

## Classifying ALE concepts: Which ideas matters most?

1. You/ your group will get a set of concepts, each one written on its own card
2. Review these concepts: do you have a clear idea of what they mean in the context of ALEs?
  - I suggest that EACH PERSON keeps track of the concepts they feel they do/ do not know ( it's a place to start, for later review)
  - Set aside any concepts that no one in the group knows
3. Decide how to classify each known concept (critical, important, additional-- *see below*)
  - Be ready to give reasons WHY you have classified it in such a way. Use specific evidence if you can.
  - Write at least 2 reasons on the card (*clearly, so others can read them!*)
4. IF TIME: Work on looking up your group's unknown concepts, OR trade with another group-- you might know some of their unknowns, they might know some of yours.
5. Add your classifications to the table/board (wherever we are putting them)
6. View others' classifications
  - Do you agree/ disagree?
  - If disagreeing, how would you classify instead?
  - If agreeing, do you think reasons are correct, or have additional ones?
7. IF TIME: Are there any critical concepts that appear to be missing from the whole set? What are they?

### Concept classifications:

**CRITICAL (1):** This is a concept/issue that is relevant to *all systems* and to understanding the idea of ALEs as a whole. It is *difficult or impossible* to understand, write about, or build ALEs without understanding this concept. It is part of what could be considered a basic understanding of what ALEs are, what they do.

**IMPORTANT (2):** This concepts/issue plays a substantial role in the ALE field and in many individual systems, but is not "universal" in the way that the CRITICAL concepts are. It is possible to understand main ideas about the field without knowing this concept, but knowing this concept will certainly help you understand more.

**ADDITIONAL (3):** This concepts/issues is more limited in its scope or impact than is an IMPORTANT concept. It may be specific to only a few systems (or types of systems). It may be a subtype of another concept on the list. It is possible to have a reasonable understanding of what ALEs are/do without knowing this specific concept.

CONCEPTS LIST ON BACK OF THIS PAGE

## **Full concepts list:**

Adaptivity  
Affect  
Bayesian models  
Constructivism  
Deployment (of “finished” system)  
Diagnosis (of knowledge, states, etc.)  
Dialogue  
Domain types (e.g. well- vs. ill-defined)  
Engagement  
Existing educational goals, methods, and systems  
Human tutor behaviours and strategies  
Iterative design cycles  
Learning gains  
Learning-by-teaching  
Metacognition  
Model-tracing, path-tracing  
Models/ modelling  
Motivation  
Pedagogical agents/ Virtual characters  
Planning  
Production rules  
Qualitative modelling, qualitative reasoning  
Representation (of domain)  
Self-efficacy  
Simulation  
Transfer/ generalisation of learning  
Users

*Note: Let me be very clear that we are looking at the importance of these concepts in terms of understanding ALEs as a type of technology and an area of research. This activity is not to say that some concepts are not important in terms of the course, or that you are not expected to know some of these concepts for the exam! --A.*