Professional Engineers Ontario Education Conference

"Thinking Like Telford"

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(Then in Grade 12 Technological Design)

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On May 14, 2016, I spoke in front of about 50 professional engineers at the annual PEO Education Outreach Conference. The conference was held at the PEO headquarters in Toronto. During the morning break, I spoke to a few of the engineers whom Mr. McCowan introduced to me. After the break there was a panel discussion on the important topic of women in engineering. The discussion was engaging. My only regret is not raising my hand earlier so that I could have participated in the discussion myself.

During lunch, I spoke to the engineers at my table. I told an engineer from Europe about our school and things that we'd done in computer engineering and technological design and he gave me his card. I also spoke to a structural engineer about engineering jobs.

My personal task at the conference was to present a student's perspective on the Thomas Telford Menai bridge engineering challenge – a pilot project for future consideration by the PEO Education Committee, the sponsors of the conference. I spoke to the entire audience about my experiences and opinions on the Telford challenge.

The main subject of the talk was the potential for this suspension bridge design/build challenge to be province-wide in the future, among many different schools and school boards. The audience was attentive and respectful and, most important for me, fun.

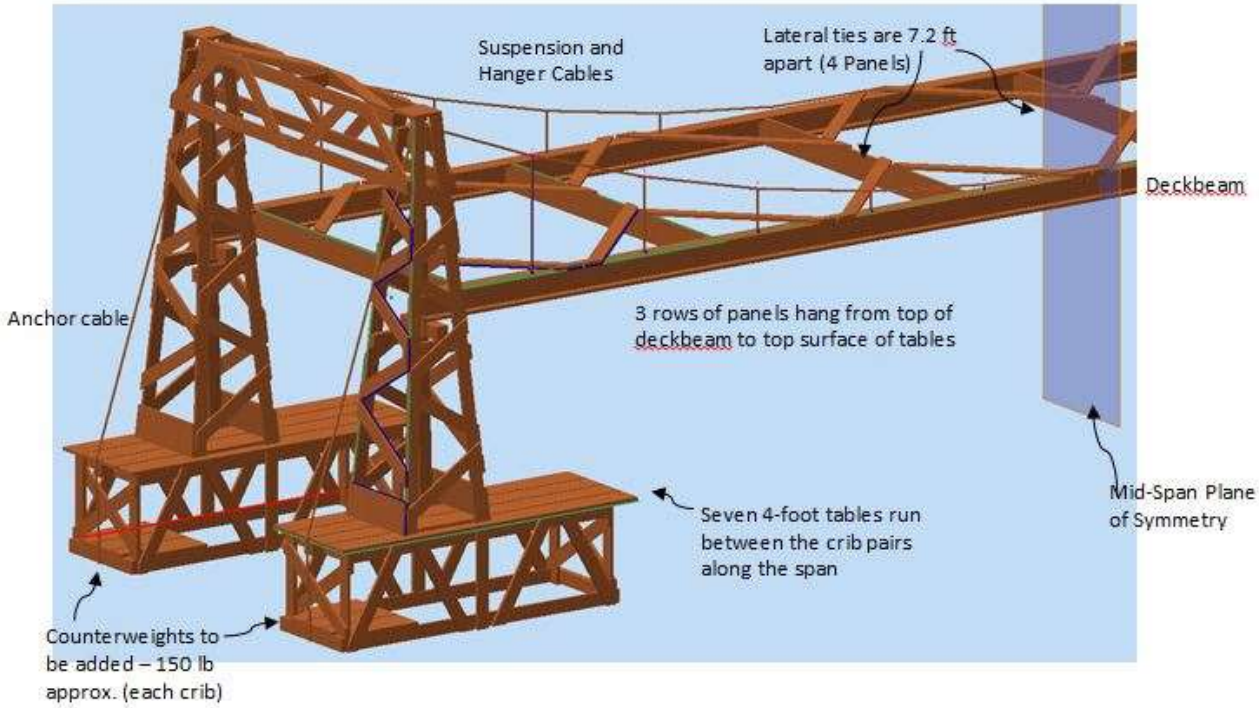
After me, Mr. McCowan presented his summary and opinion on this pilot challenge. The Q/A session had me and Mr. McCowan answering questions about our suspension bridge project and the challenge. We had some fun over my use of the imperial system in my design and in my shop work. By the way, the Menai bridge has been called the world's first modern suspension bridge and is almost 200 years old.

The engineers were interested in how the class felt about the project, so we presented a summary of an **anonymous** survey of the students. "On a scale of 1 to 10, with 10 being awesome, how would you rate the ***"Thinking Like Telford Menai Suspension Bridge Model"*** Project"?

Learning Experience: Average Rating Out of 10		
1	Telford was a good learning experience in terms of Problem-Solving	8.1
2	Telford was a good learning experience in terms of improving individual Essential Skills and Work Habits	8.1
3	Telford was a good learning experience in terms of team collaboration	8.6
4	Telford was a good learning experience in terms of development and application of shop skills	8.3
5	Telford has good potential as a province-wide engineering challenge	8.9

Mr. McCowan said he was pleasantly surprised at the high rating for the province-wide challenge idea.

The engineers were also interested in the "STEAM'D" learning opportunities that came with this Telford Engineering Challenge. STEAM'D stands for Science, Technology, Engineering, Art, Math and Diversity. Mr. McCowan's design of the wooden Menai bridge model (with a span of 36 feet by the way) will be used September 19 to October 1, 2016, at St. Andrew's Church, Scarborough. Have a look at www.scottishdiasporatapestry.org or you can contact Mr. McCowan.



Mr. McCowan's Design -- Left Half of Menai Bridge Model
Note: The Right Half (not shown) is the Mirror of the Left Half

After our presentation we were given some gifts and then there was another presentation on the general idea of and other possible province-wide challenges. During the afternoon break, I shook multiple engineers' hands, who congratulated and thanked me for my talk. I spoke to a civil engineer about steel bridges. After the break, the engineers shared stories from their chapters and engineering outreach events during the past year.

The PEO Education Conference was a great experience and the engineers were very approachable.

By Taha Syed, Grade 12, SATEC, Technological Design, 2016