Jonathan G. Tullis

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Professional Positions

Associate Professor, University of Arizona 2021-present
Department of Educational Psychology
Affiliated with Psychology and Cognitive Science

Assistant Professor, University of Arizona 2015-2021
Department of Educational Psychology
Affiliated with Psychology and Cognitive Science

Post-doctoral Research Fellow, Indiana University (adviser: Rob Goldstone) 2013-2015
Department of Psychological and Brain Sciences

Education

University of Illinois at Urbana-Champaign May 2013
Ph.D., Department of Psychology, Cognitive Division (advisers: Aaron Benjamin & Brian Ross)

University of Notre Dame, Notre Dame, IN July 2007
M.Ed., Specialization: high school science

Dartmouth College, Hanover, NH June 2005
B.A., Psychology and Physics, Cum Laude

Awards

2016	Michael Pressley Award for a Promising Scholar in an Education Field, University of Notre Dame
2015	Faculty Travel Grant
2009-2013	National Science Foundation Graduate Research Fellowship
2013	Graduate College Travel Award
Summer 2012	List of Teachers Ranked as Excellent
Fall 2011	Rated as an “outstanding” instructor (top 10% of instructors across the university)
Summer 2009	List of Teachers Ranked as Excellent
Fall 2008	List of Teachers Ranked as Excellent

Funded Grants

2019-2024 CAREER: That Reminds Me: The Causes and Consequences of Remindings, National Science Foundation, Perception, Action, and Cognition, **PI**, ***$580,000.***

2016-2017 Social Metacognition: How we predict other's memories, UA Faculty Seed Grant, **PI,** ***$10,000***

Non-Funded Grants

Summer 2020 A Pilot Program to Study Workforce Curricula in Manufacturing & High Temperature Aerospace Materials in order to Establish a Learning Organizational Framework for Implementation at a Large Scale. Naval Surface Warfare Center.

Spring 2019 Modeling and Augmenting Workers' Learning Efficiency of New Operational Technologies at Workplaces via Augmented Reality [Resubmission], National Science Foundation, Future of Work at the Human-Technology Frontier, Changxu Wu (Systems Engineering) PI.

Fall 2018 Using Retrieval Practice to Enhance Self-Regulated Learning, Spencer Foundation.

Summer 2018 Modeling and Augmenting Workers' Learning Efficiency of New Operational Technologies at Workplaces via Augmented Reality, National Science Foundation, Future of Work at the Human-Technology Frontier, Changxu Wu (Systems Engineering) PI.

Fall 2017 Individual Differences in the Use of Testing to Support Learning, Spencer Foundation.

Fall 2017 Response to Intervention for College Students Post- Concussion, UA Start for Success, Jessie Brown (Speech, Language, Hearing Sciences) PI.

Summer 2017 Student-generated memory cues: How students support their own learning, Institute of Education Sciences, Cognition and Student Learning.

Spring 2017 Cognitive Factors Associated with Differential Responses to Mathematics Teacher Professional Development, McDonnell Foundation, Rebecca McGraw (Math Education) PI.

Summer 2016 Student-generated memory cues: How students support their own learning, Institute of Education Sciences, Cognition and Student Learning.

Summer 2016 Predicting the difficulty of material for students: How and how well teachers anticipate student performance, Institute of Education Sciences, Effective Teachers and Effective Teaching.

Fall 2015 Environmental Science Studios: Open Access, Web-Based Technology for Education in Microbial Growth and Substrate Utilization, National Science Foundation, Improving Undergraduate STEM Education, Raina Maier (Soil, Water, and Environmental Science) PI.

Peer Reviewed Publications

Peng, Y.*, & Tullis, J.G. (in press). Dividing attention and metacognition. *Digital Distractions in the College Classroom*.

Tullis, J. G., & Fraundorf, S. H. (in press). Selecting effectively contributes to the mnemonic benefits of self-generated cues. *Memory & Cognition*.

Tullis, J. G., & Finley, J. R. (in press). What characteristics make self-generated memory cues effective over time. *Memory*.

Tullis, J. G., & Qiu, J.* (in press). Generating mnemonics boosts recall of chemistry content. *Journal of Experimental Psychology: Applied*.

Tullis, J. G., & Benjamin, A. S. (2021). The negative reminding effect: Reminding impairs memory for contextual information. *Journal of Memory and Language*, 121, 104284.

Peng, Y.*, & Tullis, J. G. (2021). Dividing attention impacts metacognitive control more than monitoring. *Psychonomic Bulletin & Review*, 28, 2064-2074.

Zhang, D.*, & Tullis, J. G. (2021). Personal reminders: Self-generated reminders boost memory more than normatively related ones. *Memory & Cognition*, 49, 645-659.

Tullis, J. G., & Goldstone, R. (2020). Why does peer instruction benefit student learning? *Cognitive Research: Principles and Implications*, 5:15.

Tullis, J. G. & Maddox, G. (2020). The use of self-testing varies by grade and domain. *Metacognition and Learning*, 15, 129-154.

Tullis, J. G. (2020). E-learning: The opportunities and challenges of online instruction. Routledge Encyclopedia of Education. [INVITED SUBMISSION]

Peng, Y.*, & Tullis, J. G. (2020). Theories of intelligence influence self-regulated study choices and learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 46 (3), 487-496.

Tullis, J. G., & Finley, J. R. (2018). Self-generated memory cues: Effective tools for learning, training, and remembering. *Policy Insights from the Behavioral and Brain Sciences*, 5(2), 179-186. [INVITED SUBMISSION]

Tullis, J. G. (2018). Predicting others' knowledge: Knowledge estimation as cue-utilization. *Memory & Cognition*, 46, 1360-1375.

Tullis, J. G., Fiechter, J. L. & Benjamin, A. S. (2018). The efficacy of learners' testing choices. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 44,* 540-552.

Tullis, J. G., & Fraundorf, S. H. (2017). Predicting others' memory performance: The accuracy and bases of social metacognition. *Journal of Memory and Language*, 95, 124-137.

Tullis, J. G., & Goldstone, R. (2017). Instruction in computer modeling can support broad application of complex systems knowledge. *Frontiers in Education*, 2, 1-18.

Tullis, J. G., & Goldstone, R. (2016). Comparison versus reminding. *Cognitive Research: Principles and Implications*, 1:20.

Ryskin, R., Benjamin, A. S., Tullis, J. G., & Brown-Schmidt, S. (2015). Perspective-taking in comprehension, production, and memory: An individual differences approach. *Journal of Experimental Psychology: General*, 144, 898-915.

Tullis, J. G., & Benjamin, A. S. (2015). Cue Generation: How learners flexibly support future retrieval. *Memory & Cognition*, *43,* 922-938.

Hourihan, K. L., & Tullis, J. G. (2015). When will bigger be (recalled) better? The influence of category size on JOLs depends on test format. *Memory & Cognition*, 43, 910-921.

Tullis, J. G., Goldstone, R., & Hanson, A. (2015). Scheduling scaffolding: The extent and arrangement of assistance during training impacts test performance. *The Journal of Motor Behavior*, 47, 442-452.

Tullis, J. G., & Benjamin, A. S. (2015). Cuing others' memories. *Memory & Cognition*, 43, 634-646.

Tullis, J. G., Benjamin, A. S., & Ross, B. H. (2014). The reminding effect: Presentation of associates enhances memory for related words in a list. *Journal of Experimental Psychology: General*, 143, 1526-1540.

Tullis, J. G., Benjamin, A. S., & Liu, X. (2014). Self-pacing study of faces of different races: Metacognitive control over study does not eliminate the cross-race recognition effect. *Memory & Cognition*, 42, 863-875.

Tullis, J. G., Braverman, M., Ross, B. H., & Benjamin, A. S. (2014). Remindings influence the interpretation of ambiguous stimuli. *Psychonomic Bulletin & Review,* 21*,* 107-113.

Benjamin, A. S. Tullis, J. G., & Lee, J. H. (2013). Criterion noise in ratings-based recognition: Evidence from the effects of response scale length on recognition accuracy. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 39, 1601-1608.

Tullis, J. G., Finley, J. R., & Benjamin, A. S. (2013). Metacognition of the testing effect: Guiding learners to predict the benefits of retrieval. *Memory & Cognition,* 41, 492-442.

Tullis, J. G. & Benjamin, A. S. (2012). Consequences of restudy choices in younger and older learners. *Psychonomic Bulletin & Review*, *19*, 743-749.

Tullis, J. G. & Benjamin, A. S. (2012). The effectiveness of updating metacognitive knowledge in the elderly: Evidence from metamnemonic judgments of word frequency. *Psychology and Aging, 27*, 683-690.

Tullis, J. G., & Benjamin, A. S. (2011). On the effectiveness of self-paced learning. *Journal of Memory and Language*, *64*, 109-118.

Benjamin, A. S., & Tullis, J. G. (2010). What makes distributed practice effective? *Cognitive Psychology*, *61*, 228-247.

Book Chapters

Finley, J. R., Tullis, J. G., & Benjamin, A. S. (2009). Metacognitive control of learning and remembering. In M. S. Khine & I. M. Saleh (Eds.) *New Science of Learning: Cognition, Computers and Collaboration in Education*. New York: Springer Science & Business Media.

Manuscripts in Preparation

Tullis, J. G., & Feder, B.[1] (under revision). Estimates of normative difficulty change with one's experience.

Presentations

Li, J.*, & Tullis, J. G. (2021, November). Reminding guides the use of self-regulated reading reflections. Poster presentation at the 62nd Annual Meeting of the Psychonomic Society, Online due to COVID-19.

Tullis, J. G. (2021, November). Remindings cause interference in memory for related trivia facts. Poster presentation at the 62nd Annual Meeting of the Psychonomic Society, Online due to COVID-19.

Castro, S.*, & Tullis, J. G. (2021, June). Learning from examples: Generating or comparing. Poster presentation at McMaster Conference on Education & Cognition, Online due to COVID-19.

Tullis, J. G. (2021, February). Estimating what others know: How we predict others' knowledge and the factors that influence those predictions. Brownbag Presentation, Vanderbilt.

Milburn, H., Diehl, T., Maddox, G., & Tullis, J. G. (2020, November). Student and teacher sensitivity to the benefits of retrieval practice. Poster presentation at the 61st Annual Meeting of the Psychonomic Society, Online due to COVID-19.

Tullis, J. G., & Qui, J.* (2020, November). Generating mnemonics boosts recall of chemistry content. Spoken presentation at the 61st Annual Meeting of the Psychonomic Society, Online due to COVID-19.

Tullis, J. G. (2020, October). Blasts from the past: Encoding novel stimuli can prompt retrievals of prior episodes. Brownbag Presentation, University of Pittsburgh.

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*indicates graduate student

[1]indicates undergraduate student

Tullis, J. G. (2020, June). Learning from examples. *S*poken presentation at McMaster Conference on Education & Cognition, Online due to COVID-19.

Tullis, J. G., & Goldstone, R. (2020, April). How peer instruction changes student learning. Spoken presentation at AERA, San Francisco. [Conference canceled due to COVID-19]

Tullis, J. G., & Goldstone, R. (2019, November). Why does peer instruction benefit student learning? Spoken presentation at the 60th Annual Meeting of the Psychonomic Society, Montreal.

Tullis, J. G. (2018, December). Choosing Retrieval Practice: When and How Effectively Do Students Choose Testing. Spoken presentation at the 9th Arizona Cognitive Science Conclave, Phoenix.

Tullis, J. G. (2018, November). Predicting Others' Knowledge: Expertise and experience change what cues are used. Spoken presentation at the 59th Annual Meeting of the Psychonomic Society, New Orleans.

Tullis, J. G., Peng, Y. (2018, November). Theories of intelligence influence restudy choices. Spoken presentation at the International Association for Metacognition conference, New Orleans.

Zhang, D.*, & Tullis, J. G. (2018, November). Personal reminders: Idiosyncratic associations boost memory more than normative ones. Poster presentation at the 59th Annual Meeting of the Psychonomic Society, New Orleans.

Tullis, J. G. (2018, September). The schedule of scaffolding affects math learning and metacognition. Poster presentation at the Center for Integrative Research on Cognition, Learning, and Education Conference, St. Louis.

Peng, Y.*, & Tullis, J. G. (2018, April). Theories of intelligence influence restudy choices. Spoken presentation at AERA, New York.

Tullis, J. G., & Goldstone, R. (2017, November). Reminding vs. Comparison. Spoken presentation at the 58th Annual Meeting of the Psychonomic Society, Vancouver.

Tullis, J. G. (2017, April). Predicting others' knowledge: Judgment conditions affect the accuracy of estimates of difficulty for others. Roundtable session at AERA.

Tullis, J. G. (2016, December). Predicting others' understanding: Perspective-taking in knowledge estimation. Presentation at the 7th Arizona Cognitive Science Conclave, Phoenix.

Tullis, J. G., (2016, November). Estimating others' knowledge: Judgment conditions affect the accuracy and bases of estimates of difficulty for others. Poster presentation at the 57th Annual Meeting of the Psychonomic Society, Boston.

Tullis, J. G. (2016, November). The influence of others' study choices on metacognitive monitoring and control. Presentation at the conference of the International Association for Metacognition, Boston.

Fraundorf, S. H., & Tullis, J. G. (2016, November). Predicting the memory performance of others. Presentation at the conference of the International Association for Metacognition, Boston.

Tullis, J. G. & Fraundorf, S. H. (2015, December). Predicting others' memories. Poster presented at the Arizona Cognitive Science Conclave, Tucson.

Tullis, J. G., (2015, November). Remindings influence source memory. Poster presentation at the 56th Annual Meeting of the Psychonomic Society, Chicago.

Tullis, J. G. & Fraundorf, S. H. (2015, November). Predicting others' memories. Poster presented at the 56th Annual Meeting of the Psychonomic Society, Chicago.

Tullis, J. G. (2015, September). Remindings: The influence of prior episodes on present behavior. Presentation to the Cognitive Science Group at University of Arizona.

Tullis, J. G., Goldstone, R., & Hanson, A. (2014, November). Scheduling scaffolding: The extent and arrangement of assistance during training impacts test performance. Poster presentation at the 55th annual meeting of the Psychonomics Society, Long Beach, CA.

Tullis, J. G. (2014, November). The wonders and woes of self-paced learning. Presentation at the conference of the International Association for Metacognition, Long Beach, CA.

Hourihan, K. L., & Tullis, J. G. (2014, November). When will bigger be (recalled) better? The influence of category size on JOLs depends upon test format. Presentation at the conference of the International Association for Metacognition, Long Beach, CA.

Tullis, J. G. (2014, October). Remindings: The influence of unplanned retrievals on memory and interpretation. Presentation to the Cognitive Psychology Department at Indiana University.

Tullis, J. G., & Goldstone, R. L. (2014, September). The mnemonic and metamnemonic consequences of predictions in science learning. Presentation at the Memory and Cognition Laboratory, Champaign, IL.

Tullis, J. G., & Goldstone, R. L., & Hanson, A. J. (2014, September). Schedule of scaffolding impacts what and how well skills are learned. Poster presentation at the Center for Integrative Research on Cognition, Learning, and Education Conference, St. Louis, MO.

Hanson, A. J., Goldstone, R. L, & Tullis, J. G. (2014, June). The bugcatcher. Presentation at the Thirteenth Annual Summer Interdisciplinary Conference, Moab, UT.

Tullis, J. G., & Benjamin, A. S. (2013, November). Generating memory cues for others. Poster presentation at the 54th Annual Meeting of the Psychonomic Society, Toronto, Canada.

Tullis, J. G. (2013, March). That reminds me: The influence of unplanned retrievals on memory and understanding. Presentation to the Cognitive Psychology Department at University of Illinois, Urbana-Champaign.

Tullis, J. G. (2012, December). Promises and Pitfalls of Self-Regulated Learning: Evidence from study time allocation, item selection, and activity selection. Presentation to Psychological and Brain Sciences Department. Indiana University.

Tullis, J. G., & Benjamin, A. S. (2012, November). Metacognitive control of encoding same- and other-race faces. Poster presentation at the 53th Annual Meeting of the Psychonomic Society, Minneapolis.

Tullis, J. G., Benjamin, A. S., & Ross, B. H. (2011, November). A metacognitive illusion in category learning. Poster presented at the 52th Annual Meeting of the Psychonomic Society, Seattle.

Tullis, J. G., & Benjamin, A. S. (2009, November). On the effectiveness of self-paced learning. Poster presented at the 50th Annual Meeting of the Psychonomic Society, Boston.

Tullis, J. G., Benjamin, A. S., & Ross, B. H. (2008, November). What makes distributed practice effective? Poster presented at the 49th Annual Meeting of the Psychonomic Society, Chicago.

Community Presentations

Tullis, J. G. (2020, January). Making decisions: How simple biases shape how we act. Presentation at Arizona State Prison through the Prison Education Project, Tucson, Az.

Tullis, J. G. (2019, June). How can teachers use cognitive psychology to support student learning. Presentation at Envision High School, Tucson, Az.

Tullis, J. G. (2018, June). Brain-based instruction: Using cognitive psychology to bolster student learning. Presentation at Arizona Teachers' Institute, Tucson, Az.

Tullis, J. G. (2017, March). Applying Cognitive Psychology to Education: Benefits and Boundary Conditions. Presentation at Arizona Psychology Undergraduate Research Conference, Arizona State University.

Tullis, J. G. (2017, January). 4 Cognitive principles to easily improve student learning. Presentation to Patagonia School District Teachers, Patagonia, AZ.

Tullis, J. G. (2017, January). Making sense of mathematics: Using the brain to enhance math instruction. Presentation at the Mathematics Educator Appreciation Day Conference, Tucson.

Tullis, J. G. (2016, September). Improving Physics Learning Through Cognitive-Based Pedagogy. Presentation to the Tucson Area Physics Teachers (TAPT) group, Tucson.

College Teaching Experience

University of Arizona

Decision Making Across the Lifespan	EdP 410	Fall 2016-2022
Dec. Making Across the Lifespan (Online)	EdP 410i	Fall 2017-2022
Learning Theories	EdP 510	Spring 2016-2020
Advanced Research Methods	EdP 667	Spring 2019, 2017
Self-Regulated Learning	EdP 615b	Spring 2019, 2018, 2016
Social Cognition in Education	EdP 615a	Spring 2018
Cognitive Approaches to Education	EDP 696	Fall 2015
Independent Study	EDP 699	Fall 2019

University of Illinois

Cognitive Psychology	Psych 224	Fall 2012, Summer 2009, Spring 2009
Learning and Memory	Psych 248	Spring 2012
Introduction to Psychology	Psych 100	Fall 2011
Research Methods in Cognitive Psychology	Psych 331	Fall 2008

Editorial Board Positions

Journal of Experimental Psychology: Learning, Memory, and Cognition (Associate Editor)
Journal of Experimental Psychology: Applied (Editorial Board Member)

Ad Hoc Reviewer

Journal of Research on Personality
Science of Learning: Nature
NSF: Perception, Action, Cognition
Women in Science Fellowship
Israel Science Foundation
European Regional Development Fund
Learning and Instruction
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Learning, Memory, and Cognition
Journal of Experimental Psychology: Applied
Psychonomic Bulletin & Review
Journal of Memory and Language
Memory & Cognition
Memory
Psychology and Aging
Journal of Applied Gerontology
Journal of Gerontology: Psychological Sciences
Quarterly Journal of Experimental Psychology
Applied Cognitive Psychology
Acta Psychologica
PLOS One
Anatomical Sciences Education
European Journal of Psychology of Education
Frontiers in Psychology
Mind, Brain, and Education
Cognitive Psychology
Educational Psychology Review
Metacognition and Learning
Human Factors
AERA Conference Reviewer
Aging, Neuropsychology, and Cognition
Journal of Applied Research in Memory and Cognition

Advising

2020-2021

Comps Committee – Shane Thomas (Molecular and Cellular Biology)
Comps Committee – Rebecca Friesen
Comps Committee Chair – Di Zhang
Master's Thesis Committee – Ryan Lee (McMaster University)
Master's Thesis Committee – Juhnze Yang
Master's Thesis Chair – Jiyu Li
Master's Thesis Chair – Haydon Ekstrom

2019-2020
Master's Thesis Chair – Leslie Bosch
Master's Thesis Chair – Jiahui Qiu
Comps Committee – Sarah Grace
Undergraduate Thesis Chair – Brennen Feder
Undergraduate Thesis Chair – Dominique Hughes (Neuroscience)

2018-2019
Dissertation Chair – Yaopeng Peng
Dissertation Co-chair – Elizabeth Bukoski
Dissertation Committee – Zhongyuan Li
Master's Thesis Chair – Di Zhang
Master's Thesis Committee – Mary Hartman
Master's Thesis Committee – Avery Mickens
Comps Committee – Melissa Akan (Psychology, University of Illinois)

2017-2018
Comps Committee – Elizabeth Bukoski
Comps Committee – Stella Sakhon (Psychology)
Dissertation Committee – Katie Esterline (Psychology)
Master's Thesis Committee – Lauren Clough
Master's Thesis Committee – Daisy (Shuxin) Di
Master's Thesis Committee – Ambareen Baig
Master's Thesis Committee – Greg Hughes (Psychology, Boston University)
Undergraduate Thesis Chair – Samantha Orwoll (Psychology)

2016-2017
Comps Committee – Katie Esterline (Psychology)
Master's Project Committee – Ben Caldera
Master's Project Committee – Kylan Butler
Master's Thesis Committee – Xueyan Li
Dissertation Committee – Erica Defrain

2015-2016
Master's Project Committee – Charlene Bruce

Service

University Level

Summer 2021	eIRB Champion, eIRB Product Tester
Spring 2021	NSF CAREER Grant Panel
Fall 2016-ongoing	Committee on Faculty Membership, Faculty Senate
Fall 2017-Spring 2021	Graduate Council Member
Spring 2016-ongoing	Graduate Student Showcase Judge
Spring 2018-ongoing	Grad Slam Judge
Spring 2018-ongoing	UA Research & Development Grant Reviewer
Spring 2016-Spring 2019	Senior Awards Committee Member
Spring 2018	Strategic Planning Committee: Pedagogy & Instruction

College Level

Fall 2016-Fall 2018	College of Education Dean's Search Committee

Department Level

Spring 2021-ongoing	EdP SPFI and Advanced Faculty Search Committees
Spring 2020-ongoing	EdP Annual Review Committee
Spring 2019-ongoing	EdP Social Media Coordinator
Fall 2017-ongoing	EdP Participant Pool Coordinator
Fall 2016-ongoing	EdP IRB Exempt Reviewer
Fall 2019-Spring 2020	EdP Learning Sciences Search Co-Chair
Fall 2015-Spring 2016	EdP Quantitative Search Committee

Community

Spring 2019 – Fall 2020	APA – High school science standards committee
Spring 2018, 2021	SARSEF Science Fair Judge
Spring 2017, 2019	APA Intel International Science Fair Judge
Spring 2017	Skype a Scientist

Professional Memberships

American Educational Research Association – Division 15
American Psychological Association – Division C
International Association for Metacognition
Psychonomics Society [Review Committee Member]