**Crowdsourcing Public Higher Education**

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**Problem**

Decrease costs
- Tuition and fees have increased faster than healthcare costs
- Average loan amounts increased 24% from 2004 to 2008; student loan debt exceeded credit card debt in 2010 for the 1st time

Increase successful outcomes/decrease total time
- Texas ranked 35th in four-year graduation rates in 2010
- Only 29% of students graduate in 4 years and only 56% graduate in 6 years

**A possible solution**

**Personalized instruction**
- Tailors learning to each student
- Situated learning increases time on task

**Supplemental instruction**
- Social and contextual
- Active learning

**Crowdsourced mentor system**
- Tracks impact for refined mapping and recognition of success

**Design elements**

**Personalized menu**
- Dynamic topic mastery indicators

Gamification
- Leaderboard recognition
- Problem levels

Captured/live mentor instruction
- Growing pattern library

Social
- Collaborative human interaction
- Participatory public content

**Quality control**
- Implicit peer assessment

**Interaction Flow**

Step 1 – Personalized instruction
- User control

Step 2 – Contextual PBL
- Gamification mechanics

Step 3 – Spatial pattern-matching
- Memory efficient

Step 3’ – Supplemental instruction
- Additive not remedial

Step 4 – Motivation
- Social and public

Step 5 – Open resource
- Evidence-based

**Algorithmic problem generator**

Recursive problem attempts

Live human mentoring

Stored pattern library

Success

Student results
Mentor results
Pattern results