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A HINT of Success

Sarah Asp Olson
Minnesota State University, Mankato

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A HINT of Success

By Sarah Asp Olson

Angela Monson's unique teaching tool is a boon for precision in dental hygiene instruction.



Imagine hiring a carpenter to build a house, but instead of a level, you just ask him to eyeball it. That's a little bit what it's like instructing dental hygiene students on proper technique and instrumentation, according to Angela Monson, chair of Minnesota State Mankato's Dental Hygiene department.

Textbooks make recommendations for the correct angles at which to hold instruments—70 degrees, adapted at 1 to 2 millimeters—but there is currently no way to objectively ensure that students (or instructors, for that matter) are hitting those ideals.

Currently, students rely on one-on-one time with instructors for feedback on technique. Once the instructor leaves and students are practicing on their own, “if they can't hold on to what we discussed, they'll practice it incorrectly and create negative habits,” says Monson.

What's more, she says, there's no way to know if faculty members are consistent across the board. “The way I hold my instruments may be slightly different from the way coworkers hold their instruments,” she explains. “Because there's never been any independent feedback—you just have to eyeball it.”

About three years ago, Monson started to think there must be a better way. She recruited her dad, a retiring electronic engineer, to put together a plan and a prototype for the Hygiene INstrument Tutor (HINT). The patent-pending product uses Electromagnetic Tracking technology and 3D modeling to accurately measure and display angulation and

adaptation of dental hygiene instruments. Sophisticated software allows for a variety of lesson plans and teaching modes, as well as remote monitoring for instructors.

The tool will never replace faculty training and mentorship, Monson notes, but “HINT is actually providing the students with a level,” she says. “They're finally able to see something concrete regarding feedback about how they're doing, and it's going to be exactly the same every single time.”

In March 2017, Monson presented her prototype at the American Dental Educators Association annual conference; her professional colleagues were enthusiastic about HINT.

The encouragement has given Monson the momentum to move forward. She'll continue to self-fund HINT's development, with the goal that eventually she'll be able to sell it to a company for mass production. But without the support from her Minnesota State Mankato colleagues, the process may not have made it this far.

“I feel very blessed that I'm at an institution that supports faculty in their independent endeavors,” she says. “I have this great opportunity to conduct research with the faculty and eventually with the students to prove it's effective, and start to prove there should be a strong demand.”

Visit DentalHint.com to learn more about HINT, and follow its progress from prototype to product.