RUTGERS
Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

15:255:606 Key Principles of Learning: Learners and Learning I

Course Instructor: Christopher Manente PhD, BCBA	**Email address:** christopher.manente@rutgers.edu
Phone #: 848-445-3973	**Office Location:** Room 102, Rutgers Center for Adult Autism Services
Fax #: 732-932-6829	**Prerequisites:** None
Mode of Instruction: ___ Lecture ___ Seminar _X_ Hybrid ___ Online ___ Other	**Permission required:** __X_ No ____ Yes If you need a permission # for some reason, contact Dr. Manente
Office Hours: by appointment	**Websites:** www.sakai.rutgers.edu
Class Meets in Person: Heldrich Science Building (HSB) Room 206 **Dates: May 31, June 7, 14, 28; July 5, 12, 26; August 2, 9.**	**Class Meets Online: June 21; July 19; August 12.**
Required Texts: Bransford, J. D., Brown, A. L, and Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, and experience*. Expanded Edition. Washington, D.C.: National Academy Press. Available for free download (PDF) at https://www.nap.edu/catalog/9853/how-people-learn-brain-mind-experience-and-school-expanded-edition. **Other Readings:** All course readings are listed at the end of the syllabus and are available to be downloaded from Sakai under "Resources." Additional readings may be assigned during the semester.	

Course Description

A focus on student learning raises fundamental questions about types of learners and learning processes and their connections to teaching, assessment of learning, and the design of learning environments (including virtual) in homes, schools and other community settings and institutions. The main purpose of this class is to update doctoral students' knowledge of current approaches to P-16 classroom learning so that leaders can identify and inspire effective learning in a wide variety of educational settings for diverse learners. The course will focus on learners, learning theories, instructional approaches, and their implications. The course will also address specific objectives relative to the overall goals of the Ed.D. program. The course seeks to be relevant to students across each of the Rutgers Ed.D. concentrations.

This course focuses in part on Ed.D. program goals
- Critically interpret research

RUTGERS
Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

- Diagnose, frame, and address organizational and practice problems;
- Hone their pedagogical skills to lead instructional improvements at the classroom and local levels;

The following objectives will be specifically addressed. Students will:

1. Develop a sense of community within the cohort by establishing group norms, expectations,
2. Have opportunities to work effectively in collaborative groups.
3. Learn to locate research articles and will improve their ability analyze and summarize empirical research studies, with an emphasis on quantitative methods, procedures, & results and their connection to study's purpose.
4. Explore preliminary dissertation topics and identify research topics in their area of interest.
5. Develop their research focus further by writing research questions, locating references, and conduct a mini-literature review.
6. Learn to communicate and collaborate with each other and with the instructor via online tools such as the Sakai discussion threads.

Course Content Objectives

1. Introduce and discuss a broad framework for learning that incorporates different traditions. The course will focus on modern approaches to learning that are relevant for professionals in a variety of disciplines.
2. Introduce and discuss recent learning and instructional models designed to increase learning outcomes in PK-16 classrooms and non-school environments. Students will become familiar with how to use these frameworks and other course material to investigate problems of practice in educational settings.
3. Introduce and discuss theories and practice related to specific types of "learners" and/or current issues in learning. Each student will focus on a specific learner/learning issue and complete a mini-literature review.

Sakai Website

This course will be supported by a course management system named Sakai. To access Sakai you will need access to the Internet and a supported Web browser (Internet Explorer, Firefox, Safari). The url for the Rutgers Sakai portal is: https://sakai.rutgers.edu You will need your Rutgers net ID to enter the Sakai portal. Look for our class: 15:255:606:T6 once inside Sakai.

Course Structure and Expectations

The course is structured as a hybrid course. We will meet for 9 face to face classes and 3 times online. The class will meet in New Brunswick, NJ 08901. The three online sessions will be via online asynchronous discussions using Sakai. Your final paper is due on August 16th (it can be submitted earlier if you wish).

Face to face classes: Students are expected to attend class having completed the readings and assignments. Each class meeting may include both a lecture-discussion component and a group-work component that can only be completed during class. Each student is required to participate in in-class discussions and assignments by freely sharing their ideas, questions, and perspectives. You are expected

2

RUTGERS
Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

to attend class having read and taken notes on the assigned readings. This means that you will walk into class able to summarize key points in the readings and with questions for the instructor and your classmates about the assignment. Each class member is responsible for making the class a success. Attendance is mandatory. More than one unexcused absence will lower the final course grade by one full letter grade. Please make arrangements with the instructors prior to any class you may need to miss.

Online Discussions: On the three days that we have an "online" class, you will be expected to participate in online discussions using Sakai's "Forums" function. The discussions will center on the course readings and assignments. Students are required to submit all assignments on Sakai in the Dropbox by the posted due date. Assignments turned in after the posted due date will only be able to earn a maximum of 75% of the possible total score, unless arrangements have been made with the instructor a priori.

Academic Integrity Policy

All students must follow the RU Code of Student Conduct which can be accessed at:
http://policies.rutgers.edu/PDF/Section10/10.2.11-current.pdf
- For information on the academic integrity policy, please go to:
  http://academicintegrity.rutgers.edu/files/documents/AI_Policy_9_01_2011.pdf
- A multimedia presentation on plagiarism can be found at:
  http://library.camden.rutgers.edu/EducationalModule/Plagiarism/
- Related regulations may also be found in the Rutgers Graduate School of Education Catalog
- This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check Sakai for corrections or updates to the syllabus. Any changes will be clearly noted in course announcement or through SAKAI email.

Course Assignments & Grading

- Class Participation   15%   ongoing
- Online Participation   15%   as indicated in the schedule
- Article critique   15%   due June 21st
- Individual Assignments   25%   as described below
- Literature review   30%   due August 16th

Grading Scale

93-100 A	73-77 C
88-92 B+	68-72 D+
83-87 B	60-67 D
78-82 C+	Below 60 F

Class participation (15%)

Physical attendance does not imply participation. Cognitive engagement and intellectual sharing of ideas and questions is critical to your success in this course and the program. We will co-construct a shared understanding of the course readings via class discussion and activities as well as engage in small-group

RUTGERS
Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

analyses and creative problem-solving. There will be ample opportunities to share your ideas and informed rationale on a variety of topics. While the content may be general, it is up to you to make connections with your context of professional practice.

Online participation (15%)

When class is online, you are expected to participate in the asynchronous discussion on course topics by sharing your ideas, reactions, interpretations and questions on the forum. You will be assigned to a small group so that you are not inundated with material to read. You are encouraged to share questions about the readings for the day with me, in advance, so that I can review and add them to the discussion questions. You are also required to read the posts of others and comment on them. Remember, these posts need not be perfect or represent your final understanding on the topic. These are your thoughts, ideas, and reactions to the reading. Your understanding and final stances on the topics will evolve after sharing, discussing and reflecting on these ideas. You will learn more if you focus on the content and depth of discussion rather than the number of posts required.

Article Critique (15%)

This is due on June 21st. You can put it in "Dropbox." Choose an article that is relevant to your literature review and is from a reputable journal. The article should be empirical and include data. It should consist of a description of a research study conducted to answer a research question.   You should select an article that relates to the content of this course but applied within your specific field of studies. You should critique the research by commenting on (1) the rationale for the research, (2) the methods used to answer the research question asked, (3) the results found, and (4) the interpretation of the results.

Submit: A 4-7 page paper describing your critique.
Format: You should attach a copy of the article critiqued to the submission.
Grading: The paper will be graded based on your use of relevant constructs from the course and on the quality of your criticism. Your critique should identify limitations of the research and propose solutions.

Individual assignments (25%)

To help with the process of writing the literature review, which is the final paper for this class, you will complete 4 mini-assignments related to your paper.

(1) By the end of week 2, June 14th, Wednesday, you should have narrowed down the topic for your literature review. Please share the topic you have chosen with me and get it approved before starting your literature search. This is an iterative process. Your topic will predetermine your search but at the same time your search will sharpen and refocus your topic.

(2) July 12th, Wednesday - Using the Rutgers library resources or other reputable sources, you will develop a literature review plan, outline and a reference list for your final paper by doing the following:

- o   List your topic and main research question
- o   Document the search strategies used,
- o   Critically evaluate and collect a list of references up to a maximum of 20 citations,

RUTGERS

Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

     o   Show proposed list of 8-10 articles you will review for your final paper – present criteria for selection that resulted in 8-10 articles.

(3) July 19th. Choose three articles from those you have selected and write an integrative summary of the substance of these articles. Your response should be relatively short (1-3 pages).

(4) July 26th. You should submit an updated plan for your literature review, which documents your search procedure, outline of the paper, and a complete bibliography of research articles you are including in your final paper.

Final paper: Literature Review (30%)

You should submit your paper in the Dropbox on Sakai no later than August 16th at midnight. The final assignment requires that you conduct a critical literature review that incorporates 8-10 empirical studies or research studies on the same topic. You may not use an existing literature review as 1 of the 8 references for your literature review but you can use it in addition to the required minimum. All 8-10 articles must be an actual study with a research question, participants, data collection, methods, and data analysis. Additional review articles may be used above and beyond the 8-10 articles required.

You can choose to focus on one of the two broad areas:

1. A substantive area pertaining to a learning environment or context (PK-16) such as: efficacy of distance education; effective models of teacher professional development; the role of motivation in classroom learning, transfer of learning; learning in collaborative groups, and so forth. Note that each of these examples is very broad and would have to be narrowed down.

2. A type of "learner" such as "gifted and talented students", students with nonverbal learning disabilities, students with exceptional spatial abilities, students with an autism spectrum disorder, and so forth. Learners in any instructional setting can be the focus. Topic areas will be discussed and sharpened in class and via private interactions with the instructor in class and via googledocs. More detailed guidelines and rubric for the final paper will be shared on Sakai.

Formatting Written Work

In this class, and for all courses in the Ed.D. program, your written work for the final paper should conform to the formal standards articulated by the American Psychological Association (6th Ed). Help with APA style can be found at https://owl.english.purdue.edu/owl/section/2/10/. Most importantly:

○ Times New Roman, 12 point font
○ One inch margins on all sides
○ Page numbers
○ Cover page that includes title, course, student, professor, date

RUTGERS
Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

○ Left alignment with default spacing between words and letters
○ Double spaced lines with only one hard return between indented paragraphs

Incorrect formatting may result in a loss of points.

Tentative Schedule

Date	Topic	Readings/Resources	Assignments/Activities
1. May 31st RUTGERS	• Overview • Discussion of paper topics • Online resources • Memory systems	Bransford, Chapter 1 Kellogg (2016): Chapter 4	Review syllabus Overview of Sakai

RUTGERS

Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

Date	Topic	Readings/Resources	Assignments/Activities
2. June 7th RUTGERS	• Memory improvements	Schwartz, Chapters 9, 13	
3. June 14th RUTGERS	• Specific Techniques • Peer questioning • Self explanation • ELearning	• King, 1990 • Chi, 1994 • Rienties et al., 2013	Literature Review Topic Due
4. June 21st ONLINE	• Design of learning environments	• Bransford, Chapters 6 and 9	Article Critique Due
5. June 28th RUTGERS	• Feedback • Formative feedback	• Shute, (2008) • Butler et al., 2013	
6. July 6th RUTGERS	• Effective teaching • Teaching of subject matter	• Bransford, Chapter 7 • Mayer, 2004	
7. July 12th RUTGERS	• Socioconstructivist perspectives • First hand learning • Effective learning techniques	• Palincsar, 1998 • Rogoff et al., 2003 • Dunlosky et al., 2013	Literature Review Plan Due
8. July 19th ONLINE	• Cognitive apprenticeships • Restructuring the classroom • Problem-based learning	• Collins et al., 1991 • Cohen, 1994 • Hmelo-Silver, 2004	Integrative Article Summary Due
9. July 26th RUTGERS	• Discovery • Doing versus viewing • Discovery teaching	• Stull & Mayer, 2007 • Alfieri et al., 2011 • Kirschner, Sweller, & Clark, 2006 • Hmelo-Silver, Duncan, & Chinn, 2007	Updated Literature Review Plan Due
10. August 2nd RUTGERS	• Teacher Learning • Scaffolding teachers' ability to notice	• Bransford, Chapter 8 • Van Es & Sherin, 2002	

RUTGERS
Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

Date	Topic	Readings/Resources	Assignments/Activities
11. August 9th	• Learning and transfer	• Bransford, Chapter 3 • Gick & Holyoak, 1983	
12. August 16th ONLINE	• Expert-Novice Distinctions • The expert learner • Reading research articles	• Bransford, Chapter 2 • Ertmer & Newby, 1996 • Hogan, Rabinowitz, & Craven, 2003	Final Literature Review Paper Due

References

Alfieri, L., Brooks, P.J., Aldrich, N.J., & Tenenbaum. H. R. (2010). Does discovery-based instruction enhance learning? *Journal of Educational Psychology*, *103*, 1-18.

Bransford, J. D., Brown, A. L, and Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, and experience*. Expanded edition. Washington, D.C.: National Academy Press.

Butler, A., Godbole, N. & Marsh, E. (2013). Explanation feedback is better than correct answer feedback for promoting transfer of learning. *Journal of Educational Psychology*, *105,* 290-298.

Chi, M. T. H., De Leeuw, N., Chiu, M.H., & La Vancher, C. (1994). Eliciting self-explanations improves understanding. *Cognitive Science, 18*, 439-477.

Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research, 64*, 1-35.

Collins, A., Brown, J. S. & Holum, A. (1991). Cognitive apprenticeship: Making thinking visible. *American Educator, 15(3)*, 6-11, 38-46.

Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013). Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. *Psychological Science in the Public Interest, 14*, 4-58.

Ertmer, P. A., & Newby, T. J. (1996). The expert learner: Strategic, self-regulated, and reflective. *Instructional Science, 24*, 1-24.

Hmelo-Silver, C. (2004). Problem based learning: What and how do students learn? *Educational Psychology Review, 16*, 235-266.

Hmelo-Silver, C.E., Duncan,R. G., & Chinn. C. A. (2007). Scaffolding and achievement in problem-based and inquiry learning: A response to Kirschner, Sweller, and Clark (2006). *Educational Psychologist, 42*, 99-107.

Hogan, T., Rabinowitz, M, & Craven, J. A. (2003). Representation in teaching: Inferences from research of expert and novice teachers. *Educational Psychologist, 38,* 235-247, DOI: 10.1207/S15326985EP3804 3.

RUTGERS
Graduate School of Education

Office of Student and Academic Services
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183

www.gse.rutgers.edu/as

Phone: 848-932-3232
Fax: 732-932-8206

Kellog, R. T. (2016). *Fundamentals of cognitive psychology.* Thousand Oaks, CA: Sage.

King, A. (1990). Enhancing peer interaction and learning in the classroom through reciprocal questioning. *American Educational Research Journal, 27*, 664-687.

Kirschner, P.A., Sweller,J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching." *Educational Psychologist, 41,* 75-86.

Mayer, R. E. (2004). Teaching of subject matter. *Annual Review of Psychology, 55*, 715-44.

Merriam, S. B. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education, 89*, 3-14.

Palinscar, A. S. (1998). Social constructivist perspectives on teaching and learning. *Annual Review of Psychology, 49*, 345-375.

Parker, E. S., Cahill, L., & McGaugh, J. L. (2006). A case of unusual autobiographical remembering. *Neurocase, 12,* 35-49.

Rienties, B. Brouwer, N. & Lygo-Baker, S. (2013). The effects of online professional development on higher education teachers' beliefs and intentions towards learning facilitation and technology. *Teaching & Teacher Education, 29*, 122-131.

Rogoff, B., Paradise, R., Arauz, R. M., Correa-Chavez, M., & Angelillo, C. (2003). Firsthand learning through intent participation. *Annual Review of Psychology, 54*, 175-203.

Schwartz, B. L. (2011). *Memory: Foundations and applications.* Thousand Oaks, CA: Sage. (chapters 9, *Metamemory,* and chapter 13, *Memory improvements).*

Shute, V. (2008). Focus on formative feedback. *Review of Educational Research, 78*, 153-189.

Stull, A. T., & Mayer, R. E. (2007). Learning by doing versus learning by viewing: Three experimental comparisons of learner-generated versus author-provided graphic organizers. *Journal of Educational Psychology, 99*, 808-820.

van Es, E.A., & Sherin, M.G. (2002). Learning to notice: Scaffolding new teachers' interpretations of classroom interactions. *Journal of Technology and Teacher Education, 10*, 571-596.

Zhou, W., Simpson, E., & Domizi, D. (2012). Google Docs in an out-of-class collaborative writing activity. *International Journal of Teaching and Learning in Higher Education, 24*, 359-375.