Online undergraduate engineering education presents challenges for all involved. The support of our innovative online program has changed in response to growth and budgetary limitations. Training and procedural documentation as well as proactive anticipation and prevention of problems has enabled us to move away from active daily professional support system to a monitoring, multilevel support system.

The online undergraduate engineering program at a prestigious mid-Atlantic university has grown since its inception in 2008. Having been through multiple iterations of courses, instructors, and cohorts of students we have improved the support process for the program – from introducing instructors to the technology to the real-time support for the classrooms. Taking a thoughtful, deliberate approach to the instructional design and the necessary supporting technology has been successful, but we have had to adjust and modify in response to the needs of participants as well as the limitations of currently available (and affordable) technology and manpower.

The current financial strain has not left our program untouched, and the support structure has had to be restructured in response. Tackling day-to-day operational issues such as problems with ambient sound, internet outages, and downtimes of hosted applications has enabled us to establish some best practices for maximizing support offered while maintaining productivity and budget restrictions. Using a mix of professionals, graduate students, and undergraduate students we have developed training approaches and systematic procedures for supporting multiple simultaneous classrooms, varied instructional formats including lectures, problem-solving sessions, small-group work, and electronics laboratories. We are interested in sharing our lessons during the transition from active daily classroom support to a problem-prevention/monitoring approach.