

21st Century Learning - *Harnessing Our Innate Learning Energy*

In the 21st century, the body of knowledge humankind has at its disposal grows exponentially. The “half-life” of knowledge continues to shrink as the overall expansion of knowledge occurs. In short, what may be the “truth” or correct information one day may become outdated and replaced the next day. Just look at a world map from a couple of years ago and compare it to today. Now expand this idea to science, art, literature, mathematics, music, engineering, technology, etc. and you will quickly see that simply teaching students to “know” doesn’t cut it any more. Our students must be able to “think” in a process where they are perpetually learning and un-learning in an ongoing cycle.

With this situation in mind, it is becoming abundantly clear to us (as educators) that our students will not be able to keep up with the rapid expansion of the collective body of knowledge using a traditional content delivery model for learning (present knowledge and then assess it to make sure it has arrived safely). Therefore, learning environments that are built on a teacher/textbook centered learning model that expects students to memorize rapidly decaying information that is disconnected from the learners’ life trajectory nor fails to engage the learner in meaningful high cognitive demanding work is at best a futile educational effort and at worst a monumental disservice to the learner and to our society.

Our work as educators therefore must change to support this shift in learner needs. The educational opportunity our students need today must be more of a learning platform that assists them to learn how to think independently rather than simply perpetuate the factory learning model designed to transfer knowledge. To do this, we must create powerful, internally motivating learning environments that harnesses the energy behind every learner’s natural human need to learn. In the La Center School District, this work has resulted in the redefining of our roles as teachers from being simply deliverers of content (sage on the stage) to seeing ourselves as learning environment leaders (guides on the side) who use the content to develop life-long learners. This shift has resulted in the development of a concept we now identify as the *Learning to Learn* classroom.

A *Learning to Learn* classroom (or better seen as a learning team rather than as a classroom) is focused on assisting all learners to learn how to learn using the content. The content remains vitally important but for a very different reason than we previously thought. The content is more of a learning topography that the learners immerse themselves into so as to learn how to learn anything (beyond the content used). In other words, the content is a means to an end rather than the end itself. A *Learning to Learn* classroom, we believe, must allow the learner to: 1) Receive and add on to multiple flows of information within and around the learning targets/objectives; 2) Be designed to consistently engage the learner in both real and meaningful learning endeavors that expect the learner to have cognition beyond the memorization level; and 3) Learn in an environment that is built upon a foundation of trust that everyone within the learning team (learner and leader) has an innate need to own their own learning.

To help us improve our practice as learning environment leaders to meet this new vision, we have created a model that we have called the *Learning Environment Matrix*. The matrix is a three dimensional model that focuses on three facets or learning environment conditions we

consider critical to creating a *Learning to Learn* classroom. They are: 1) Flow of Information; 2) Cognitive Demand; and 3) Learning Trust.

The first condition is the Flow of Information within the learning environment. This concept is borrowed from the work of Ikujiro Nonaka and his research that is the foundation of his *Organizational Knowledge Creation Theory*. This theory describes how organizations create, transfer and store knowledge. We see a learning organization as being made up of many distinct and different connected learning teams, which within a school organization will involve and/or be comprised of both children learners as well as adult learners. A single learning team (e.g. a classroom) within the broader learning organization therefore can be seen as simply a microcosm of the overall organization. Therefore Nonaka's theory should apply to how knowledge is created, transferred and stored within and by any learning team within the learning organization. The Flow of Information within and around the learner is therefore seen as critical to the creation of a *Learning to Learn* classroom.

The second condition is Cognitive Demand of the work being asked of the learner. This concept is built upon Bloom's Taxonomy where cognitive demand is ordered in a hierarchical structure of Knowledge, Comprehension, Application, Analysis, Evaluation and Creation. Low cognitive demand learning is considered the first three classifications (Knowledge, Comprehension and Application). High cognitive demand learning is considered to be the last three classifications (Analysis, Evaluation and Creation). What we have seen in our district is low cognitive demand learning is the typical result of a teacher/textbook centered learning environment. Students learn what they are told, can understand the information and can often apply their knowledge to a point where it is sufficient enough to at least pass a test (usually a teacher centered summative assessment). Low cognitive demand learning is not dependent upon connecting to what the learner actually thinks, what is important to them as humans or is supportive of their trajectory as a learner. By contrast, high cognitive demand work requires students to disaggregate information based on their current mental models, what they know/think, judge the merits of the parts of the whole and reassemble the resulting information in a meaningful way. We believe that low cognitive demand learning is efficient (i.e. to pass the class) for those learners who are compliant. By contrast, we think high cognitive demand learning is more effective for a broad range of learners because it both builds on what they already think and is meaningful to them in where they are headed as a learner. In other words students own their learning then own a grade.

The third condition we believe is critical for the creation of a *Learning to Learn* classroom is the development of something we now identify as Learning Trust. Learning trust manifests itself when there is a need to lower the control over the learner by the learning environment leader as the primary way to get learning to occur. Externally motivated (i.e. teacher centered) content delivery focused learning built around primarily low cognitive demand work typically yields a low learning trust environment. By contrast, student centered high flow of information learning environment that is designed around high cognitive demand work enhances our opportunity to create high learning trust. In essence, the trust develops when learners harness their own experiences and tap into their natural internal drive to analyze and develop skills to evaluate a variety of information. This type of learning environment supports all learners to create and own the knowledge they gain. This is the ultimate goal of a *Learning to Learn* classroom because if the learner owns the work in this way, they become independent of the learning environment

leader (e.g. the teacher or some other content expert) telling them what they need to know. It will teach them to think for themselves (i.e. have the skills and abilities to be a life-long learner).

The Learning Environment Matrix is a tool we have developed in our school district to help us (as learners ourselves) to calibrate our observational lens we use to explore the above described ideas. What we have learned so far shows promise for all learners (teachers and administrators included) and has helped us see the learning environments we create in a completely different way. This new view has lead us to explore ideas and strategies designed to increase the flow of information between learners as well as increase the cognitive demand of the exchanges that are occurring within the learning environment. We have begun to see increases in learner engagement, enhanced internal motivation for learning, increasing trust between learners as well as educators who are beginning to see themselves as learning environment leaders rather than simply deliverers of content. Again, content is still very critical to our work, but not as the end rather as a means to an end.

In conclusion, this shift in thinking we are experiencing has for the first time allowed us to see ourselves as learners first, and educators second. As adult learners, we are becoming more focused on learning to improve our practice as creators of effective learning environments and less on managing students effectively in order to deliver content. Seeing ourselves in this new way has begun to erode the barriers of isolation that the educational organization we work within and our own mental models behind an outdated industrial (i.e. factory) learning model has created for us. The result has been an increase in professional synergy, greater adult focus on what are the conditions for learning necessary as well as an improvement in student engagement across the district. We believe this shift of mind in how we see ourselves and our role as teachers has helped us support our students to do the same; develop critical thinking skills in order to become independent, self-directed learners rather than simply good memorizers. In the end, these critical thinking skills that are embedded within a *Learning to Learn* classroom environment is what we believe students need to be prepared for living and working in the knowledge age of the 21st century.