

## ALE-1 “big questions” and high-level themes

During the course, we will try to collect evidence from studying individual systems and methods in order to help us answer the following questions about this research area:

### Definitions:

1. What IS an *adaptive learning environment* (ALE) and/or an *intelligent tutoring system* (ITS)? How would we differentiate these (or *can* we differentiate these) from other categories of technologies?

### Synthesis:

2. How, why, and when do ALE/ ITS projects draw on multiple disciplines, theoretical positions, and types of expertise?

### Goals:

- 3A. What has this research area set out to accomplish? What are its current overarching goal(s), and do these seem to have changed over time? If they have changed, what seems to have driven those changes? [*Think very high-level here, bigger than individual projects*]
- 3B. To what extent has this research area made progress toward those overarching goals? (and what is the evidence for that assessment of progress?)

### Course scope:

4. Why aren't we building a new system this semester, or modifying an existing one? (*A question suggested by previous course feedback*)

## Why pose these “big questions” at the start of the course?

- ⤴ Setting these questions at the beginning of the course underscores our focus on the **big picture** of this topic area, and how it synthesises many areas of informatics (and many other disciplines).
- ⤴ The questions are intended to be a “framework” for organising many small and specific pieces of information, and moving away from individual system/study examples to thinking about the larger research programme of ALE/ITS and its underlying assumptions.
- ⤴ We will return to these questions throughout the course, and consider how information about individual systems and techniques (e.g. Cognitive Tutors, user modelling) provides us with concrete evidence to help answer them.
- ⤴ Considering these questions will also help to draw attention to the persistent differences within the field. In many cases, there has been (and continues to be) a lack of consensus about philosophies, priorities, and methods.