Who Will Be the Next Superstar(s)?

Mentoring the future generation

by Warren E. McPherson

Legends in our industry—such as Duff Abrams, Bryant Mather, and Mary Hurd—were once seemingly irreplaceable, but somehow, someway, our industry has been able to produce new "superstars" and thrive as a result.

Where have the replacements come from, and why have these new superstars chosen the concrete industry to share their many talents? In the future, where will the new, yet-unborn superstars come from, and how can we, as industry leaders, help point them toward the concrete industry?

As I have sat in committee meetings and sessions at ACI conventions, I have seen an increasing number of younger participants. As a seasoned citizen, I am allowed to define "younger participants" as anyone under the age of 40. Because the lifeblood of any organization is to continue to regenerate itself with new, younger members, I am encouraged to see more and more young people participating.

My one concern for younger participants is that there are committees that are very difficult for them to get involved with. Speaking for myself, I waited many years to become a voting member of what I consider a very prestigious committee, but I'm not sure everyone would be as patient as I was.

The enthusiasm that the student chapters display during the student competition is inspiring. Their excitement and competitive spirit make me think back to my younger days in the business. How and why did these students choose to pursue a career in the concrete industry? Did someone influence them at a very young age?

Last winter, my granddaughter, Abigail (Abby) Pinch, who attends the STEM (Science, Technology, Engineering, and Mathematics) Middle School in Dearborn, MI, asked if I would help her with her seventh-grade science fair project.

I'm not sure who coerced her into asking me, but I obviously felt very honored. At that point, panic set in. What could we do that would be interesting to her but would also be hands-on and somewhat of a challenge?

What we decided to do, although both hands-on and informative, is not really the point of this article. Having said that, I have asked Abby to share her experience and to outline her procedures for weighing and mixing, and, ultimately, the results of the project (the rate of hardening [ROH] of the mortar specimens she created). Her writeup on the project follows.

My Science Fair Project

by Abby Pinch

Last year, my grandfather, Warren McPherson, and I conducted a science fair project investigating how different ambient and concrete temperatures affect the rate at which concrete sets. The concrete and environment temperatures ranged from 38 to 85°F (3 to 29°C).

Originally, I thought that if the mixing water were heated, then the concrete would set at a slower rate. Actually, the exact opposite occurred—when the mixing water was heated, the concrete set faster, and when the mixing water was cooled, the concrete set slower. During this experiment, I found that as the temperature of the mixing water increased, the amount of water needed to maintain the same consistency did as well.

Mixing concrete is very similar to baking. When weighing each ingredient, my grandfather reminded me that exact measurements must be used or else the consistency won't be accurate. I also learned that the setting of concrete is like the ice cube phenomenon. The warmest sample did not set as fast in a cold environment compared to the time it took for the room-temperature sample to set in a cold environment.