

TLT INTERVIEWS

I'm very happy to introduce a new column for TLT to start the new year, bringing you interviews with leading figures in language learning and education, conducted by people who share their professional interests. To kick start the new column we have an interview with Tracey Tokuhama-Espinosa, an expert on Mind, Brain, and Education and Multilingualism, conducted by John Duplice, a former distance student of Tracey's at Harvard Extension School. From the next issue Torrin Shimono will be taking over as column editor, starting with interviews with the plenary speakers at JALT 2016. So if like us, you loved this year's amazing plenaries, or if you were unfortunate enough to miss them, make sure you check out this column over the coming months. At TLT, we're all very excited about the great interviews we have in store for you!

Caroline Handley

An Interview with Tracey Tokuhama-Espinosa

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Tracey Tokuhama-Espinosa, PhD is the author of numerous books and papers on bilingualism and multilingualism; Mind, Brain, and Education; and classroom teaching practices. She teaches the course *Neuroscience of Learning: An Introduction to Mind, Brain, Health, and Education* at the Harvard University Extension School. More information about her work can be found at <<http://traceytokuhama.com>>.



What led you to become an educator?

I had inspirational teachers around me as I grew up, especially my parents. My father, who was a public school math teacher for forty-five years, was an amazing teacher. He focused on the human connection and treated every kid as an individual who was the most important thing in his life at that given moment. My mother would always support me in my writing and to get me to think of things from different perspectives and viewpoints.

You have written numerous books on bilingualism and multilingualism. Would you consider this to be your primary field of research?

Initially my formal research that turned into books was in bilingualism and multilingualism. I was personally driven, as I was looking for answers for my

own kids and couldn't find what I wanted. Before that, I did a lot of things related to philanthropy and education because I wanted to know why everyone didn't have the best education. My master's thesis at Harvard was on this topic. I now think that technology is going to be the great equalizer and bring education to all.

My most recent interest is in shaking up the educational landscape and asking why we still teach in academic silos instead of approaching real life problems through multiple lenses. I have been looking at neuro-constructivism studies and how there is this hierarchy of knowledge that builds upon prerequisite concepts in all areas of learning. This has led me to look into how everything we learn is parsed into at least one of five pillars: symbols, order, categories, relationships, and/or patterns. For example, instead of saying "it's Math time" or "it's Art time," the teacher would say, "let's look for all the patterns or symbols in the world. What patterns do you see outside the window, on your fingertips, in nature?" Or, "how can we categorize ideas, or understand the relationships between them?" This would help the students understand that the world is made up of these bigger concepts, rather than just part of an academic subject in school.

So initially my main research was in languages and multilingualism, but I have also now started to look at how neuro-constructivism organizes concepts in the brain.

How did you become involved in Mind, Brain, and Education (MBE)?

When I was researching PhD programs, I wanted to do something with neuroscience and connect it in some way to education, and luckily this led me to Mind, Brain, and Education. I went on to do doc-

toral research where I identified the main people in the field of MBE and invited them to participate in a Delphi panel survey. This meant that I asked the leaders of the field various questions, collected their answers and the evidence they suggested from their individual disciplines (neuroscience, psychology and education) and proposed the guidelines, standards and goals of the emerging field.

In 2007, the first MBE meeting in the world took place in Austin, Texas. I went to the meeting to find out how serious this movement was and discovered it was both international and transdisciplinary. There were already loose organizations of researchers in many countries around the world, but this meeting brought people together. It was there that I thought this was where education was heading. I then finished my doctorate, and my first book on MBE spun off from my dissertation and the work with the Delphi panel. I feel I was there at the ground level, observing the gurus of the field and asking them the right questions to establish the parameters of the new society efforts.

Since the 10th MBE anniversary meeting, I have started a new Delphi panel survey to see what changes have occurred over the past decade. It is very interesting to see how this field has morphed since the first meeting in 2007. There are twice as many people on the Delphi as my original study, which in itself shows the growth of the field.

For educators who are not familiar with Mind, Brain, and Education, how would you describe the field?

I would start off by saying teaching is the most important job in society. It is also an art and a science that is still very young relative to many other fields like biology, history, and philosophy that are thousands of years old. Formal teacher training as a field is only about 125 years old. MBE is the merging of different fields that have different perspectives and problems or ask different questions. More specifically it is the merging of neuroscience, psychology, and education to get a better understanding and better prepare educators, researchers, and psychologists.

In your 2011 book Mind, Brain, and Education Science you provide an excellent introduction to MBE. How have things changed in the field since then?

One of the biggest and most positive things is that technology continues to give us more and better information about what is going on in the brain. For example, mindfulness studies are very popular in education these days. In 2011 we didn't have the technology to piece it together and understand

what is going on in your brain during mindfulness meditation, but we do now.

Secondly, I'd say we have more consensus on what is truly "garbage" and should be considered neuro-myths and avoided at all costs in education. These false beliefs about the brain and intelligence, such as left- and right-brain learners, learning styles, and the belief in multi-tasking, do harm to students, and they should have no place in modern classrooms.

Finally, the most surprising thing is that in the first Delphi in 2007 there were only five things that everyone agreed upon, such as plasticity lasts throughout the lifespan and all new learning passes through the filter of prior experience. That number has increased because so much new research has been done meaning more can be taught to teachers to help them in their classrooms. Specifically, there is much better "bookend" evidence on what is supported by evidence and what is false, or a neuro-myth. Much of this is thanks to technology.

Are there any other books that either you or others have written that you would recommend for language educators interested in MBE?

- *Making Classrooms Better: 50 Practical Applications of Mind, Brain, and Education Science* by Tracey Tokuhama-Espinosa
- *Visible Learning for Teachers* by John Hattie
- *Making Thinking Visible* by Ron Ritchhart, Mark Church, and Karin Morrison
- *How People Learn* by National Research Council—a new edition of this classic text will be coming out next year

You were a plenary speaker at the FAB8 NeuroELT conference in Kyoto in 2015 and gave a virtual presentation at the CALL/Brain SIG joint conference in 2016. Do you have any thoughts on why there is such a growing interest in neuroscience among language educators in Japan?

There is a growing interest around the world in how the brain learns best. You could say that MBE has gone through three phases. The first phase asked, "what does the brain really have to do with learning?" and introduced neuroscience to educational practice. The second phase had teachers who realized that the brain is important, but this was a phase of misinformation in which the popular press filled in the gaps in the science. This is when many of the neuro-myths came into being, due to people trying to dummy-down and over-generalize information. We are now at the stage where researchers can communicate with general audiences and

make brain science understandable and useable for teachers without being scary. There are more communicators who can translate the science literature making it more accessible but not dummed-down like it was in the second stage. These communicators are also helping neuroscientists understand the messiness and difficulties of the classroom.

So I would say the field is growing and improving because teachers don't see neuroscience as too far away from their own practice anymore or consider it a gimmick or phase, but rather as something that can and should really impact teaching.

Could you tell readers about the Neuroscience of Learning class you teach at Harvard Extension School?

This class is built as a survey course on the core concepts around Mind, Brain, Health and Education and how the fields work in a transdisciplinary way. A goal is to highlight individual risks and protective factors to enable people to maximize their potential and specifically their potential to learn. This course allows for students not only to learn how to learn, but also to go deep into many other areas, such as memory and mindfulness. There are 15 general topics, which all provide the opportunity for students to dig deeper into an area of personal interest.

What advice would you give to parents wanting to raise their children to be multilingual?

The first piece of advice would be don't be afraid to expose your children to foreign languages. Only positive benefits come from being raised multilingually, if it's done right.

The second piece of advice would be to have a good strategy and be consistent. For example, deciding and knowing who speaks what to whom and when is key to success. Don't be afraid of children not learning the language of the culture you live in because the community will enable the child to learn the language. But rather, be afraid of losing the language that is not shared by the community you live in. For example, if a parent who is an English speaker starts speaking Japanese with their Japanese spouse and the children, that is likely to end the opportunity for the child to become native in English if they live in Japan.

Third, it is important to appreciate that languages are opportunities. The more languages you have, the more opportunities you have in life.

Finally, it is very good for the brain to learn multiple languages. It is great for overall general cognition and executive functions (working memory, inhibitory control, cognitive flexibility). You are

not just becoming bilingual for the languages and culture, but also for a better brain.

Could you explain the importance of person, place, or time for parents raising bilingual children?

Any language strategy is divided by person, place, and/or time. The person is the teacher, parent, or any other individual who interacts with the child. The place is the location where language exchange occurs, like a classroom or a home. The time can be a time of day (such as story time or mealtime), or time in the year (like summer vacations). The key is that when you have a strategy that separates person, place and time it is far superior to one that only separates one or two of those three. Any strategy with all three will work, but some strategies are more efficient than others. For example, if one person were to teach two languages to your child in the same classroom this would be much less efficient than having a different person teach each language at a different location. So, the more of these three that are implemented, the more likely they will be successful. The greater the space in time and space between the languages being learned and used, the better it is. For example, if the parents only speak English at home and the learner speaks Japanese at school with the teacher and classmates, this would provide a separation of the person providing the language input, the location, and the time of day. This strategy is important, but the real key is consistency.

If you had a magic wand and could dispel two neuro-myths about language learning or teaching, what would they be?

The myths I find the most despicable are the ones that make people think they have limits. In my mind, the biggest myth in foreign language learning is that there is a maximum age for learning another language. Adults can and do learn foreign languages better and faster than children, if and when they dedicate the same amount of time to the task. The second myth is that one is either born with a brain for languages or not. These two are the most damning in language instruction because people say things like, "I've never been good at languages" or, "My mother said I don't have a head for languages". The presumption that you have a fixed level of aptitude for languages is really damaging because it locks the individual into a fixed mindset rather than approaching learning with an open, flexible, growth mindset. People should approach languages and all other learning with the belief that they can and will succeed.