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# How a Universal Design Mindset Can Support Learning in the Workplace

## Introduction

A Universal Design for Learning (UDL) mindset, when integrating UDL into workplace training and learning experiences, can serve as an effective strategy for mitigating barriers. Traditionally, UD (universal design)/UDL research and practice have been approached from a pragmatic, operational lens with attention given to outcomes. By framing workplace design, learning and otherwise, benefits are vast, especially those rooted in outward mindsets (Arbinger, 2016). An outward mindset amongst employees serves to create sustainable shifts in value-based learning, which encourages UD/UDL thinking. Learning design is becoming increasingly more present in all industries from primary up through university environments to the business/training and development industry. The UDL mindset framework (the understanding and knowledge of the concept) holds the potential to be successful across all disciplines to create a common thread in promoting inclusion and diversity in learning environments by developing this mindset (Bartz & Rice, 2017). Without a reflective, proactive mindset that supports the value of UD/UDL, we stand to lose the opportunity to create a collective workplace learning culture driven by UD/UDL. With the adoption of this mindset, the workplace learning environment is primed for the potential of UD/UDL and what it holds for individuals in all industries (Andreason, 2003).

## What is Universal Design for Learning

Universal Design for Learning (UDL) serves as guiding principles for learning design which serve all learners (Erlandson, 2007). While UDL is explicit in the intention of the design, its application is diverse and widely still discoverable. Universal Design of Learning is not new to learning design; however, the evolution of emergent learning technologies over the past decade has ignited conversation on demand for Universal Design for Learning as a common practice. While UDL is structured with accessibility as its pillar, it is a framework that provides all learners, including those who may have specific learning paths and needs (Persson, Åhman, Yngling, & Gulliksen, 2015).

(Dis)ability advocates and inclusion designers have long since advocated the use of UDL as a lens for understanding how design impacts on learners' experiences. UDL has been widely examined in primary through university settings, more recent research has been emerging on UDL in higher education settings. **However, there is a significant gap in existing research for exploring UDL in the workplace to support training and development (Martyn, 2015).** While this interest continues to develop, research in this area is still foundational in terms of its application and integration into training curricula and programs. As with any new framework, it is the understanding and knowledge of the concept (aka mindset) which must take root before rigorous implementation can occur. So how does one develop a UDL mindset for the workplace? First, discussion on the background and facets of learning as they relate to UDL in the workplace must be reviewed.

## Universal Design to Universal Design for Learning

Universal Design (UD) is specific to design of physical space for access (Dalton, Lyner-Cleophas, Ferguson &

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McKenzie, 2019) and consists of seven principles:

- **Equitable use**
- **Flexibility in use**
- **Simple and intuitive**
- **Perceptible information**
- **Tolerance for error**
- **Low physical effort**
- **Size and space for approach and use**

**(Story, Mueller, & Mace, 1998)**

Learners may interact in physical spaces which may not meet the recommended seven principles, thus hindering access. When these principles are applied, coupled with universal design for learning, in the workplace, the maximum in terms of learning is closer to being met. When learners are able to focus on just learning, absent of obstacles created by either the physical or curricular aspects, they stand to reach their fullest potential. In shifting our mindset for workplace learning woven with these ideas, our learning spaces become welcoming to all learners, physical or online.

Rose & Mayer (2006) were the pioneers of the Universal Design for Learning, which followed the principle of Universal Design as a learning framework. While often those from the design field may think of the physical space when considering Universal Design, a more significant push has been made to create accessible and diverse learning environments that support all learners through the application of Universal Design for Learning. This shift from the physical space to the learning space is not always independent of one another. While learning occurs within the student (cognitively speaking), it is the physical space that is also conducive for learning.

## Moving from Accessibility to Universal Design for Learning

As workplace settings aim to support employees and learners through creating accessible materials, Universal Design for Learning offers a framework that not only supports diverse learners but offers designers a lens through which to approach learning design from the start for all learners (Inclusive Workplace Practices, 2019). While accessibility and Universal Design for Learning are not the same, it is the central goal that ties the two together: to maximize learning for all learners. Thus, those who approach learning design with only one or the other often leave a learner without the opportunity to maximize their learning through inclusive design. To explore further the partnership between accessibility and UDL, consider how accessibility is rooted in (dis)ability (Ladner, 2011), by observing a learner's deficits as the driver of learning design. Whereas with UDL, there is no one identified learner; more importantly, the design focus is all learners (Stefanich, 2018, p. 43) from the start. Consider the reactive and proactive mindset approach (Ni, 2019), accessibility as the reactive, and UDL as proactive. It is this design framework that stands to support workplace training and learning in a progressive, innovative approach that considers all learners. This is not a foolproof process, but interactive, often cyclical, in which the process provides evidence and results which lead to further advanced strategies for workplace training and development.

For example, consider the relatively simple process of captioning videos for access for Deaf and hard-of-hearing employees. Initially, captioning provided access for this particular group of learners from its inception. From research (Veronis, 2015), we know that robust design includes captioning due to the multi-

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tiered benefits, beyond accommodating for people with hearing loss (Deaf, hard-of-hearing, etc.), captioning provides learners from various backgrounds including but not limited to English-language learners (ELLs), older adult learners, and even those that simply want an alternative format for reinforcing concepts: thus, Universal Design for Learning allows for multiple means of engagement (Chong, 2015).

## Workplace Learning and Universal Design Learning

Universal Design for Learning in the workplace promotes multiple means of access. Workplace learning serves as a platform not just to move the learner forward, but to move a company forward (Manuti, Pastore, Scardigno, Giancaspro, & Morciano, 2015). When members of a learning team are supported, the opportunity to improve performance exists. Support comes in many forms in terms of learning and training, but for the sake of our discussion here, we focus on inclusive design such as Universal Design for Learning in the workplace (Business Radio, 2019). Workplace learning is vital for a workforce to have current skills and remain competitive for both individual and organizational success (Manuti et al, 2015). Applying UDL to workplace learning is vital to impact all learners in the work environment. Just as UDL has been critical in the secondary school setting, these children move through the education system and later enter the workforce. Inclusive Workplace Practices (2019) stated that UDL in the workplace should offer flexibility in how, when, and where work is performed. Learning experiences that take place at work should also be designed with 'all learners' in mind.

## Universal Design Mindset

The Universal Design mindset is the development of a cognitive framework which informs consistent attention and consideration for Universal Design (Learning) in various contexts, and execution of practices which support this mindset. Dong, Keates, and Clarkson (2004) proposed barriers to Universal Design into four categories:

- **fears and concerns**
- **equate training or resources**
- **lack of interest**
- **structural barriers.**

In addition to the barriers proposed by Dong, Keates, and Clarkson (2004), cultural mindsets such as those rooted in Individualist vs. Collectivist thinking may further challenge the shift in thinking if one is firmly rooted in an individualistic mindset. The primary motivator for valuing a Universal Design mindset includes improved effectiveness of UD(L) practice, including demand from organizations and institutions to improve learning outcomes that address diverse learner groups - in all industries.

<b>Outward Mindset</b>	<b>Universal Design for Learning Application</b>
Awareness	Are you aware of your mission, audience, and all learner needs?
Consideration	Is the training developed to provide opportunity for collaboration?
Accountability	What assessments are in place for learners' accountability for learning?

Outward Mindset	Universal Design for Learning Application
	What assessments are in place for instructors' accountability for learning?
Innovation	Is the content of the course designed and continually evaluated for practical application and innovation?
Engagement	Is the content designed to promote engagement between participant - peers, participant - content and participant - facilitator?

Figure 1. Universal Design for Learning Applications aligned with Arbinger (2016) Outward Mindset.

## UDL Mindset in Action – points to consider

**Are you aware of your mission, audience, and all learner needs?** When designing training, typically people will start with session objectives and then add lecture, video, other content sources, and activities that align with the session objectives while considering the overall mission of the training and the gap between the audience's current knowledge and what the audience needs to know after the training. The UDL mindset proposes that content creators also consider the needs of all learners by incorporating various modalities to access content and other accessibility considerations such as color-blind safe palette, captioning for videos, QR-codes, etc. Beyond what the participants need to know, designers should consider that all learners are able to receive and process the content.

**Is the training developed to provide opportunity for collaboration?** As a method, lecturing ‘...assumes that all learners need the same information and need it at the same pace.’ (Silberman, 2006, p. 3). Whereas, active learning helps increase participation, enliven learning, deepen retention, and encourage application (Silberman, 2006, p.10). Beyond incorporating active learning in the training, learners need to have the opportunity to collaborate to solidify the concepts and increase the chances for knowledge absorption and transfer of training content from the workshop to on-the-job. Collaboration also provides the variance of learner understanding to lessen as those who can grasp concepts are able to re-state and further discuss content with those who have lesser degrees of understanding.

**What assessments are in place for accountability for learning?** Trainers have often incorporated formative and summative assessments to check learning. Trainers have also used Kirkpatrick's (2016) four levels to further evaluate training. All four levels (reaction, learning, behavior, and results) help evaluate if learning resulted in the intended outcomes. Incorporating these elements of training may highlight how design (specifically UDL) improves learning for participants. In particular, the results may reveal how shifts in positive attitudes toward learning design through the UDL framework could increase outcomes for learners. We propose that trainers also build in opportunities for learners to assess their own learning to ensure retention.

Novak & Rodriguez (2018) suggest offering various self-assessment techniques so that students can monitor their learning, which promotes self-reflection, self-directed, and lifelong learners. When the goal is that the participants learn the content, it makes more sense to allow multiple opportunities for assessment rather than one snapshot judgment of their learning. Rose, Robinson, Hall, Coyne, Jackson, Stahl, & Wilcauskas (2018) promote that by providing multiple ways for learners to show their learning, the accuracy of assessments is increased.

For example, in a workplace learning workshop where mandatory information was presented, a facilitator was often frustrated that the participants were not all scoring high, even though the training was delivered with excellent

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knowledge and experience of the subject. Rather than doing a post-workshop test that had a one snapshot judgement score for the learning, the instructor built-in self-assessment opportunities throughout the workshop. This self-assessment helped the participants know what content was not sticking and then allowed them to search for more information on the concepts. The facilitator found that scores at the end of the workshop increased significantly when the learners were empowered to self-assess and fill in learning gaps. Providing self-assessment opportunities combined with the additional content and time increased overall learning in the workshop.

### **Is the content of the course designed and continually evaluated for practical application and innovation?**

Beyond creating training that meets the objectives, each content piece and deliverable should be aimed at strengthening the skills learners need to apply this knowledge on the job. For example, training that emphasizes the importance of a task is not as practical as training designed to help participants know how to complete the task. Training should be consistently evaluated for the content and activities which are current, innovative and have practical application for the participants. Participant-led and/or informed design promotes innovative insights into ways inclusive design can be furthered advanced.

**Is the content designed to promote engagement of participants to peers, participants to content, and participant to facilitator?** Meaningful connections within workplace learning increases the chances of learning retention. It is essential to design learning that promotes engagement; learner to peer, learner to content, and learner to facilitator (Angelino & Natvig, 2009; Bartlett, 2018). Using tools such as shared Google Documents, Google Sheets, Google Slides, Flipgrid, Padlet, and Dotstorming, promotes engagement even in online asynchronous environments where learners often feel like they are moving through the learning experience alone. By diversifying options for engagement, no matter the platform, learners are ultimately empowered to navigate content without limits.

## **Impact for the Future**

The initial ideas proposed here serve to further advance how UD(L) can improve lives - not just in how we integrate UD(L) into our lives, but how we value incorporating UD(L) as a standard of practice rooted in mindset. In doing this as a mindset from the onset of any environmental design (physical, learning, online, etc.), in believing in the value of creating access for all, we can also create new pathways to innovation in learning.

Organizations and institutions can further develop the UD(L) mindset among members of their workplace communities. In shifting this mindset, organizations and institutions stand to create long-lasting change and practice, resulting in improved outcomes, and lastly, creating meaningful access to learning for all of us.

As workplace learning evolves, so do the ways in which we think and reflect on the impact of universal design for learning on workplace development environments. We hope the UDL mindset will provide a framework for training teams who are often exploring strategies in which they may support all learners. While there is no exact formula, encouraging a UDL mindset in the workplace creates the opportunity to shift what was previously a burden on the learner to navigate a narrow learning system to creating an inclusive and accessible system that promotes innovation. We stand to advance training design into a new dimension in which workplace learning is limitless.

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