BUILDING AN INSTRUCTIONAL TECHNOLOGY TOOLKIT: INTEGRATING TOOLS TO EMPOWER ALL LEARNERS
Foundations for constructing an instructional technology toolkit:

Active Learning involves planning "instructional activities involving students doing things and thinking about the things they are doing" (Bonwell & Eison, 1991, p. 1). These instructional activities can be individual, paired, in informal small groups, in formal groups for larger projects, or as a class.

Learning "styles" express how information is best taken in/communicated by a learner. While this idea is commonly espoused by individuals and instructors alike, Pashler, McDaniel, Rohrer, & Bjork (2008) found no evidence to support it. Focus instead on Willingham's (2009) assertion that good teaching is good teaching, no matter what, and use the best technology available/appropriate.

Today's students: Millenials/Generation Y who want "discovery based" learning that uses the Internet to construct and share understanding (Seely Brown, 2002). Effective use of instructional technology will engage students in those ways.

In considering how to integrate technology in instruction, determine the kind of learning you want:

Remembering? Understanding? Applying? Analyzing? Evaluating? Creating?

Learning Activities:
- Remember: https://www.zotero.org/groups/instructional_tech_workshop_-_tools
- Understand: http://m.socrative.com/student/#joinRoom -- enter room name OUHess
- Apply: http://padlet.com/nichols/CETL2015
- Analyze: http://bit.ly/CETL2015
- Evaluate: http://www.chatzy.com/31757041756412
- Create: go wild – explore for yourself! ☺

A guide for considering where technology tools can be used to achieve these desired outcomes:

	Remember	Understand	Apply	Analyze	Evaluate	Create
Zotero.com						
Diigo.com						
Evernote.com						
PollEverywhere.com						
Socrative.com						
Padlet.com						
En.Linoit.com						
Screencast-o-matic.com						
Screenr.com						
Techsmith.com/Jing						
OnlineChartTool.com						
Create.ly						
Bubbl.us						
Text2MindMap.com						
MindMeister.com						
SurveyMonkey.com						
Chatzy.com						
drive.google.com: docs, forms, presentations, spreadsheets						
Wikispaces.com						
Blogger.com						
WordPress.com						
Piktochart.com						
Learni.st						
Infogr.am						
easel.ly						
Glogster.edu						
Animoto.com						

Resources for Keeping Up-to-Date in Instructional Technology

These sites and journals represent scholarship in the field and can be used to stay abreast of technology tools that can be integrated into instruction.

Top 100 Tools for Learning: http://c4lpt.co.uk/top100tools/
- These top 100 tools are "voted for by 582 learning professionals worldwide" yearly, and reflect the tools used for personal and professional learning and productivity, in education, or in business. This is updated every year at the end of September/beginning of October.

Multimedia Educational Resource for Learning and Online Teaching (MERLOT): www.merlot.org
- This free, open community is designed for "faculty, staff and students of higher education from around the world to share their learning materials and pedagogy."

Pertinent Scholarly Journals:
- *Educational Technology Research and Development*, **AECT**: This journal is the only scholarly publication in educational technology that focuses exclusively on research and development.
- *Educational Media and Technology Yearbook*, **AECT**: This yearly publication includes chapters around thematic issues of using technology to enhance or enable education.
- *TechTrends*, **AECT**: *TechTrends*' major purposes are "to provide a vehicle for the exchange of information among professional practitioners concerning the management of media and programs, the application of educational technology principles and techniques to instructional programs, corporate and military training, and any other kinds of information that can contribute to the advancement of knowledge of practice in the field."
- *Journal of Online Learning and Teaching* (JOLT), **MERLOT** – jolt.merlot.org: A publication of MERLOT, JOLT is "a peer-reviewed, open-access, online publication that aims to promote scholarship in the use of the internet and web-based multimedia resources in higher education."

Anderson, L. W., Krathwohl, D. R., & Bloom, B. S. (2001). *A taxonomy for learning, teaching, and assessing: A revision of bloom's taxonomy of educational objectives*. New York: Longman.

Andrews, T. M., Leonard, M. J., Colgrove, C. A., & Kalinowski, S. T. (2011). Active learning not associated with student learning in a random sample of college biology courses. *CBE Life Sciences Education, 10*(4), 394-405. doi:10.1187/cbe.11-07-0061

Bonwell, C. C. & Eison, J. A. (1991). *Active Learning: Creating Excitement in the Classroom.* ASHE-Eric Higher Education Report No. 1. Washington, DC: The George Washington University, School of Education and Human Development.

Braxton, J. M., Jones, W. A., Hirschy, A. S., & Hartley III, H. V. (2008). The role of active learning in college student persistence. *New Directions for Teaching and Learning, 2008*(115), 71-83. doi:10.1002/tl.326

Brown, J. S. (2002). Growing up digital: How the web changes work, education, and the ways people learn. *USDLA Journal, 16*(2)

Campisi, J., & Finn, K. E. (2011). Does active learning improve students' knowledge of and attitudes toward research methods? *Journal of College Science Teaching,40*, 38.

Chickering, A. W. & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *American Association for Higher Education Bulletin*. Retrieved from http://wwwtemp.lonestar.edu/multimedia/SevenPrinciples.pdf

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.

Jung, C. J. (1971). *Psychological Types*. Princeton, NJ: Princeton University Press.

Kolb, D. A. (1984). *Experiential Learning: Experience as the source of learning and development.* Englewood Cliffs, NJ: Prentice Hall.

Learning styles. (2012). In *Encyclopedia of Diversity in Education*. Retrieved from http://huaryu.kl.oakland.edu/login?url=http://www.credoreference.com/entry/sagedived/learning_styles

Learning style theory. (2006). In *Elsevier's Dictionary of Psychological Theories*. Retrieved from http://huaryu.kl.oakland.edu/login?url=http://www.credoreference.com/entry/estpsyctheory/learning_style_theory

Obenland, C. A., Munson, A. H., & Hutchinson, J. S. (2012). Silent students' participation in a large active learning science classroom. *Journal of College Science Teaching, 42*, 90.

Powner, L. C., & Allendoerfer, M. G. (2008). Evaluating hypotheses about active learning. *International Studies Perspectives, 9*(1), 75-89. doi:10.1111/j.1528-3585.2007.00317.

Riener, C. & Willingham, D. (2010). The myth of learning styles. *Change, 42*(5), 32-35. Retrieved from http://www.changemag.org/Archives/Back%20Issues/September-October%202010/the-myth-of-learning-full.html

Roehl, A., Reddy, S. L., & Shannon, G. J. (2013). The flipped classroom: An opportunity to engage millennial students through active learning strategies. *Journal of Family & Consumer Sciences, 105*(2), 44-49.

Pashler, H., McDaniel, M., Rohrer, D. & Bjork, R. (2008). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest*, *9*(3), 105-119. doi: 10.1111/j.1539-6053.2009.01038.x

Ross, A. & Furno, C. (2011). *Active learning in the library instruction environment: An exploratory study* The Johns Hopkins University Press.

Fleming, N. (2012). VARK: A guide to learning styles. Retrieved from http://www.vark-learn.com

Williams, J., & Chinn, S. J. (2009). Using web 2.0 to support the active learning experience. *Journal of Information Systems Education, 20*(2), 165-174.

Willingham. D. (2009). Learning Styles Don't Exist. [Video file]. Retrieved from http://www.youtube.com/watch?v=sIv9rz2NTUk

Zayapragassarazan, Z. & Kumar, S. (2012). Active learning methods. *NTTC Bulletin, 19*(1), 3-5.