V1.0 3/19/26 **Psychology 4803 (CRN: 94024)/8890(CRN: 94025)**

Syllabus

Psychology of Lifelong Learning

Fall Semester 2026

Mondays, 3:30 - 6:15 p.m., Room 250 J. S. Coon Building

Instructor: Prof. P. L. Ackerman
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Course Description:

The study of learning has been a fundamental topic for psychological theories and empirical research for well over 100 years. General theories of learning have been advanced and various techniques developed to identify a variety of important determinants of learning, such as individual differences in traits, motivation and self-regulation, structure of treatments, aids and scaffolding, massed vs. spaced training, and so on. However, learning across the adult lifespan presents important challenges and opportunities for both learning organizations and learners. This course is designed to review what is known about adult learning, and review potential best practices for acquisition and maintenance of knowledge and skills across the adult lifespan.

Course Objectives

Upon successful completion of this course, you should be able to....

1. Identify and understand the methods and statistics used in the context of assessing learning
2. Describe the major learning theories
3. Understand the different kinds of knowledge, how they are acquired, and how they are assessed, and how they are retained or decay
4. Describe and understand the dominant models of self-regulated learning
5. Have an appreciation for models of technology assessment and the development of technological fluency

Required Readings:

Course readings are listed with each topic/lecture, and copies are available for download on the course Canvas website.

General Course Information and Requirements:

Class meetings will primarily be devoted to lectures and discussions. Students are encouraged and expected to ask questions and take part in discussion during regular class periods. Two midterm quizzes and a cumulative final exam will be given. Also, class members will participate in a group project and presentation.

Course Grading

Your grade for the course will be determined as follows:

	Weight
Midterm Quiz #1	25%
Midterm Quiz #2	25%
Group Project	20%
Cumulative Final Exam	30%

For the Quizzes and Final Exam: a grade of "A" corresponds to a percentage grade of 90% or above; a grade of "B" corresponds to a percentage grade of 80%-89%; a grade of "C" corresponds to a percentage grade of 70%-79%; a grade of "D" corresponds to a percentage grade of 60%-69%; and a grade of "F" corresponds to a percentage grade of 59% or below.

NOTE: See "Attendance and Participation" section below.

Group Projects:

One of the goals of the course is to identify what works (and what doesn't) in terms of best practices for lifelong learning programs. The group projects are to select one such program, provide an overview of the program and a critical review of the efficiency and effectiveness of the program. Groups of 4-5 students will make up each group. We will discuss more of the details after the first Quiz.

General parameters for selecting a program for the group project:

1. The program must involve more than 30 hours of time-on-task.
2. The program may be educational, governmental, non-profit, commercial, but **not be a degree-granting program** (e.g., the GT On-line Masters in Computer Science [OMSCS] program would not be suitable for the project)

For the presentation (expected presentation time: 15 minutes):

1. Identify the lifelong learning program under consideration
2. Describe the goals of the program (e.g., literacy, numeracy, foreign language fluency, etc.)
3. Describe the population for whom the program was designed
4. Describe the underlying theory (i.e., where does the program fit, in terms of learning theory/theories)
5. Describe the environment (e.g., in-person, asynchronous, self-study)
6. Describe the methods of instruction/training/skill development
7. Evaluate the effectiveness of the program (also, include comparison with similar programs)

Attendance and Participation

In-class discussion is a central theme for this course. As a result, regular class attendance and full participation in discussions is required. That doesn't mean that a student must speak-up continuously, but a failure to regularly attend class AND fully participate in discussions will result in the reduction of the course grade by one letter (e.g., A→B, B→C, etc.).

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Extensions, Late Assignments, and Re-Schedule/Missed Exams

Because the group project presentations are built into the schedule, it is expected that groups will be prepared to present on their assigned day. For quizzes, in case of illness or GT approved absences, the make-up exam must be completed by the end of the week the quiz is administered, because there will be discussions of the quiz content and results during the next class meeting.

Inclement Weather and Digital Learning Days

If Georgia Tech declares a digital learning day, an e-mail will be sent to registered students with information on how to log-in for web access. Information will also be posted as an announcement on Canvas.

Student Use of Mobile and other Devices in the Classroom

Students are encouraged to take notes during the class, and may use electronic devices for this purpose. The use of mobile devices and computers should be restricted to supportive activities related to the course, and may not be used in a fashion that is disruptive to other students or the instructor, except in case of medical or other emergencies. Students are not permitted to record audio or video in the class without the explicit permission of all those individuals present in the room.

Special Note on the use of Artificial Intelligence (AI) Platforms for Project/Presentation

The rapid rate of progress on AI and related platforms makes it difficult to specify how much of the group project assignment could be effectively completed without an individual engaging in the kind of research, integration, and critical thinking that represents the aims of the course curriculum. This creates a dilemma. On one hand, it would be unreasonable to expect students to avoid using modern technological resources in pursuit of the assignment goals. On the other hand, it is entirely unclear if there would be any 'residual knowledge' if a students were to turn-over the entire project to an AI assistant (meaning that the students are no better informed or knowledgeable about the topic after using AI to generate the presentation).

In light of these considerations, you may use AI platforms to assist you in the group project assignment. But if you do so, you MUST document the sources of the content, and clearly mark which content was generated from AI, and differentiate your contributions from the AI contributions.

MEETING TOPICS AND ASSIGNMENTS

Note: Whether we get to all of the topics at the desired dates is critically dependent on class discussion and the depth of treatment accorded to the various topics, and on the time and effort dedicated to the class project. However, the assigned readings and dates for completion of the readings will not change.

Date: 8/24 **Overview, Introduction, & Background**

Readings:

Alexander, P. A. (2005). The path to competence: A lifespan developmental perspective on reading. *Journal of Literacy Research, v37.4*, 413-436.

Hall, D. T., & Mirvis, P. H. (1995). The new career contract: Developing the whole person at midlife and beyond. *Journal of Vocational Behavior, 47*, 269-289.

*Horrigan, J. B. (2018). *Lifelong learning and technology*. Pew Research Center. 69pp.
[Optional: This report is on a survey of "the extent to which America is a nation of ongoing learners]

Mahan, J. D., & Stein, D. S. (2014). Teaching adults – best practices that leverage the emerging understanding of the neurobiology of learning. *Current Problems Pediatric Adolescent Health Care, 44*: 141-149.

Taylor, D. C. M., & Hamdy, H. (2013) Adult learning theories: Implications for learning and teaching in medical education: *AMEE Guide No. 83, Medical Teacher, 35:11*, e1561-e1572.

Date: 8/31 **Methods/Statistics for Learning Assessment**
Learning Theories [start]

Readings:

Arghode, V., & Brieger, E. W. (2017). Adult learning theories: Implications for online instruction. *European Journal of Training and Development, 41(7)*, 593-609.

*Cepeda, N. J., Pashler, H., Vul, E., Wixted, J. T., & Rorher, D. (2006). Distributed practice in verbal recall tasks: A review and quantitative synthesis. *Psychological Bulletin, 132(3)*, 354-380.
[Scan: This is an extensive meta-analysis. Focus on the main evidence/conclusions]

Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2010). Meta-analysis of the effectiveness of four adult learning methods and strategies. *International Journal of Continuing Education and Lifelong Learning, 3(1),* 91-112.

Krathwohl, D. R. (2002). A revision of Bloom's Taxonomy: An overview. *Theory into Practice, 41(4),* 212-218.

Ramsey, R., Kaplan, D. M. & Cross, E. S. (2021). Watch and learn: The cognitive neuroscience of learning from others' actions. *Trends in Neuroscience, 44(6),* 478-491.

Date: 9/7 No class: Labor Day Holiday

Readings:

Illeris, K. (2018). An overview of the history of learning theory. *European Journal of Education, 53,* 86-101.

*Marsiske, M., Lang, F. B., Baltes, P. B., & Baltes, M. M. (1995). Selective optimization with compensation: Life-span perspective on successful human development. (pp. 35-79). In R. A. Dixon & L. Erickson (Eds.) *Compensating for psychological deficits and declines: Managing losses and promoting gains*. Mahwah, NJ: L. Erlbaum Associates.
[Scan: Make sure you understand the basic SOC framework. Read the details if interested]

Merriam, S. B. (2017). Adult learning theory: Evolution and future directions. *PAACE Journal of Lifelong Learning, 26,* 21-37.

Date 9/14 **Learning Theories [conclusion]**
Methods of Learning and Learning Environments
Transfer

Readings:

*Baldwin, T. T., & Ford, J. K. (1998). Transfer of training: A review and directions for future research. *Personnel Psychology, 41*, 63-105.
[Scan: Much of this paper includes details on specific studies -- in tables. Focus on the main points of the article.]

Bransford, J. D., & Schwartz, D. L. (2000). Rethinking transfer: A simple proposal with multiple implications. *Review of Research in Education, 24*, 61-100.

*Kraiger, K., & Ford, J. K. (2021). The science of workplace instruction: Learning and development applied to work. *Annual Review of Organizational Psychology and Organizational Behavior, 8*, 45-72.
[Scan: This is a great resource as a contemporaneous review of the literature. Focus on the main issues, not on the specific studies unless they are of particular interest.]

Manuti, A., Pastore, S., Scardigno, A. F., Giancaspro, M. L., & Moriano, D. (2015). Formal and informal learning in the workplace: A research review. *International Journal of Training and Development, 19(1)*, 1-17.

Date 9/21 **Procedural Knowledge Acquisition**

Readings:

*Adams, J. A. (1987). Historical review and appraisal of research on the learning, retention, and transfer of human motor skills. *Psychological Bulletin, 101*, 41-74.
[Scan: This article takes a definitive wide sweep of the motor learning field up to the 1980s. The author identifies major themes and provides extensive details.]

*Newell, K. M. (1991). Motor skill acquisition. *Annual Review of Psychology, 42*, 213-237.
[Scan: This is a great resource as a contemporaneous review of the literature. Focus on the main issues, not on the specific studies unless they are of particular interest.]

Ren, J., Wu, Y. D., Chan, J. S. Y., & Yan, J. H. (2013). Cognitive aging affects motor performance and learning. *Geriatrics and Gerontology International, 13*, 19-27.

Sherwood, D. E., & Lee, T.D. (2003) Schema Theory: Critical Review and Implications for the Role of Cognition in a New Theory of Motor Learning, *Research Quarterly for Exercise and Sport, 74:4*, 376-382.

Date: 9/28 **Quiz 1 [1st half of class]**
Group Project Planning [2nd half of class]

*Ackerman, P. L. (2008). Knowledge and cognitive aging. In F. Craik & T. Salthouse (Eds.) *The Handbook of Aging and Cognition: Third Edition*, (pp. 443-489). New York: Psychology Press.
[The chapter covers a wide range of issues, in addition to learning. Read the portions on learning.]

Taylor, M.A., & Bisson, J. B. (2020). Changes in cognitive function: Practical and theoretical considerations for training the aging workforce. *Human Resource Management Review, 30*, 100684.

Date: 10/5 **No class: Fall Break**

Date: 10/12 **Individual Differences Determinants of Learning**

Readings:

Zerr, C. L., Berg, J. J., Nelson, S. M. et al. (2018). Learning efficiency: Identifying individual differences in learning rate and retention in healthy adults. *Psychological Science, 29(9)*, 1436-1450.

*Davenport, M. K., Young, C. K., Kim, M. H., Gilberto, J. M., Beier, M. E. (2022). A lifespan development perspective and meta-analysis on the relationship between age and organizational training. *Personnel Psychology, 75*, 833–863
[As with other meta-analysis articles, focus on the main issues identified by the authors, and don't get bogged down in the meta-analysis methods and details]

Boekaerts, M. (1999). Self-regulated learning: Where we are today. *International Journal of Educational Research, 31*, 445-457.

Pintrich, P. R. (1995). Understanding self-regulated learning. *New Directions for Teaching and Learning, 63*, 3-12.

Date: 10/19 Self-Regulated Learning and Motivation [start]

Readings:

Cronin-Golomb, L. M. & Bauer, P. J. (2023). Self-motivated and directed learning across the lifespan. *Acta Psychologica*, 103816.

Houde, J. (2019). Andragogy and motivation: An examination of the principles of Andragogy through two motivation theories. *ERIC Document*, 90-97.

Panadero, E. (2017) A Review of Self-regulated Learning: Six Models and Four Directions *Research. Front. Psychol. 8*:422.

Peel, K. (2019). The fundamentals for self-regulated learning: A framework to guide analysis and reflection. *Educational Practice and Theory, 41(1),* 23-49.

Schunk, D. H., & Zimmerman, B. J. (2012). Self-regulation and learning (pp. 59-78). In W. M. Reynolds & G. E. Miller (Eds), *Handbook of Psychology: Vol 7, Educational Psychology,* New York: John Wiley.

Date 10/26 Self-Regulated Learning and Motivation [conclusion]
Technology Acceptance and Technology Fluency [start]

Readings:

Ackerman, P. L., & Kanfer, R. (2020). Work in the 21st century: New directions for aging and adult development. *American Psychologist, 75(4),* 486-498.

Deepa, V., Sujatha, R. & Baber, H. (2021) Ageing and Learning Agility –Mediating role of learning perception and moderating role of technology leverage, *International Journal of Lifelong Education, 40:5-6,* 514-531

Kim, S., Lee, K-H, Hwang, H, & Yoo, S. (2016). Analysis of the factors influencing healthcare professionals' adoption of mobile electronic medical record (EMR) using the unified theory of acceptance and use of technology (UTAUT) in a tertiary hospital. *BMC Medical Informatics and Decision Making, 16*:12.

*Venkatesh, V., Morris, M. G., Davis, G. B., and Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View *MIS Quarterly , Sep., 2003, Vol. 27, No. 3,* 425-478
[Scan: Focus on the exposition of the model -- the rest is not required reading.]

Yarbrough, A. K. (2007). Technology acceptance among physicians: A new take on TAM. *Medical Care Research and Review, 64(6),* 650-672.

Date: 11/2 **Quiz 2 [1st half of class]**
Technology Acceptance and Technology Fluency [conclusion]

Date: 11/9 **Presentations I**

Date: 11/16 **Presentations II**

Date: 11/23 **Brain Training**
Drugs for Learning Enhancement

Readings:

Chen, S. H. A., & Goodwill, A.M. (2022). Neuroplasticity and adult learning (pp. 1-13). In K. Evans et al. (Eds.), *Third International Handbook of Lifelong Learning*. Switzerland AG: Springer Nature.

*Hertzog, C., Kramer, A. F., Wilson, R. S., & Lindenberger, U. (2009). Enrichment effects on adult cognitive development: Can the functional capacity of older adults be preserved and enhanced. *Psychological Science in the Public Interest, 9,* 1-65.
[Scan: Focus on the "Conceptual Framework" and "Research Agenda." If interested, check out the discussion of specific interventions.]

Lakhan, S. E., & Kirchgessner, A. (2012). Prescription stimulants in individuals with and without attention deficit hyperactivity disorder: Misuse, cognitive impact, and adverse effects. *Brain and Behavior, 2(5),* 661-677.

Urban, K. R., Gao, W.-J. (2014). Performance enhancement at the cost of potential brain plasticity: Neural ramifications of nootropic drugs in the health developing brain. *Frontiers in Systems Neuroscience, 8,* Article 38.

Zamanian, Y. M., Karimvandi, M. N., et al. (2023). Effects of Modafinil (Provigil) on Memory and Learning in Experimental and Clinical Studies: From Molecular Mechanisms to Behaviour Molecular Mechanisms and Behavioural Effects. *Current Molecular Pharmacology, 16(4),* 507-516.

Date: 11/30 **Retention (and Relearning) over the Lifespan**

Readings:

Escobari, M., Seyal, I., & Meaney, M. (2019). *Realism about reskilling: Upgrading the career prospects of America's low-wage workers*. Brookings Institute Report.

*Ernst & Young Report (2021). *Learning reimagined*. EY White Paper.
[Optional: Scan for information about large-scale trends in the workplace.]

Field, J., & Canning, R. (2014). Lifelong learning and employers: reskilling older workers. (Pp. 463-473. In S. Harper, & K. Hamblin (Eds.), *International Handbook on Ageing and Public Policy*. Edward Elgar Publishing.

Tamayo, J., Doumi, L., et al. (2023). Reskilling in the age of AI. *Harvard Business Review.*

World Economic Forum (2017). *White paper: Accelerating workforce reskilling for the fourth industrial revolution.* World Economic Forum. Cologny/Geneva, Switzerland.

Date: 12/7 **Final class -- wrapping up.**

Readings: To be announced

FINAL EXAMINATION – To be determined xxxxxday, xxxxx 30, 2:40pm - 5:30pm