

From Theory to Transformation: Impact of UDL Implementation on K-12 Teacher Practice and Efficacy

Jon D'Angelo
Founding Partner

Jo Ann Hanrahan
Lead Impact & Program Evaluator

INTRODUCTION

Goalbook, in conjunction with WestEd and D.C. Public Schools, conducted an impact evaluation to examine how the Universal Design for Learning (UDL) framework influences instructional design and facilitates differentiated lesson planning utilizing instructional coaching support. UDL is a framework that guides educators to differentiate instruction by designing lessons that offer multiple means of access to rigorous learning objectives. Goalbook provides instructional resources within a technology platform that empower teachers to align their planning to rigorous learning standards. Goalbook uses the principles of the UDL framework to guide the support and resources provided to educators. This investigation addressed the following questions: (1) What impact does the UDL framework have on classroom practice and (2), how can districts support teachers' use of UDL in classrooms?

DESIGN

To address these guiding questions, researchers designed a four-month study within D.C. Public Schools. Utilizing a mixed-methods approach, multiple data sources provided deeper insights into how teachers applied the UDL framework to instructional practice and how job-embedded UDL training and 1:1 coaching supported teacher practice. Researchers recruited a volunteer sample of three instructional coaches and ten teachers within DC Public Schools for this inquiry.

The first aspect of this design involved training the three instructional coaches during a one-day professional development workshop on UDL. In turn, these coaches delivered to the teachers they coached. Coaches also learned how to utilize the UDL framework within their coaching processes. They learned how to use UDL-aligned planning and lesson observation tools and discussed how to use the tools with teachers as part of a job-embedded, cohesive coaching cycle.

Following training, coaches met with each teacher individually to discuss plans for an upcoming lesson with a specific focus on one student with an upcoming IEP. During this conference, the coach and teacher utilized Goalbook resources to enhance their UDL-aligned planning. Coaches then observed lesson delivery using a UDL-aligned rubric to evaluate the integration of UDL principles into instruction. Following the lesson, the coach conferenced with the teacher to share reflections on the lesson and review student work samples.

Lesson effectiveness based on criteria outlined within the UDL-aligned rubric was collected by each coach for each lesson observation. Anecdotal and perception data from teachers and coaches was collected via pre-and post-surveys. Researchers concurrently analyzed data from multiple sources including teacher and coach surveys, UDL rubric scoring feedback, reflections, and observations.

FINDINGS

The findings suggested that applying the UDL framework provides positive educational benefits on instructional practice (see Appendix 1). When educators received UDL training through whole group professional learning, as well as job-embedded one-on-one coaching, educators' efficacy and ability to differentiate instruction based on individual learning needs increased.

Furthermore, when educators were prompted to embed the UDL framework into their instructional planning and delivery, teachers and coaches showed growth as measured by observation data and anecdotal reports. The findings also established effective ways school districts could support the integration of UDL in classrooms, which include using a specific coaching model that consists of group and individual training, co-planning, lesson observation, reflection, and teacher feedback (see Appendix 2). Related recommendations generated from this evaluation are provided in Appendix 3.

SUMMARY

This inquiry revealed positive effects on instruction when the UDL framework is applied through an instructional coaching model that involves group and individual training, focused observation and coaching, and instructional resources. The findings support the body of research that suggests the UDL framework aids educators in designing learning experiences that are differentiated and accessible for all learners. Given the unique context of each school district, the specifics of support plans for implementing UDL may vary district to district. However, within this district context, a structured support plan for educators and training in all UDL-related resources and technological tools, showed promise in advancing instructional and coaching practice.

Appendix 1

Transforming Instructional & Coaching Practices

Analysis of observation data and final evaluations showed that all 10 participating teachers showed growth in the ability to differentiate lessons as part of the process of UDL-embedded instructional design and delivery. Coaches participating in the study also demonstrated growth in the ability to support teachers with differentiation strategies aligned to student needs within the instructional planning process.

- Teachers self-reported improvement in the ability to differentiate instruction. When asked to rate their ability to differentiate their instruction using a scaled rating system from 0 (lowest) to 3(highest), the teachers rated their ability at a 1.7 before the study and at a 2.4 after the study.
- Similarly, coaches reported that the teachers' ability to differentiate instruction improved from an average of 1.9 to 2.6 (using the same 0-3 rating scale).
- All teachers stated that their ability to embed the three principles of UDL in instructional planning increased as a result of the training received. Specifically, out of the three UDL principles (engagement, representation, and expression), teachers reported the most growth related to their understanding and integration of the principles of engagement and expression. When asked to rate growth on a 3-point scale, teachers reported an increase of 0.5 points in the ability to plan meaningful representation strategies. Similarly, teachers reported an increase of 0.9 points in the ability to plan meaningful expression strategies and an increase of 0.8 points in the ability to plan meaningful engagement strategies.
- All participating teachers perceived they received more effective coaching as a result of their participation in the study. Specifically, all 10 participating teachers said they learned something new and wanted to continue to work more with their coaches.
- All participating coaches self-reported they became more effective coaches and acquired more tools with which to support teachers in differentiated instructional planning utilizing the UDL framework. Survey responses revealed coaches' perceived ability to support teachers in differentiating instruction grew from a self-reported rating of 2.1 before the study to a rating of 3.0 after the study (on a 0 (lowest) to 3 (highest) scale).
- All coaches noted an increase in embedding UDL strategies within their practice. This was informed by student data and resulted in student instructional objectives being met as measured by student work samples.

Appendix 2:

How the UDL Framework Could Be Effectively Implemented

There are specific measures districts/systems could take to effectively implement the UDL framework within schools. This impact evaluation highlighted an effective method to reinforce implementation of the UDL framework was an instructional coaching model involving coaches who support teachers directly. Below are key aspects of the DC Public Schools' coaching model which demonstrated positive influence on teacher instructional planning and practice.

- All facilitators reported that their initial training was very helpful to their professional development. The most beneficial aspects of the coaches' UDL training included watching a video of teaching and then analyzing the sample lesson using a UDL-aligned rubric to evaluate the use of UDL strategies within a lesson. In other words, practicing the coaching process with sample teacher lessons and tools increased coach efficacy.
- The coaching tools which supported conferencing and co-planning sessions influenced teacher and coach practice, especially when used alongside Goalbook resources. One coach commented: "I think that the three-part process of identifying student present levels, creating standards-aligned IEP goals, and then identifying UDL strategies to help students achieve their goals has been very useful. Though teachers are used to these steps, Goalbook allows them to implement them more seamlessly. I think that guiding teachers through this process and showing them how Goalbook can be used as a resource, helps teachers to remember and implement these best practices."
- Of all UDL materials provided, the coaches found the UDL rubric and Goalbook resources to be the most helpful tools in providing UDL support to teachers. One coach commented: "I think that now I am able to use the rubric to show how many different strategies can be embedded in a lesson. I think a lot of times I would just look to make sure that each lesson component had a differentiated UDL strategy, but not that the student had multiple representation, expression, and engagement strategies. It's not enough to just provide one strategy per category, per lesson...I do feel that the rubric and Goalbook showed me how many different strategies could be incorporated into a lesson and that was very helpful."
- All participants found Goalbook resources supported their work. Specifically, all participants (13 out of 13) stated that the Goal Wizard function, which assists educators to develop learning goals based on a student's current levels of performance, was one of the most helpful resources supporting teacher needs. Furthermore, participants cited that the UDL Strategy Wizard and UDL repository were also critical tools in aiding their work in embedding the UDL framework within instructional design and instructional coaching.
- Teachers agreed that their work with their coaches was instrumental in supporting their professional development. They perceived working individually with their coach a positive and influential aspect of the coaching cycle. Specifically, teachers found coaching feedback, co-planning, and use of Goalbook resources most influential in supporting the work of teachers and coaches together.

Appendix 3:

Recommendations to Strengthen UDL Implementation

Providing structured support affords clear expectations and guidelines for all participants. In this study, a structured coaching model was used to support teachers in their development and utilization of the Universal Design for Learning Framework within instructional design and delivery. Both coaches and teachers were given explicit training and clear guidelines on how to use and embed UDL principles in instructional and coaching practices. Teachers received consistent support from their coach throughout the duration of the study, which was instrumental in achieving positive gains in teacher and coach performance.

- **Recommendation #1: Provide tools that relate to and support the use of UDL, such as UDL-aligned rubrics and Goalbook resources.**

Participating coaches and teachers received various tools and resources to support their work with UDL, including group training, individual training, planning documents, coaching tools, UDL-aligned rubric for instructional planning, and individual Goalbook licenses. Coaches reported one of the most helpful resources they used to assess a teacher's ability to differentiate was the UDL-aligned rubric created for this study. Goalbook was also cited as a highly effective tool. All 13 participants reported that Goalbook strongly impacted their ability to learn about and integrate UDL within their instructional planning in a meaningful way.

- **Recommendation #2: Train facilitators and teachers how to use the UDL resources and technologies.**

The UDL rubric was new to all participating coaches and was, at first, challenging to utilize as it differed from the district-provided observation running record and lesson evaluation protocols previously used. However, after participating in training, coaches found the rubric to be highly effective in helping them to evaluate a lesson within the context of UDL. Furthermore, all coaches agreed that the practice embedded within the training, increased their ability and fidelity of using the UDL-aligned rubric. Specifically, coaches found watching sample lessons and practicing using the rubric both within a group and individually supported their increased efficacy in using the tool to record data. Coaches and teachers also received training on how to use Goalbook. Although some participating teachers had access to Goalbook prior to this study, they reported more engaged and informed use after training. Coaches also used Goalbook during their co-planning conferences, which teachers found to be a helpful and authentic application.

Appendix 4:

Background and History

Goalbook was founded in 2011 by former educators and administrators, Daniel Jhin Yoo and Justin Su, as part of the first cohort of EdTech firms participating in the renowned Imagine K12 EdTech startup incubator program. Today, Goalbook serves more than 500 school districts across 45 states. Goalbook continues to be a team of educators dedicated to achieving our mission: We empower educators to transform instruction so that all students succeed. The company provides two software solutions, Toolkit and Pathways, and a catalogue of professional development offerings that support educators in making standard aligned instruction accessible to all learners.

Link to the DC Public Schools summary to learn more:

<https://medium.com/innovative-instruction/instructional-impact-study-at-dcps-7511e04ba0f>