

Virtual Tutoring Agents

Just-in-time individualized learning

Today, education is identifying methods and tools for delivering just-in-time and on demand knowledge experiences tailored to individual learners, taking into consideration their differences in skill level, perspective, and culture. Virtual tutoring agents (VTAs) can help with individualized instruction and just-in-time tutoring enabling active participation.

BENEFITS TO EDUCATION

- Interactive, replayable PDFs, show process as well as product
- Seeing / hearing the virtual human helps the learner to engage
- Builds library of just-in-time feedback
- Distributes individualized instruction
- Can immerse learners in real-world situations that they would not otherwise experience
- Learners control interaction with VTAs, which build their confidence in classroom community interaction
- Learners can use same tools for confident self-expressions

TYPES OF VTA

Where do VTAs come from? A content expert can create VTAs or some can be bought premade. VTAs can be created on one of three levels to simulate tutors, mimic tutoring interactions, and offer just-in-time and adaptive feedback. Each level requires more skills.

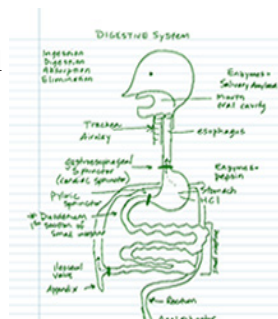
Level 1 - Smartpens - paper-based computer in a pen that records everything you hear and write.

Level 2 - Interactive video - a platform that enables the user to create and share dynamic interaction.

Level 3 - 3D Animation - real time 3D animation tool enabling users to make 3D animated films.

SAMPLES OF VTA

Level one may be, for example, how to solve for x by using a tool such as Livescribe, which is a smartpen that records everything you say and write as a Pencast. Pencasts are interactive PDFs, which allow learners to replay the Pencast at any given point.



A Pencast can be created in any language, which could be helpful for learning another language or for teaching learners whose second language is English. Click on <http://elearning.uaf.edu/go/digestivepencast> to experience the above Pencast.

Level two is interactive video. An example program is Flixmaster, which is a cloud-based, video editing and publishing platform that enables a content expert to build dynamic, interactive videos with drag-and-drop ease. The learners receive information about a topic then an interactive quiz appears about the information. The learner can replay the information until they understand the topic. Click on <http://www.flixmaster.com/projects/3921/play> to experience this interactive video.



Level three is 3D Animation virtual human. This level does require more skill than the first two levels. The learning curve for the content expert is much higher.



Experience this 3D animation at

<http://www.youtube.com/watch?v=t-3GVYYpTb4>