

## **Teaching, service, and research—making the most of graduate positions**

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Huggins currently works for the Fundamentals of Engineering program at West Virginia University. She is her PhD in Education a lifelong dream. Huggins is an advocate of STEM learning in the K-12 arena as well as a proponent of after school programming to help build the workforce of the Technological Revolution.

## **Engendering Inclusion by Implementing an Interactive Theatre Sketch**

While many engineering educational programs teach teamwork skills, especially in first year engineering courses, teaching inclusive, collaborative and productive behaviors for working in teams composed of people with diverse backgrounds is challenging [1]. For students from marginalized or minority populations, many interventions focus on preparing them to work within a majority-focused and sometimes unwelcoming culture [2]. Supported by NSF funding, a team of researchers investigated a different approach. They infused existing engineering and computer science curriculum with small, but impactful, changes or additions to help students develop inclusive professional identities. That project approached diversity holistically, including different life experiences, demographic characteristics, personalities, and problem-solving approaches. This approach values each person's experiences, including those from historically underrepresented populations in engineering and computer science [2].

One intervention, adapted from Finelli and Kendall-Brown [3], uses observation and role-play to demonstrate how to approach biases within peer group settings, behave inclusively, and create inclusive and productive environments within their field [2]. Students in a first year "Engineering Problem Solving 1" course at a large, R1 institution in the mid-Atlantic region were required to attend an Interactive Theatre Sketch and answer several reflection questions about the content and their own related experiences.

Before COVID, the sketch was performed live in an auditorium and students were asked to participate with the actors during part of the event. In 2020 (during the COVID-19 pandemic) the sketch was adapted for an online audience and performed as a Zoom webinar. In both performance modalities, the sketch, performed by student actors directed by a Theatre Department faculty member, depicts a dysfunctional lab team working on a report.

The in-person sketch opens with student actors sitting at a table with an empty chair. Trained facilitators introduce the sketch and ask audience members to picture themselves in the empty seat. Following the short sketch, the facilitators guide the audience in a discussion and then explain the interactive component. The sketch is then replayed with audience volunteers taking the empty chair and intervening to try to resolve the issue presented.

In the online webinar version, the "empty chair" exercise was replaced by a "debriefing" of the characters, in role. Characters took turns explaining to the audience how the actions of the other group members made them feel [2].

This poster describes the Interactive Theatre Sketch activity for both in-person and virtual environments, identifies implementation challenges, and includes observations and recommendations.

## References

- [1] J. T. Polzer, L. P. Milton, and W. B. Swarm Jr, "Capitalizing on diversity: Interpersonal congruence in small workgroups," *Administrative Science Quarterly*, vol. 47, no. 2, pp. 296-324, 2002.
- [2] Pedersen, B. A., & Hensel, R. A., & Raisa, S. A., & Atadero, R. A., & Casper, A. A., & DeLyser, R. R., & Griffin, C. D., & Leutenegger, S. T., & Morris, M. L., & Paguyo, C., & Paul, J., & Park, S., & Rambo-Hernandez, K. E., & Roszelle, B. N. (2021, July), "Leveraging Changes in Engineering and Computer Science Curricula to Engender Inclusive Professional Identities in Students" Paper presented at 2021 ASEE Virtual Annual Conference Content Access, Virtual Conference. <https://peer.asee.org/37454>
- [3] C. Finelli, and M. Kendall-Brown, "Using an interactive theater sketch to improve students' perceptions about and ability to function on diverse teams," in *American Society for Engineering Education: 2009 Annual Conference & Exposition*, Austin, TX, USA, June 14-17, 2009, pp. 14.1312.1-14.1312.8.