

Summary of Articles from October 2009 through September 2014.

Authors (Year)	Methodology	n	Summary of Findings
Baker, T.E., Cimini, J.E., & Cleveland, C.T. (2011)	Quantitative-(Survey); Evaluation results from a university investigative process course.	33 students	The preliminary survey findings were positive for: (1) varied learning experiences, (2) active learning activities, and the (3) mock trial simulation. Evaluation results indicate learning preferences for student participants in two sections of the course.
Black, R.D., Weinberg, L.A., & Brodwin, M.G. (2014)	<i>Quantitative</i> -(Survey); Faculty incorporated principles of UDI/UDL into their instruction, the variety of methods used varied	73 faculty	Faculty attitudes still create barriers to an equitable educational environment for students with disabilities.
Davies, P., Schelly, C.L., & Spooner, C.L. (2013)	<i>Quantitative</i> (pre-post tests)	Pre-test – 622 Post-test- 421	UDL training has a significant effect on students' perceptions of instruction in university courses.
Dallas, B.K., Sprong, M.E., & Upton, T.D. (2014)	<i>Quantitative</i> -(survey); Measured faculty attitudes toward academic accommodations and UDI; utilized an online survey among 1,621 faculty at a medium- sized Midwestern public research University	1,621 faculty	Identifying faculty attitudes can determine readiness for organizational change with respect to implementing UDI principles and can be useful when developing training methods or materials by comparing differences between faculty groups. Findings include significant differences among faculty (N = 381) based on teaching experience, prior disability-related training, and academic discipline.
Schelly,, Davies, & Spooner, (2011).	<i>Quantitative</i> (Pre-post student surveys); Instructor training	Pre 1,362 Post 1,223	After training instructors on the use of UDL, students reported a significant increase in the use of UDL strategies. 6 out of 14 questions on UDL had effect sizes that suggest the improvement was meaningful.

Tzivinikou, S. (2014).	<i>Quantitative</i> (Quasi-experimental study with pre-post-measures); Student evaluation of a Study Guide with UD principles applied	60	In the student evaluation of a study guide with UDL modification, student responses on the subcategories for representation; perception; language and symbols; and comprehension statistically significantly increased.
Aguirre, R.T.P, & Duncan, C. (2013)	<i>Qualitative-</i> (Autoethnography); A faculty member and a student collaborated to develop accommodations for that particular student with a disability.	One faculty and one student (authors)	The student recommends including the following: handouts, e-books, PDF v. Word Document, in-class group activities.
Catalano, A. (2014)	<i>Qualitative-</i> (interviews): UD applied	7	Using the principles of <b>universal design</b> for learning can improve distance education not only for students with special needs, but for all types of learners.
Holbrook, T., Moore, C., & Zoss, M. (2010)	<i>Qualitative</i> (Action research); a two-pronged approach to a literacy curriculum: (1) creating the course using educational principles of UD and (2) enhancing the curriculum from an intentional ethic of care stance.	Three instructors (authors) and their students	As the semester progressed, the authors came to believe that the efficacious application of educational UD required caring.
Smith. (2012)	<i>Qualitative</i> (Action research)	80 graduate students in 2 sections of a research methods course.	Statistically significant relationship among UD and student interest and engagement.
Kumar, K. (2010)	<i>Qualitative</i> (Action research); applying UDL to a course.	One instructor (author) and her students	Positive impact in her classroom (e.g., providing a supportive learning environment and imparting flexibility into course design) and change in her perspectives from how to teach the subject to how to teach the students.

Nielson, D. (2013)	<i>Qualitative</i> (Action research); applying UDL to a course; use of strategies to increase interaction with students and formal and informal assignments for assessing student mastery.	One instructor (author) and her students	The author found both practical concerns including available technology, time, program requirements, student resistance, and more theoretical concerns such as the limitations of some UDL concepts, especially distal genres.
Samuels-Peretz, D., & Powers, J. (2014)	<i>Qualitative</i> (Action research); Applying UID, using multimedia approaches to engage students with poetry, stories, and plays and used written, oral, visual, and performance-based assessments.	Two faculty (authors) and their students in the first-year seminar courses	Documentation has helped the authors explore student learning deeper, has given a new understanding of equity in assessment, and has improved their instruction. Enhanced assessment of learning made courses more equitable and accessible.
Ragpot, L. (2011)	<i>Qualitative</i> (Action research); modified course using UDL.	One instructor (author) and her students	Different approaches to assessment created opportunities for students to engage with the curriculum content in a variety of ways; taught students a different way of looking at assessment in general and also made them think about how they would approach assessment in the future in their own classrooms.
Zhong, Y. (2012).	<i>Mixed-method</i> (Action research and student post-survey); applied UDL to his library instruction.	One faculty (author) and 50 students enrolled in four sections of library instruction	Student post-survey reported benefiting from UDL-integrated instruction, hand-on exercises as the most effective method of learning, and group activities beneficial,
Bigelow, K.E. (2012)	<i>Mixed-method</i> (decision analysis matrices including rating scale items and written responses)	48 students enrolled in the first-year engineering design course	Results indicated that students who participated in the universal design project were much more likely to consider criteria related to universal design principles, though they identified accessibility as more important than the more overarching goals of achieving a universally usable design. Results suggest that such a

			universal design project is one possible model to better prepare engineering students and that the model can be strengthened through involvement of disability services professionals.
Bongey, S.B., Cizaldo, G., & Kalnbach, L. (2010)	<i>Mixed-methods</i> (surveys and follow-up interviews)	Exact number is NA but undergraduate class	Survey results and follow-up interviews as well as student usage statistics and points earned on tests are collected and analyzed, with the resulting data used to generate conclusions relating to the benefits of a UDL-compliant supplemental site versus a supplemental site that does not apply UDL principles. While the students perceived-added value in the UDL-enhanced site, the overall intervention does not lead to improved grades leading to the possibility that there may be a “sweet spot” or optimal blend of tools and approaches.
He, Y. (2014).	<i>Mixed-methods</i> (Case Study, including tracking of student access to course content, pre-post course assessment surveys, and ongoing feedback); online teacher education course designed using UDL principles.	24 undergraduate and graduate teacher candidates in a three-credit course	Improved the teacher candidates’ confidence and self-efficacy in teaching and learning online. They thought pacing and flexibility as benefits and lack of face-to-face interactions with instructor as a concern.
Kumar, K. (2014)	Mixed-methods (Case study, including student post-survey with rating scale items and written responses and student interviews); UDL applied course,	35 students including 2 SWD in survey & 4 students including 1 SWD in interviews	Students responded very positively to the course design and reported increased flexibility, social presence, reduced stress, and enhanced success. Students also felt more in control of their own learning process and empowered to make personal choices to best support their own learning.

Rao & Tanners (2011)	<i>Mixed-methods</i> (Case study, including student survey and interview); A graduate-level online course designed with UDL and UID,	49 in survey & 4 in interview	Students reported positive experiences with the course, including clarity in course expectations and options in text formats, and identified effective instructional strategies and effective asynchronous and synchronous technology elements.
Moon, N. W., Utsching, T. T., Todd, R. L., & Bozzorg, A. (2011)	<i>Mixed-methods</i> (Case study including student performance data, classroom observations, faculty workshop surveys, student surveys, website surveys, online journals, and focus groups); enhance the capacity of university STEM faculty and staff to improve learning for all students; increased accessibility over the project's course, use of various grouping and interactive learning mechanisms	15 faculty members and their students	Findings of the SciTran University - students' positive feedback in response to group-based learning and class materials. The faculty participants were categorized into 3: enthusiast, skeptic, and incremental adopter.
Watt, S., Vajoczki, S., Voros, G., Vine, M., Fenton, N., & Tarkowski, J. (2014).	<i>Mixed-methods</i> (Stage 1: online survey on utility of lecture capturing (LC), academic accommodations or needs, & perceptions/ experiences of LC. Stage 2: individual face-to-face interviews w/8 students and 1 faculty member from Stage 1)	175	LC helpful for 80% of Ss w/accommodation needs; 60% of students w/unreported accommodation needs; 78% of Ss reported that LC improved their overall understanding of course materials and knowledge retention; 41% of Ss reported using LC to miss a lecture; 21% used it in lieu of attending class.

Search Criteria: empirical studies in peer-reviewed journals (including: quantitative, e.g., experimental design; qualitative, e.g., focus group, action research, case study; and mixed methods); (b) articles published from October 2009 through September 2014, and (c) articles on the use of UDI, Universal Design for Learning (UDL), Universal Instructional Design (UID), and Universal Design (UD) in postsecondary education settings (with postsecondary education outcomes).