REINVIGORATING
THE MIDDLE CLASS

Dan Rosensweig
CEO of Chegg, Inc
April 17th 2018
Americans feel under attack.

**Income Inequality**
- Gain in real wages 2000-2017
  - Upper Class: 18%
  - Middle Class: 5%

**Globalization Fears**
- 40% of Americans believe free trade agreements have been a bad thing for the U.S.

**Wealthy Get 3x More Degrees**
- Bachelor attainment rate

**Technological Changes**
- 72% of Americans worry about a future where robots and computers can do many human jobs

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Note: Upper Class and Middle Class defined as 90th and 50th income percentile, respectively.
Chegg is a voice of the student.

4B
page views¹

10M+
unique visitors per month¹

8M+
registered users

360%
increase in Chegg digital subscribers from 2013-2017

Source: Chegg

Chegg is uniquely positioned to understand industry trends and student needs.

2015

We have both
A SKILLS GAP & EXPECTATIONS GAP

Educators said:
To create strong critical thinkers

Students said:
To get a good job

Employers said:
To hire job-ready grads who are strong critical thinkers

2016

Is the Higher Ed Bubble About to Burst?

2017

Rebooting the American Dream

2018

REINVIGORATING THE MIDDLE CLASS

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Education is a business that has a lifecycle like any other. Just ask university presidents.

69% believe more than 5 universities will close in 2018

47% are uncertain about their institution’s financial stability

82% are concerned about target enrollment figures

Source: Inside Higher Ed 2018 Survey of College and University Presidents
Education has evolved in the past and has to again.

**AGRICULTURAL AGE**
1800s | Local

Goal: prepare workers for agriculture and industrial age jobs in rail and steel

**INDUSTRIAL AGE**
1900s | Local

Goal: prepare workers for auto manufacturing, oil and gas, chemicals, electricity, and more

**DIGITAL AGE**
Today | Global

Goal: ?

EVALED TO MEET THE GEOGRAPHIC, ECONOMIC, AND DEMOGRAPHIC NEEDS OF THEIR COMMUNITIES

Illustration of power loom weaving, T. Allom
Even the government tried to help students.

<table>
<thead>
<tr>
<th>THOSE WHO MAKE IT</th>
<th>THOSE WHO DON’T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEBT</strong></td>
<td><strong>DEBT</strong></td>
</tr>
<tr>
<td>$37K average student debt&lt;sup&gt;2&lt;/sup&gt;</td>
<td><strong>EARNINGS</strong></td>
</tr>
<tr>
<td>$3.4M lifetime expected earnings for college graduates&lt;sup&gt;4&lt;/sup&gt;</td>
<td><strong>JOBS</strong></td>
</tr>
<tr>
<td>22% of jobs requiring a bachelor degree or more can be automated&lt;sup&gt;5&lt;/sup&gt;</td>
<td>55% of jobs not requiring a high school diploma can be automated&lt;sup&gt;5&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

**Higher Education Act (1965) –** federal aid drove enrollment but not degrees earned

- **$7K average student debt for college dropouts<sup>3</sup>**
- **$1.2M lifetime expected earnings for high school dropouts<sup>4</sup>**

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Most students don’t make it through the gauntlet.

45% drop out or don’t go to college

37% don’t graduate

16M HS STUDENTS

THOSE THAT DO WONDER...

44% of graduates are in jobs that don’t require a degree

Source: NCES, BLS, Federal Reserve Bank of New York, and Chegg estimates.
* National Clearinghouse Research Center (2018): Reflects % of students who don’t graduate from a 4-yr institution in 6 years or less.
The future is not bright for those who opt out.

RETAIL SALESPERSON
CASHIER
FAST FOOD WORKER
WAITER / WAITRESS
JANITOR
CONSTRUCTION WORKER

LANDSCAPER
BARTENDER
TRUCK DRIVER
DISHWASHER
TAXI DRIVER
WAREHOUSE WORKER

Source: BLS (2016), Chegg Analysis
The jobs are just going away.

55% of those jobs will be automated by 2030.

<table>
<thead>
<tr>
<th>Retail Salesperson</th>
<th>Landscaper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cashier</td>
<td>Bartender</td>
</tr>
<tr>
<td>Fast Food Worker</td>
<td>Truck Driver</td>
</tr>
<tr>
<td>Waiter / Waitress</td>
<td>Dishwasher</td>
</tr>
<tr>
<td>Janitor</td>
<td>Taxi Driver</td>
</tr>
<tr>
<td>Construction Worker</td>
<td>Warehouse Worker</td>
</tr>
</tbody>
</table>

There’s already an economic disparity.

Real median earnings by educational attainment
(1979 = 100)

Why this is happening...

<table>
<thead>
<tr>
<th>TOMORROW’S JOBS</th>
<th>GROWTH MULTIPLE¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Learning</td>
<td>9.8x</td>
</tr>
<tr>
<td>Data Scientist</td>
<td>6.5x</td>
</tr>
<tr>
<td>Sales Development Rep</td>
<td>5.7x</td>
</tr>
<tr>
<td>Customer Success Manager</td>
<td>5.6x</td>
</tr>
<tr>
<td>Big Data Developer</td>
<td>5.5x</td>
</tr>
<tr>
<td>Full Stack Engineer</td>
<td>5.5x</td>
</tr>
<tr>
<td>Director of Data Science</td>
<td>4.9x</td>
</tr>
<tr>
<td>Full Stack Developer</td>
<td>4.5x</td>
</tr>
<tr>
<td>Brand Partner</td>
<td>4.5x</td>
</tr>
</tbody>
</table>

¹ 2012 -- 2017
Source: LinkedIn (2017), Chegg analysis
IT’S TIME TO REALIGN TO SERVE THE NEEDS OF THE MODERN STUDENT
In order to serve them, we need to know who they are.

And who they are, ain’t who they used to be.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>1970</th>
<th>Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older than 25 years old</td>
<td>28%</td>
<td>40%</td>
</tr>
<tr>
<td>Minority enrollment</td>
<td>15%</td>
<td>42%</td>
</tr>
<tr>
<td>Female students</td>
<td>42%</td>
<td>56%</td>
</tr>
<tr>
<td>Working &gt;30 hours / week</td>
<td>12%</td>
<td>40%</td>
</tr>
<tr>
<td>English is not first language¹</td>
<td>4%</td>
<td>11%</td>
</tr>
<tr>
<td>Have children</td>
<td>—</td>
<td>26%</td>
</tr>
</tbody>
</table>

**TODAY’S EDUCATION SYSTEM IS INCOMPATIBLE WITH TODAY’S STUDENTS**

Chegg estimates

Note: 'Now' refers to 2015 and 2016 data

¹4% as of 1987, the first year such data was tracked
The reason they go is to get a better job.

- **85%** get a **better job**
- **73%** make **more money**

Source: UCLA Higher Education Research Institute (2016)
The real reasons they opt out are time and money.

If college and work are at the same time, you’re forced to choose work.

- **71%** Needed work & money
- **52%** Can’t afford tuition & fees
- **43%** Classes weren’t useful
- **35%** Not worth the money
- **34%** Classes too difficult

Source: Bill and Melinda Gates (2009)
Eating or reading. This is a terrible choice.

36% of college students are food insecure

Students are studying, working, looking for jobs, preparing for the future... all while hungry.

Don’t let me tell you – let them.
THIS IS NOT MISSION IMPOSSIBLE
WE CAN SERVE
3X MORE
STUDENTS
IF WE DO OUR
JOB RIGHT

Source: NCES, Chegg Analysis
Students are telling us what to do.

55% of students use smartphones in class, behind only laptops.

60% of students believe digital learning tools had a positive impact on performance.

47% of students used online tutorials to help them with school work in 2017.

EMBRACE TECHNOLOGY TO EXPAND LEARNING

IT’S TIME TO REIMAGINE

WHO WE SERVE
WHAT THEY NEED
WHY THEY COME
WHERE THEY ENGAGE

AND PUT STUDENTS FIRST
Students, employers, and institutions aren’t seeing eye-to-eye.

**What students say they want**

- 85% college freshmen say that getting a **better job** is a very important factor in getting a degree.

**What universities say they offer**

- 23% private four year college presidents believe their primary mission is to **prepare students for the workforce**.

**What employers say they’re getting**

- 66% executives are **not satisfied** with the level of skill-attainment of young people entering the workforce.

Most can’t imagine the future.

But we must.
Technology is relentless in the face of early detractors.

“[T]he telephone may really be a device of the enemies of the Republic”

*The New York Times, 1876*

“Good enough for our transatlantic friends […] but unworthy of the attention of practical or scientific men”

*British Parliamentary Committee, 1878*

“The virtual keyboard will be about as useful for tapping out emails and text messages as a rotary phone”

*TechCrunch, 2007*
Chegg has lived this and survived to tell the story.

2013

80%+ textbook revenue
Flat growth
No profit
Huge need for cash

2018

440M content views in 2017
69%+ from 2016
20M questions and answers
+6M in 2017
9PM EST is when students use Chegg the most

¹ As of 12/31/2017
We have good role models.

**REINVENTION**

*Then*
- Adobe
- 8M Creative Pros

*Now*
- 12M Users

**DISRUPTION**

*Then*
- Netflix
- Revenue CAGR 4.5%

*Now*
- Disney
- Revenue CAGR 25.5%

*Image: “Adobe Photoshop 7.0” Amazon.com*  
If you don’t embrace - you lose the race.
If the demand is there someone else will meet it.

Walmart

Market Cap: $254B

Warner Music Group

Equity Value: $1B

Amazon

Market Cap: $699B

Spotify

Market Cap: $27B

Note: Market capitalizations as of 4/13/18; Warner Music Group equity value as of 2011 acquisition
Winners have things in common.

Relevant Brands

Own Their Customer

Own Their Data

Own Their Distribution Channel

Own Their Proprietary Content
Netflix vs. Movie Theaters.

Hours of Content Watched (in billions)$^{1,2}$

<table>
<thead>
<tr>
<th>Year</th>
<th>Netflix</th>
<th>Movie Theater</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>19.8</td>
<td>2.5</td>
</tr>
<tr>
<td>2017</td>
<td>23.8</td>
<td>2.5</td>
</tr>
</tbody>
</table>


MORE CONTENT
MORE CONVENIENT
MORE AVAILABLE
MORE AFFORDABLE
MORE DIVERSE

HAS CREATED MORE CONSUMERS AND MORE CONTENT CREATORS

$^{1}$ Assumes U.S. Netflix members stream as much content as Netflix global average and average movie length of 2 hours; $^{2}$ U.S. only
Graduate programs were early adopters.

Why did graduate programs move online?

- Students are older
- Students have other commitments
- Students want to remain employed
- Prepare students to get a job
- Physical constraints of classroom and time

GRADUATE PROGRAMS WERE FORCED TO EVOLVE TO ATTRACT STUDENTS

Source: Chegg analysis
It’s time for undergraduate programs to catch up.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>SOLUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited classes</td>
<td>Unlimited content online</td>
</tr>
<tr>
<td>Fixed times</td>
<td>On-demand</td>
</tr>
<tr>
<td>Fixed locations</td>
<td>On every device</td>
</tr>
<tr>
<td>Limited number of educators and tutors when students need them</td>
<td>Expand number of educators and tutors and make them available 24/7</td>
</tr>
<tr>
<td>Limited curriculum</td>
<td>Ability to have unlimited curriculum</td>
</tr>
<tr>
<td>Costly and takes a long time</td>
<td>Reduce cost and accelerate time from learning to earning</td>
</tr>
</tbody>
</table>
IT’S NOT TOO LATE TO REINVIGORATE THE MIDDLE CLASS

AND WE CAN DO IT TOGETHER