Learning at JIS – from Cath Wan PYP Coordinator

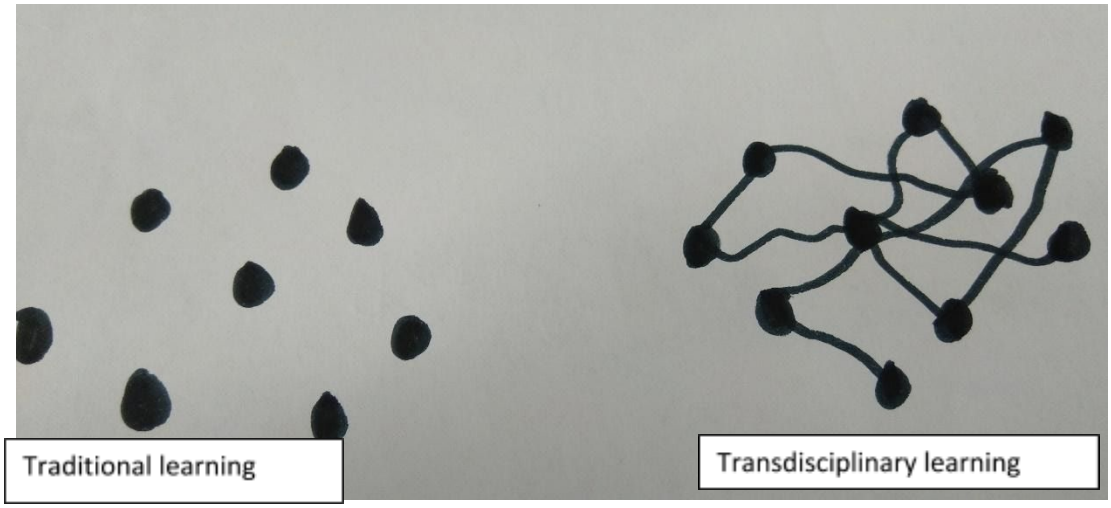
This week, I will address a question from a parent via our 'Learning at JIS" questionnaire:

"Does the transdisciplinary method of teaching lead to slower learning in 'traditional' subjects while enabling broader critical thinking?"

This depends on how you define learning. If learning is 'coverage of facts' then possibly yes. If you define learning as understanding and being able to apply skills in different contexts, then no. 'Enabling broader critical thinking:' the answer is a definite yes.

Here are a few ways to visualise the differences between 'traditional learning' and transdisciplinary learning. Please excuse the amateur drawings!

Drawing 1



Brain research from multiple sources informs us that learning happens more effectively when the brain can make connections. I like to think of the connections as being a 'web' which hold the 'dots' of information together in something that makes sense.

Drawing 2

There is a saying in educational circles that traditional curriculums are often "an inch thick, a mile wide." That means that while coverage is large, there is little depth of thinking. Transdisciplinary learning addresses this balance.

Another saying, stemming from the physicist Basarab Nicolescu is that there is "Transdisciplinarity needs disciplinarity". This means that transdisciplinary teaching does not ignore the skills and understanding needed within the different disciplines of Mathematics, Science, Languages and so forth; it is not a 'dumbing down'. In contrast it is, according to the IB a 'step up'. Students have to make connections between the different disciplines and apply their understanding to real word problems. With this approach, 'coverage' of facts may indeed take more time, but at the end of the day what do we want of our students? To be able to regurgitate random facts or to be able to operate effectively in a complex world which is not separated into convenient disciplines, but is interconnected and requires critical thinking above and beyond.

If you are interested in further reading in this area, below is a list of references. Not exactly light reading, but do let me know if you'd like access!

Drake, S.M. *Creating standards-based integrated curriculum* (3rd Ed.) California: Corwin
Jensen, E. (2005). *Teaching with the brain in mind.* Alexandria, VA: Association of Supervision and Curriculum Development.
Nicolescu, B. (2008). *Transdisciplinarity theory and practice.* New Jersey: Hampton Press, Inc.
Nicolescu, B. (2014). Methodology of Transdisciplinarity. *World Futures*, 70(3-4), 186-199.
Popescu, G. (2014). From psychological- disciplinary knowledge to a transdisciplinary one. *Procedia - Social and Behavioural Sciences*, 128, 438-441.