

Software Tools in the Teaching of Psychology
Best Resources List
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The following list identifies some software tools that are useful for instruction in psychology. Note that some of these tools display information within a web browser, while others are actual software applications that must be installed on each computer system that will be used. Some of these tools are freely available for educational use, while others are commercial products that must be purchased or licensed. A few are only available to adopters of particular textbooks.

Web Resources for Psychology Software

- *MERLOT* – A general resource aimed at faculty and students in higher education. Notes: In addition to the links to online materials, there are also peer reviews and annotations. (<http://www.merlot.org/>)
- *Encyclopedia of Psychology* – A list of psychology software with annotations. (<http://www.psychology.org/links/Resources/Software/>)
- *Software Resources on the Internet* – An annotated list of resources maintained by John Krantz, Hanover College. (<http://psych.hanover.edu/Krantz/software.html>)

Demonstration Software

- Introduction to Psychology/General Psychology
 - *Epsych* – A creative set of animations and tutorials explaining various aspects of psychology. Notes: Many modules are designed for and best used as out of class assignments but some may be useful for in-class demonstrations. (<http://epsych.msstate.edu>)
 - *PsychExperiments* – A variety of experimental stimuli that can be used to gather data for a class on classic experimental paradigms. Notes: Students perform the studies outside of class and contribute data to a class set that can be analyzed and discussed in class. (<http://psychexps.olemiss.edu/>)
 - *Sniffy the Virtual Rat* – Realistic simulation of a rat in an operant chamber. Notes: Includes 47 exercises that demonstrate all the major aspects of classical and operant condition (with enough detail for a course on learning). About \$25 for Lab Manual with CD-ROM for Windows and MacOS. Lite version includes 16 most popular exercises and is more suitable for introductory courses. Developed by Greg Wilson, Tom Alloway, &

Jeff Graham, University of Toronto-Mississauga.

(http://www.wadsworth.com/psychology_d/special_features/technology.html)

- *Psyk.Trek* – Tutorial CD-ROM covering core psychology topics. About \$55. Developed by Wayne Weiten.
(http://www.wadsworth.com/psychology_d/special_features/PsykTrek.html)
- *PsychSim* – Tutorial CD-ROM covering core psychology topics. Twenty sample modules are freely available on the web at
<http://bcs.worthpublishers.com/gray/content/psychsim5/launcher.html>. Full CD-ROM version about \$25. Developed by Thomas Ludwig.
(<http://www.worthpublishers.com/book.asp?1149000262>)
- *MindMatters* – Tutorial CD-ROM covering core psychology topics. About \$22. Developed by James Hilton and Charles Perdue. (www.ablongman.com/)
- *Psychology 2000* – A set of 19 demonstrations of psychological phenomena, designed to be used by individual students outside the classroom. Notes: Not highly structured, so students can explore the topics in their own way. Distributed on CD-ROM. About \$55 for single-user license; multiple-user licenses available. Developed by Sarah Ransdell, Florida Atlantic University. (<http://www.psychologysoftware.com/>)
- *Self-Help Quizzes* – A set of 17 free online quizzes, including personality profiles and simple screening for several types of disorders. Maintained by John Grohol.
(<http://psychcentral.com/quizzes/>)

➤ Research Methods

- *HyperStat Online* – A largely text-based statistics text available for free on the web. Notes: It is written with hypertext links that allow the reader to click on certain terms to jump to other sections of the text describing various terms in greater detail. Advertising supports it and there are a number of ads on each page (but no popup ads). Developed by David M. Lane, Rice University. (<http://davidmlane.com/hyperstat/>)
- *SticiGui* – An online statistics textbook. Developed by Philip Stark, Univ. California, Berkeley. (<http://www.stat.berkeley.edu/~stark/SticiGui/>)
- *VassarStats* – Helpful set of statistical computation tools.
(<http://faculty.vassar.edu/lowry/VassarStats.html>)
- *Statistics To Use* – Introduction to basic statistical tests.
(<http://www.physics.csbsju.edu/stats/>)
- *STATS* – Simple step-by-step approach to analyzing data, with emphasis on medical research. (<http://www.cmh.edu/stats/>)
- *CHANCE database* – Set of audio and video resources illustrating real-life examples of probability and statistical reasoning.
(<http://www.dartmouth.edu/~chance/ChanceLecture/AudioVideo.html>)
- *Methods in Behavioral Research* -- Online resource for research methods courses, with links to short tutorials on topics in statistics and experimental design. Developed by Paul Cozby, California State University, Fullerton. (<http://methods.fullerton.edu/>)

➤ Sensation & Perception

- *Insight* – A series of laboratory exercises that demonstrate current topics in sensation and perception. Available on CD-ROM that accompanies Goldstein’s *Sensation & Perception*. Thompson Wadsworth pub.
 - *Sensation & Perception Tutorials* – A series of interactive Java tutorials on various aspects of sensation and perception. Notes: Most are not cluttered with small text and the graphics are large enough to be useful for in-class presentations. Developed by: John Krantz, Hanover College. (http://psych.hanover.edu/Krantz/sen_tut.html)
 - *Visual Illusions Gallery* – Sample displays of illusory phenomena. Notes: Also contains links to various visual illusions, many useful for in-class presentations. Developed by: David T. Landrigan, University of Mass. at Lowell. (<http://dragon.uml.edu/psych/illusion.html>)
 - *Joy of Visual Perception* – A web book written with hypertext links and interactive demonstrations of perceptual phenomena, many of which are large enough to be useful for in-class demonstrations. Developed by: Peter K. Kaiser, York University. (<http://www.yorku.ca/eye/thejoy1.htm>)
 - *Eye Lines* – Software package for demonstrating visual and visuomotor phenomena. Notes: Includes visual illusions, visual psychophysics, mirror drawing, and pursuit tracking. Can also be used for research purposes to present visual stimuli and collect responses. About \$100 for a 6-copy license. Windows and MacOs. Developed by W. K. Beagley, Alma College. (<http://www.alma.edu/el/>)
- Cognition/Cognitive Science
- *Cognitive Science Web Site* – A Web text in cognitive science. Notes: Useful for out of class readings. Developed by: a project team at the University of North Carolina, Charlotte. (<http://cogsci.uncc.edu/>)
 - *SuperLab LT* – A series of 25 classic and contemporary experiments in cognitive psychology that can be used as student lab projects. Notes: Useful for involving students in out-of-class demonstrations of classic experiments in cognition. Available on CD ROM that can be purchased by a student (Price: \$35) with an accompanying lab manual or by the institution with a license for SuperLab Pro. (<http://www.superlab.com/lt/>)
 - *Computer Lab in Memory & Cognition* – A series of contemporary experiments in cognitive psychology that can be used as student lab projects. Notes: Can be used to give students a participant’s eye view of studies in cognition and their results can then be analyzed and discussed in class to provide increased understanding of the theories suggested by the results. Developed by: Janice M. Keenan, University of Denver. Freely available for educational use. (<http://www.du.edu/psychology/methods/experiments/>)
 - *Laboratory in Cognition and Perception* – A set of 20 classic experimental paradigms for use in student data collection projects. Notes: Each paradigm can be modified to produce several different experiments. A special Excel template is provided for data analysis. Student manual with background information on each paradigm and detailed instructions for running the experiments is available for purchase (\$25). Commercial product: About \$300 for a single-user license; multiple-user license is available; free trial version available; Windows version only. Developed by C. Michael Levy and Sarah Randell. (http://www.psychologysoftware.com/laboratory_in_cognition_and_perc.htm)

- *CogLab* – Set of 46 exercises on attention, perception, memory, and language. Notes: Students must purchase a registration code (about \$27) to use CogLab online; 37 of the exercises are also available on CD-ROM. (<http://coglab.wadsworth.com/>)

Laboratory Software

- Tool-based software to create experiments in psychology
 - *SuperLab Pro* – Popular general-purpose experiment generator for setting up and running psychology experiments. Notes: Can be used as software in a psychology lab for students or faculty to conduct research. Faculty price: about \$600 for a single user license (create experiments and collect data on only one computer at a time, with reduced cost for run-time licenses to collect data on other computers). Student price: \$125. Also available as an instructional package/workbook called SuperLab LT (Price: \$35) containing 25 “canned” experiments that an individual student can use for up to four months. Developed by Cedrus Corporation. Windows and MacOS. (<http://www.superlab.com/>)
 - *E-Prime* – Popular general-purpose experiment generator package. Notes: Allows for precisely timed stimulus presentation of text, BMP image files, and sound files with precision response recording; strong on specifying various experimental parameters. Price: About \$700 for a single-user license (Generator software uses a hardware key which allows the user to create experiments on only one computer at a time, but included run-time software license allows data collection on up to 10 computers without the hardware key). Free trial version available. Developed by Psychology Software Tools. (<http://www.pstnet.com/products/e-prime/>)
 - *MediaLab* – General-purpose experiment generator. Notes: Designed to present a wide range of multi-media content; especially good for development of questionnaires with various types of response formats. Windows only. Free trial version available. Developed by: Empirisoft. (<http://www.empirisoft.com/medialab/>)
 - *DirectRT* – DirectX-based experiment generator designed specifically to deliver precisely-timed text, images, sound clips, and video clips, and measure reaction times with high precision. Windows only. Free trial version available. Developed by: Empirisoft. (<http://www.empirisoft.com/directrt/>)
 - *StimScope* – General-purpose experiment generator for visual stimuli only. Notes: Especially useful for 2 alternative forced-choice delayed matching tasks, (initial picture followed by a delay, then two pictures; the participant has to indicate which one matches the initial picture). Windows only. Free download. Developed by: R. Zoontjens (<http://www.rzoont.dds.nl/stimscope/>)
 - *Presentation* – Powerful experiment generator designed specifically for neuroscience research. Windows only. Laboratory license: \$80 per computer per year. Free trial version available. Developed by: Neurobehavioral Systems. (<http://nbs.neuro-bs.com/>)
 - *Psychophysics Toolbox* – Powerful and flexible open-source software for vision research. Notes: Requires some programming ability, and requires purchase of Matlab numerical programming environment. Windows and MacOS. Free download. Developed by David Brainard, Denis Pelli, and Allen Ingling. (<http://psychtoolbox.org/>)
 - *PsyScript* – Very flexible open-source experiment generator. Notes: Requires some programming ability to modify the scripts for experiment control. MacOS only. Free download. (<http://www.maccs.mq.edu.au/%7Etim/psyscript/>)

- *SurveyWiz* – A tool for creating online surveys. Notes: Could be useful for posting midterm course evaluations or other surveys of students online or could be used by students to create surveys to use in their own research. Freely available for educational use. Developed by: Michael Birnbaum
(<http://psych.fullerton.edu/mbirnbaum/programs/surveyWiz.htm>)
- Statistics programs – All of these programs can be used to teach students to do statistical procedures.
 - *Excel* – General purpose spreadsheet software. Notes: Can be used to calculate simple statistics and generate graphs to demonstrate statistical concepts. Widely available for purchase as part of Microsoft Office package. Developed by: Microsoft.
 - *Using Excel for Statistical Analysis* – Tips from R. E. Wyllis, Univ. Texas at Austin. (<http://www.gslis.utexas.edu/~wyllys/IRLISMaterials/excelnotes.html>)
 - *SPSS* -- General purpose statistical software. (<http://www.spss.com/>)
 - *SPSS Tutorial* – Online instructions for getting started with SPSS data analysis. (<http://www.csubak.edu/ssric/Modules/SPSS/SPSFirst.htm>)
 - *Minitab* -- General purpose statistical software. (<http://www.minitab.com/>)
 - *Minitab Resources* – Free site for Minitab users. (<http://www.personal.psu.edu/users/d/m/dmr/minitab/mtbtutor.htm>)
 - *SAS* -- General purpose statistical software. (<http://www.sas.com/>)
 - *Free Statistical Software* – A set of links to free downloads of statistical programs and Excel add-ins for statistical analysis. (<http://members.aol.com/johnp71/javasta2.html>)
- Archival Data
 - Statistical Abstract of the United States - The U.S. Government Census Bureau has several datasets available online and other data available for purchase. (http://www.census.gov/stat_abstract/)
 - White House Briefing Room – Contains statistical reports generated by a variety of federal agencies, including information on crime, demography, education, and health. (<http://www.whitehouse.gov/fsbr/demography.html>)
 - World Bank - Includes downloadable datasets, statistical reports on countries and regions, maps showing environmental data, and more. (<http://www.worldbank.org/data>)
 - Inter-University Consortium for Political and Social Research (at the University of Michigan) has a large array of datasets. (<http://www.icpsr.umich.edu/>)
 - Institute for Social Research (at the University of Michigan) – Includes statistical reports and downloadable datasets. (<http://www.isr.umich.edu/>)
 - Social Sciences Data Collection at University of California San Diego - Large data files with descriptions of the studies in which the data were collected. (<http://ssdc.ucsd.edu/ssdc/catalog.html>)
 - University of Michigan Document Center - This is a comprehensive list of statistical reports available on the web. (<http://www.lib.umich.edu/libhome/Documents.center/stats.html>)
 - Statistics and Demographics Page at the University of Texas – US and international data sources. (<http://www.lib.utexas.edu/subject/business/demographics&statistics.html>)