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Greensboro College: A Model of UDL in the Curriculum

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Abstract. Developed at the North Carolina State University College of Design in the 1980s, a group of architects, product designers, engineers, authors and environmental design researchers, collaborated to establish the Principles of Universal Design to guide a wide range of design disciplines including environments, products, and communications [1]. Universal Design for Learning (UDL) is a research-based set of principles intended to guide the design of learning environments that are accessible and effective for all. First articulated by CAST (Center for Applied Science and Technology) in the 1990s and now the leading framework in an international reform movement, UDL informs all of our work in educational research and development, capacity building, and professional learning. UDL is based on cognitive neuroscience and is intended to guide the development of flexible learning environments that can accommodate individual learning differences [2]. UDL asks educators to create curricula that provide: multiple means of representation, multiple means of expression and multiple means of engagement, while motivating all students to learn and succeed [3]. Greensboro College is unique in higher education in that it has committed to fully embracing UDL. Greensboro College uses UDL as a framework for successful academic and student development at a small, private, Methodist-affiliated, liberal arts college. Greensboro College has initiated its transformation to an institution that values and facilitates UDL across its curriculum. As The Mission Statement of Greensboro College points out, we as a college believe "Universal Design for Learning, at its core is a comprehensive educational framework that removes barriers to student learning and academic success. The principles of UDL recognize that variance in learning ability and style among individuals is the norm and not the exception. Therefore, curricula should be adaptable to individual learning differences rather than the other way around" [4]. Greensboro College has taken its first steps towards providing a learning environment for all students, which can be used as a model for launching a UDL initiative at a small, liberal arts, private college [5].

Keywords. Phases of UDL, implementation, strategic plan

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1. Background of Greensboro College

"It is this rich patchwork of individuality, community and experience that is unmistakably and uniquely Greensboro." [6]

1.1. Greensboro College is Uniquely Sized

The college is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award bachelors and master's degrees to approximately 1000 students. The college has 32 undergraduate majors and Master of Arts degrees. Our full time faculty number 45, giving us a student/faculty ratio of 12:1 and an average class size of 12 [6].

1.2. Greensboro College is Uniquely Located

Founded in 1838, Greensboro College provides a coeducational and independent learning atmosphere. Unlike most small, private, liberal-arts colleges, Greensboro College is located within the vibrant downtown district of a medium-sized city of about 250,000. Shopping, dining, entertainment, nightlife, theatre, art, sports, internships and jobs are close and convenient [6].

1.3. Greensboro College is Uniquely Diverse

We are a small, private, Methodist-affiliated, liberal arts college. This includes a number of first-generation college students from medium performing high schools. Forty percent of our students are athletes and many are from rural North Carolina. Approximately eight percent of our student body has disclosed and is registered with The Office of Academic Accessibility. This makes for a diverse student body with diverse learning needs [6].

1.4. Greensboro College is Uniquely Committed to UDL

According to The Strategic Vision Statement of Greensboro College: "Greensboro College, grounded in the traditions of the United Methodist Church, aspires to provide all students with a transformative, universally designed educational experience that positively affects their lives so they may realize their full potential" [7]. One of the core academic missions of The Strategic Plan of Greensboro College is: Greensboro College will become a UDL institution. One of the three pillars of Greensboro College's Strategic Plan states that UDL will be elevated to an institutional level at Greensboro College [7].

The principles of UDL recognize that variance in learning ability and style among individuals is the norm and that neurodiviersity exists in all classrooms; this is not the exception. UDL is the vocabulary, architecture, and framework for successful academic and student development at Greensboro College. "Greensboro College will implement UDL strategies and techniques at all levels to increase the chances that all students will succeed" [8].
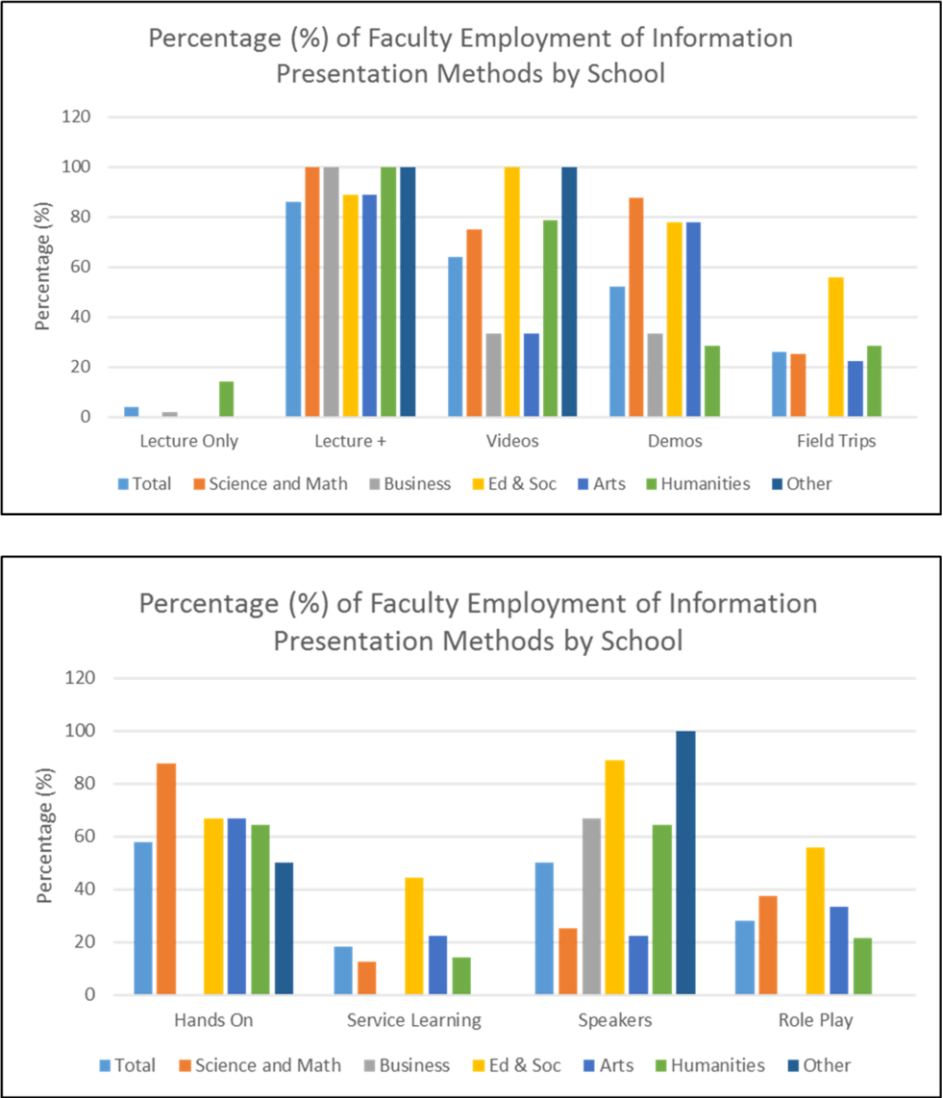
2. Greensboro College's UDL Plan

The Guidelines for UDL state "When a school is preparing to implement UDL, the focus is on creating a school climate that accepts variability. School leaders are encouraged to reflect on existing policies that may or may not support UDL, such as organizational and personnel structures. Finally, those leading the process must establish a vision and an implementation action plan" [3]. The implementation of UDL on Greensboro College's campus began with a charge from the college president, Dr. Lawrence Czarda, in 2014. My predecessor, the former Director of Academic Accessibility, Daryl Bruner, instructed the faculty about the meaning and principles of UDL. The beginning phases of this implementation included presentations at faculty meetings, faculty workshops and the dissemination of information. I was introduced to CAST (Center for Applied Science & Technology) and UDL during my tenure at a previous institution. I had the fortune of meeting and spending two days with Patricia Ralabate, a facilitator of CAST, in 2013. I assisted in facilitating a faculty workshop about UDL with Ms. Ralabate and continued to work with faculty on a UDL initiative at this institution. I then came to Greensboro College in August of 2016. I participated in a CAST "Presenters Academy" and was certified in UDL presentation in November of 2017. Upon my return from the CAST Professional Learning Institute, Greensboro College initiated a committee to assist with the task of educating the staff and faculty about UDL. The Committee for Universal Design (CUD) began modeling the "Phases of UDL Implementation" [3].
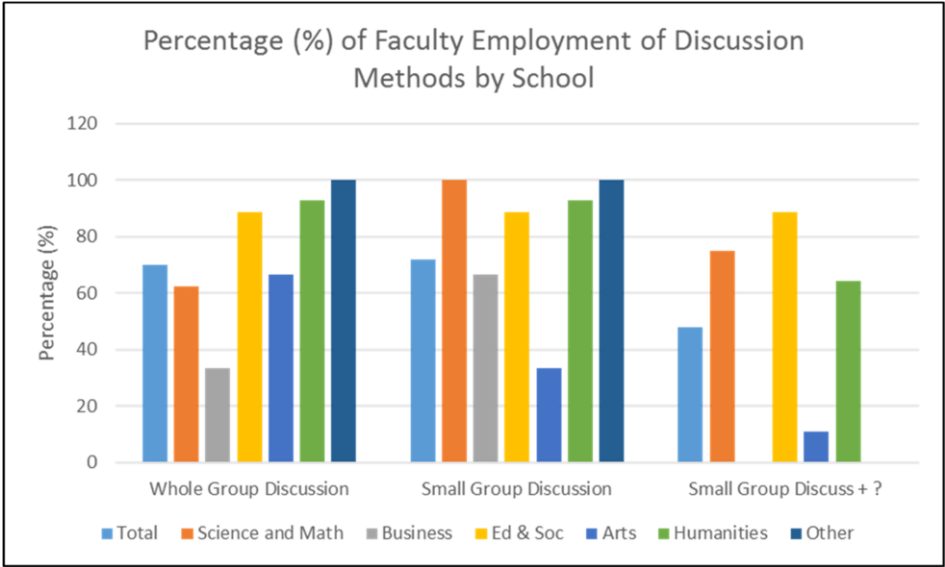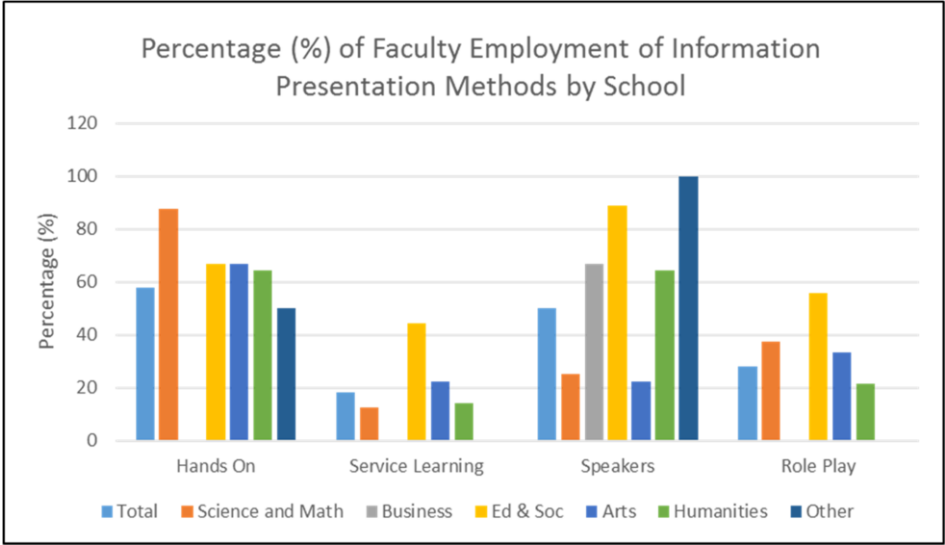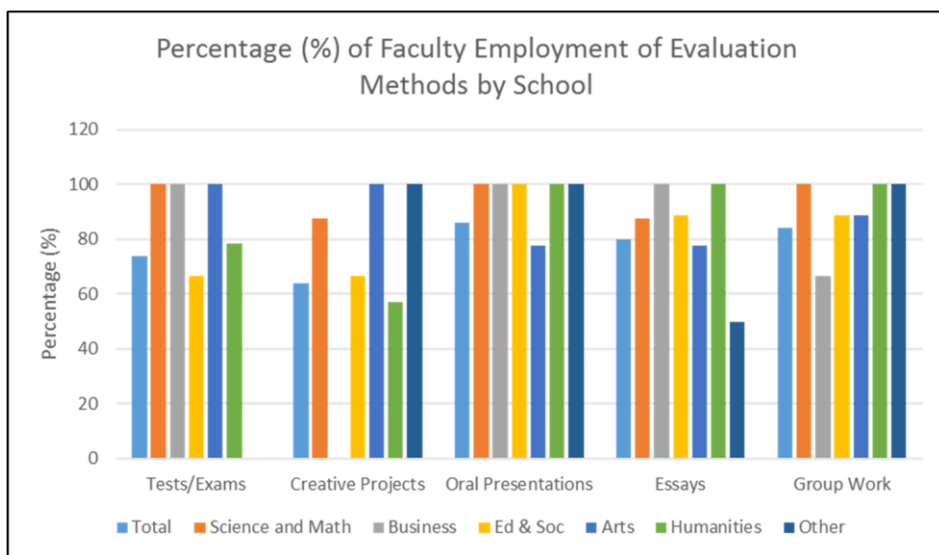
2.1. Phase One: Exploration

In this initial phase, administrators of the college learned the basics of UDL and decided it should be a part of the Strategic Plan of the College. The college then requested a team of volunteers including faculty, staff and administrators to form a committee. The final step in this phase is for all college personnel to engage in UDL implementation. We have 100% commitment from the volunteer members of CUD and plan to meet bi-monthly and collaborate on implementing UDL classroom methods and creating a UDL-friendly school climate.

The CUD conducted a faculty survey in February 2018. The purpose of this survey was to gauge how well UDL practices are being integrated into the Greensboro College classrooms at this time. The committee chose to inquire about several methods of facilitating curriculum classes with multiple means of engagement and representation in mind. These included: lecture, video, demonstrations, field trips, hands-on exercises, service learning, speakers, role play, readings, student presentations and simulations. Each department was scored by determining the percent at which the department currently integrates these particular means of engagement and representation into their classroom teaching. Many of the departments at Greensboro College are already using the UDL guidelines put forth by CAST. Using multiple means of presenting data, targets all learners and learning styles and engages and sustains interest in the lesson [3]. The survey also queried faculty about the use of multiple means of action and expression. The aim was to determine if we are using varied evaluation methods to assess curriculum proficiency in the neurodiverse classroom. The committee chose a few evaluation methods and determined how widely they are used across campus in the various departments. The methods surveyed were tests, creative projects, oral presentations, essays, group work, and group discussions. Most departments are using multiple means of evaluating mastery of the curriculum in their classes, a great start.

The bar graphs in Figure 1, show Greensboro College is already engaged in implementing the UDL principles. From flexible teaching methods to varied evaluation methods, UDL is the language used in the preparation of courses at Greensboro College. Each school/discipline is recognized by a specific bar color on the graph. The percentage tells us how prevalent the method is in that particular school/discipline. Multiple means of evaluation are used by many departments through, not only testing, but also creative projects, oral presentations, essays and group work. Flexible means of acquiring information is used in many classrooms and includes lectures, videos, demonstrations, field trips, hands-on projects, service learning, speakers, role play and group discussions. While Greensboro College is well ahead of the curve in its use of UDL principles, we realize that this is an evolutionary process and will continue to grow as Greensboro College continues to pursue its curriculum through a UDL lens.

Percentage (%) of Faculty Employment of Information Presentation Methods by School

Percentage (%) of Faculty Employment of Discussion Methods by School

Figure 1. Faculty Survey's of employment of UDL presentation and evaluation methods used in the Higher Ed classrroms at Greensboro College

2.2. Phase Two: Preparation

This phase makes UDL a part of the institution's plan for improvement, as it is a strong pillar of the school's Strategic Plan. All faculty learn about the theory and practice of UDL in faculty meetings, and professional development workshops. Our CUD meets, creates and carries out a plan to learn more about UDL during our discussions and by participating in webinars and online trainings. This new pedagogy of UDL will address efforts and improvement in recruitment and retention. We hope to see an increase in these areas in the future.

2.3. Phase Three: Integration

The CUD is researching ways to experiment with UDL and collaborate to improve practices in classrooms. For instance, the CUD has decided on short/long term goals for implementation. Long-term: Continue to bring UDL practices to campus and strive to be all-inclusive in our efforts to educate Greensboro College students. Short-term: Work through the CAST Phases of UDL Implementation to bring UDL practices to Greensboro College campus.

In addition, the CUD will eventually participate in an iterative process of designing, reflection, and redesign to meet the rigorous long and short-term goals. We, the CUD continue to carry out our plan for learning more about UDL by sharing resources and facilitating workshops throughout the year. The CUD plans a workshop in August 2018 to address accessible syllabi with faculty.

2.4. Phase Four: Scaling

The CUD will continue with the integration process and work to fully include all students on this campus in the learning process. The committee started a Moodle page to disseminate information to the faculty, staff and administrators about professional development options and web resources to promote a deeper understanding of the process of UDL. Greensboro College's assistive technology is updated and includes Kurzweil, Dragon, screen reader, Bookshare, magnifiers and smart pens. Our institution has completed a web site analysis and has created an accessible site according to ADA (Americans with Disabilities Act) standards. In addition, the Greensboro College study lab chairs were replaced with ergonomic seats. We added a comfortable sofa and some beanbag chairs to make the environment more accessible and user-friendly. As an advisee to the Curriculum Instruction Committee (CIC) I see that all new curriculum is accessible to the widest audience and seen through a UDL lens. CUD's current members will become proficient enough by next fall to train new members and new faculty to the team. Our administrators ensure systems are in place to encourage growth and implementation school-wide. The CUD is on the agenda of faculty meetings, and there is professional development support and encouragement to attend conferences and obtain certifications, by the College's administration.

2.5. Phase Five: Optimization

Our future plans are to continuously train faculty and staff in facilitating UDL in the classroom and throughout campus. The CUD team will become UDL coaches and train and support faculty and staff. We will continue to share our data and advice on our Moodle site. We have just learned that we are now one of the national Higher Ed institutions to be acknowledged and listed on the "UDL on Campus" as a UDL institution on the CAST site.

3. Conclusion

The CUD's future plans involve a partnership with CAST that came out of a visit with CAST's Chief Development Officer and Director of Corporate Foundation Relations in April 2018. Greensboro College will collaborate with CAST on promoting research, professional learning and capacity building into our implementation of UDL campus wide. In addition, Greensboro College has found a place on the CAST list of Colleges and Universities with a strong UDL initiative. The CUD will administer a faculty workshop prior to the start of classes to assist in revising faculty syllabi using the UDL Rubric for syllabi accessibility. In the early part of this year, Greensboro College also secured a donation to begin the creation of a Global Communication Center in its Library. This center will assist students in reading, writing, technology and collaborative learning and will be physically accessible by ramp, including accessible inside and outside space and furniture. Additionally new and accessible signage has been placed on campus to indicate building locations and the new campus map will contain the most accessible travel routes to and from the buildings. The CUD will continue to provide faculty and staff workshops, consulting on matters of UDL, and above all be a resource for the Greensboro College community.

4. Discussion

The feedback from faculty and administrators can guide the implementation process. In addition, this will assist in accessing the effectiveness of the process by observations from across campus. Eventually the process will contain assessments and measures of effectiveness of UDL on the retention rate, GPA and teaching effectiveness of Greensboro College. The following are quotes from faculty and administration at Greensboro College to shed some light on the personal experiences & effects of implementing UDL on a college campus.

The Associate VP of Academics, Martha Bunch, points out: "One example of implementing UDL principles has occurred this summer as our academic support staff and Early Alert Team have worked together to develop a workshop that will be presented to faculty in August. Realizing that our faculty are diverse learners - just as their students are - we will use multiple means of information-sharing during our workshop in order to be more effective" [9].

Dr. Paul Leslie, Professor of Sociology, also explains: "In a course on the Holocaust and Genocide last year, spring 2017, my co-teacher (Dr. Karl Schleunes) and I deliberately included multiple active pedagogical methods to enhance student learning and investment in the course material. These included readings, films, guest lecturers by authors of books we read, reflection papers, book reports, documentary film clips, an analytical paper on a pertinent topic using the tools and skills of the students that were developed in their majors (art, criminal justice, history, sociology, psychology, and religion), oral presentations, lectures, and frequent seminar-based classroom discussions/Q&A periods. We constructed our syllabus with UDL principles in mind" [11].

I have taught several courses but the one that comes to mind is the Forensic Anthropology course in the Criminal Justice Department. I used multiple means of representation, multiple means of expression and multiple means of engagement to speak to all diverse learners in my class. I used lectures, videos, demonstrations, field trips, hands-on exercises, speakers, role play, readings, student presentations and simulations. These came in the form of visits from an SBI officer and a forensic odontologist, including a trip to the medical examiners office. We watched crime scene episodes and films about decomposition/time of death. Students made presentations and role played as crime scene investigators. Multiple means of evaluation was used by not only testing, but also creative group projects acting as CSI agents, to oral presentations on their chosen topic. The course received excellent evaluations from students and will be taught next spring. I am excited to experiment with more UDL course designs in the near future.

The uniqueness in Greensboro College is seen in its small size, vibrant location, diverse student population and in its wholehearted commitment to facilitating UDL campus wide. The Implementation of UDL is an evolutionary process that is slow and may not be very pretty, kind of like making sausage. The process is labor intensive and messy but the product is worth it. The products we hope to see in the future by following the CAST Implementation process are better faculty/student communication, increased retention, the use of best practices in learning and equal access to curriculum whether, disabled, ESOL, culturally diverse or a different learner. Eric Moore, et al. points out in "Voices from the Field: Implementing and Scaling-Up Universal Design for Learning in Teacher Preparation Programs: "published research regarding UDL in higher ed settings is currently comparatively thin." They go on to say "The concept of "scaling-up" UDL in levels is not a new idea. Discussion of scaling up from level to level is central to many

UDL initiatives; in fact, the CAST (the founders of UDL) have released their own articulation of how UDL can be scaled up in a K–12 setting [11]. Elsewhere, Moore et al. 5 (n.d.) published an overview of four K–12 case studies of schools that had succeeded in scaling up UDL. Still others, like Katz [12], have written whole texts on how UDL can be scaled up in K–12 context: "However, less has been written regarding how implementation can be scaled up in the context of higher education, where the social, academic, and practical environment and structures may be substantially different from K–12" [11].

In 2014, CAST added to their website listing UDL implementers at the higher education level across the country (see www.UDLonCampus.cast.org). This website lists postsecondary programs that have UDL initiatives in place. There are over 22 colleges or universities listed on the site demonstrating several different action plans and what it means to have an "initiative." The institutions vary in size, resources and implementation of UDL. They range from more established programs like the California State University System UDL-universe, providing comprehensive faculty development guidance for UDL course redesign, to Grand Rapids Community College having pulled together several resources on UDL for their faculty. The college's webpage also includes a recording of a faculty-learning day about UDL. Then there is Greensboro College where UDL is one of the three pillars comprising the college's Strategic Plan. The UDL principles are embedded across the institution including all academic, student development, campus infrastructure, and resources programs and units. Greensboro College is delighted to be the first institution to chronicle the process of UDL implementation across campus in a small, liberal arts, Methodist affiliate College. We hope to be a model for the implementation of UDL across campuses globally [13], [14].

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