Top Nursing Program Tackles Shortage of Nurses with New Technology

“This was the perfect app that I needed right at the perfect time. Everything came into alignment when I found GoReact.”

—Dr. Michael D. Bumbach, Assistant Clinical Professor

A large body of research has linked the quality of nursing education with patient outcomes in hospitals. Nurses with higher education levels have lower patient mortality rates and lower rates of failure to rescue. Well-trained nurses clearly save lives, but our future nursing pool is drying up.

According to the American Nurses Association, the U.S. will require an additional 1.13 million nurses by 2022. Our population is aging, and so are our nurses. Nearly 40 percent of registered nurses will be 50 years or older within the next 10 years, and the number of new nurses under 30 is decreasing rapidly.

Nursing education programs around the country are aware of this national shortage and are working hard to recruit more nurses, train them properly, and prepare them for successful nursing careers. But will they be able to train the number of nurses we need?

Nursing in The Sunshine State

Located in Gainesville, the University of Florida (UF) has been educating nurses since 1956. Today the UF College of Nursing consistently ranks in the top ten percent of nursing schools in the nation.
Perhaps the biggest reason UF excels is thanks to its experienced and dedicated faculty. One of these faculty members is Dr. Michael D. Bumbach. Bumbach is a trained nurse who worked in urgent care for over 15 years. Now he is a nurse practitioner at the Archer Community Health Center and an assistant clinical professor in UF’s College of Nursing.

Bumbach explains, “Research shows that nurses with strong skills have better patient outcomes. If patients aren’t having good outcomes, usually they die in the hospital. So the educational background of the nurse really matters. The College of Nursing’s main goal is to produce qualified, intelligent, and strong nurses. We want our nurses to be extremely competent when they leave our program.”

But turning out high numbers of highly skilled nurses is a tall order.

**Challenges at the University of Florida**

For students to become licensed registered nurses, they must pass the NCLEX exam. UF’s nursing faculty evaluate their students progressively throughout the program to make sure they’re ready when the NCLEX rolls around.

The foundation of all nursing skills is assessing the health of a patient. “Nurses have to know how to do the physical examination because everything else comes from that,” said Dr. Bumbach. “You can’t assess your patient if you don’t know what’s going on.”

To conduct a health assessment, students must receive hands-on experience, which can be tough. Dr. Bumbach says, “Our biggest challenge is giving the nursing student enough experience so they can get comfortable in the clinical atmosphere. We felt we had to facilitate that by increasing clinical hours and simulation experiences in the lab. But in my course I have 120 students. There’s no way I could find 120 individual patients.”
He decided to have his students perform health assessments on each other. The first 60 students do an evaluation of their cohort, and the other 60 do vice versa so everyone has a patient.

But even this solution for patient access wasn't enough. Each nursing student needs individual feedback from their instructor. The peer evaluations helped get students started, but they didn't give Bumbach any more time to observe his students and share detailed critique of their work.

**Students Need Feedback**

With such large classes, professors like Dr. Bumbach struggle to find the time and energy to give students the face-to-face interactions they need: “We've seen a big trend of people moving nursing instruction online to train more students, but then you miss out on the face to face. It's hard to read body language over Skype, over phone, or whatever.”

Early on, Bumbach wondered if video projects might be the answer. Could students film themselves doing health assessments so he could observe and give feedback that way?

As an experiment, Bumbach tested an assignment requiring students to submit videos through Canvas, the learning management system (LMS) used at UF. Unfortunately, Canvas proved to be clunky and frustrating. There wasn't a great way to evaluate the videos, and the files were too large and too numerous for Canvas to handle.

Still, Bumbach had a hunch that video was the answer to preparing students for certification. It was the secret to giving new nurses personalized feedback, which just might be the way to reverse our national nursing shortage over time.

Instead of throwing in the towel, Bumbach started hunting for a better technology solution.

**Making Video Assessment a Reality**

In his search for the right video tool, Dr. Bumbach teamed up with James Kocher, the instructional designer for the College of Nursing.

“Mostly I prepare courses for each semester,” said Kocher, “and part of that is finding new technologies
that improve classroom experiences. When Professor Bumbach came to me last year, he was having an issue with videos being too big to upload into Canvas. I went to the EduAppCenter and saw the video product GoReact. Its upload sizes were bigger and there was built-in time-stamping, comments, and all the cool things we needed.”

Best of all, GoReact was already at UF. The Business School was using the platform successfully, so transferring it to the College of Nursing wasn’t difficult. Dr. Bumbach introduced GoReact to his students and had them conduct a health assessment on camera. They submitted the videos directly to him for critique.

Almost immediately he recognized the time-saving difference the product made. Instead of scheduling 60 hours in the lab, Bumbach could view all the assessments anytime:

“Assessing the students in a place that wasn’t the lab was a perfect modality for me. I could do it at midnight outside of working hours. Or I can stay home in my pajamas and do it whenever.”

Kocher has also noticed what a difference GoReact makes for professors in various disciplines. “Before GoReact, students had to upload videos to YouTube, and it’s a lot messier that way. Now they can record themselves doing their skill, and the instructor can grade on their own time and give better feedback. It really is the best product.”

**Why GoReact Fits the College Of Nursing**

- **LMS Integration**
  The software integrates seamlessly with most university LMS systems. UF is an enthusiastic Canvas user, and professors want to function in the environment they’re used to. GoReact allows that.

- **Video File Sizes**
  The issue of large video files has been virtually eliminated. Students film themselves, save their videos, and submit them all within GoReact. Every video
submission is compressed automatically and goes directly to the professor.

• Simple Equipment
  Instead of complicated camcorders, nursing students can film themselves with their own smartphones and laptops. GoReact makes it easy for students to pause, clip, or re-film a segment.

• Better and More Frequent Practice
  Best of all, the nursing students are getting more practice and better instructor feedback than ever. This has helped Dr. Bumbach train his students faster and with greater precision.

• Saving Time for Faculty
  In Dr. Bumbach’s words, “Because we have a faculty shortage, GoReact has really allowed me to maximize my time. If I’m on the bus for 20 minutes, I can do my work then. It saves me literally days of time.”

Proven Improvement

“I like GoReact a lot,” Bumbach confessed. “But I wanted to know if it made a measurable difference. So I surveyed our students, and I looked at how prepared they were after the health assessment video. My survey found that the process itself helps students gain hands-on practice.”

Bumbach has been surprised at just how much his students liked GoReact too. “So you know when the semester is done, basically students owe you nothing? But people actually came to my office and said, ‘Listen man, I just want to tell you how good that final
Looking to the Future

The favorable results from the survey prompted Dr. Bumbach to explore the reach and results of video feedback in the nursing field. Dr. Bumbach’s research (to be published later this year) shows GoReact has made a significant and measurable difference for nursing students in his program.

According to Bumbach, “I was able to take my data to my administration, and it impressed them also. I’ve talked to several colleagues that I think will start implementing it at other universities. If it works and it creates good nurses, that shouldn’t be a trade secret. We’ve got an innovative method that may really help with the nursing faculty shortage.”

When asked to sum up his overall feelings about GoReact, Bumbach expressed, “This is such a good product. The data is so strong that you guys have something great.”

For more information on the University of Florida and what they’re accomplishing with GoReact, check out our feature article on their story at goreact.com/nursing-uf.

Sources
1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3711087/
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