actual classroom. The paper you hand in should be no more than two pages in length. I will hand out more information about the paper in the first or second week of class. The handout will give further detail about what to include in the paper, and we will discuss the assignment in more detail at that time. The paper will be due on **November 21**, as indicated in the Schedule of Topics. The paper is worth 70 points, and for each day the paper is late, 10 points will be deducted from the final grade.

### **Short assignments (15 points each - one page maximum for each assignment):**

#1 (due 10/28): In honor of the election on November 8, we will spend a couple of class periods discussing education policy and how it may or may not be informed by research. We will discuss the Common Core standards and the basic education positions of the presidential candidates. As a short writing assignment, you will write two paragraphs about Common Core. In the first paragraph, you should describe where Common Core came from, what the goal is, and what (briefly) it is. In the second

paragraph, provide a brief argument about whether you think states should or should not adopt the Common Core standards. In your argument, you need to use at least one reason or piece of evidence in support of your position. You also need to address at least one potential counter argument to your claim, and explain why the counter argument is not convincing.

#2 (due 12/5). In the last week of class you will turn in a brief written assessment of the two papers that are assigned for that week. The writing assignment will also serve as the basis for the class discussion that we will have during part of that week.

For this assignment, you should address a particular issue within the learning styles literature as it relates to the two papers that are assigned for the last week of class (Massa and Mayer, 2006; Zapalska & Dabb, 2002). The *learning styles hypothesis* is a phrase that refers to the basic claim, often made in the learning styles literature, that students will learn best if they are given information in their preferred modality. Multiple authors (eg. Massa and Mayer, 2006; Pashler, et. al., 2010) have argued that there is a particular pattern of evidence that should be found in order to establish support for the learning styles hypothesis. A study should be able to identify at least two different groups of learners (visual and verbal, for example.) Then students should be assigned to all learn the same content, but the content should be presented in one modality or the other (visually or verbally.) Then all students take the same test over the content. Support for the hypothesis would be found if the visual learners score higher when studying content in the visual modality, and the verbal learners score higher when studying content in the verbal modality. Massa and Mayer (2006) refer to this pattern as an aptitude by treatment interaction, or the ATI hypothesis. Other patterns of results, such as everyone scoring higher with the visual modality, would not provide support for the hypothesis. Experiments that do not present information in multiple modalities and test learning of it would be unable to provide support for this hypothesis because they wouldn't have the right experimental setup.

In this assignment, you should write a brief (one paragraph per article) statement about the extent to which each of the articles provides (or does not provide) evidence that supports the learning styles hypothesis. You do not need to write a summary of the article. Just get straight to the question of whether the article provides or does not provide evidence that would count as supporting the hypothesis, and explain your response.

### **Plagiarism:**

You must write all assignments in your own words. If you copy phrases or sentences from any source without quoting them, that is plagiarism. If any work you turn in is plagiarized, you will fail the course. There is a link posted on Blackboard for a website that has a lot of useful information about plagiarism. I encourage you to look at it or talk to me if you have any questions about plagiarism.

**Blackboard:**

Partial notes for the week will typically be posted before each week begins, usually on Friday of the week before. These notes will be in a PowerPoint file. It is important to understand that the notes I post will not be the complete notes for the week. In particular, I will not post results or conclusions of experiments that we will be discussing in class (for reasons that I will explain in class.)

**Grading:**

Your final grade for the course will be a combination of the scores on each of the exams (240 points total), 70 points for the paper, 45 points for the quizzes, and 30 points for the two short assignments. All grades will be represented as percentages. Letter grades will be assigned based on the following scale:

93 – 100%	A
90 – 92%	A-
87 – 89%	B+
83 – 86%	B
80 – 82%	B-
77 – 79%	C+
73 – 76%	C
70 – 72%	C-
67 – 69%	D+
60 – 66%	D
0 – 59%	F

This scale may be adjusted to make grades higher at the discretion of the instructor, but it will not be adjusted to make grades lower.

## Tentative Schedule of Topics

Week of	Topic	Chapter
8/29 - 9/2	Introduction and Research Methods	1
9/5 - 9/9	Introduction and Research Methods <b>No class Monday 9/5 (Labor Day)</b>	1
9/12 - 9/16	Basic Components of Memory	2
9/19 - 9/23	Long-Term Memory Storage and Retrieval	3
9/26	<b>Exam 1: 9/26</b>	
9/28 - 9/30	The Nature of Knowledge	4
10/3 - 10/7	Beliefs about Intelligence and Knowledge	6
10/10 - 10/14	Learning and Prior Knowledge	Kintsch (1994)
10/17 - 10/21	Metacognition	Bjork, Dunlosky, & Kornell (2013)
10/24 - 10/28 10/28	Metacognition / Education policy and politics <b>Short assignment #1 due 10/28</b> <b>5:00 PM. - Drop deadline with grade "W"</b>	
10/31	<b>Exam 2: 10/31</b>	I.E.S. report (Pashler et al., 2007)
11/2 - 11/4	Transfer and Long-Term Retention	Bjork & Bjork (2007)
11/7 - 11/11	Transfer and Long-Term Retention	
11/14 - 11/18	Transfer and Long-Term Retention / Testing	Karpicke & Blunt, 2011; Roediger & Karpicke, 2006
11/21 11/21	Motivation <b>Paper due 11/21</b> <b>Thanksgiving break Wed. &amp; Fri. 11/23-25</b>	5
11/28 - 12/2	Motivation	5
12/5 - 12/9	Research Methods Revisited <b>Short assignment #2 due 12/5</b>	Zapalska & Dabb, 2002; Massa & Mayer, 2006
Finals week	<b>Sec. 01 (10:00) - Tues. 12/13 at 12:00 to 1:50 pm.</b> <b>Sec. 02 (12:00) - Wed. 12/14 at 2:00 to 3:50 pm.</b>	

## References

- Bjork, E. L., & Bjork, R. A. (2011). Making things hard on yourself, but in a good way: Creating desirable difficulties to enhance learning *Psychology and the real world: Essays illustrating fundamental contributions to society*. (pp. 56-64): Worth Publishers, New York, NY.
- Bjork, R. A., Dunlosky, J., & Kornell, N. (2013). Self-regulated learning: Beliefs, techniques, and illusions. *Annual Review of Psychology*, 64, 417-444.  
doi:<http://dx.doi.org/10.1146/annurev-psych-113011-143823>
- Karpicke, J. D., & Blunt, J. R. (2011). Retrieval practice produces more learning than elaborative studying with concept mapping. *Science*, 331, 772-775.
- Kintsch, W. (1994). Text comprehension, memory, and learning. *American Psychologist*, 49, 294-303.
- Massa, L. J., & Mayer, R. E. (2006). Testing the ATI hypothesis: Should multimedia instruction accommodate verbalizer-visualizer cognitive style? *Learning and Individual Differences*, 16, 321-335.
- Pashler, H., Bain, P., Bottge, B., Graesser, A., Koedinger, K., McDaniel, M., and Metcalfe, J. (2007) *Organizing Instruction and Study to Improve Student Learning* (NCER 2007-2004). Washington, DC: National Center for Education Research, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://ncer.ed.gov>.
- Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: Taking memory tests improves long-term retention. *Psychological Science*, 17, 249-255.

Zapalska, A. M., & Dabb, H. (2002). Learning styles. *Journal of Teaching in International Business*, 13, 77-97.