

## “Data Measures and Understanding Quality” by Luke Matthews

Recently, I have had the opportunity of having conversations with several of our faculty colleagues about the mandate from the state requiring us at the college to institute a faculty evaluation plan. There are several things about this new mandate that concern me, but for now I'd like to address one thing in particular, and that is a term used in the document that describes the faculty evaluation plan. That term is “data measures”.

What do we think when we read or hear the term, “data measures”? This term has an implication that should be questioned and examined. What are we measuring, what does it mean to measure something and does it make sense to measure what we do in the classroom? When we measure, we measure quantities...we weigh, we use a scale, we count, we apply a ruler to a length of cloth or wood, we weigh out a sample of some chemical in a lab, but does that action of measuring, of counting and weighing concrete objects translate so easily and usefully to assess the quality of what we do with our students in a classroom? Or, by using the language of measurement do we hide things from ourselves and perhaps even delude ourselves into doing the opposite of what we had set out to do? How much does an hour of quality teaching weigh? How many miles or kilometers in length is the journey a student takes in getting a quality education? Certainly, the last two sentences are grammatical, but do they point to any reality we recognize?

In having the conversations with our colleagues, I have thought about an unfortunate and ignominious chapter in my own discipline of anthropology. In the 19<sup>th</sup> century, there were a group of men – sometimes referred to as craniometrists – who believing that they could gain substantive insights into how such qualities as intelligence, character and temperament differed among various human racial groups, set out to gain those insights by taking measurements of the shapes and sizes of people's heads. They measured and measured with great precision every imaginable dimension of the human head and skull, from the length and breadth of skulls, the volume of braincases, the distances between eyes sockets, the slant of noses, to the shape of jaws and even catalogued the physical characteristics of ears. All of that, in a frenzy of activity that was an ostensibly more ‘scientific’ version of the phrenology that was popular at the time. The craniometrists believed that the outer quantifiable features of the human head were directly caused by those inner qualities of a person such as intelligence, temperament and character. It all looked very authoritative and scientific, and so convincing, to the uncritical because of the impression made by the volume of the measurements taken and the precision with which those measurements were recorded. But, as celebrated as these efforts may have been at the time, we know today that the entire enterprise was not only suspect because of its underlying motivations (i.e., to justify racist and colonialist oppression) but was also based on an inaccuracy. It is simply wrong that the measurement of the outside of the head can tell us anything about what goes on inside of that head.

How do you measure character or intelligence? What do we even mean by character and intelligence? Can we put stand one person's character or intelligence against

another's and fairly, reasonably or in any useful way apply an objective metric to measure them against each other? Does the shape of my earlobes say anything at all about my inclination to commit crime? Does the length of my skull say anything about my personality or aptitudes? Are people with broad heads better or worse at math than those with narrower skulls? Does a high forehead signify an innate honesty? It seems an absurdity to think that we can measure a person's nose, or ear or some facial feature to gain insights into their character but it seems to me an equal absurdity to think that a quality like character can be measured at all, i.e., represented as a quantity, in any useful way. Further, it would seem to me that by regarding quality like a person's character and thinking of it in terms of quantity that we are no longer really thinking about that person's character.

So, when we think about quality and our efforts as individuals and collectively to improve the quality of our teaching and of the learning experience of our students, what are we talking about? The quality of your teaching is not about the number of exams you give or the number of minutes you spend on a topic, but rather in how you talk about it, in how you are able to share with students your excitement, the depth of your passion for your field, and so to start a student – even if he or she doesn't realize it – on their own journeys of discovery. The quality of what you as a teacher do abides there in the way that you interact with the full living and breathing reality of students. There's a magical, hard-to-pin-down, almost ineffable character to good teaching; it's transformative. Certainly, the quality of what we do and what our students experience can be assessed but are those activities measurable in the way that physical objects are weighed, counted or measured? I would think not, and further that we risk making the same mistakes that my misguided 19<sup>th</sup> century forebears made. We run the risk, when we choose to quantify qualities, of hiding potential inaccuracies behind the reality of false precisions, of ultimately seeing and doing things other than we intended. We may engage, by distracting ourselves, in doing something harmful to the quality that we seek to maintain and enhance. If we uncritically use measurements, perhaps because it is more efficient to do so (the struggle between efficiency and efficacy is a concern, but I will leave that for another time) rather than doing the harder work of engaging in honest assessments of quality, we may unintentionally erode, elide or erase quality rather than enhance it.

There is a lesson here for us in the error that the 19<sup>th</sup> century craniometrists made in their confusion of accuracy and precision. Accuracy is a matter of being correct or not, of being right or wrong, but precision is a matter of how well you have applied some arbitrary scale to a thing. Those 19<sup>th</sup> century men were in practice very precise but wildly inaccurate. We are better off, in thinking about the quality of what happens in the classroom, avoiding the craniometrists' error of being inaccurately precise and erring instead on the side of being imprecisely accurate in our assessments. Better to get the quality right than looking for that elusive thing, i.e., the quality of teaching and learning, as if it is to be found somewhere over there two or three places to the right of a decimal point.