Short Communication

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Editorial on CADCAM Pre-Doctoral Dental Education

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I remember the first time I imaged a patient's crown prep on a CEREC unit. It was a humbling experience. I had taken a course and practiced on models, but that didn't compare to the instant feedback and insight I gained from viewing my prep magnified 20x on a computer screen. Since that time, I've transitioned to a career in dental education, and I am hopeful that students can experience the same benefits of assessment and feedback that I did from digital dentistry.

The Park et al article in the May 2017 issue of Journal of Dental Education resonated with me, particularly their message that the lowest-scoring students benefited the most in the area of self-assessment when digital prep assessment was added to their clinical learning experience [1]. In another article from the May 2017 issue, Metz et al demonstrate that it wasn't until the fourth year that pre-doctoral students' self-assessment matched with the faculty's assessment of the students' work [2]. Additionally, we know poorer performing students tend to overestimate their skills and scores, which can significantly affect patient safety and patient outcomes [3].

As we know from the CODA pre-doctoral program requirements as well as the principles of adult learning, we must teach our students to self-assess. Any tools we can offer students to improve this skill are worthy of our time as educators and are an investment in their lifelong learning.

Obviously, there will be challenges. Our first-year students are learning so much about dentistry that it is unreasonable to expect their self-assessment ability to match faculty assessment. In fact, the study done by Mays and Levine in JDE showed that first year students (even with the assistance of CAD/CAM prep analysis) tended to grade their own work more favorably than faculty.

This presents an imperative for us to incorporate digital assessment tools as early as possible in the pre-doctoral curriculum. Early introduction and deliberate practice with such tools, juxtaposed with feedback and assessment from faculty, may accelerate development of pre-doctoral students' metacognitive skills, especially in the area of self-assessment. I look forward to contributing to development of best practices in this area as we learn more and expand our use of these digital tools [4].

References

1. Park CF, Sheinbaum JM, Tamada Y, Chandiramani R, Lian L, et al. (2017) Dental Students' Perceptions of Digital Assessment Software for Preclinical Tooth Preparation Exercises. J Dent Educ 81: 597-603.
2. Metz MJ, Durski MT, O'Malley DeGaris M, Daugherty TC, Vaught RL, et al. (2017) Student Self-Assessment of Operative Dentistry Experiences: A Time-Dependent Exercise in Self-Directed Learning. J Dent Educ 81: 571-581.
3. Mays KA, Branch-Mays GL (2016) A Systematic Review of the Use of Self-Assessment in Preclinical and Clinical Dental Education. J Dent Educ 80: 902-913.
4. Mays KA, Levine E (2014) Dental students' self-assessment of operative preparations using CAD/CAM: a preliminary analysis. J Dent Educ 78: 1673-1680.