Disrupting Class:
How Disruptive Innovation Will Change the Way the World Learns

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Disruption in computing
Disruption = affordability, accessibility

Yesterday
- GM
- Dept. Stores
- State universities
- Digital Eqpt.
- Delta
- JP Morgan
- Xerox
- IBM
- Cullinet
- AT&T
- Sony DiskMan

Today
- Toyota
- Wal-Mart
- Community colleges
- Dell
- Southwest Airlines
- Fidelity
- Canon
- Microsoft
- Oracle
- Cingular
- Apple iPod

Tomorrow
- Chery
- Internet retail
- Online universities
- Smart phones
- Air taxis
- ETFs
- Zink
- Linux
- Salesforce.com
- Skype
- Smart phones
Prime examples of nonconsumption

- Credit recovery
- Drop outs
- AP/advanced courses
- Scheduling conflicts
- Home-schooled and homebound students
- Small, rural, urban schools
- Unit recovery
- Disaster preparedness
- Tutoring

- Professional development
- Pre-K
- After school
- In the home
- Incarcerated youth
- In-school suspension
- School bus commute
- Summer school
- Teacher absenteeism
- Migrant worker families
Online learning gaining adoption

[Chart showing Online Enrollments (9-12 Grade) with a trend line indicating growth from 2000 to 2020.]
Definition of blended learning

A formal education program in which a student learns at least in part through online delivery of instruction and content with some element of student control over time, place, path and/or pace

and

At least in part in a supervised brick-and-mortar place away from home
Blended learning is not...
Blended learning is not...
Blended learning is not...
Emerging blended-learning models

- **Brick-and-mortar**
  - Traditional instruction
  - Technology-rich instruction

- **Online learning**
  - Informal online learning
  - Full-time online learning

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**BLENDED LEARNING**

1. **Rotation model**
   - Station-Rotation model
   - Lab-Rotation model
   - Flipped-Classroom model
   - Individual-Rotation model

2. **Flex model**

3. **Self-Blend model**

4. **Enriched-Virtual model**
Station-rotation model: KIPP Empower

Individualized Online Instruction

Teacher-led Instruction

Collaborative activities & stations

Source: Education Elements
### Lab-rotation model: Rocketship Education

<table>
<thead>
<tr>
<th>Teacher (T)</th>
<th>Paraprofessional (P)</th>
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<td><strong>T</strong></td>
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<td>Literacy/Social Studies</td>
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<td>Learning Lab</td>
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<td>Reading, Math</td>
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Source: Alex Hernandez, Charter School Growth Fund
Flipped-classroom model: Stillwater Area Public Schools

- **School**
  - Practice and projects

- **Home**
  - Online instruction and content

- Online learning
- Offline learning
- Teacher

INNOVISIONS
Individual-rotation model: Carpe Diem

- **Intervention**: 5:1
- **Seminar**: 12:1
- **Central Learning Lab**
  - **Direct Instruction**: 15:1
  - **Group Projects**
- **Learning Lab**
- **273 students**
- **T = teacher**
- **P = paraprofessional**

Source: Alex Hernandez, Charter School Growth Fund
## Flex & self-blend model: SF Flex Academy

<table>
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<tr>
<th>Computer Lab</th>
<th>Study Room</th>
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<th>Lunch/Social Area</th>
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### Classroom Rooms
- **History Room**
- **English Room**
- **Math Room**
- **Science Room w/ Lab**
Self-blend model: Quakertown Community School District
Enriched-virtual model: Albuquerque eCADEMY
Where to start?

What’s the problem to be solved?
Where to start?

Model selection & design

What’s the problem to be solved?
Where to start?

Hiring strategy
Professional development strategy
Hardware & Internet strategy
Software strategy

Model selection & design

What’s the problem to be solved?
Where to start?

Model selection & design

What’s the problem to be solved?
# Model selection and design

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*Or invent the next model...*
Different learning needs @ different times

Multiple intelligences
Learning Styles
Talents
Motivations/interests
Aptitude \( \rightarrow \) Working-memory capacity
Depends on subject/domain \( \rightarrow \) Different levels of background knowledge
Different paces
Ongoing neuroscience research
Built to standardize
Fixed time, variable learning

Deliver content to students  
Testing & assessment  
Progress to next grade, subject, or body of material  
Receive results
Competency-based learning

Offer learning experiences for students

Testing & assessment

Receive real-time interactive feedback

Progress to next body of material
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