Variability Includes Poverty: Plan for It

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Abstract
Students living in poverty are in classrooms across the United States. While educators believe UDL can help design environments that will support these students, they must acknowledge the over-arching experiences of students in poverty and how those experiences affect their learning. Educators can utilize the UDL framework to design flexible environments that will eliminate barriers these students face. This paper provides the foundational information used to build this argument, and suggests available supports.

Keywords
Poverty, universal design for learning, stress

INTRODUCTION

The National Center on Childhood Poverty states that 21% of all students under the age of 18 (15 million) live in families with incomes below the Federal poverty threshold (National Center for Children in Poverty (n.d.). Additionally, research tells us that families need to earn twice that amount to cover basic expenses. When we adjust for that, the numbers jump to 43% or 30.7 million (Kobal and Jiang, 2018). As an educational response to this need, Title I serve's students in 69.7% of schools in all 50 states including American Samoa, Guam, the Commonwealth of the Northern Marian Islands, Puerto Rico, and the U.S. Virgin Islands (U.S. Department of Education, 2015-16). These statistics show that these students are in our classrooms and their experience is part of the inherent variability that makes up our schools.

To address the supports needed by learners in poverty, this paper provides an overview of the impact poverty has on learning followed by the impact Universal Design for Learning (UDL) can have on design and implementation. The paper concludes with a cross-walk of UDL with actions suggested by Jensen (2009) to support learners experiencing poverty.

THE IMPACT OF POVERTY ON LEARNING

Poverty has been shown to impact the learning of students in substantial ways. Students living in poverty are known to experience less complex and diverse language both at home and in kindergarten compared with their peers in communities not experiencing poverty (Neuman, Kaefer, & Pinkham, 2018). This language deficit can continue to grow as they mature, furthering cognitive lags in language and literacy development (Jensen, 2009; Parrett & Budge, 2016). Beyond academics, students in poverty also demonstrate challenges in the areas of health and well-being as well as executive functioning (Parrett & Budge, 2016; Willoughby & Garett-Peters, 2018).

Students in poverty also experience stress at higher levels than those not in poverty (Blair & Raver, 2016). Understanding their stress can help educators provide students with learning strategies and coping skills. To help understand the complexities of stress, the Harvard University Center on the Developing Child identifies three types of stress: positive, tolerable, and toxic (Center on the Developing Child, n.d.).

Positive stress is the type of stress that is found in our day-to-day lives where we experience a brief increase in our heart rate and mild elevation in our stress responses. For example, students might experience this when meeting their teacher for the first time or when getting an inoculation. This type of stress is part of healthy development.

The second type of stress is Tolerable. In this case, the body is responding to longer-lasting or more intense stressors. Examples include the loss of a parent or pet, a hurricane, or a broken bone. If the occurrence is time-limited and there are adults present to help the child mitigate the emotional impact, the brain and other organs can recover.

This third type is Toxic. When stressors are strong, frequent, or there are prolonged adverse conditions without adequate adult support, this can impede structural brain architecture and organ development. Examples include consistent and persistent food insecurity, homelessness, or persistent health issues due to unsanitary living. Results can include stress-related illnesses and cognitive impairment. Adult intervention can help, but must be consistent and child specific.

As educators, we must recognize that toxic stress inhibits executive functioning. Toxic stress can lead to emotional dysregulation in the classroom, student anxiety due to not fitting in (based on the dysregulation) and disengagement. Another way that poverty impacts learning resides within educators.

Dell'Angelo (2016) discusses how teacher perception directly impacts the education students in poverty receive. This traces back to our own beliefs about poverty. Those beliefs can show up as bias, both conscious and unconscious, and those biases can get in the way of using the in-

formation experience provides (Brehemer, 1980). Therefore, we must focus on what students bring with them.

IMPLEMENTING UDL

Universal design for learning provides educators with a framework of research-based practices, strategies, and philosophies from which they can choose to design an environment that lowers barriers for all learners, including students who experience poverty. This is because the framework promotes full inclusion through mindset and action. UDL is a way of thinking and a way of doing as described in the Table 1.

Table 1. UDL as a way of thinking and doing

Way of thinking	Way of doing
For the full implementation of UDL, educators must believe that all learners bring something of value to the environment and it's up to educators to lower barriers so learners can share their contributions and build additional knowledge and skills.	For the full implementation of UDL, educators design their lessons and learning environments **anticipating learner variability**. Doing so causes them to provide multiple opportunities and options for learners to connect with, understand, and demonstrate their understanding of the subject or skill.

Jensen (2009) suggests action steps educators can take to develop environments where students experiencing poverty can thrive. Table 2 aligns these actions with UDL guidelines.

Table 2. A cross-walk of the action steps and the UDL guidelines

Action Step	UDL Guideline
Avoid business language ("do this;" "put on your shoes"). Instead, use language that builds capacity and student agency.	Self-regulation
Avoid demeaning sarcasm (e.g., "I guess someone forgot their pencil, again!"). Instead, show understanding and provide support that guides the learner to take actions aligned with success.	Self-regulation Executive functions
Embed turn-taking	Sustaining effort & persistence
Embed social-emotional skill building opportunities	Self-regulation
Appropriately acknowledge students for things like attendance and appropriate behavior	Sustain effort & persistence Executive functions
Celebrate effort and process, milestones, and goal progress.	Executive functions.

There are quality tools available to educators to support their work with learners living in poverty. Teaching Tolerance, for example, is a website out of the Southern Poverty Law Center (see https://www.splcenter.org/teaching-tolerance). The website is full of diverse and impactful tools specifically designed for educators. Edutopia (see www.edutopia.org) and ASCD (see www.ascd.org) also provide resources. Investigating these resources alongside a copy of the UDL framework provides educators with insight into what barriers are removed via the tool, strategy or method, but also what barriers might remain and could inhibit academic or social-emotional growth learners. As always, this author encourages all educators to keep a copy of the UDL framework to reference when designing any lesson or learning environment.

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