

## **Students' Involvement in Healthcare Technology**

### **Healthcare technology**

What does it mean to heal? When is somebody healed? An extremely important question in healthcare, and the longer I've been studying in the paramedic field, speech language therapy, the more I reach the conclusion that healing, in a lot of ways, is subjective. But one point mostly stands: clients want to be able to do the same as before their health problems. Unfortunately nature, and thus traditional therapy, has its limits there. But what if we can make them able to do the same, but in a different way? Where the body can't be healed, technology can give new possibilities. Hope.

### **Possibility VR-client**

An example of how healthcare technology is already used today, is Virtual Reality. It is used to train students to become better professionals. Instead of students practicing new treatments on each other, which isn't realistic because students mostly play the 'perfect client' for their classmate, they can practice with a VR-client. Especially in the years before their internship, to make them feel more ready and secure.

### **Possibility VR-therapist**

And an example of how VR could be used in the future, is in speech therapy. Right now, the speech therapist has to be present to give feedback on a voice exercise, like breathing correctly. So what if you could give the client VR glasses to take home, which would contain a 'virtual speech therapist' who would give feedback and tips. This would allow the client to practice more interactively, aimed at the goal and more fun, which is an indicator of how much they will actually practice. And if the speech therapists would have insight into the VR-feedback through the computer, they would know what the client finds the hardest and could compose the next therapy session based on that.

### **The iXperium**

Thankfully, more and more healthcare professionals start to realize the potential of healthcare technology. It's a much talked about topic at the workplace, and thus of course that makes its way to the education field as well, as it should. And for the HAN Nijmegen, that meant the addition of the iXperium Health: a center that stands between the business side and the education side of healthcare technology. As a student ambassador at the iXperium, that means I get to meet both sides.

### **Research for companies**

On the one hand that means I get to help companies with research for their products. An example is how I helped the Simulation Crew (who will speak after me) with the analysis of the communication between their virtual agent and students. Their VR-simulation, VR-Max, was used to train lots of students, and my task was to spot opportunities for improvement in those conversations. This way, students like me can really be close to the newest developments in products from companies associated with the iXperium, and I think this both benefits the companies and the students.

### **Teaching students**

On the other hand, I get to teach students from different majors about those new technologies, like Virtual Reality simulations. Healthcare students aren't exactly known for their technical interest, and thus it's often the first encounter they have with VR.

So what are their reactions at those VR sessions? It's often a combination of curiosity and doubts, and enthusiasm and fear. It's new, exciting and different from the average therapy method. We show them how the specific VR program can help clients, so they can see the possibilities. They know from both their major and the media, that technology starts to become more important in healthcare, so they are very aware of the part VR might play in their future jobs.

### **Unanswered questions**

But that's also the scary part, because after a short introduction about what VR is, trying the program, and shortly discussing why it could support therapy, they are left on their own. So the students are left behind with their enthusiasm, but also only with a vague idea of the reality of VR and a lot of unanswered questions. How convenient can VR be, when they could barely control it without assistance? Does healthcare-insurance even cover this kind of technology? Can you actually give it to clients to practice at home or is that too unsafe or expensive? How do you even implement it into a healthcare practice, so that it will actually be used? Unanswered questions.

### **The future of healthcare technology?**

So right now, do we as students get prepared for using healthcare technology in the future? I don't think so. We get introduced to it. We get introduced to possibilities, but not to the reality. And I get why: It's hard preparing students for a future we don't even know yet.

So what do I personally think the future of healthcare technology, especially VR, looks like? I think VR-glasses will be available at most healthcare practices, containing programs to practice what the therapist has explained in the sessions. These VR-glasses could be taken home for as long as the therapy lasts and the therapist will have insight into the feedback the glasses give. The one-time purchase by the professional would be covered by health-care insurance, and if there is a problem with the glasses, there would be a clear point of contact to get them repaired.

And of course this would make its way through the education as well, with students getting prepared to use VR-glasses. Each university's library might include them, for the student to practice as much as they need. The assessor of their performance tests might be a VR-agent, for objective assessments, where a teacher's personal bias won't play a part. VR-glasses would be viewed as a therapy assistant, so students will have to know how to use them. And the emphasis here is on it being an assistant, not a replacement.

### **Involving students in healthcare technology**

But with the future getting nearer and nearer, I think we will get more and more taught about the bigger picture surrounding healthcare technology. And the more we talk about those technologies as being a reality, instead of just an option, the more students in general will feel comfortable and excited about it. Which once they graduate, will work its way through the whole field. And one great way to achieve this, is by having those companies that create those products, and those healthcare facilities that use them, involve students in the process. So I really want to encourage everyone here to become a partner of a university, and of course especially the HAN, because we as students can't wait to work together with you to create a future where healthcare technology brings hope to our clients who need it the most. We look forward to meeting you.