

Agent-Based Architecture for Intelligence and Collaboration in Virtual Learning Environments



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Motivation

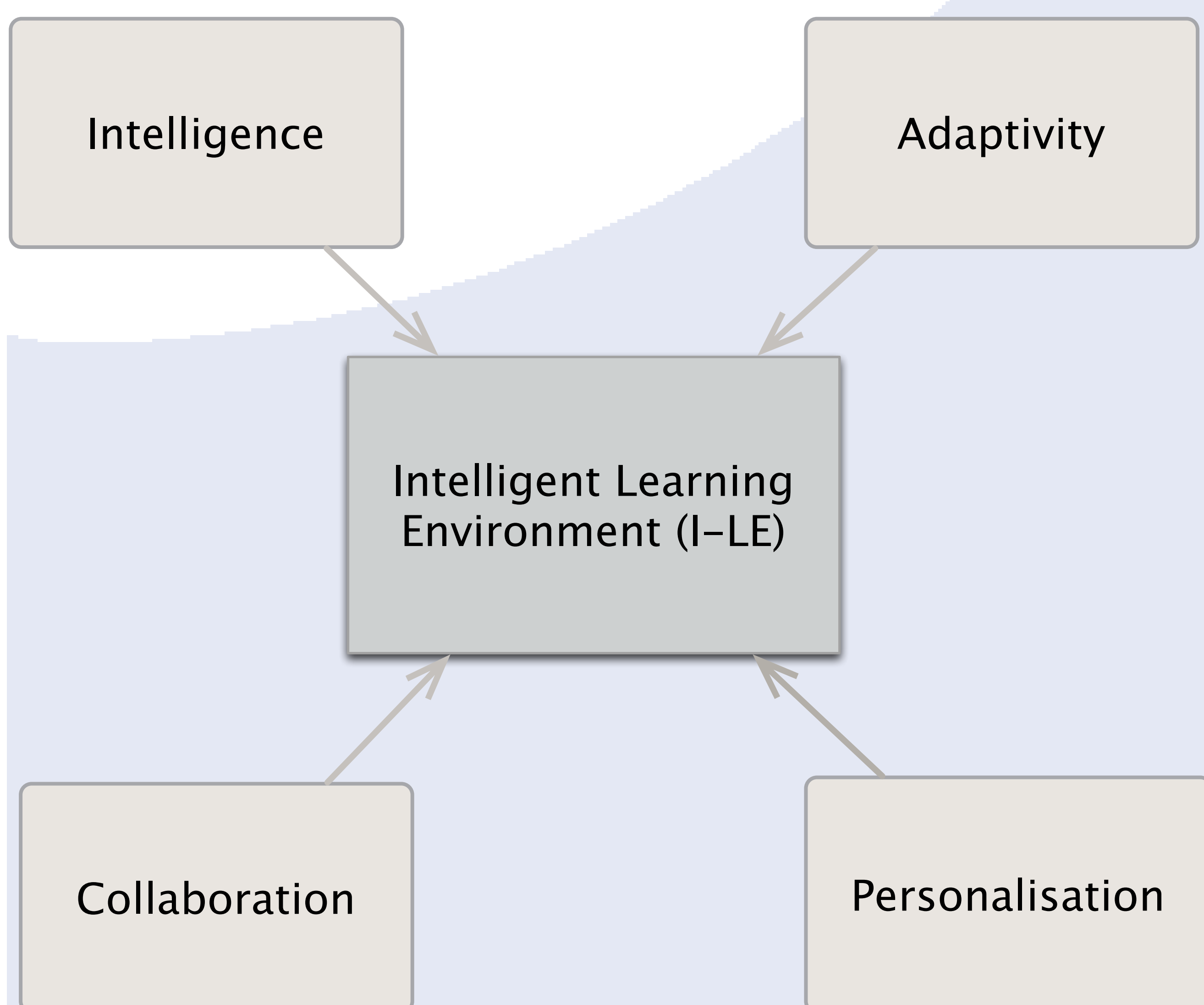
Virtual Learning Environments (VLEs) are widely used in both distance learning and for on-campus learning providing supporting tools which allow students to access learning materials, activities and assignments.

VLEs usually lack assistive feedbacks and assume static student profiles. As a result students are presented with the same learning materials regardless of their learning needs. A VLE itself is **not an automated system** that cannot provide an intelligent response to students.

How to improve VLEs to become intelligent systems...?

Provide an agent-based system to support intelligent responses in VLEs.

Aims

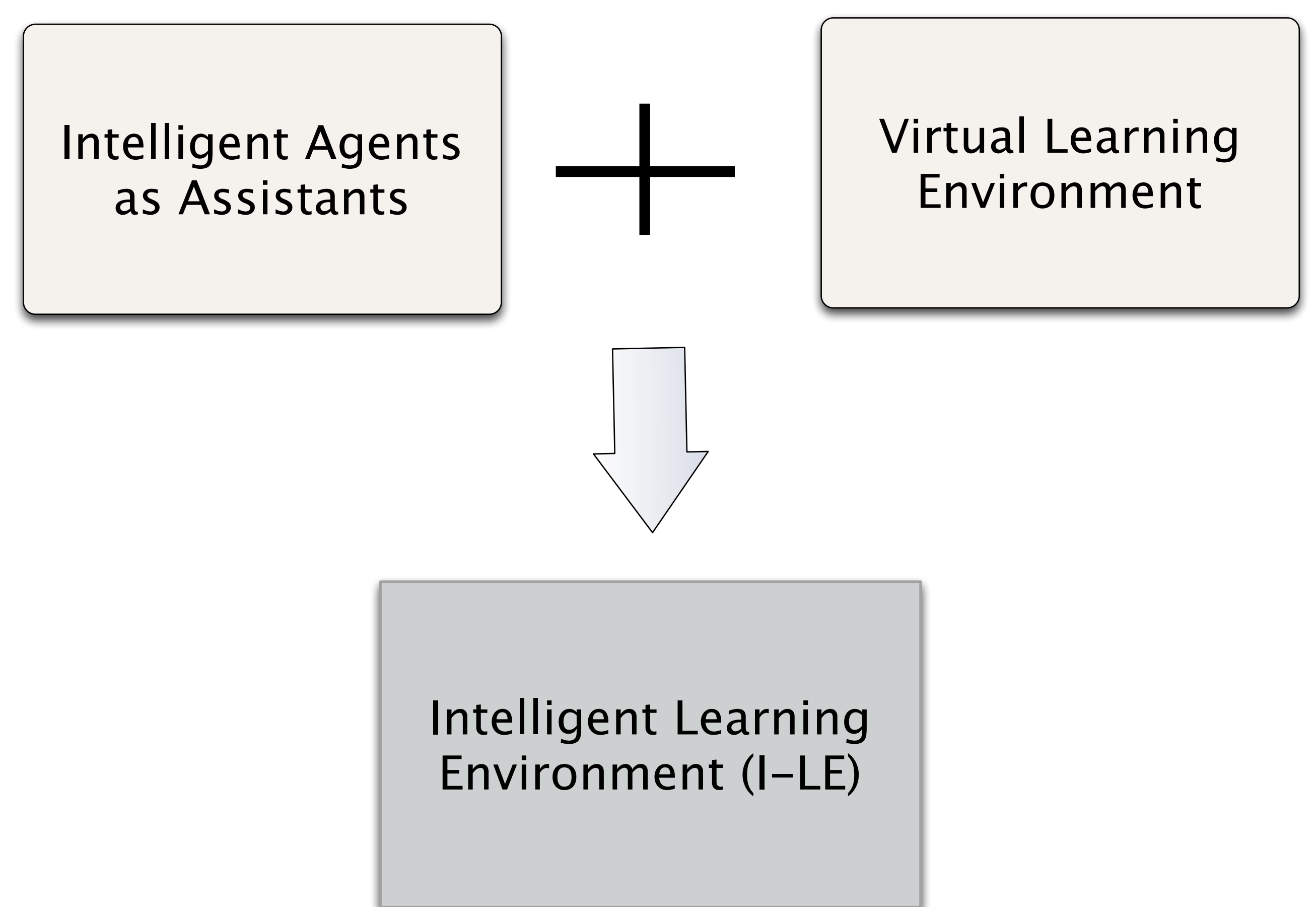


Orientation Data

- **Teachers' Views**
 - Interactive lesson that allows teachers to incorporate formative assessments into course materials.
 - Dynamic web modules for observing student assignments, performances, and easing up grading processes.
- **Students' Views**
 - More functions for supporting collaborative tasks such as group project.
 - Students have different backgrounds, profiles, learning styles and knowledge about their subjects.
 - Some subjects are difficult to explain in lectures. Other learning activities could make them easier.

Proposed Method

- Introduce an agent-based system into a Virtual Learning Environment
- Personalise and adapt learning materials based on student profiles
- Monitor tasks by using state changes e.g. **Student A** has completed a **Report B**.



Overview of I-LE

