One Size Does Not Fit All: Equity, Access, PD, and UDL

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Introduction

• Creating lessons that are accessible to all learners can be challenging (Courey, Tappe, Siker, & LePage, 2013; Spooner et al., 2007).

• Without the necessary training, guidance, and support, currently practicing teachers are faced with a dilemma in creating accessible lessons that meet the needs of all students (CAST, 2013; Courey et al., 2013). With the states mandating the Common Core state standards and those Universal Design for Learning, (UDL) principles to be integrated as a viable tool of instruction for all learners, it will be pivotal for teachers to receive proper training in this task (Williams, King, & Warren, 2011).

• Not only is UDL a method of curricular design that is inclusive of all learners, UDL is also now a requirement due to the implementation of Common Core Standards (CCSS, 2013).
Statement of the Problem

It is not known if there is a significant difference in the gain scores of teacher integration of UDL principles in lesson plans as measured by Spooner et al. (2007) between teachers who attended professional development workshops using the CAST method of teaching UDL and who attend other professional development sessions or have received no prior knowledge of UDL principles.
Methodology

• For the purposes of this study, teachers in a public school setting in Grades K-5 across four different elementary schools located in a small school district in Maine were used. Across the four elementary schools, teachers served 1127 students in Grades K-5. For the whole population, there are 10 teachers in kindergarten, 10 teachers in first grade, 10 teachers in second grade, 8 teachers in third grade, 9 teachers in fourth grade, 10 teachers in fifth grade, and 2 multi-grade teachers.

• The total number of teachers in the district for Grades K-5 was 70, 59 of the teachers taught regular education, and 11 of the teachers taught special education. There were 61 female teachers and 9 male teachers in the district. The average number of years teaching was 19. All of these teachers were invited to participate in the study.

• Despite recruitment efforts, only a total of 22 participants were recruited for this study. Based on the reduced sample size, a post-hoc power analysis was conducted using G*Power statistical software. Results of the analysis showed an effect size ($d=.5$), ($Df = 21$), and power (1-$\beta$ err prob = .73).

• Quantitative descriptive comparative research design.
Methodology

- Demographic Survey
- Pre-test lesson plan submission
- One-hour training of UDL using CAST teacher training toolkit of Experimental Group
- Post-test lesson plan submission
Methodology

- Lesson Plan template (Spooner, et al., 2007; Courey et al., 2013)
- Scoring Rubric (Spooner et al., 2007)
- Rubric evaluated the level of integration of three principles of UDL (representation, expression, and engagement) in lesson plans.
Methodology

• A one-way analysis of variance, ANOVA, independent samples $t$ tests, and Mann-Whitney $U$ tests were used to test the null hypotheses.

• Data analysis consisted of the use of descriptive statistics, including a one-way analysis of variance, ANOVA, independent samples $t$ tests, ad Mann-Whitney $U$ tests were used to determine if the gain score on the pretest and posttest measures differed significantly from one another.
Results

- Research Question 1: Is there a significant difference in the gain scores of lesson plans between teachers who attended professional development workshops using the CAST method of teaching UDL and who attended other professional development sessions?

- A significant difference in the gain scores of lesson plans was found between teachers who attended professional development workshops using the CAST method of teaching UDL and who attended other professional development sessions ($t = 9.762$) ($sig = .029$) ($sig2tailed = 0.00$) ($F = 67.78$).
Results

- Research Question 2: Is there a significant difference in the level of UDL representation principle between teachers who received training and those who did not receive training?

- A significant difference was found in the level of UDL representation principle between teachers who received training and those who did not receive training ($t = 9.762$) ($sig = .029$) ($sig2tailed = 0.00$) ($F = 76.834$).
Results

• Research Question 3: Is there a significant difference in the level of UDL expression principle between teachers who received training and those who did not receive training?

• A significant difference was found in the level of UDL expression principle between teachers who received training and those who did not receive training ($t = 9.762$) ($sig = .029$) ($sig2tailed = 0.00$) ($F = 50.359$).
Results

• Research Question 4: Is there a significant difference in the level of UDL engagement principle between teachers who received training and those who did not receive training?

• A significant difference was found in the level of UDL engagement principle between teachers who received training and those who did not receive training. ($t = 9.762$) ($\text{sig} = .029$) ($\text{sig2tailed} = 0.00$) ($F = 76.834$)
Conclusions

- The research findings suggested that there were improvements in teachers’ knowledge of UDL principles as evidenced by their ability to create lesson plans that integrated UDL principles after receiving a one to three hour training in UDL, as was discovered in the studies conducted by Spooner et al., (2007) and Courey et al., (2013).

- The results of this study have determined, with a degree of caution that there was a significant difference in the gain scores of teacher integration of UDL principles in lesson plans as measured by a rubric developed by Spooner et al., (2007) between teachers who attended professional development workshops using the CAST method of teaching UDL and who attended other professional development sessions or had received no prior knowledge of UDL principles.

- The results of this study indicated, with a degree of caution, that providing training to teachers will lead to transfer of learning in UDL principles after receiving training, as evidenced in lesson plan development that integrated UDL principles as measured by Spooner et al., (2007).
Recommendations

- Further research should be conducted in public school settings, with larger sample sizes, employing the same research techniques as outlined by Spooner et al., (2007) and Courey et al., (2013). The research should be centered on the training and how it relates to transfer of learning to the classroom environment. Longitudinal studies that examine long-term training in UDL (i.e., school reform efforts, school district professional development goals) should be examined to determine the long-term effects of training, as well as the effects of the training on student learning and achievement.
How does this relate to equity?

Educational Institutions are charged with providing training to currently practicing teachers in UDL so that their lesson plans are UDL-centric. When lesson plans are integrative of UDL principles, strategies and supports are are a forethought, not an afterthought. This gives students the opportunity to access learning irregardless of socioeconomic or other barriers to learning that exist.
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STORE

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