Deeper Learning at NTN

At NTN, we believe all students are capable of great achievements and acknowledge that schools, by design, play a critical role in supporting student success. This will require school and district leaders to lead the work of disrupting cultural and instructional opportunity gaps by cultivating deeper learning conditions that result in "outcomes that matter" for *each* learner. The word "each" matters because this is more than just making deeper learning experiences available for all learners, but also demanding that *each* learner has the resources they need to succeed in those deeper learning environments.

Through collaboration with teachers, university academics, and the business community, and informed by research, NTN has identified learning outcomes that are aimed at fully preparing students for college and career success. These "outcomes that matter" include: Knowledge and Thinking, Collaboration, Oral Communication, Written Communication, and Agency. At NTN, we believe that in order to ensure each student develops outcomes that matter, their learning experiences must exhibit conditions that reflect deeper learning. Those deeper learning conditions for learning are: authentic, active, relational, responsive and complex. Each of these conditions is expanded upon below.

AUTHENTIC: Personally Relevant and Immediately Useful

Learning experiences that are authentic improve engagement and depth of thinking. Learners should experience the immediate usefulness of new learning (Vella, 2002). If the learning is personally relevant, learners connect to why they are doing the task, which improves performance (Pink, 2010). Authentic learning that is personally relevant will connect to emotions, and emotions are what fuel thinking for all learners (Immordino-Yang, 2016). This requires ongoing efforts to understand your learners and your community, and to create intentional connections between your discipline and their lived experiences. (Pink, 2010).

From...	To...
- Learning focused on curriculum that excludes the students' lived experiences - New learning that is introduced without opportunities for application or connection to previous learning - Learning that takes place in isolation or is disconnected from the outside world	- Learning focused on topics and problems that impact students' lives and/or community - Learning that requires the construction and presentation of original responses and products - Learning that emulates the work of professionals and involves presentations beyond the classroom setting.

ACTIVE: Active Engagement with Reflection

Learning experiences that are active increase engagement by providing opportunities for learners to be active sense-makers, rather than passive recipients of knowledge. Learners better understand and apply new concepts through interactive, student-centered learning (Pellegrino & Hilton, 2012). Learners must have an opportunity to conceptualize it, get a chance to feel it, and do something with it. They must be invited to put themselves into the learning task, into the

delight of learning. Without engagement there is no learning (Vella, 2002). Inquiry is a key strategy for activating the learning experience. In order to be lifelong learners, we must consistently practice the learning process, which includes asking questions and actively exploring those questions together.

From...	To...
- Limited opportunities for students to contribute knowledge and questions related to the course content - Students are positioned as passive receivers of information - Limited opportunities for learners to provide input on the design of instruction and assessment	- Learning designed to create and surface students' questions (aka knows/need-to-knows) - Learning allows students to drive their own search for answers through inquiry, exploration, and research (based on knows/need-to-knows) - Students are encouraged to suggest and make decisions about what occurs in their own learning experience

RELATIONAL: Safe, Inclusive and Emotionally Supportive

Learning experiences that are relational show up well through dialogue, where we are able to construct meaning collectively that is inaccessible to us individually (Bohm, 2014). And through dialogue, when we authentically turn to one another, better relationships and community are generated. Whatever impedes dialogue must be courageously addressed and eliminated. Whatever enables dialogue must be fearlessly nurtured and used. Relationships must transcend personal likes and dislikes (Vella, 2002). Helping students experience this kind of learning requires both high expectations and a supportive, caring relationship. "This combination of personal warmth and active demandingness earns the teacher the right to push for excellence and stretch the student beyond her/his comfort zone" (Hammond, 2015). We must build trust and rapport to ensure a culture of safety and care, requiring a new type of relationship called a learning partnership (Hammond, 2015).

From...	To...
- An environment that is judgmental - Few opportunities for students to connect and share their learning with each other - Regularly choosing coverage of content or adherence to process over relationships	- Teachers and students celebrate one another in success and failure, particularly when risks are taken - Learning challenges students to problem-solve, reflect, provide and elicit critique with peer and adult guidance - Teachers foster a learning environment that feels safe, inclusive, and emotionally supportive

RESPONSIVE: All Learning Needs are Assessed and Supported with Care

Learning experiences that are responsive consistently assess the needs of each learner and respond to those needs. This includes proactively planning for a range of targeted experiences as well as the adjustments made in the moment to better bridge the learning experience to the learner. This means knowing where

and how to begin. The learning of knowledge, skills, and attitudes should be arranged from simple to complex and from group-supported to solo efforts (Vella, 2002). Learning experiences that are responsive provide an appropriate challenge in order to stimulate brain growth to increase intellectual capacity. Being responsive also includes holding and communicating high expectations for each student's achievement. Research demonstrates that students have the capacity to live up or down to our expectations, and that teachers' expectations are significant predictors of students' cognitive, emotional, and behavioral engagement in school (Quaglia, Fox, & Corso, 2010). Beyond holding high expectations for each learner, it is also the teacher's responsibility to provide concrete support for meeting those standards (Hammond, 2015).

From...	To...
- Over-reliance on a predefined script or scope & sequence for learning that lacks flexibility - One-size-fits-all learning that is disconnected or isolated from prior learning - Teacher assigns difficult work and does not provide guidance and scaffolding for meeting standards	- Assessment (pre, during, post) opportunities are used to determine what students know and need to know, and that data is used to guide the design of learning - Task requires students to build on skills, knowledge and cognitive mindsets. - Learning requires students to be working on appropriately challenging tasks that support their specific needs and communicate high standards and expectations

COMPLEX: Productive Struggle with Complex-Thinking and Problem-Solving

Learning experiences that are complex develop productive struggle, and include higher order thinking and problem solving. In her book, Culturally Responsive Teaching and the Brain (2015), Zaretta Hammond introduces the concept of *productive struggle*, defined as the mental activity and growth that takes place when the learner works through something difficult. Work at this level is not too hard or easy, guiding the learner to develop new skills by building on what they already know. Inquiry plays a key role in helping students engage in productive struggle. In order to be continuous learners, we must have regular opportunities to ask questions, explore new possibilities, and share our thinking.

From...	To...
- Low-level work that focuses primarily on absorbing information - Few opportunities for students to apply and demonstrate their learning - Tasks that require little cognitive effort from students	- Learning encourages students to use open-ended inquiry to build disciplinary knowledge and thinking skills - Task requires students to demonstrate learning of curricular standards and New Tech Learning Outcomes - Tasks are designed to push students to an appropriate level of productive struggle