



***PSY 3340-Cognitive Development and Learning  
Course Syllabus  
Metropolitan State College of Denver  
Department of Psychology***

***Instructor of Record:*** Dr. Aaron S. Richmond

***Office Hours:*** Monday and Wednesday 9:30-11:00 a.m. and 1-2:00 p.m.

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***I. CATALOG COURSE DESCRIPTION:***

This course is designed to examine human cognitive development and learning. Topics include the development of cognition and learning throughout the lifespan, psycholinguistics (language acquisition and literacy acquisition), the development of scientific and mathematical thinking in children, and the effects of formal schooling on cognition. Students will complete a practicum project applying the ideas presented in class with children/adults of different ages. Prerequisites: Developmental Educational Psychology (PSY 1800) and General Psychology (PSY 1000). This is a required core course for the Human Development Major.

***II. COURSE GOALS & STUDENT OBJECTIVES:***

- a.*** Identify the current and historical theories of cognitive development (quizzes and comprehensive exam).
- b.*** Define and outline cognitive development theories in developmentally appropriate practices (quizzes, comprehensive exam, and constructivist theory paper).
- c.*** Analyze and critique developmentally appropriate practices (lesson critique).
- d.*** Evaluate which pedagogical methods are most appropriate to use with children of various cognitive abilities (constructivist theory paper).
- e.*** Demonstrate the ability to apply, analyze, and synthesize cognitive development theories in the K-12 classroom (constructivist lesson and lesson plan).
- f.*** Synthesize knowledge of the development of thinking in different content domains (e.g., science) through written assignments and assessments.
- g.*** Demonstrate the ability to work collaboratively with peers (group project).

***III. COURSE STRUCTURE:***

The course will be structured around the following methodologies: (a) lecture, (b) active class discussion, (c) small group activities, and (d) experiments and demonstrations. Class lectures and tutorials will be provided in multiple modalities: (a) PowerPoint presentations, (b) overheads, (c) videos, (d) white-board, (e) assigned reading, and (f) reflective practices.

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#### **IV. EXPECTATIONS FOR STUDENTS & INSTRUCTOR:**

##### **Student Expectations**

- a.** PLEASE BE ACTIVE AND PARTICIPATE IN CLASS
- b.** Listen and respect others
- c.** Be comfortable in taking risks
- d.** Complete all assignments
- e.** Turn off your cell phones and/or pagers
- f.** Be punctual for all classes
- g.** Discuss class concerns either after class or during designated office hours
- h.** Be prepared for class by reading chapter prior to lesson

##### **Instructor Expectations**

- a.** BE ACTIVE AND ENTHUSIASTIC TO FACILITATE STUDENT LEARNING
- b.** Listen and respect students' views
- c.** Be in class at least 5 minutes before and after class
- d.** Respond swiftly and effectively to student concerns
- e.** Turn off cell phone
- f.** Grade objectively, consistently, and timely
- g.** Be prepared for class
- h.** Accommodate differences in students' learning

Please remember if you have any questions, concerns, or comments to let me know right away. I welcome any feedback you're willing to offer.

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#### **V. CLASS ATTENDANCE:**

Attendance will benefit you in several ways. First, material is presented in class that is not covered in your text, but it will appear on your exams. Second, your understanding of the course material is heightened from double exposure to the material (i.e., in class and in the text). Third, you are responsible for all information presented in class even on days that you are absent. If absences are necessary, please contact me BEFORE the class. Absences will only be excused if I am contacted prior to class period and for appropriate reasons. In addition, each constructivist lesson missed is 1% off your final grade.

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#### **VI. TEXT AND MATERIALS:**

Byrnes, J. P. (2008). *Cognitive development and learning in instructional contexts*. (3<sup>rd</sup> Ed.). Boston, MA: Allyn & Bacon

Richmond, A. S. (2010, January 17). Cognitive development in learning website. Retrieved from <http://clem.mscd.edu/~arichmo3/PSY3340.html>

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#### **VII. ACADEMIC HONESTY:**

It is my policy, and the college's policy that cheating and plagiarism are strictly prohibited. Any student that is caught cheating on an exam or plagiarizing on a paper will be reported to the academic dean. If you put an idea, statistics, or quote in your paper that is from

another source, absolutely cite the source. If you do not cite a direct quote or even a paraphrased quote, this will be considered plagiarism and you will receive either an F in the course or an F on the paper and your actions will be reported to college officials. ***Moral of the story, cite and reference your work excessively.***

#### VIII. DESCRIPTION OF CLASS ASSIGNMENTS & ASSESSMENTS:

- a. Constructivist Theory Assignment:** One of the major themes of this course is that modern pedagogical theory emphasizes a constructivist approach to teaching. This project will give everyone in the class an opportunity to develop, apply, synthesize, create, and implement a 20-30 minute constructivist based lesson. You will be working in groups of 4-5. I will assign groups based on teaching interests from students. There are five parts to this assignment.
- I. **Lesson Plan (due Wednesday, February 17<sup>th</sup>).** Turn in a 1-2 page lesson plan detailing how you will teach your class. ***You only need to turn in one lesson plan per group.*** Please refer to *Appendix A* for lesson plan template.
  - II. **Constructivist Theory paper (due Wednesday, March 31<sup>st</sup>).** EACH member of the group will turn in a 5-8 page typed paper on describing how their lesson will incorporate constructivist theory and other cognitive development theories There is a student example of a paper on the website. Please refer to *Appendix B* for further detail.
  - III. **Constructivist Lesson (TBA, see calendar for tentative dates).** Each group will teach a 20-30 minute class that demonstrates cognitive development theory. The class and I will evaluate the strengths and weaknesses of your group's lesson. Please refer to *Appendix C* for the lesson grading rubric and score sheet.
  - IV. **Constructivist Class Critique (due Wednesday, April 28<sup>th</sup>).** This assignment is intended for your evaluation of others constructivist lesson. It will assess your ability to synthesize different cognitive development theories. Please Refer to *Appendix C* for the grading rubric.
  - V. **Group & Peer Grade (TBA, depending on lesson topic).** This assessment is designed to reduce social loafing (i.e., slackers) in group projects. You will evaluate yourself and your group members on multiple criteria. Please refer to *Appendix C* for grading rubric and score sheet.
- b. Quizzes (TBA):** Quizzes are used to assess your reading comprehension of course material. Content will pertain to the information received since the last quiz. Thus, quizzes are not comprehensive and cannot be made-up unless otherwise approved. The format will vary (e.g., short-answer, true/false, multiple choice, fill-in-the-blank, matching, or essay). For each quiz, there will be 5-10 questions and you will have 12-15 minutes to complete each quiz. To provide the flexibility of low performance, for whatever reason, I will drop 2 of your lowest quiz scores from the 12 quizzes. Therefore, you will only be graded on 10 quizzes.
- c. Comprehensive Exam:** There is one cumulative final (***finals week***). This exam is intended to assess both lower and higher level learning of content covered in this course from the start to end of the semester (i.e., comprehensive). You will only be tested on information that is found in the study guide (available on class website).

The exam will contain multiple choice, true/false, fill-in-the-blank, matching, short-answer, and essay questions. If ANY student needs to receive an exam orally, accommodation may be made.

**IX. GRADING POLICIES:**

(10) Quizzes @ 35 pts each..... = 350 pts	The grading scale is as follows:
(1) Cumulative Final.....= 250 pts	1000-900 points ..... = A
(1) Constructivist Theory Assignment	899-800 points ..... = B
Lesson Plan ..... = 50 pts	799-700 points ..... = C
Theory Paper..... = 200 pts	699-600 points ..... = D
Group Lesson..... = 100 pts	599 points and less ... = F
Peer Grade and Class Critique..... = 50 pts	
Total.....= 1000 pts	

**X. COURSE CALENDAR:**

Week of	Assigned Reading & Class Topic	Assignments Due
1/18-1/20	Introduction	
1/25-1/27	Piaget's Cognitive Constructivism	
2/1-2/3	Vygotsky's Social Constructivism	
2/8-2/10	Schema Theory	
2/15-2/17	Information Processing Theory	Lesson Plan Due
2/22-2/24	Development of Memory	
3/1-3/3	Development of Problem Solving & Transfer	
3/8-3/10	Motivation Theories	
3/15-3/17	Development of Beginning Reading	Beginning Reading Lesson
3/22-3/24	<b>SPRING BREAK!</b>	
3/29-3/31	Development of Reading Comprehension	Reading Comprehension Lesson & Theory Paper Due
4/5-4/7	Development of Writing	Writing Lesson Due
4/12-4/14	Development of Math	Math Lesson Due
4/19-4/21	Development of Science	Science Lesson Due
4/26-4/28	Development of Social Studies	Social Studies Lesson Due
5/3-5/5	Review	
5/10-5/12	<b>FINALS WEEK: Comprehensive EXAM</b>	

Note. This calendar is subject to change. On average, there will be one quiz per week. These are unannounced quizzes.

## Appendix A: Lesson Plan Template

Names \_\_\_\_\_ Date \_\_\_\_\_

Grade Level \_\_\_\_\_

Lesson Plan Title \_\_\_\_\_

<b>Learning Objective</b>	<i>One clear topic, (e.g., math) concept, or process to state what children will need to know to complete the activity.</i>
<b>Standards</b>	<i>At least one standard for content area and one for integration of literacy. Include others if integrated into lesson.</i>
<b>Assessment</b> * How will student process &/or product be assessed? * How will you document?	<b>How did you determine objective and lesson were appropriate?</b> <i>Pre-assessment method?</i>  <b>Formative assessment:</b> <i>During lesson</i>  <b>End or summative assessment:</b> <i>Specifically tie to objective; must include student written explanation.</i>
<b>Resources /Materials</b> Manipulative's, literature, software, etc.	<b>Teacher will use to introduce and assess:</b> <b>Students will use to do learning activity:</b>
<b>Student Grouping</b>	<b>How will you group:</b> <i>If groups, pre-arranged groups, or are you developing?</i> <b>Expectations for groups:</b> <i>Be specific; include roles if using cooperative groups.</i>
<b>Differentiation</b> *How will you differentiate for success of all students? Be specific.	<b>Special needs or specific learning/background differences:</b> <b>Gifted:</b> <i>What are you actually doing for advanced or learning disabled students?</i>
<b>Inquiry Method Procedure</b> * What you will do to introduce and guide the learning?	<b>Introduction:</b> Question: <i>teacher will ask to start children thinking about concept</i> How establish Relevancy & Prior Knowledge: <b>Expectations for behavior:</b> <i>Exactly what you will tell students during the lesson.</i> <b>Directions for Activity:</b> <i>(exactly what/how you will inform students of what they are to do during exploration learning time)</i> How will materials (manipulatives) be distributed and collected? How check for student understanding of directions? <i>Of the directions noted above.</i> <b>Questions to promote thinking during learning:</b> <b>Question to have students summarize <u>learning of objective:</u></b>
	<i>Note: Suggestions are in red; delete before submitting lesson plans.</i>

## **Appendix B: CHECKLIST & GRADING RUBRIC FOR CONSTRUCTIVIST THEORY PAPER**

The well-written theory paper should produce a YES for each query. Note, however, that the items are not of equal weight for the purposes of evaluation.

### **TITLE PAGE (10 points)**

- 1. Is the title brief, but informative?
  - 2. Does the author's name appear below the title in upper and lower case letters?
  - 3. Does additional information appear below the author's name?
- \_\_\_ / 10 points

### **BRIEF INTRODUCTION (35 points)**

- 4. Is there a description of what the paper is about?
  - 5. What is a constructivist theory?
  - 6. What is the argument for constructivist theory being effective?
  - 7. How are you implementing constructivist theory into this lesson plan?
- \_\_\_ / 35 points

### **CONSTRUCTIVIST THEORIST 1 - PIAGET (40 points)**

- 8. Is there a brief description of Piaget's theory?
  - 9. Is there enough information about this theory that the reader understands the theory?
  - 10. Is there a description of how Piaget's theory applies to your lesson?
  - 11. Is the lesson plan developmentally appropriate according to Piaget?
- \_\_\_ / 40 points

### **CONSTRUCTIVIST THEORIST 2 - VYGOTSKY (40 points)**

- 12. Is there a brief description of Vygotsky's theory?
  - 13. Is there enough information about this theory that the reader understands the theory?
  - 14. Is there a description of how Vygotsky's theory applies to your lesson?
  - 15. How does the lesson plan illustrate ZPD or other Vygotskian concepts?
- \_\_\_ / 40 points

### **THEORIST 3 –YOUR CHOICE (40 points)**

- 16. Is there a brief description of theory?
  - 17. Is there enough information about this theory that the reader understands the theory?
  - 18. Is there a description of how the theory applies to your lesson?
  - 19. How does the lesson plan illustrate or demonstrate concepts of this theory?
- \_\_\_ / 40 points

### **REFERENCES (20 points)**

- 28. Did you cite all the information that you used in the paper?
  - 29. Are all references cited in the body of the paper are listed in the reference page?
  - 30. Are the references in alphabetical order and then chronological order if you have more than one citation for an author(s)?
- \_\_\_ / 20 points

### **GRAMMAR AND OVERALL WRITING ABILITY (15 points)**

- 31. Is there proper spelling?
  - 32. Is the paper easy to read?
  - 33. Does each sentence and paragraph have proper grammatical structures?
  - 34. Does this paper follow all of the APA format guidelines?
- \_\_\_ / 15 points

\_\_\_ / 200 points

**Appendix C: Grading Rubrics for Constructivist Lesson, Group Members Rating, & Lesson Critique**

<b>Evaluation of Constructivist Lesson Group Members:</b>		
<i>Grading Criteria</i>	<i>Possible Points</i>	<i>Earned Points</i>
Use of constructivist theory of teaching.	35	
Use of other cognitive theories (e.g., IPT, Schema).	35	
Teaching Quality	30	
Teacher student interaction (monitoring progress)	15	
On/Track-Timing	10	
Total	125	
Instructor Comments:		

<b>Self &amp; Group Member Evaluation for Group Project</b>					
<b>Rate Yourself:</b>					
<i>Rating Criteria</i>	<i>Rating Score (please circle)</i>				
	<i>Very Poor</i>	<i>Poor</i>	<i>Okay</i>	<i>Good</i>	<i>Excellent</i>
1. They were well prepared.	1	2	3	4	5
2. Worked well with others.	1	2	3	4	5
3. Contributed creative, innovative, and useful ideas.	1	2	3	4	5
4. Contributed considerable productive time on project.	1	2	3	4	5
5. Communicated well.	1	2	3	4	5
<b>Total Score</b>	/25				
<b>Group Member Name:</b>					
<i>Rating Criteria</i>	<i>Rating Score (please circle)</i>				
	<i>Very Poor</i>	<i>Poor</i>	<i>Okay</i>	<i>Good</i>	<i>Excellent</i>
1. They were well prepared.	1	2	3	4	5
2. Worked well with others.	1	2	3	4	5
3. Contributed creative, innovative, and useful ideas.	1	2	3	4	5
4. Contributed considerable productive time on project.	1	2	3	4	5
5. Communicated well.	1	2	3	4	5
<b>Total Score</b>	/25				

<b>Critique of Constructivist Lesson: For each lesson answer the questions below.</b>	
<b>Questions &amp; Lesson</b>	<b>Lesson &amp; Your Critique</b>
<b>Lesson Topic:</b> _____	
1. How did the teachers use a constructivist theory of teaching?	
2. What other theories did this teachers use?	
3. What worked well in this lesson?	
4. What could have been improved in this lesson?	