

Toward Universal Design in the Classroom

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Like many professors, I get requests from the Office of Disability Services or individual students for certain kinds of teaching practices that are considered to be “accommodations,” such as making my PowerPoint slides available in advance, giving students time to do assignments that is not time-pressured, or allowing a student to take notes with a laptop. Each time, my response is—that’s just good teaching through a “universal design” approach. Let me explain why we should each try to incorporate universal design principles into our teaching and provide specific examples of how to do so.

The Individuals with Disabilities Education Act,¹ Section 504 of the Rehabilitation Act,² and the Americans with Disabilities Act³ have helped more students graduate from high school and attend higher education than in previous decades.⁴ Some of these students were successful because of accommodations or auxiliary aides they may have received in K-12 or higher education such as Braille typeface, Bluetooth listening devices, extended time

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- 1 20 U.S.C. § 1401(3) (2012).
- 2 Pub. L. No. 93-113, 87 Stat. 394 (1973) (codified as amended at 29 U.S.C. § 701 (2012); *see also* 29 U.S.C. §§ 705(20), 794(a) (2012)).
- 3 Pub. L. No. 101-336, 104 Stat. 327 (1990) (codified as amended at 42 U.S.C. §§ 12101-12213 (2012)). The Americans with Disabilities Act Amendments Act of 2008 emphasized that “the definition of disability in this Act shall be construed in favor of broad coverage of individuals under this Act, to the maximum extent permitted by the terms of this Act.” *Id.* § 12102(4)(A).
- 4 *See* THOMAS R. WOLANIN & PATRICIA E. STEELE, HIGHER EDUCATION OPPORTUNITIES FOR STUDENTS WITH DISABILITIES: A PRIMER FOR POLICYMAKERS vii (2004), <https://files.eric.ed.gov/fulltext/ED485430.pdf> (“The percentage of students with disabilities who have completed high school has increased from 61 percent in 1986 to 78 percent in 2001 About 9 percent of all undergraduates in higher education report having a disability, a percentage that has tripled in the last two decades. This amounts to about 1.3 million students.”).

on testing, distraction-free testing environment, use of a screen reader, or a myriad of other types of assistance.⁵

While those kinds of assistance are important, this article will focus on a different approach to help us better reach all of our students, including our students with disabilities. That approach is called “universal design.” Universal design is a concept, originally developed from architecture, in which we try to construct spaces so that they are usable to a wide range of people, “regardless of the user’s body size, posture, or mobility.”⁶ Common universal design features are curb cuts or power door openers. Those features assist people with mobility impairments as well as parents using strollers or people who are trying to enter a door carrying heavy objects. No one has to identify as a person with a disability to access these features. By contrast, before these features became fairly standard, people who used a wheelchair or did not have enough upper body strength to open an outside door would have to identify themselves as disabled and seek assistance. Today, people might press the button to open a power door because they have severe arthritis and cannot open a door manually or may just not feel like pulling a door open. No one is “outed” as a person with a disability merely by using a universal design feature. The universality aspect of the design makes that accessibility feature available to all users. Many nondisabled people have become accustomed to taking advantage of these universal design features and implicitly recognize how they make the world more accessible for everyone, not just those with disabilities.

The question of what kinds of features are provided as part of universal design and what kinds are provided through a reasonable accommodation process is neither simple nor obvious, because most policies are initially created under the assumption that no one is disabled. The COVID-19 pandemic, however, has shown how easy it can be to pivot away from that assumption. For example, before the pandemic, restaurants routinely offered a menu only in a print format. Someone with a visual or reading impairment may have found a need to request an accommodation to access the menu, such as bar code to a digital version of the menu. During COVID-19, however, many restaurants realized that the print version posed a risk of COVID-19 transmission so they pivoted to making the bar code version of the menu the default menu option. What had been a reasonable accommodation request for some diners became the universal design approach for all diners. The bar code version still might

5 See generally *Supports, Modifications, and Accommodations*, CENTER FOR PARENT INFORMATION & RESOURCES (updated March 2020), <https://www.parentcenterhub.org/accommodations/> (listing common types of support).

6 Allison R. Lombardi & Christopher Murray, *Measuring University Faculty Attitudes toward Disability: Willingness to Accommodate and Adopt Universal Design Principles*, 34 J. VOCATIONAL REHAB. 43, 44-45 (2011).

not meet the needs of all diners; those diners might now need to request a print version of the menu. But COVID-19 has given us an opportunity to learn that pivoting toward a more universal design approach through menus or off-site working can occur quickly and effectively. This article seeks to help us think about ways to make the classroom more accessible for everyone rather than rely primarily on individualized requests for accommodations as a way to better meet the learning needs of disabled students.

In this article, I will discuss how we can make the law school classroom more accessible through the use of universal design features. I am sure my list is incomplete and that others, including the contributors to this issue, can add to this list.⁷ Nonetheless, I think there are two key benefits to a discussion of universal design principles. First, the use of universal design features will lessen the need for students to identify themselves as disabled and seek to use an often-clumsy accommodation process. It is expensive to receive a disability diagnosis from a trained professional, and some universities require documentation with adult norms that would not have been used for K-12 testing, when students were not yet adults.⁸ Further, some universities require students to renew their requests each semester.⁹ Even if the renewal request is automatically approved, it is time-consuming, anxiety-producing, and disrespectful to one's dignity to have to say "yes, I still have a visual impairment."

Second, I have found that all students benefit from many universal design features. On my end-of-year student evaluations, I often get comments from students thanking me for my use of a universal design feature, such as posting PowerPoint slides in advance of class, even though they do not identify as disabled. My students with disabilities often also thank me for allowing them to access instruction more fully without going through an accommodation process. The "universality" aspect of universal design has broad appeal. It

7 I am not the first law professor to suggest adopting universal design features in the classroom. See Meredith George & Wendy Newby, *Inclusive Instruction: Blurring Diversity and Disability in Law School Classrooms Through Universal Design*, 69 U. PITT. L. REV. 475 (2008); Jennifer Jolly-Ryan, *Bridging the Law School Learning Gap Through Universal Design*, 28 TOURO L. REV. 1393 (2012); Jason S. Palmer, "The Millennials Are Coming!": *Improving Self-Efficacy in Law Students Through Universal Design in Learning*, 63 CLEV. ST. L. REV. 675 (2015).

8 See, e.g., Abigail Sullivan Moore, *Accommodations Angst*, N.Y. TIMES (Nov. 4, 2010), <https://www.nytimes.com/2010/11/07/education/edlife/07strategy-t.html> (reporting that private testing "can cost \$1,000 to \$5,000"); see also George & Newby, *supra* note 7, at 479-92 (discussing the legal challenges to determining who is considered "disabled" and entitled to accommodations under ADA).

9 See, e.g., *Request for Academic Accommodations & Faculty Notification*, DENISON UNIVERSITY, <https://denison.edu/forms/request-for-academic-accommodations-faculty-notification> (last visited Dec. 12, 2021) ("A student with a disability who thinks he or she may need an accommodation to access a campus program, activity or service should complete a Request for Faculty Notification Form each semester and return it to the Academic Resource Center. Services and accommodations will not be offered until a student makes this request. Naturally, it is in the student's best interest to make this request as early as possible during each semester.").

saves time and money while respecting the dignity interests of students with disabilities.

As a starting point to learn more about universal design, I would recommend that instructors learn to use resources such as ones made available by CAST. CAST is a nonprofit education research and development organization that created the Universal Design for Learning framework, which is used throughout the world to make education more inclusive.¹⁰ It provides strategies to have multiple means of engagement (the “why” of learning), multiple means of representation (the “what” of learning), and multiple means of action and expression (the “how” of learning) to reach the broadest possible audience.¹¹ Within each of these categories, it offers guidelines on how to gain access, build knowledge, and internalize learning so that students become expert learners.¹²

In this article, I will discuss most of the sections on the CAST universal design chart and suggest ways that universal design can be achieved in a law school classroom. In making my suggestions, I am going to assume that some of my students are on the autism spectrum, some have visual or reading impairments that require the use of a screen reader, some have low vision, some have dyslexia, some have physical or motor disabilities, some are deaf or hard of hearing, some have an anxiety disorder or depression, some have ADHD, and some have a visual impairment such as colorblindness. Some students, of course, may have several of those impairments. I will also add content to the issue of how to test students under principles of universal design, a topic not featured on the CAST website. While CAST is certainly not the only entity providing assistance with how instruction can proceed under principles of universal design, I am featuring it in this article because I have found it helpful in my work. I encourage others to amplify what I have learned through their work.

I. Access

On its website, CAST takes each of its main rubrics—access, build, and internalize—and shows how they can be used to increase engagement (the “why” of learning),¹³ provide multiple means of representation (the “what” of

10 See *About CAST*, CAST, <http://www.cast.org/about#.XzGoBS2z2L8> (last visited on Aug. 10, 2020).

11 See *The Universal Design for Learning Guidelines*, CAST, http://udlguidelines.cast.org/binaries/content/assets/udlguidelines/udlg-v2-2/udlg_graphicorganizer_v2-2_numbers-yes.pdf (last visited on Aug. 10, 2020).

12 Further, I have benefited from resources made available on the ukhomeoffice.com website. See *WHY GITHUB?*, https://github.com/UKHomeOffice/posters/blob/master/accessibility/dos-donts/posters_en-UK/accessibility-posters-set.pdf (last visited on Aug. 18, 2020).

13 The “why” of learning focuses on engagement: “For purposeful, motivated learners, stimulate interest and motivation for learning.” See *About Universal Design for Learning*, CAST, <http://www.cast.org/our-work/about-udl.html#.X2Oj3jgh2L8> (last visited on Sept. 17, 2020).

learning),¹⁴ and provide multiple means of action and expression (the “how” of learning).¹⁵ I have followed that structure in this article. The headers and categories come from the CAST website and are based on CAST’s extensive research in the field. In this article, I presume rather than question the validity of the research and do not rewrite their terms and headers.

A. Provide options for recruiting interest (the “why” of learning)

1. Optimize individual choice and autonomy

While some professors may disagree that our mission should include “optimizing” individual choice and autonomy in a field in which our students typically face a rigid bar exam at the end of their legal studies, it nonetheless makes sense to embrace this goal. The universal design guidelines presume that students are purposeful and motivated learners. Even as purposeful and motivated learners, they benefit from the “why” of learning beyond the knowledge or fear that the topic may be on the bar exam. More engaged learners are better learners.

An example of a group of students who would benefit from a teaching style that seeks to optimize individual choice and autonomy would be autistic students. It is estimated that one in sixty-eight children meets the diagnostic criteria for autism spectrum disorder, with about half of that group having average or above average intellectual ability.¹⁶ Research suggests that students on the autism spectrum “need support in self-determination and self-regulation, which includes how to set and achieve goals, make choices and problem solve. Individuals with self-determination and the ability to self-regulate respond to events in an empowered state.”¹⁷ Thus, increasing student choice and autonomy can be considered a way to empower students to help them achieve their learning goals.

To help achieve this goal, I post my syllabus well in advance of my class’s first meeting, especially when multiple sections are available, so that students can contrast my scope of coverage with that of other sections. For example, three faculty usually teach constitutional law and I offer greater emphasis on the Fourteenth Amendment than the other two sections. By contrast, I offer less coverage of the executive branch than does one of my colleagues. Posting the syllabus in advance provides students with an opportunity to make a more informed choice although I realize that many factors guide student decision-making.

14 The “what” of learning focuses on representation: “For resourceful, knowledgeable learners, present information and content in different ways.” *Id.*

15 The “how” of learning action and expression: “For strategic, goal-directed learners, differentiate the ways that students can express what they know.” *Id.*

16 See Monica L. Bellon-Harn et al., *Quantity, Quality and Readability of Online Information for College Students with ASD Seeking Student Support Services*, 55 *READING IMPROVEMENT* 7, 8 (2018).

17 *Id.* at 12.

In seminars that I teach on a variety of subjects, such as LGBT rights or disability access, I create a provisional syllabus, which I share with my students in advance of class, inviting them to suggest topics that I may not have considered. I have found their suggestions enrich the scope of the course and make them feel more invested in the course's content. They often generate fantastic ideas, so the entire class benefits from their engagement.

During the COVID-19 epidemic, I was even more detailed on my syllabus than usual. I posted six dates on which students would be expected to take a quiz, specified class days that would be canceled so they could prepare for the quizzes, and listed detailed study questions they could consider to assess whether they were mastering the material. Knowing that some students might be ill and that all students were facing increased stress, I hoped that such precise guidelines could help them manage their mental and physical energy during the semester. Because I precisely signaled the purpose of each unit, they could also understand the "why" of my pedagogical decisions.

Making my PowerPoint slides available before class is a very important aspect of my classroom practice, because it enhances student autonomy and preparedness. Some professors tell me that they do not want to provide slides in advance because they put the answers to problems on the slide. In that situation, my advice is to prepare two versions of the slides—one with and one without the answers. The professor can wait until class ends to make the second set available (or never make that set available). Other professors have indicated to me that they are concerned that students will be less engaged if they can see the slides beforehand. I have found quite the opposite. I find that by having an opportunity to consider hypotheticals in advance of class, students are better prepared to offer insightful analyses of the hypotheticals. The decision to make PowerPoint slides available before class supports nearly every one of the goals mentioned below.

2. Optimize relevance, value, and authenticity

One challenge for all students in law school is that the final exam is typically some kind of issue-spotter and students may not feel prepared to identify issues and apply the relevant rules to those issues. In my torts class, I have found that a problem-oriented approach really helps students understand the relevance of the rules we are learning to analyze problems. I post the problems in advance of class and often take them from actual cases that might be briefly summarized in the notes of their casebook. After we work through a problem together, I am able to tell them how a judge resolved the issue, sometimes suggesting that the result might vary by jurisdiction or judge.

In my disability access seminar, the subject matter is often deeply relevant to many students in the class because they or a family member is disabled and they may have already acted as an advocate for themselves or others. Based on the work of Professor Jasmine Harris,¹⁸ I have identified myself as a person

18 See Jasmine E. Harris, *Taking Disability Public*, 169 U. PA. L. REV. 1681 (2021).

with a disability during the first class introduction and invited my students, if they want, to share their own personal connection to disability issues or identity. For that class, I also had the students read the ADA's definition of disability. Some students shared that they learned for the first time that they are considered disabled under the ADA. Other students used the first class to mention a topic of special interest to them that we would be discussing later. So the self-identification process served the interest of promoting student autonomy and respect while also connecting them to the course material.

3. Minimize threats and distractions

Some students find the prospect of a "cold call" to be a threat to their comfort level in the classroom. Studies indicate that students with anxiety disorders report that both cold-calling and random calling increases their anxiety level in the classroom because of their fear of being evaluated in a social situation.¹⁹ By contrast, some students say that the threat of being called on helps them stay focused. Some students are distracted by other students' using their computers for non-class-related activity (such as browsing the internet). On the other hand, some students find it important to type their notes during class to integrate them into material they have prepared in advance of class.

My solution to the "cold-call" dilemma is that I tell students that I will first give them an opportunity to volunteer in a large class. If they have not volunteered within the first few weeks (and I have run out of new people to call on) then I will begin to cold-call. If they are still anxious about speaking in class, I invite them to talk to me in my office and arrange, in advance, when I will call on them. I also try to be patient when students speak in class, especially when it becomes clear that English is not their first or best language or when they have a speech impairment.

As part of this universal design model, I encourage all students to reach out to me if they have concerns about speaking in class. This invitation has caused some students with disability to privately disclose their disability to me and, I hope, receive assurances that I would treat them respectfully. But it has also caused students who would not be considered disabled to share with me other kinds of concerns about speaking in class. But I also do not presume that all students with concerns about speaking in class have shared that concern with me and therefore try to structure the classroom environment so that all students can find a comfortable way to contribute to the discussion.

Several experiences highlight the importance of conducting class in a way that makes all students feel comfortable speaking in class. In one case, a student chose to self-disclose to me that they stutter and explained how they wanted me to facilitate their participation when they volunteered. Another student did not self-disclose a speech impairment before participating but told me in office hours how my practice of giving students the option to volunteer rather

19 See Katelyn M. Cooper et al., *The Influence of Active Learning Practices on Student Anxiety in Large-Enrollment College Science Classrooms*, 5 INT'L J. STEM EDUC. 23 (2018).

than be cold-called had enabled the student to speak comfortably for the first time in law school. Other students have told me that they prefer to face the possibility of a cold call because it helps them maintain their attention. For all of my students, I find that once they volunteer to speak, they often raise their hand repeatedly during the semester. It is our job to make the classroom feel like a safe space in which they can speak. Further, this classroom practice appears to benefit many students who have historically participated less in class discussion.²⁰

Computer-related distractions are a serious problem in law school, but computers are also an important way for many students to take notes. Some professors ban computers and allow only students with accommodations to use them. That approach “outs” students with hidden disabilities and also creates a hurdle for students who want to request computer use. As I have discussed in another article,²¹ the research that supports banning computers in the classroom is based on artificial classroom environments and has little bearing on the law school classroom.

For many years I have allowed students to use a computer in the classroom if they send me an e-mail promising to use the computer for class-related purposes only. I emphasize the importance of being professional and using the computer only for class-related purposes. Typically, about half of the class chooses to use a computer. I have done a modest empirical study and found that my computer users tend to earn the same grades as my non-computer users.²² I remind students throughout the semester about the importance of adhering to my policy and have been told by students that there is very strong compliance. As computer use changes, I think my approach will be even more appropriate. Some students, for example, bring in iPads and take notes by hand with a special pen, which gets transcribed into printed text. Some students report to me that they chose my section of a class because they wanted to be able to use a computer. Thus, the option to use a computer also enhances the first category of maximizing individual choice and autonomy.

B. Provide options for perception (the “what” of learning)

1. Offer alternatives for auditory information

I present only open-captioned videos in class so that my students who are deaf or hard of hearing can readily follow a video. Under universal design principles, we would expect that such a choice also benefits students who merely find it difficult to follow auditory communications. “Captioned videos directly accommodate hearing impaired law students, but also benefit any

20 See Palmer, *supra* note 7 (discussing how principles of universal design benefit a wide range of students).

21 See Ruth Colker, *Universal Design: Stop Banning Laptops!*, 39 CARDOZO L. REV. 483, 486-87 (2017).

22 *Id.* at 488-89.

student who cannot quickly process information, take notes, or concentrate on the visual and audio information provided by a video.”²³

During COVID-19, my classes were videotaped through Zoom technology. One feature of Zoom is the ability to create a transcript of the discussion. I had students tell me that the written description of the class discussion was very helpful when they were reviewing the material because they could use a search feature to quickly find a discussion they wanted to review.

Like many faculty, I have been historically hesitant to have my classes videotaped out of fear that it would lessen class participation by students or make me feel too self-conscious. But my experience of having my classes videotaped during COVID-19 has changed my view on that issue. Assuming the technology is available, I will allow my classes to be videotaped and for the videotape to be available to my students so that they can also review the written transcript that is created.

2. Offer alternatives for visual information

For any images on my slides I provide alternative written text that describes the image in words. I also avoid using text in colors that might be difficult to read for students who are colorblind. I try to stick to a gray or black-and-white palette, and I especially avoid red. Simple graphics also typically work better for students using screen readers. When the class is viewing an image during class, I am also sure to verbally describe the image. Unlike many professors, I do not use a lot of visual information in my classes (other than text on PowerPoint slides). According to Professor Jason Palmer, my teaching might better meet principles of universal design if I used more visual tools. He says: “Indeed, less than one-third of today’s population are auditory learners, who learn best through hearing; rather today’s law students are most likely to be visual learners, conditioned ‘through use of computers, videos, television and other visual tools.’”²⁴ Thus, my own teaching might benefit from more use of visual tools while also making sure those tools are accessible to all students.

C. Provide options for physical action (the “how” of learning)

1. Vary the methods for response and navigation

Instead of talking only to me, I have students sometimes break into groups to talk about the problems and then report back to the entire class. Students have to move their seats or position their bodies differently to have these conversations. For students with attention deficits, the physical movement of their bodies can help them maintain attention. For students with physical disabilities that limit mobility, I make sure that the chairs are configured in a way that allows them to fully participate.

²³ Jolly-Ryan, *supra* note 7, at 1427.

²⁴ Palmer, *supra* note 7, at 703.

During COVID-19 online instruction, it became possible to move students into small groups fairly easily to work on problems and report back to the whole class. I could jump from group to group and hear their discussion. This allowed me to better understand where students might be confused. When we return to in-person discussion, I will try to simulate the eavesdropping that was possible during online instruction so that I can better learn where students have confusion.

2. Optimize access to tools and assistive technology

I use only tools that are accessible to students who use screen readers such as JAWS.²⁵ I insist that students turn in work in Microsoft Word so I can use its comment feature to provide feedback rather than physically write on a student's paper. If I create features that require use of a button to access further files, I make those buttons descriptive (e.g., "attach files"). I avoid Google docs, which are often inaccessible to screen readers.

At my university, we are now required to ensure that all tools are accessible to students with visual impairments. Our office associates have been trained to add accessibility tools to our work. Faculty can encourage their law school to engage in that kind of training so that it becomes easier to generate accessible teaching tools.

II. Build

A. Provide options for sustaining effort and persistence (the "why" of learning)

1. Heighten salience of goals and objectives

As part of my problem-oriented approach to teaching, I select problems that relate to current events. That allows students to translate the course to the real world. During the semester, I often find that students bring those real-world examples to my attention, increasing their connection to the class.

2. Foster collaboration and community

Students enjoy working together to solve some of the problems in small groups. But I am also careful not to overemphasize this tool because some students prefer to work more independently.

In practice, lawyers often work collaboratively with others in a noncompetitive atmosphere. Some argue that law school does a poor job of preparing students to enter such a collaborative work environment because of the curved²⁶ and graded nature of most law school work. In-class collaboration

²⁵ See JAWS, FREEDOM SCIENTIFIC <https://www.freedomscientific.com/products/software/jaws/> (last visited Dec. 12, 2021).

²⁶ Some have argued that the curved nature of law school grading does not promote student learning and self-efficacy. See Palmer, *supra* note 7, at 704 (summarizing that viewpoint).

to solve hypotheticals in small groups can help build that important practice skill while also making students feel more included in their community.

3. Increase mastery-oriented feedback

Traditionally, law professors offer one exam at the end of the semester, with little opportunity for students to receive feedback. I have come up with two strategies to get around this problem. First, even in a large class, I try to give my students an opportunity to take at least one assessment that I evaluate and on which I provide formative feedback. In collaboration with other faculty, I have conducted an empirical study in which we found that formative feedback in a large first-year class can help a student's performance in all their first-year classes.²⁷

From a universal design perspective, periodic written assessments have certain advantages. They can reduce the anxiety from one summative exam while also teaching students the importance of the kind of clarity and precision they will need in practice.²⁸ But I also realize that the anxiety-reduction effect will not be true for all students. Some students find frequent assessments to increase their anxiety level during the semester. Nonetheless, because the single, summative exam is so traditional in law school, there is a benefit to having opportunities for students with other kinds of learning styles to demonstrate their knowledge during law school.

During the COVID-19 switch to online education, I took this written assignment option to a new level. In my constitutional law class, I broke the material into six chunks of material and gave a take-home test after each unit that was limited to five double-spaced pages. Each student had to complete five of six exams, with every student completing the last exam. (They could not complete all six.) With sixty-one students, I knew that I could not hold individual conferences with each student on those exams, but I also thought they would benefit from formative feedback. I therefore used Microsoft Word to provide feedback to each student on the exam as the exams were anonymous. I also used my standard Excel spreadsheet to grade their exams consistent with our mandatory curve. To protect my own work-life balance, I told them I could not provide any student with further individualized feedback. While a few students tried to test that boundary, they soon understood that I would not make exceptions.²⁹ To give students adequate time to complete these written assignments, I canceled three classes for each exam.

27 See Ruth Colker et al., *Formative Assessments: A Law School Case Study*, 94 U. DETROIT MERCY L. REV. 387 (2017).

28 See George & Newby, *supra* note 7, at 496 (2008) ("Furthermore, the movement away from only using the Socratic method allows students with other types of learning styles more opportunity to succeed.").

29 In fact, I did make an exception for a few students who were in danger of earning a D or F in the course based on weak performance on the written assignments. I reached out directly to those students to offer assistance, as I always would do in any class when I perceive a student is struggling. These formative assessments allowed me to intervene fairly early in the

For those assignments, students were not allowed to cite sources that were not assigned for the class. That rule limited how much time a student would profitably spend on the assignment. While no system is perfect (and grading five exams for sixty-one students was a monstrous undertaking for me), I do think the system allowed students to get formative feedback, encouraged them to stay on top of the material, and allowed them to manage their own time by deciding which of the six exams to skip. Finally, it lessened the need to accommodate a student who had a COVID-related illness during the semester, because every student was required to skip one exam.

Some faculty worry about cheating during such written exercises that are completed outside of class. I told students that they could speak with one another, but my expectation was that all written work would be their own. Because we grade on a curve, I also assume they have an incentive not to complete one another's work. I also try to give "cheat-proof" exams that could be completed only by someone actually in my class.

Further, I give my students the problems I will discuss in class ahead of time on the PowerPoint slides so they can choose to try to work out the problem on their own before class. Then, they can use class discussion to provide feedback. As I said earlier, some professors are uncomfortable making the PowerPoint slides available in advance, because they put the answers on the slides. In that instance, I recommend posting two versions of the slides—one in advance of class without answers and one after class with answers. While professors may think that academic freedom concerns allow them to not share PowerPoint slides *at any time* with their students, I would hope they would consider how their decision is undermining the learning environment for many students.

B. Provide options for language and symbols (the "what" of learning)

1. Clarify vocabulary and symbols

As law professors, we are used to Greek symbols and Latin terms in text and opinions and can forget that those terms may be a barrier to our students' understanding. I still remember being confused by the Greek symbols for plaintiff and defendant that my professors would put on the board during the first semester of law school. When I was in law school, obscure Latin terms were part of the "gotcha" aspect of cold-calling if a student could not properly define one of those terms.

To reduce anxiety, I use volunteers to define Latin terms. If no one knows the meaning of a certain term, I invite the computer users to look it up. I also try to avoid abbreviations (and encourage students not to overuse abbreviations on my final exam).

To create greater access for students on the autism spectrum, I try to write in plain language and use simple sentences and bullets. I build simple and consistent layouts so students can anticipate where to find material. That

semester to help students improve their performance.

decision should help a variety of students who have trouble accessing overly complicated designs.

In the first semester, there are also words that frequently appear such as “summary judgment” or “directed verdict.” Even though I do not teach civil procedure, I realize that basic mastery of those terms is necessary to understanding the text. I therefore often spend a few minutes defining key terms to enhance understanding. I typically provide those definitions rather than expect students to recite them by volunteering. I put the definitions on PowerPoint slides that they can download from our class portal. That way, I know that they have the correct definition throughout the semester.

2. Illustrate through multiple media

This is not one of my strengths, but I try to make my weakness into a strength. In torts class, I often try to draw a picture on the board of the accident or injury we are discussing. I use stick figures and oddly shaped cars to portray various traffic accidents. I invite the students to laugh at my crude pictures, but laughter is a good way to help people become refocused on the discussion. My drawings, however, can be helpful to better understanding a complicated fact pattern with multiple causal elements. PowerPoint slides, of course, offer other opportunities for interweaving pictures and videos.

C. Provide options for expression and communication (the “what” of learning)

1. Use multiple media for communication

I try to intersperse short video clips and images on my slides, along with words, so students can use different types of media to connect with the content. For students with dyslexia, it is helpful to have images and diagrams to support text. Large blocks of heavy text are difficult for people with dyslexia to comprehend and also confuse many students.

2. Build fluencies with graduated levels of support for practice and performance

In my first-year torts class, I offer a practice exam that asks questions on only a limited amount of material. I give the students written feedback on their answer and invite them to speak with me about the feedback. I cannot continue to offer that kind of support for additional exams throughout the semester for every student, but I encourage students to come speak with me in office hours about the practice problems we discuss in class. For students who performed poorly on the practice exam, I offer to read a new draft with additional feedback. I do not select students for additional support just because they have a disability; I select them for support because they are performing below my expectations for the class. Some of those students will self-report that they have a disability and benefit from constructive feedback to get on the right path.

III. Internalize

A. Provide options for self-regulation (the “why” of learning)

Self-regulation is a broad term. It encompasses learning the skills to be lifelong learners as well as physical and emotional regulation, as in awareness of stress and anxiety levels, so that one can make appropriate adjustments. As part of the “why” of learning, students can feel more engaged when faculty are transparent about their pedagogical choices.

1. Promote expectations and beliefs that optimize motivation

We can encourage the development of these “soft” skills by discussing the importance of good mental health and active engagement from the front of the classroom. If appropriate, we can share steps that we are taking, for example, during COVID-19 to maintain our physical and mental health through hobbies or other anxiety-reducing activities. Like many professors, I open my Zoom screen ten minutes before class begins and encourage students to share their pets or hobbies before the formal class begins.

I can also help my students’ self-regulation through my use of formative assessments. Although I grade the practice exam in torts, the grade does not count toward the final exam. That allows students to modify their behavior and improve without negative consequences for their original attempt. Law students are very motivated to perform well, but I do not want students to give up and think they are going to do poorly merely on the basis of one practice exam. I emphasize that many students move from the C to A range after getting feedback on the practice exam.

2. Facilitate personal coping skills and strategies

When students visit me to discuss the feedback on their practice exam, I tell them that I will not have any comments to offer. They are in charge of the session and should come with their own questions. I also do not insist that they speak with me. Sometimes, I find that students who do poorly on the practice exam avoid coming to see me. But I try to reinforce in class that avoidance is not a successful strategy. Gradually, nearly every student who struggled on the practice exam will come talk to me in the office. I use gentle nudges to try to get students to come speak with me in case an anxiety-related concern is what is keeping them away from my office. Unfortunately, students who use an avoidance strategy are rarely successful on the final exam.

Student independence allows them to best choose appropriate coping skills. For students with physical or motor disabilities to be able to work independently, it is important that pages be designed with a mobile and touch screen in mind. If actions are required on a page, such as responding to a poll, it is important that the clickable actions be large rather than demand precision. By respecting their ability to work independently, I am facilitating their personal coping skills.

3. Develop self-assessment and reflection

Putting the student in charge of any individual conference promotes self-assessment and reflection. I make it clear in class that I expect them to set the agenda during individual sessions. Thus, I start an individual session with a question like “how can I help you?”

Because it is difficult to have individual conferences with every student in a large class, I often make my Excel spreadsheet available for students to see where they earned points (and failed to earn points). Students have reported that they learned a lot about the weaknesses in their examination writing style by reviewing the Excel spreadsheet. Although my office associate helps me prepare an individualized spreadsheet for each student, most students do not choose to retrieve it.

B. Provide options for comprehension (the “what” of learning)

1. Activate or supply background knowledge

Because I often have foreign students in my class, I have learned not to assume historical or cultural background that might be useful in examining a problem. One time, for example, I mentioned Jeffrey Epstein³⁰ as an example in class and had a foreign student ask me after class who Jeffrey Epstein was. That exchange reminded me not to take any background knowledge for granted. For students on the autism spectrum, I also try to avoid figures of speech and idioms. “[P]roblems with pragmatic language have been consistently reported across the autistic spectrum, even when structural language is intact. In addition, some studies have found evidence of weakness in the figurative and idiomatic language domains, contrasting with clear strengths in area of grammar.”³¹ From a universal design perspective, that linguistic decision also benefits students whose first language is not English.

2. Guide information processing and visualization

I use simple sentences and bullets to guide information processing. I follow a linear, logical layout rather than spread content all over a page. I try to avoid creating a wall of text. I also use simple colors rather than bright, contrasting

³⁰ See Caroline Halleemann, *What We Do and Don't Know About Jeffrey Epstein*, TOWN & COUNTRY (July 2, 2020), <https://www.townandcountrymag.com/society/money-and-power/a28352055/jeffrey-epstein-criminal-case-facts/>.

³¹ See Sobh Chahboun et al., *Can You Play with Fire and Not Hurt Yourself? A Comparative Study in Figurative Language Comprehension between Individuals with and without Autism Spectrum Disorder*, PLOS ONE 1 (Dec. 30, 2016), <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0168571&type=printable>; Ronit Saban-Bezael & Nira Mashal, *Different Factors Predict Idiom Comprehension in Children and Adolescents with ASD and Typical Development*, 49 J. AUTISM & DEVELOPMENTAL DISORDERS 4740, 4741 (2019) (“Autism spectrum disorder (ASD) is reflected in a continuum of abilities and difficulties . . . [A] core disability of ASD lies in the social and communicative domain, of which comprehension of figurative language plays a significant role.”).

colors. To assist students with low vision, I use good color contrasts and a readable font size.

3. Maximize transfer and generalization

C. Provide options for executive functions (the “how” of learning)

1. Guide appropriate goal setting

I provide students with a detailed syllabus that lists all the cases and topics we will cover so they can use the syllabus as a tool to develop an outline. I also make all my PowerPoints available in advance of class so students can anticipate the topics and more easily take notes, without copying information on the PowerPoint slides.

2. Facilitate managing information and resources

My university uses “Carmen,” a Canvas product that I use to help me keep all class information organized on one portal for the students. This product is accessible to students with visual impairments. TWEN,³² a course management system provided by Westlaw, has not been certified at my university as accessible. By having all information located on one portal, students can easily keep track of notes and readings. I also use this portal to allow students to take and receive feedback on practice quizzes. I post old tests on this portal so students can practice on their own.

A portal such as Carmen also allows me to name file folders and create as much organization as possible. Descriptive links and headers are helpful for students using screen readers.

IV. Fair Assessments

In the CAST blueprint for universal design in learning, there is no discussion of appropriate examinations. But that topic is of the utmost importance if we are to reach all of our students and offer them a fair way to demonstrate their skills and knowledge. Grades are typically curved in law school and often play a significant role in students’ job opportunities.

Most professors are used to the typical way that exams are handled in law schools. Professors offer a time-limited in-class exam, and students who need extended time must make a request through the Office of Disability Services for that accommodation. Disability Services does not usually ask to see the professor’s exam to determine on an individual basis how much extended time would be appropriate. Instead, it usually has a blanket policy for a student such as time and one-half or double time.

32 See *TWEN: Course management for law schools*, THOMSON REUTERS, <https://lawschool.thomsonreuters.com/twen/> (last visited on Sept. 17, 2020).

As I have discussed extensively in other articles,³³ that kind of on/off switch for accommodations is deeply flawed. Some impairments, like ADHD or an anxiety disorder, exist on a spectrum. Further, not all exams are the same. Some are more time-pressured than others. Yet the accommodation process is rigid and cannot respond to those nuances. Most importantly, the time limits set by professors are fairly arbitrary. Sometimes, time limits are so relaxed that nearly any student could complete the exam in the required time and answer with a thoughtful response. Other times, the time limit is quite harsh, so a student's score depends significantly on the ability to move quickly through an exam. Because professors are experts in the subject and choose the exam questions, they may not correctly gauge how long it takes to answer an exam well.

My objection to time-limited exams is quite simple. Such exams fail to tell us the student's full range of knowledge if the student is not able to complete it at an acceptable level of depth. If I were giving a math exam with ten questions and one student finished five questions and then wrote "out of time" and the other student finished ten questions but got five correct, I would have trouble comparing their knowledge. Did the student who finished five questions not know the answers to the remaining five questions, or did the student just not have time to demonstrate their knowledge? Did the student who completed all ten questions but got only five right rush and therefore get sloppy? To answer those questions, I would want to give both students enough time to demonstrate their knowledge. In some cases, with more time, the first student would still get five answers correct but the second student would correct the work and get an additional two questions correct. Alternatively, the first student might complete all ten questions correctly with more time and the second student might still turn in the same wrong answers. Why would I want to draw a conclusion about students' math knowledge without giving them enough time to demonstrate the full range of their knowledge? Word-limited exams with generous time limits allow me to compare those two students more fairly and accurately.

While test anxiety is to be expected among students with various mental health issues, studies have also shown that it is prevalent for students with ADHD.³⁴ Further, studies indicate that test anxiety increases with age.³⁵ Thus, the application of universal design principles in a way that reduces exam anxiety can have positive results for a range of students.

Rather than use a clumsy accommodation process to provide some students with extended time, I give word-limited take-home exams to measure my

33 See Ruth Colker, *Test Validity: Faster Is Not Necessarily Better*, 49 SETON HALL L. REV. 679 (2019).

34 See Will H. Canu et al., *History of ADHD Traits Related to General Test and Specific Math Anxiety in College Students*, 58 LEARNING AND INDIVIDUAL DIFFERENCES 56, 56-57 (2017).

35 See Myra Taylor & Stephen Houghton, *Examination-Related Anxiety in Students Diagnosed with AD/HD and the Case for an Allocation of Extra Time: Perspectives of Teachers, Mothers and Students*, 13 EMOTIONAL & BEHAVIOURAL DIFFICULTIES 111, 112 (2008).

students' knowledge of the material. As a result, I no longer have a student write "out of time" at the end of the exam, leaving one or more question blank. If students do not use all the words that I allocated for an answer, I'll know that the students shared all the knowledge they had on the material. I won't have to guess if "out of time" was a ploy to make me think the student would have demonstrated more mastery with more time.

One advantage to my decision to grant ample time to all students is that I do not have to be concerned if the Office of Disability Services mistakenly grants some students more time than is comparable to the time provided nondisabled students. Some studies have suggested that extended-time decisions can advantage a subset of students with disabilities if an exam has significant time constraints for nondisabled test takers.³⁶ While those findings are only provisional, they also add weight to a universal design approach to time limits on exams: Take out the time-pressured element for all students.

Two common responses to my attempt to use universal design techniques on the exam are: (1) lawyers bill by the hour, so students should be required to take time-limited exams; and (2) the bar exam is time-pressured, so law school exams should also be time-pressured.

Although it is true that lawyers sometimes bill by the hour, that is not universally so. Further, lawyers are often subjected to word and page limitations. My exams have strict word limits, which require students to learn to write succinctly. Also, lawyers always get to write multiple drafts. My exams provide students enough time to edit their product before submission. I have experimented with different time limits over the years. I used to give students forty-eight hours to complete my final exam in a required first-year course, but I learned that some students were staying up all night, so that their performance on my exam interfered with their ability to do well on their other exams. In the pre-COVID-19 era, I migrated to a twelve-hour exam (with a significant word limit so a student could easily complete the exam in four or five hours). The exam window was open from 8 a.m. to 8 p.m. That window concerned me because it might disadvantage my students with young children. But it seemed like an adequate amount of time for any student, because I did not expect any student to use twelve hours to answer the questions. One of my constitutional law students, who got the lowest grade in the class, told me he did not study much in my class, thinking he could catch up during the final exam. That strategy was not successful for him, showing that a student will have to use good time-management skills to do well on a take-home exam. During the COVID-19 era, as discussed earlier, I gave students a week to complete each exam (with a page-limited exam answer). No system is perfect, and each professor will have to see what balance of time limits and page limits provides the best and fairest assessment tool.

36 See Laura M. Spenceley & Starr Wheeler, *The Use of Extended Time by College Students with Disabilities*, 29 J. POSTSECONDARY EDUC. & DISABILITY 141 (2016); Lawrence Lewandowski et al., *Test-Taking Skills in College Students With and Without ADHD*, 31 J. PSYCHOEDUCATIONAL ASSESSMENT 41 (2013).

The bar exam is a moving target. If law schools placed less emphasis on speed, it is possible that the bar exam would also place less emphasis on speed. Speed is increasingly de-emphasized in K-12 education, and we may eventually see that trend move to higher education and professional examinations. During COVID-19, many schools adjusted their admission standards to no longer require standardized exams. It is possible that COVID-19 will have a lasting impact on the de-emphasis on standardized testing for admissions purposes. And, of course, the old maxim that two wrongs don't make a right applies. The bar exam needs to de-emphasize speed. Law professors can model that urgency in their own choices about how to administer exams.

V. Conclusion

Law schools promote their interest in equity and inclusion, but often those practices ignore the importance of disability diversity. Most law schools do not even track how many students, faculty, or staff are disabled. This lack of transparency helps keep disability private and may make us think the only disabled students are the ones identified by the Office of Disability Services at the university. This is a false assumption that also lessens the quality of our teaching by leading us not to recognize the disability diversity present in our classrooms. While we should work to make disability more public, we should also employ principles of universal design so that we can become better teachers for all of our students and provide fairer methods of examining their knowledge.

The COVID-19 moment has also shown many of us that teaching techniques that we previously thought would be impossible to implement, such as teaching by Zoom, recording classes or making PowerPoints available in advance of class, are possible and do not necessarily lessen the educational quality of our classes. If there is a silver lining to teaching during COVID-19, I hope it is that we have been pushed to be more creative in thinking of ways to reach the whole class. Reaching the whole class requires use of universal design. Reaching the whole class is good teaching.