



Two persistent systems level challenges

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Two persistent problems

1. Computed curriculum and distributed learning (fragmented, unstructured, not centrally controlled/curated)
2. Equity in meeting knowledge and learning needs of all members of society

Computed curriculum and learner knowledge graph

Reducing the basic units of
education:

From courses/workshops/modules
to competencies



Information
fragmentation...
loss of narratives
of coherence

Once we've fragmented content
and conversation,
we need to stitch them together
again so we can act meaningfully
(learn, assess)

Research attempts to make sense
of this:

DALMOOC

Personal Learning Graph

COCOA Grant (with CMU)

- Learning design
- Learner motivation/self-regulation
- "Pathways" of learning

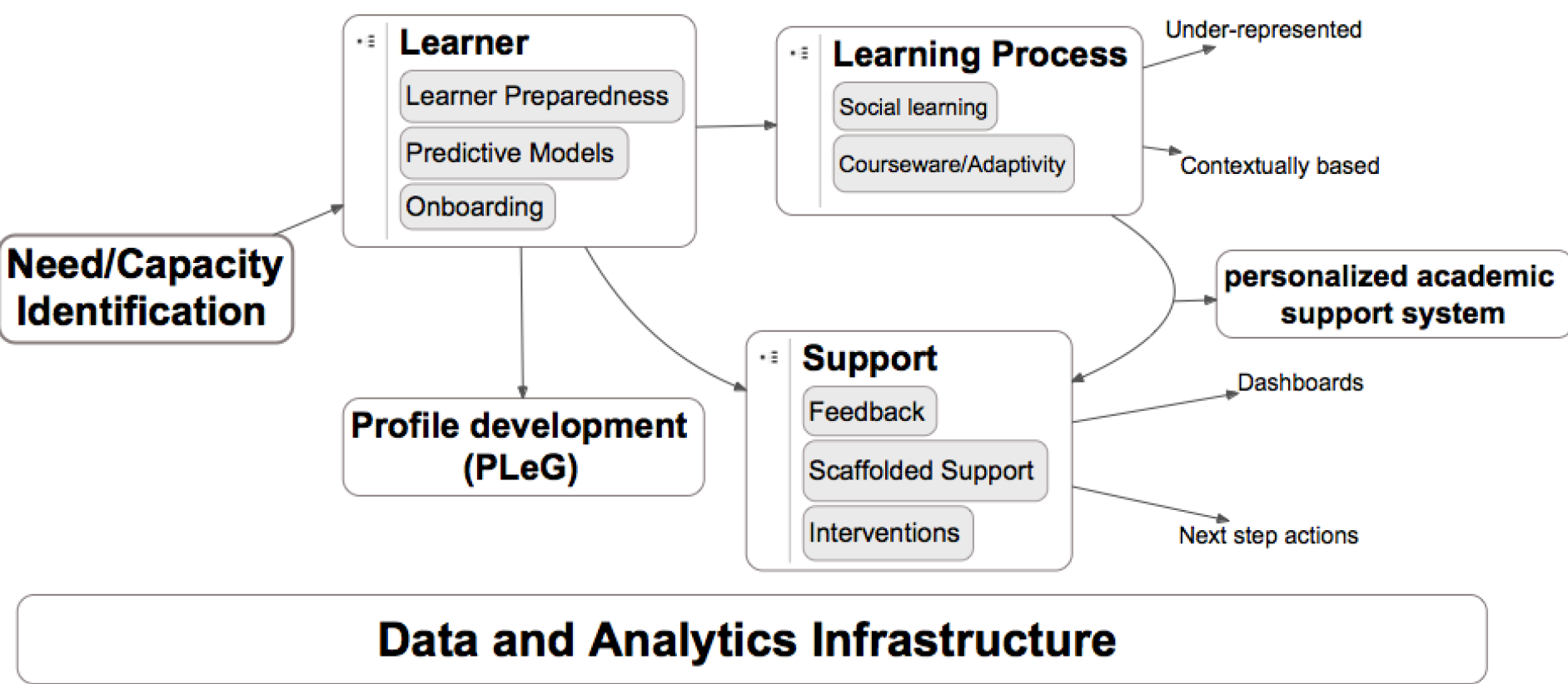
Equity: Social, Affect, Wellbeing

“If the ladder of educational opportunity rises high at the doors of some youth and scarcely rises at the doors of others, while at the same time formal education is made a prerequisite to occupational and social advance, then education may become the means, not of eliminating race and class distinctions, but of deepening and solidifying them.”

President Truman, 1947

Systemic integration, scaffolding,
and multiple support systems

Openness and open learning analytics



Research attempts

IDEAS (DOE Grant)

Scaffolded support (SPW/ASU)

Complexity framework for knowledge development & systems change (Boeing, NASA, SFI, Microsoft)

Affect/emotion (wearables, psychophysiological data collection – Stanford, Nov 14-15)

Smart Campus in a Smart City (Intel/DFW)