

When I was a student, my math teacher taught me math (let's say trigonometry on a blackboard and an old textbook that just had one diagram of a sinusoidal wave. Perhaps, I did not understand that it is those triangles spinning around inside the unit circle that contributed to the making of the sinusoidal (sine and cosine waves). Before few decades, atleast in math, book authors bothered to include few pictures and did not stick to the math symbols and alphabets but that cannot be sufficient. No wonder, why children were and are scared of math. Later, in college I taught to myself how to learn math using different intelligences. I was an audio-visual learner but during my childhood, I was made to believe in learning only through textbook. This picture is taken from Wikipedia and it has a nice animation as to how the sine and cosine waves are produced by the triangles inside the unit circle. Trigonometry, the focused math topic here comes from "measurement of triangles". I did not understand even that in my school but got 95% in math. Can you look at the tragedy? Also, the sine and cosine are waves that can make sound (audio) and all the complex audio/speech that we hear and feel can be broken down to set of sinusoidal like the one in blue and red colour in the picture below. Triangles that we study in school Geometry have everything to do with what we speak every day. Sine waves and cosine waves are related to tangents and cotangents and those animations are even more intuitive. Can you believe that teachers of the antiquity have taught all these using a textbook and blackboard that has only math symbols? First of all do you think such intuitive math concepts can be taught by alphabets and math symbols? It may be possible for a math scholar but by doing so, others like me are prohibited opportunity to learn and appreciate trigonometry.

