# UNIVERSAL DESIGN FOR LEARNING AS A PATHWAY FOR ACCESSIBLE NARRATIVE WRITING PRACTICES FOR DIVERSE ADOLESCENTS

## Reagan Murnan

Wichita State University

#### Heidi Cornell

Wichita State University

#### Angela Beeler

Wichita State University

## Abstract

Equitable learning opportunities are critical for students to meet writing standards. Universal Design for Learning (UDL) is a scientifically based framework for planning and implementing instruction that supports a broad range of diverse learners. In this article, the UDL framework is briefly described, including its principles and guidelines. Vignettes are shared throughout to illustrate how one teacher applied the UDL framework to plan a narrative writing unit for a diverse group of adolescent learners. Adopting the use of the UDL framework during the instructional planning process ensures that instructional practices are centered on student strengths and offer avenues for accessible and equitable learning experiences for all students. This article closes with digital tools that promote 21<sup>st</sup> century learning and offer a pathway to accessibility.

Keywords: accessibility, diverse learners, narrative writing, Universal Design for Learning

Mrs. Gerri has a diverse group of 6th grade students in her Language Arts class. The students in her class have a wide range of abilities, come from various ethnic and racial groups, and have distinct experiences and background knowledge. In particular, Mrs. Gerri notices that once her students enter her classroom and see a writing objective on the board or hear of a lesson objective that involves writing, there is a unanimous sigh with accompanying

shoulder slumps. She has heard about Universal Design for Learning in a previous professional development session and wonders if she can apply the Universal Design for Learning (UDL) framework to her upcoming unit on narrative writing. She is hopeful that by applying the UDL framework she will be able to motivate and engage her students in writing practices while simultaneously meeting the diverse needs of her students.

The pervasiveness of literacy in academic, professional, artistic, and social realms makes the development of strong writing skills paramount to students' success across a lifetime (Bazerman et al., 2017). However, instructional writing practices have historically ignored or minimized the role of culture, linguistics, exceptionality, and/or promoted practices centered around Eurocentric and Western ways of knowing, learning, and writing (Paris, 2021). Traditional classroom writing practices are often ineffective for culturally and exceptionally diverse students, creating increased literacy achievement gaps for minority and exceptional students (Cho et al., 2022). Students entering today's classrooms are becoming ever more diverse and encounter several obstacles and barriers to literacy before even entering the classroom. Thus, creating writing instruction based on equitable and accessible practices is critical. The Universal Design for Learning (UDL) framework is an empirically-based approach for making curriculum accessible to diverse learners, regardless of ability, language, culture, or learning preference (UDL; CAST, 1998; Spooner et al., 2007). In this article, the UDL framework will be briefly reviewed, including its principles and accompanying guidelines. As such, this article aims to bring awareness to how teachers can apply the UDL framework to work towards more equitable and accessible teaching practices.

## Universal Design for Learning Framework

The UDL framework is an empirically-based approach for developing equitable and accessible curricula that helps minimize the need for individual accommodations (Black et al, 2014; Rao & Tanners, 2011). As such, the UDL framework provides many affordances that aim to mitigate barriers to learning. These affordances are centered around three overarching principles: (a) multiple means of engagement, (b) multiple means of representation, and (c) multiple means of action and expression (see Table 1). Offering multiple means of engagement aims to support students by stimulating their interest and motivation to learn. Providing multiple means of representation involves presenting information and content in a variety of ways and modalities. Affording multiple means of action and expression consists of offering students multiple ways to demonstrate their understanding. The employment of the UDL framework intentionally, proactively, and reflectively addresses the learning requirements of all individuals, including diverse and exceptional learners (CAST, 2018). Consequently, by ensuring accessible curricula, this framework is designed to prepare all students to become expert learners. As a result, the expert learners will become aware of their learning desires and will be able to pursue ways that ensure those desires are met. The three UDL principles (multiple means of engagement, multiple means of representation, and multiple means of action and expression) are supported by a set of nine guidelines (see Table 1). These guidelines can be used when considering how to align instruction to each of the principles of the framework.

**Table 1:** UDL Framework Principles and Guidelines (Rose & Meyer, 2022)

# Principle 1: Multiple Means of Engagement

- Recruiting Interest: Spark excitement and curiosity for learning
- Sustaining Effort & Persistence: Tackle challenges with focus and determination
- Self-Regulation: Harness the power of emotions and motivation in learning

## Principle 2: Multiple Means of Representation

- Perception: Interact with flexible content that doesn't depend on a single sense like sight, hearing, movement, or touch
- Language & Symbols: Communicate through languages that create a shared understanding
- Comprehension: Construct meaning and generate new understandings

## Principle 3: Multiple Means of Action and Expression

- Physical Action: Interact with accessible materials and tools
- Expression & Communication: Compose and share ideas using tools that help attain learning goals
- Executive Functions: Develop and act on plans to make the most out of learning

Note. Adopted from the CAST UDL Guidelines (https://udlguidelines.cast.org/)

Before Mrs. Gerri begins her unit on narrative writing, she is going to keep the principles and guidelines of UDL at her fingertips as she plans for an accessible and equitable unit. Her plan is to use a backward design approach, by first beginning with what her students should know, and from there, considering essential lessons and learning goals. This will help her to ensure that she is providing access to all areas of learning and assessment throughout the unit while concurrently reducing "on the fly" modifications and/or accommodations.

## **Backward Planning**

As education policy has evolved, teachers have been required to differentiate instruction (Strickland, 2008). The most common approach to differentiating instruction is retrofitting. This strategy is typically enacted when a teacher notices that a student or students are experiencing challenges and/or are lacking engagement. The teacher's response to student challenges and disengagement is to differentiate within an existing curriculum. Backward planning is also known as "backward design" and is a method of curriculum planning that starts with clearly identifying learning objectives, then working backward to achieve the objectives (Wiggins & McTighe, 2005). Backward planning consists of three stages: (a) identify desired learning results, (b) determine acceptable evidence, and (c) plan learning experiences and instruction (Wiggins & McTighe, 2011). The UDL framework integrates backward planning (planning that begins with the end goal) by starting with what students should know and be able to do and working backward from there when creating individual lessons. The UDL framework requires that teachers embrace and prioritize a backward planning approach to ensure that alternatives to meet the needs of all students are created before the instructional unit begins. While flexibility is inherently intertwined within this framework, backward planning seeks to mitigate modifications of instruction and materials during instruction or at the last minute (Rose & Meyer, 2022). In this way, educators can meet the needs of diverse learners at the outset of the unit, rather than engaging in ongoing adjustments for individual students (Pisha & Coyne, 2001).

After meeting several times with her 6th grade language arts team to discuss a backward planning approach to the narrative writing unit, Mrs. Gerri and the other language arts teachers decide that allowing students to create a narrative writing portfolio would be a great way to assess what students know and are able to do throughout and at the end of the unit. Additionally, the 6th grade language arts team considers this unit assessment portfolio a vehicle for engaging in the three principles of UDL. As she and the team generate the lesson objectives for the unit, they consider any potential barriers that students may experience, such as lack of interest, English language skills, proficiency in digital literacy, and the organizational skills required to create a portfolio of narrative work. Engaging in backward

planning also allows for the team to consider the guidelines of the UDL framework to ensure the UDL principles are embedded throughout the instructional planning of the entire unit.

#### Multiple Means of Engagement

The UDL principle of multiple means of engagement centers around student motivation and engagement with the curriculum. In other words, educators who employ this principle will strategically plan "from the beginning" more than one way to 1) pique and sustain students' interest in the content, 2) sustain student effort and persistence in learning the content, and 3) promote self-regulation. The checkpoints of the UDL Framework (see Table 1) offer teachers a place to start when planning for upcoming units.

There are a variety of strategies that can be used to pique and sustain student interest in the content. Educators can begin by listing or providing the learning outcomes for students in "kid friendly" language. Learning objectives should be posted in a place that is easily accessed and visually available to students. Students can be motivated when learning objectives are clearly and continually presented within and across lessons to determine the actions that must be done to achieve the objectives (Widyawulandari & Indriayu, 2019). Additionally, learning objectives can also be used to frame learning goals for students. Engagement and goal setting are theoretically linked (Siegert & Taylor, 2004), and therefore, goal setting can provide an avenue for achieving the UDL principle of multiple means of engagement. Teachers can consider individual, small group, and/or whole class goals. Goals that surround learning objectives should be attainable and individualized. When students accomplish goals, it can lead to satisfaction and further motivation. Contrastingly, when goals are too difficult to achieve, students can experience frustration and lower motivation (Siegert & Taylor, 2004). Teachers can provide each student with a checklist of learning goals. These checklists can be placed in sheet protectors for daily use for students to note their progress using a dry erase marker. Some students who require closer progress monitoring can be provided with short, individual "check ins" to monitor student progress formally or informally towards more individualized learning goals.

Relatedly, learning objectives and learning goals can provide a catalyst for sustained self-regulation, as students learn to self-monitor and self-evaluate their progress towards learning goals and objectives. Teachers should be intentional about having the learning goals checklists serve as a way for students to communicate and self-monitor their progress with peers and/or teachers. Lastly, because students are continually self-monitoring and self-evaluating, teachers will be more actively aware of student progress and will be able to proactively make any necessary arrangements to sustain student effort and engagement.

Educators can elicit student engagement by providing students with choice. When student autonomy is promoted using personally relevant choices, students become more motivated and learning outcomes improve (Evans & Boucher, 2015). There is strong empirical support for the use of "edgy" texts (i.e., those that contain moral dilemmas about race, gangs, drugs, suicide, sexual exploitation, or teen pregnancy; Ivey & Johnston, 2018) to engage and motivate students to read. Knowing this, teachers can provide students with a variety of different "edgy" narratives, including (a) dystopian narratives, (b) "tense" historical narratives such as the real story of Pocahontas, (c) popular songs that can be described as narratives, including "Evermore" by Taylor Swift, and (d) poems, such as those by Edgar Allan Poe and "Paul Revere's Ride." In addition to providing a variety of choices that students can explore to add to their personal narrative portfolios, teachers can also consider how providing multiple viewpoints within related narratives can evoke student engagement.

Narratives, especially historical narratives, are often provided from the dominant perspective. When considering multiple means of engagement for a narrative writing unit, educators

are encouraged to be thoughtful about including diverse perspectives and representations in the resources that are provided. While this often takes more time, it is vital that educators commit to providing students with narratives that include perspectives of individuals that are most often silenced or forgotten. As such, by showcasing different narratives, classroom teachers create entry points for each student while providing a hook to keep them engaged throughout the entire unit. Lastly, by offering diverse perspectives and viewpoints, students are likely to be inspired to find and write narratives that speak to *them* and showcase *their* voice.

Providing multiple opportunities for students to engage in both individual and group assignments is also a mechanism for sustaining interest. As students explore and create personal narratives, they can be encouraged to exchange dialogue and experiences. Providing a space for dialogue can propel students' cultural competence and provide access to the richness of various cultures, languages, and abilities (Zoch, 2017). Additionally, teachers can organize the layout of their classroom in a way that promotes choice, collaboration, and access. The layout of classrooms can also be set up in a way that has space for collaboration, such as round tables and the ability to rearrange furniture for spontaneous collaborations. Teachers can also offer flexible seating options for students. To illustrate, in addition to traditional classroom chairs, teachers can also include yoga mats, bean bags, stools, cushions, and milk crates that provide students with the ability to choose where and how they want to sit. Finally, classrooms can provide multiple means of engagement, by creating accessible materials. Classroom supplies should be plentiful and within reach for students. The students in the class should know where to find supplies that can be used for the creation of their narrative writing portfolios. By providing students with tremendous avenues for creativity, choice, and mechanisms for self-regulation, teachers are likely to recruit and sustain the engagement of their diverse group of students.

Mrs. Gerri knows that if she can recruit and sustain the interest of her students, then they will be more likely to engage in the content. She wants to acknowledge how students can utilize their strengths, identities, abilities, and background knowledge to craft their narrative writing portfolios. She will examine a variety of methods, such as clearly stated learning objectives and goals, student choice and representation, and collaborative learning opportunities and dialogue to provide her 6th grade students with multiple means of engagement.

#### Multiple Means of Representation

The principle of multiple means of representation involves the ability for students to learn according to their preferred learning method. This can be as simple as providing students with a visual image to go along with a text. Said differently, multiple means of representation involves the presentation of content in a variety of ways and modalities. While multiple means of representation concerns the physical and cognitive nature of representation, such as visual, audio, tactile, and level of rigor, for Mrs. Gerri and her students it also involves the provision of multiple sources, resources, and multiple perspectives. In essence, students' needs for autonomy, competence, and relatedness—especially for adolescents—is a mechanism for increasing student motivation (Ryan & Deci, 2000), which can be achieved when teachers offer choice in the classroom.

To begin a unit, teachers can offer students a survey to inquire about student preferences, such as if they prefer (a) information presented in a video, audio, or text-based format, (b) writing by typing, handwriting, or voice-to-text, (c) flexible or structured assignment guidelines, and (d) individual or group assignments. All this information can be studied as teachers prepare for their upcoming lessons and as a tool for supporting students throughout the unit. Throughout the course of the unit, teachers can offer students with guidance on various assistive technology supports, such as an online thesaurus and an online dictionary, and translation tools, such as text-to-speech and speech-to-text options for enabling readability of narrative texts found online. General education

teachers, along with the help of supporting special education teachers, can prepare instructional materials that are accessible to all their students, regardless of language or ability.

Throughout the narrative writing unit, teachers can explain to students that narratives are boundless and created in a variety of ways, including songs, autobiographies, biographies, documentaries, poems, movies, books, folklore, visual narratives, storytelling, speeches, including TED talks, and so much more. Teachers are encouraged to provide students with explicit instruction on the genre elements of narrative writing and model how these elements are present within a variety of formats. After providing students with adequate instruction regarding the genre elements of narrative writing, teachers can allow students to explore, within a structured environment, different resources that offer narratives and encourage students to collect and draft narratives in a way that speaks to them or is representative of them. Teachers should intentionally pull several resources for a select number of students, provide the class with a plethora of articles, video and audio clips, pictures, newspapers, and videos and articles from selected resources provided by the school's library database. To further bolster the diverse nature and perspectives inherent of narrative writing, teachers can also enlist in the community or parents to provide oral retellings, newspaper clippings, etc. of narratives, such as those who are veterans, immigrants, adoptive parents, personal conversion stories, or "slices" of life that may speak to or represent a variety of students in the class. These multiple narratives provide information from diverse perspectives and represent content standards in a variety of ways.

Mrs. Gerri deliberately offers the narrative writing content in a variety of methods. She explicitly models for students the narrative elements that are fundamental to the genre. She pairs her instruction with visuals and models for students how they can construct their own narratives. Mrs. Gerri uses think alouds to increase her students' conceptual understanding of the genre and the various styles and presentations of narratives. She considers how she can provide her students with narratives in a variety of formats, including those in multiple languages and even graphic novels.

#### Multiple Means of Action and Expression

Providing students with multiple means of action and expression affords students a variety of modalities for demonstrating mastery (CAST, 2018). The portfolio assessment allows students to compile narratives from a variety of sources (e.g., documentaries, oral presentations, poems, speeches). In addition, students can compose a portfolio in a manner that is aligned with their strengths or that was significant for them. For example, some students can a create portfolio that is entirely digital, including websites and digital compilations of their written work through iMovie, while other students can create a portfolio that is completely paper-based. Moreover, other students could potentially craft a portfolio that mirrors a poster or a "Pinterest" board. In this way, students can compose a product that is most relevant and purposeful for *them*.

Teachers can introduce many different means of engagement, representation, and action and expression to students that are likely new and different. As a result, teachers can provide students with opportunities to reflect on particular strategies. Therefore, as a daily assignment, students can reflect either in writing or through dialogue with small groups or partners what strategies they have tried, and which have worked best so far. Students can also be encouraged to discuss their willingness to try different strategies. This reflective practice also helps to propel one of the main ideas of UDL by creating expert learners (Hartmann, 2015).

By offering multiple means of action and expression, a portfolio assessment contributes positively to the identity development of students (Chardin et al., 2020). This particular portfolio assessment allows students to apply and understand the elements of the narrative genre through *their* perspectives, fictional stories that are representative of *their* lives, to express narratives in *their* format, and to replicate narratives that speak to *them*. Students are also able to share their work in *their* first language and then in English—giving value to their culture and heritage. Consequently, through a

portfolio assessment not only are students able to connect with themselves and their own identities, but they are also able to connect with their peers—recognizing and appreciating the "funds of knowledge" (Gonzalez et al., 2005) that their peers possess and the value of their experiences.

Traditionally, Mrs. Gerri has provided a multiple-choice assessment on the genre elements of narrative writing and graded an independently written personal narrative essay to assess what students know and were able to do at the end of the unit. Now that she is more familiar with the UDL framework, she decides that assessing students on their construction of a narrative writing portfolio is a great way to offer students multiple means of action and expression. Additionally, since Mrs. Gerri engaged in backward planning practices, she can provide her portfolio assessment rubric to students at the beginning of the unit, which can give students options for self-regulation and choices to spark and sustain engagement. Mrs. Gerri also offers multiple checkpoints using the rubric throughout the unit to allow students to self-assess their narrative writing portfolios and for her to give feedback and guidance. Providing multiple check-ins throughout the unit also invites students to sustain effort.

#### Tools as a 21st Century Learner

The use of 21st century tools is often used as a retrofitting technique for creating accessibility (Foley & Ferri, 2012). In other words, lessons are planned and delivered, and those students who require assistance with accessing content are provided with assistive technology (AT). The Individuals with Disabilities Act (2004 §300.5) defines assistive technology as "any item, piece of equipment, or product whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, and improve the functional capacities of individuals with disabilities." In the case for Mrs. Gerri, the curriculum surrounding narrative writing is unchanged, but rather, the students have the option of using digital tools to help them access the narrative writing unit. The use of technology, such as those provided in Table 2, not only offer an avenue for developing 21st century skills but are also a way to provide accessibility through multiple means of engagement, multiple means of representation, and multiple means of action and expression.

**Table 2**System Preferences and Extensions to Support Diverse 21st Century Learners

Customizable Operating Systems	Ease of access - narrator, magnifier, high contrast, mouse and keyboard adjustments  Additional accessibility features - Speech-to-text, text-to-speech, word processors, spell check
Add-Ons & Extensions	Read&Write <a href="https://www.texthelp.com/products/read-and-write-education/">https://www.texthelp.com/products/read-and-write-education/</a> Postlight Reader <a href="https://reader.postlight.com/">https://reader.postlight.com/</a>

System preferences can be customized for students for increased accessibility (see Table 2). For example, students can locate accessibility settings, such as Ease of Access on Windows devices to customize the narrator, magnifier, contrast, and mouse and keyboard adjustments. Narrator settings can be adjusted for students to select voices that have different pitches, speed, and accents. The magnifier preference can be used to increase or magnify a display screen. This can allow students who have visual impairments or low vision to read smaller text on the screen. Additionally, increments for enlargement options can potentially alleviate anxiety for some students who may benefit from viewing only a small portion of text at a time. Contrast adjustments, such as using warm background colors (e.g., peach, orange, yellow) can significantly improve readability for

students with and without dyslexia (Rello & Bigham, 2017). Mouse and keyboard adjustments can also be customized. Mouse adjustments include size and color. Additionally, the system preferences also allow for customizable cursors. As such, the thickness and color of the cursor can be adjusted, and a cursor indicator can be added as well.

Text-to-speech and speech-to-text are also readily available within system preferences. Text-to-speech can serve as a screen reader to provide students with accessible texts. Speech-to-text allows students to translate their spoken language to writing, which can improve writing and spelling performance (Cullen et al., 2008). Additionally, speech-to-text options can allow for students to quickly and effortlessly brainstorm through verbal "brain dumps" or "idea explosions." For example, by using the speech-to-text accessibility feature, students can verbalize or verbally "dump" several ideas on a blank document without becoming bogged down or frustrated with spelling errors and/or the physical demands of writing. This accessibility feature has been documented as helpful for students who struggle with spelling and can support some students with drafting text (Ok et al., 2022).

The use of extensions or apps are ATs that can also provide students with accessible and engaging writing practices. Word prediction software, such as Read&Write (see Table 2) can help to improve spelling and vocabulary usage, especially for students with dyslexia (Evmenova et al., 2010). Created in alignment with UDL, Read&Write is a discrete toolbar that allows users to select from several options, such as read aloud, a dictionary, word prediction, language translation, built-in research assistance, etc. The use of translation, vocabulary, and word prediction features are especially helpful for linguistically diverse students (Martin & Conatser, 2017). Additionally, the Postlight Reader extension removes ads and distracting pop ups from web pages. As such, the extension works to "clean up" webpages to only display the important information, allowing students to focus on only the content. Postlight Reader also allows students to customize the font, text size, and color contrast of most web pages.

It would be impossible to create an exhaustive list of ATs to alleviate the specific barriers faced by students in everyday classrooms, however, Table 2 provides options for some of the most common and widely accessible ATs that can be used to support academically and culturally diverse students. Providing students with multiple opportunities to explore the accessibility features within operating systems can be advantageous, especially within a one-to-one digital environment when students are always accessing the same device.

Mrs. Gerri's school district is a one-to-one district, meaning each student has their own laptop. In addition to writing competency standards, her state standards also mandate that students gain proficiency in and produce and publish written products using digital tools. The use of digital tools within the writing environment can also serve as a medium for accessibility for Mrs. Gerri's diverse classroom. Mrs. Gerri is somewhat unfamiliar with the accessibility options and applications that her students can use to help them successfully complete their writing portfolios. She consults with her special education colleagues and her school-based instructional technology facilitator.

#### Conclusion

Educators must be prepared to embrace and teach all students, including those from diverse backgrounds and those with exceptionalities. This preparation is most impactful from the outset of lesson planning, rather than a retrofitted approach. For example, teachers are encouraged to consider potential barriers within units, lesson objectives, and learning targets before instruction occurs instead of making spontaneous curriculum changes or modifications as difficulties arise. While the primary intention of the UDL framework was to provide accessible learning opportunities for exceptional students, it can be used to provide equitable learning opportunities to students from a variety of cultures, religions, and experiences (Chita-Tegmark et al., 2012). The UDL framework

along with 21<sup>st</sup> century tools, can be applied to any lesson and across content areas. Adopting the use of the framework during the instructional planning process ensures that instructional practices are centered on student strengths and offer avenues for accessible and equitable learning experiences for all students.

#### References

- Bazerman, C., Graham, S., Applebee, A. N., Matsuda, P. K., Berninger, V. W., Murphy, S., ... & Schleppegrell, M. (2017). Taking the long view on writing development. Research in the Teaching of English, 351-360. <a href="http://www.jstor.org/stable/44821267">http://www.jstor.org/stable/44821267</a>
- CAST (2018). Universal Design for Learning Guidelines version 2.2. <a href="http://udlguidelines.cast.org">http://udlguidelines.cast.org</a> Center for Applied Special Technology (CAST. 1998). What is universal design for learning? Wakefield, MA. <a href="http://www.cast.org/research/udl/index.html">http://www.cast.org/research/udl/index.html</a>
- Chardin, M., & Novak, K. (2020). Equity by design: Delivering on the power and promise of UDL. Corwin Press.
- Cho, E., Mancilla-Martinez, J., Hwang, J. K., Fuchs, L. S., Seethaler, P. M., & Fuchs, D. (2022). Comorbidity in reading comprehension and word-problem solving difficulties: Exploring shared risk factors and their impact on language minority learners. *Journal of Learning Disabilities*, https://doi.org/10.1177/00222194211068355
- Cullen, J., Richards, S. B., & Lawless-Frank, C. (2008). Using software to enhance the writing skills of students with special needs. *Journal of Special Education Technology*, 23(2), 33–43. https://doi.org/10.1177/016264340802300203
- Evans, M., & Boucher, A. R. (2015). Optimizing the power of choice: Supporting student autonomy to foster motivation and engagement in learning. *Mind, Brain, and Education*, *9*(2), 87-91. <a href="https://doi.org/10.1111/mbe.12073">https://doi.org/10.1111/mbe.12073</a>
- Evmenova, A. S., Graff, H. J., Jerome, M. K., & Behrmann, M. M. (2010). Word prediction programs with phonetic spelling support: Performance comparisons and impact on journal writing for students with writing difficulties. *Learning Disabilities Research & Practice, 25*, 170–182. https://doi.org/10.1111/j.1540-5826.2010.00315.x
- Foley, A., & Ferri, B. A. (2012). Technology for people, not disabilities: Ensuring access and inclusion. *Journal of Research in Special Educational Needs*, 12(4), 192-200.
- Gonza'lez, N., Moll, L. C., & Amanti, K. (2005). Funds of knowledge: Theorizing practices in households, communities, and classrooms. Lawrence Erlbaum Associates.
- Hartmann, E. (2015). Universal design for learning (UDL) and learners with severe support needs. *International Journal of Whole Schooling*, 11(1), 54-67.
- Hitchcock, C. (2001). Balanced instructional support and challenge in universally designed learning environments. *Journal of Special Education Technology*, 16(4), 23–30. https://doi.org/10.1177/016264340101600404
- Individuals with Disabilities Education Improvement Act. 2004. P.L. 108-446. Washington, DC: U.S. Congress.
- Ivey, G., & Johnston, P. (2018). Engaging disturbing books. *Journal of Adolescent & Adult Literacy*, 62(2), 143-150. <a href="https://doi.org/10.1002/jaal.883">https://doi.org/10.1002/jaal.883</a>
- Martin, N., & Conatser, T. (2017). Designing for universal success. *Greater Faculties: A Review of Teaching and Learning*, 1(1), 6. <a href="https://doi.org/10.13023/GF.2017.06">https://doi.org/10.13023/GF.2017.06</a>
- Ok, M. W., Rao, K., Pennington, J., & Ulloa, P. R. (2022). Speech recognition technology for writing: usage patterns and perceptions of students with high incidence disabilities. *Journal of Special Education Technology*, *37*(2), 191-202. <a href="https://doi.org/10.1177/0162643420979929">https://doi.org/10.1177/0162643420979929</a>
- Paris, D. (2021, July). Culturally sustaining pedagogies and our futures. In *The Educational Forum* (Vol. 85, No. 4, pp. 364-376). Routledge.

- Pisha, B., & Coyne, P. (2001). Smart from the start: The promise of universal design for learning. Remedial and Special Education, 22(4), 197-203. https://doi.org/10.1177/074193250102200402
- Rello, L., & Bigham, J. P. (2017, October). Good background colors for readers: A study of people with and without dyslexia. In *Proceedings of the 19th international ACM SIGACCESS conference on computers and accessibility* (pp. 72-80).
- Rose, D.H., and Meyer, A. (2002). *Teaching every student in the digital age: Universal Design for Learning.* Alexandria, VA: Association for Supervision and Curriculum Development.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, *25*(1), 54-67. https://doi.org/10.1006/ceps.1999.1020
- Siegert, R. J., & Taylor, W. J. (2004). Theoretical aspects of goal-setting and motivation in rehabilitation. *Disability and Rehabilitation*, 26(1), 1-8. https://doi.org/10.1080/09638280410001644932
- Spooner, F., Baker, J. N., Harris, A. A., Ahlgrim-Delzell, L., & Browder, D. M. (2007). Effects of training in universal design for learning on lesson plan development. *Remedial and Special Education*, 28(2), 108–116. https://doi.org/10.1177/074193250702800020101
- Strickland, D. S. (2008). Differentiating instruction in the classroom. *Teaching for intelligence*, 171-185. Suprayogi, M. N., Valcke, M., & Godwin, R. (2017). Teachers and their implementation of
- differentiated instruction in the classroom. *Teaching and Teacher Education*, 67, 291-301. https://doi.org/10.1016/j.tate.2017.06.020
- Wiggins, G., & McTighe, J. (2011). The Understanding by Design guide to creating high-quality units. Alexandria, VA: ASCD.
- Wiggins, G., & McTighe, J. (2005) *Understanding by design* (2<sup>nd</sup> ed.). Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).
- Widyawulandari, R., & Indriayu, M. (2019, January). Implementation of Joyful Learning Approach in Providing Learning Motivation for Elementary School Student. In *International Conference on Science, Technology, Education, Arts, Culture and Humanity-"Interdisciplinary Challenges for Humanity Education in Digital Era"(STEACH 2018)* (pp. 54-58). Atlantis Press.
- Zoch, M. (2017). "It's important for them to know who they are": Teachers' efforts to sustain students' cultural competence in an age of high-stakes testing. *Urban Education*, 52(5), 610-636. https://doi.org/10.1177/0042085915618716

#### **Author Biographies**

Reagan Murnan is an Assistant Professor of special education and the co-chair of the high-incidence disabilities program at Wichita State University. Before joining the Intervention Services and Leadership in Education team at WSU, Reagan earned both her bachelor's and master's from George Mason University. Her research interests include special education teacher preparation, writing for students with disabilities, and digital literacy. Reagan is an affiliate member of the ARISE (Achieving Results in Special Education) Research Collaborative, which serves as a link between research and practice for schools and the community. In her free time, Reagan enjoys cheering for DC sports teams and cooking. Reagan Murnan can be reached at <a href="mailto:reagan.murnan@wichita.edu">reagan.murnan@wichita.edu</a>.

Heidi Cornell is an Associate Professor of special education and program chair for the MEd in Special Education High Incidence Alternative Certification at Wichita State University. She is also the founder and director of the ARISE (Achieving Results in Special Education) Research Collaborative, which serves as a link between research and practice for schools and the community. Dr. Cornell seeks to produce scholarly work that advances the practice of professionals serving individuals with disabilities. Her current research interests advancing evidence-based practices,

understanding the social and relational contexts for learning, and the role of communication and collaboration in special education. Heidi Cornell can be reached at <a href="heidi.cornell@wichita.edu">heidi.cornell@wichita.edu</a>.

Angela Beeler is an Assistant Professor and the Coordinator of the School Psychology Program and Applied Behavior Analysis (ABA) certificate at Wichita State University. Dr. Beeler is a Nationally Certified School Psychologist and co-director of the ARISE (Achieving Results in Special Education) Research Collaborative. Dr. Beeler's research interests include behavioral principles of learning, curriculum development, neurodevelopmental disabilities, and evidence-based diagnostic and treatment services in schools with a particular focus in rural districts. Angela Beeler can be reached at <a href="mailto:angela.beeler@wichita.edu">angela.beeler@wichita.edu</a>.

