

Title:

THE METRIC SYSTEM

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Abstract:

It is not known by many Americans that there is a Public Law establishing the Metric System or *Le Système Internationale D'Unités (SI)* as the preferred system of measurements in the U.S. I cite from one MGM movie called "Antitrust" the following phrase "HUMAN KNOWLEDGE BELONGS TO THE WORLD". Paraphrasing, I would say "**Human Knowledge also belongs to the American People**". Ignoring this Law is one unjustified and prejudiced action against a system of measurement that is used globally. Many great science-fiction series and movies refer in many instances to measurements in the Metric System, but there is still a "metric-phobia" because of the lack of concern, lack of information and excess of apathy involving television stations, the media, some Federal Agencies and our educational system. Politicians would not like to hear about it.

Biographical description:

Tony Planas has been teaching undergraduates mathematical courses for many years at Colleges and Universities in the U.S. and in foreign countries with emphasis in the pedagogy and methodology of teaching Algebra and research interest on the Metric System. He teaches Mathematics in both languages, English and Spanish. Contact information: tplanas@fgcu.edu Phone: (239) 590-7267.

“The Metric System: A Real Reform in the U.S., in the Educational System and in the Federal Highway Administration (FHWA)”

I am not going to make a dissertation here on how important the Metric System is for our Educational System or for our not-so-good economy. I suppose you should know by now the advantages of using metric units over the Imperial Units. It is my belief that all science educators including Mathematics and Chemistry educators should be aware of the importance of teaching with metric units, however, many of them are not aware of **Public Law 94-168 [15 USC 205b, section 3 – (1) & (3), Declaration of Policy]**

One of the problems right now is the “metric-phobia” in existence in many social sectors of our communities in the U.S. Many of us are “metric-phobic” at this time, especially with two significance measures: *speed* and *weather temperature*, that is to say, mph and Fahrenheit degrees, meaning mph against km/h and Fahrenheit degrees against Celsius degrees. The Weather Channel is supposed to be an informative “educational” TV channel however, the administration at this TV station as well as some of the meteorologists working there, are completely oppose to provide weather graphs with “dual” measurements, mph and km/h together, and Fahrenheit degrees together with Celsius degrees. This is one of the greatest deficiencies in our educational system including educational channels like Discovery and History channels on pay television. I could have said mph “versus” km/h but I think it is more adequate at this moment to use the word “against”. I include inside the social sector in the U.S. I mentioned before, our politicians and we follow their steps without the minimal criticisms or arguments to refute issues that are extremely important to provide a real reform to our educational system.

Strong political extremists oppose the idea of changing and converting to the Metric System because of our arrogance and prepotency spirit of U.S. being the greatest country in the world. We do not want to look to our sides or beyond the continental U.S. to what is happening outside in our mother Earth. I would also dare to say that without the knowledge of the Metric System we are functional illiterates. The majority of the American People are completely blinded on this essential point of education.

As you know, the U.S. is the only major country in the world still using the Imperial Units and only two other very small countries as well. One is in Africa and the other in Asia.

The next problem is with respect to the *lack of information, lack of concern, excess of apathy* involving all of us, and specifically our politicians. I also blame all media and educators because of the same: *lack of information, lack of concern and excess of apathy*. The Media does not want to provide any kind of information to the public.

Around three years ago, I called a TV station in the Fort Myers area and I talked to a TV producer to give him the idea that in the weather segment of the news, the meteorologist or forecaster could write the equivalent units in the metric system for temperature and wind speed. He insulted me calling me crazy, stupid, and that it was an “impossible” idea. He told me the U.S. will never change to the metric system. What else can I say for those kinds of negative individuals opposing such an educational idea, including politicians in every State and in Washington?

Are we really working for real reforms in education in US or are we merely doing cosmetic changes? I think we are offering only “cosmetic” adjustments to the educational “establishment” or “status quo”. We are afraid of doing real reforms because if we begin real reforms in education, we are attempting against the “status quo”.

Two Federal Laws are still standing and they have not been eliminated so far: One is the “*Metric Conversion Act of 1975*” and “*The Omnibus Trade and Competitiveness Act of 1988*” amending the first. I strongly suggest to read both of them for a better view and understanding of the Metric System use. The Federal Government does not enforce those Laws. It leaves them to each State to use or not use metric units. And, of course, the metric-phobia comes to the rescue of those opposing converting to metric units.

I am very proud that Florida Gulf Coast University is the First Academic Institution in the State of Florida and perhaps, one of the fewer Academic Institutions in the continental U.S. to place these dual regulatory signs (mph with **km/h**) in roadways at FGCU, and thus, providing a tool of information, awareness and education of this significant topic. I would like to thank the vision of Dr. Joe Shepard, former FGCU Vice-President of Administrative Services and Finance for his support to this project.

This achievement has already been reported by a newspaper in Charlotte County: Sun-Herald news, and in Naples by Naples News (**)

There is one individual at the Florida State Department of Transportation, Traffic Division who wrote to me and I quote “...*but my strong recommendation would be to deny the request.*”, and making another quote, this person wrote: “...*The FHWA made a 100% metric conversion, at great cost, in compliance with a national FHWA mandate. The FHWA recalled the requirement for the states to go metric -- and the Department de-programmed the conversion...*” Is this how our Tax Money is spent? For obvious reasons, and one of them is ethical, I am not disclosing the name of this individual.

Lately, in 2008, the Executive Director of the Federal Highway Administration (FHWA), Mr. Paniati, decided to consider Metric Units as “*impractical*” for FHWA.

A new “*Manual on Uniform Traffic Control Devices*” (MUTCD) has been issued by the FHWA in effect January 2010 replacing the 2003 version. In the new 2010 version, the FHWA decided to eliminate all traces of metric symbols or signs from this important Government publication, contradicting Section 3 – (3) of Public Law 94-168, adducing those “*metric signs*” are not important for Federal employees who have to read this manual. I consider that it is not true because employees working at the FHWA are also part of the public of this great nation, and those Federal employees should be knowledgeable of the metric system, even though the general public will not read this manual (MUTCD)

Then, what about the thousands of educators at all levels of education from Secondary to Colleges and Universities teaching Chemistry? Why do they use the Metric System when the Executive Director of the FHWA considers metric units “*impractical*”? Why Mathematics teachers and professors teach many problems using “*metric units*”?

This is one of the foremost reforms to our U.S. society and our U.S. educational system if we want to really go beyond knowledge and stay a level up over the rest of the world.

Four new Dual Speed Limit Signs have been posted on Ben Hill Griffin Parkway (CR885) just in front of Florida Gulf Coast University (FGCU) main entrance [Figure 1 and 2 about here: Dual Speed Limit Signs on Ben Hill Griffin Pkwy (CR885), Fort Myers, Florida]

I would like to cite a phrase from one MGM movie heading for those who do not want to recognize Public Law 94-168 [15 USC 205b, Declaration of Policy] as a constitutional law making the metric System the prefer system of measurement in the U.S., “**HUMAN KNOWLEDGE BELONGS TO THE WORLD**”. (Figure 4 about here). Manipulating this phrase I will write that “*Human Knowledge Belongs To the American People, Take it. Use it.*”

So, embrace the use of the Metric System, let the American people know all about the Metric System. This knowledge is being blocked by the Federal Highway Administration, the media at all levels and by our educational system.

Following is the link to NBC-2 website reporting the event of placing “dual” speed limit signs on roads inside FGCU main campus and on Ben Hill Griffin Pkwy:

** “*Good Question: Why speed limits posted in kilometers?*”

http://www.nbc-2.com/story/24077659/good-question-why-are-speed-limits-posted-in-kilometers#.VBHe_aOup8E