

AMENDED Exhibit 1135

PLAINTIFFS' OMNIBUS OPPOSITION TO DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT

Case No.: 4:22-md-03047-YGR

MDL No. 3047

In Re: Social Media Adolescent Addiction/Personal Injury Products Liability Litigation

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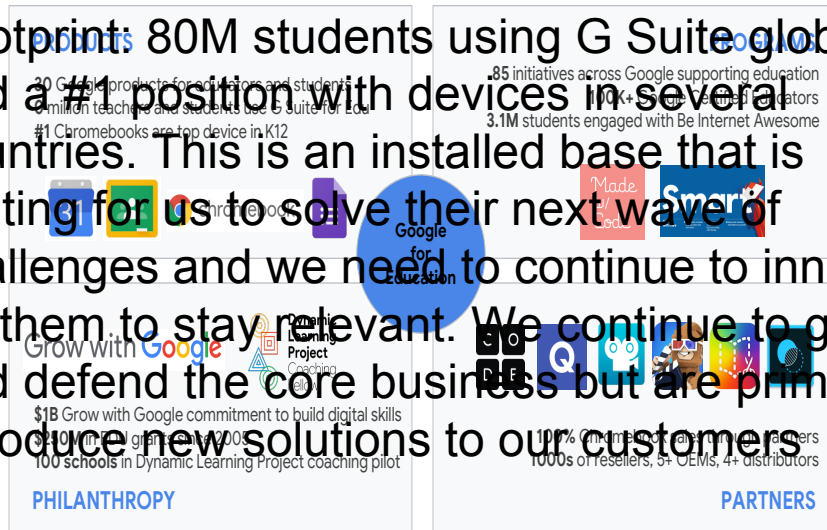
Google has a strong position, but
competition is accelerating

Google

Google has a large footprint across many areas of education technology

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Footprint: 80M students using G Suite globally and a #1 position with devices in several countries. This is an installed base that is waiting for us to solve their next wave of challenges and we need to continue to innovate for them to stay relevant. We continue to grow and defend the core business but are prime to introduce new solutions to our customers



Thought leadership within Google: We have over 10 teams at Google focused on Education delivering products and programs. Google.org has invested 600M into education the past 3 years. The Google for EDU team is at the intersection of all these teams and has the expertise, relationships and channels to take these products and initiatives to market at scale.

started in HE back in 2006 and won universities over to Gsuite along with K-12. We started the Chrome business in 2012 and pivoted to K-12 to become #1 in devices: US, Canada, Sweden, NZ in 5 years.

In the last two years we have expanded our presence to cover both K12 and higher education in the US and look to expand that in other regions.

A horizontal timeline from 2006 to 2018 with blue bars representing periods of activity. Key events are marked with vertical lines and text labels. Some labels are partially obscured by redaction boxes.

Year	Event
2006	ASU 1st University to adopt G Suite for EDU
2010	Apple iPads entered EDU
2010	US Common Core standards released
2012	72 out of top 100 US universities using Google Apps for EDU
2012	iPads became the #1 device in US EDU
2012	Google launched CBs in EDU
2014	Chromebooks became the #1 device in US EDU
2014	Google Classroom launches
2015	US K-12 Common Core testing ramps and catalyzes device sales
2015	EFF Files FTC Complaint related to student data privacy
2016	G Cloud starts HE GCP sales team
2018	Google launches GCP credit program for researchers

2015 EFF files FTC complaint to raise awareness about student data privacy

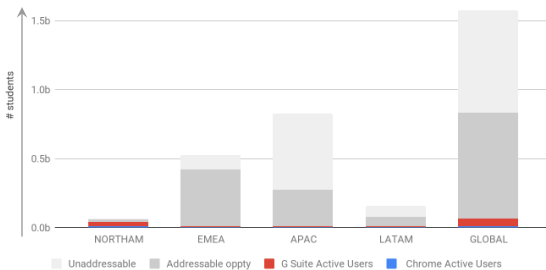
2016 G Cloud starts HE GCP sales team

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There's significant addressable market up for grabs in K-12

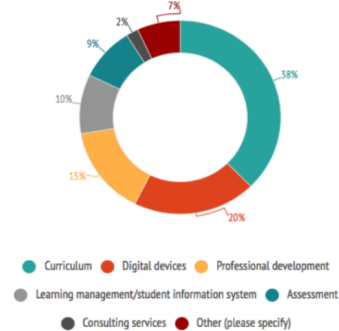
[Adoption] Still large opportunity for core products

"Only" [REDACTED] G Suite for Edu active users out of 1.6 billion students [REDACTED] teachers in formal education globally



[Revenue]...and untapped schools spend

Devices is only 20% of educational institutions' spend



While we are a leader in US K-12, we have room to grow

Chromebooks market share in K-12 US
Total addressable cloud market in K-12 US

... let alone the rest of world, where we're just getting started

- Addressable opportunity excluding China (238m students) and unconnected students (proxy: 55% of the world lacks internet access)

Shifting economic trends + tech will unlock new markets

- 65%+ students will work in jobs that don't exist today. But most lack the digital skills they'll need for that future
- Informal learning on the rise, enabled by massive content platforms
- Emerging tech like ML/AI, VR/AR will enable personalized learning at scale

Google for Edu is in a unique position to cross-sell

- G Suite and Classroom - Largest edtech adoption
- Edu institutions spend ~38% on curriculum and content (---> Youtube)

Sources

Connectivity- only 45% of world population has internet access Source:

go/whirlybird (75% connected in the US, 93% in the UK)

Students - Futuresource report

China students - Futuresource report

However we are just scratching the tip of the iceberg.

We have the opportunity to drive DEEPER impact with our products.

We may be the market leader in devices in Education but we are only account for [REDACTED] of the market in the US. We are only the dominant player in 3 markets globally. We are only focused on students with connectivity leaving x-billion students behind, And many of our current users only use our product at the most basic level (Gmail vs Docs - Classroom adoption vs G Suite adoption)

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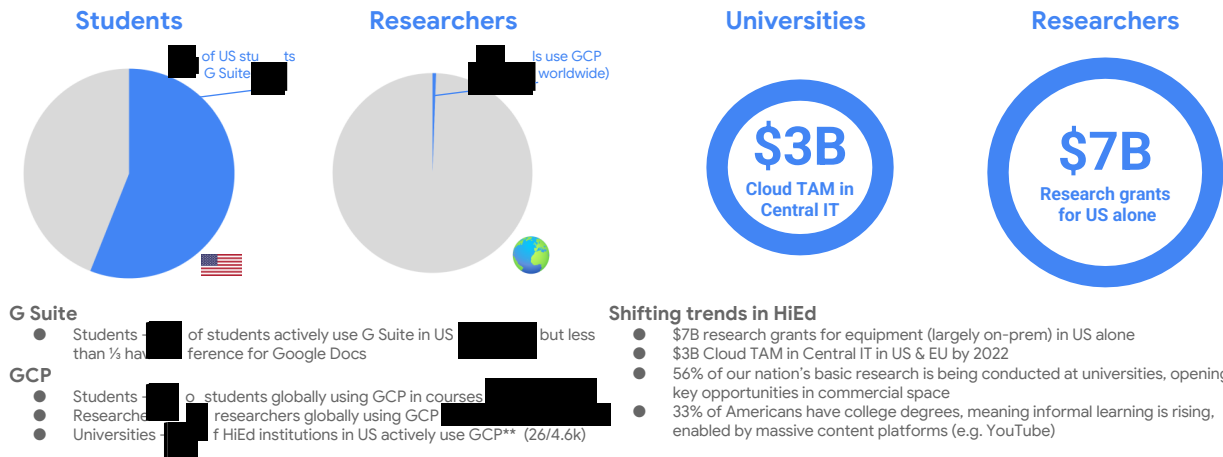
... and an urgency to double down on Higher Ed

[Adoption] Need to double down on HiEd adoption

Room to grow our HiEd Adoption, which is key moment for users en route to the workforce + for thought leadership

[Revenue] Large Cloud TAM in Central IT+Research

As Universities accelerate their Cloud journeys, there is a lot of spend to capture



Higher Ed is key for thought leadership and product adoption en route to the workplace, yet Google Cloud presence is low SOURCE DATA:

--# of students using G Suite -- assumes in US, so students)

PIs who received research grants or paid to use GCP out of - # of Principal Investigators here: <https://www.centerwatch.com/news-online/2015/11/01/number-global-clinical-pis-remains-mystery-estimates-vary-widely-due-different-criteria-data-sources/>

--26 universities in US spending >\$1500/month out of 4,600. Source data here: <https://nces.ed.gov/fastfacts/display.asp?id=84>

\$73m R&D Spend- source SOURCE:National Science Foundation, National Center for Science and Engineering Statistics, Higher Education R&D Survey

<https://docs.google.com/spreadsheets/d/1WC8oR0FFh8HKsUjHezaYNwTQS7OZD2XkZXIQZoUvSwI/edit#gid=1346495726>

Other data to potentially include in this slide:

-How many learners use Google products in formal education (K-12 vs HE)? What is dropoff?

-# of learners vs # of learners that use at least one Google product vs. # of users that use Youtube as consumers?

-Adoption - Number of students, teachers, researchers vs how many user G Suite / GCP /Chrome (30DA)

-Revenue -IT budgets / research grants in Higher Ed (US) vs GCP revenue

-Doing the right thing - xx% of people have college degrees that don't benefit

from Google tools (not universally accessible)

-Value to Google - revenue per user (G Suite, GCP, Chrome) -
LTV

VIDEO

-Youtube used by X% below Y age in the US

ML/ANALYTICS

-X amount of data in schools that needs to be harnessed

DISTANCE LEARNING

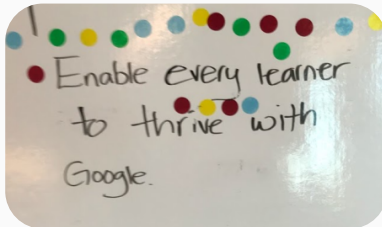
-x% of learners (age 18+) are taking a distance learning course

Google for EDU x-Functional Meeting (Aug)

Who was there?

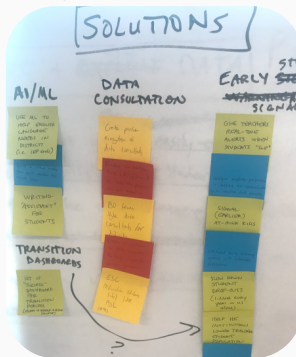
EDU is a vertical that cuts across many organizations at Google and requires strong collaboration to make our solutions look seamless to our customers

First ever gathering of ~40 people representing 11 orgs across Google



Purpose

- Set a common edu vision
- Unlock 10X opportunities based on market trends and TAM
- "Design Sprint" to examine growth areas and rank them



Outcome

Settled on these market opportunities and potential solutions

1) Learner's want flexibility and engaging content

- Distance Learning
- Video Learning

2) Schools are producing immense amounts of data and need to gain insights

- AI/ML
- Analytics and Insights

3) Learners expect personalization

- Personalized learning
- Adaptive Content



Who was there?

EDU is a vertical that cuts across many organizations at Google and requires strong collaboration to make our solutions look seamless to our customers

~40 people attended representing 11 orgs across Google

Product: GCP, G Suite, Chrome, Google for EDU, Customer Eng, PSO, DevRel, EngEDU, EDU Marketing, Sales Ops, Channel

Purpose

- Set a edu vision that resonates across the teams
- "Design Sprint" to discuss opportunity and growth areas and rank them - [REDACTED]

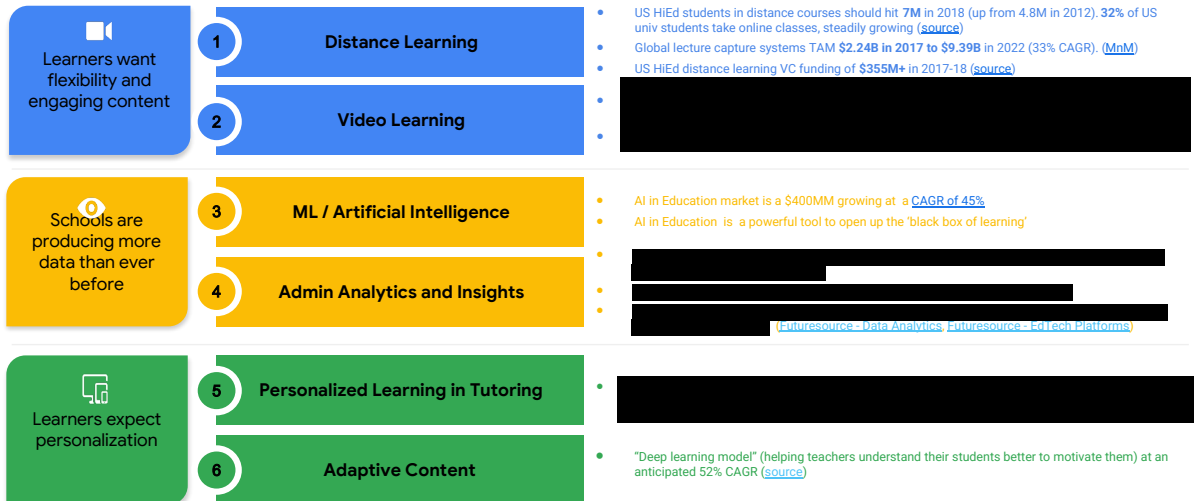
Prioritized two growth areas to be scoped in plan 2019

Analytics and Insights - help educators make sense of the immense data they have on student activity and performance to ultimately improve student outcomes

- Video recommendation engine - to identify, curate and recommend safe educational content



Customer needs are evolving, following three major trends*



*We identified these trends by reviewing recent industry investments, and they are echoed in the experiences of our sales and product teams

We are best positioned to lead in two of these areas

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		Aligned with Google core competencies	High revenue potential	Ability to scale in near term	Limited competitive threat	Drives broader ecosystem engagement
 Learners want flexibility and engaging content	1 Distance Learning		✓		✓	✓
	2 Video Learning	✓	✓	✓		✓
 Schools are producing more data than ever before	3 ML / Artificial Intelligence	✓		✓	✓	✓
	4 Admin Analytics and Insights	✓	✓	✓	✓	✓
 Learners expect personalization	5 Personalized Learning in Tutoring		✓		✓	✓
	6 Adaptive Content		✓			✓

The ML / Analytics Opportunity

Educators are sitting on a growing goldmine of data, but lack the resources and capacity to organize and make sense of it. We will design ways for schools to easily organize, use and gain insights from student data, ultimately setting the stage for us to reinvent the education system through data.

Strengths

- Strong leadership / reputation in ML and data analytics
- Large installed base

Weaknesses

- Product usage metrics do not indicate learning outcomes; lack of research to establish correlation
- As a tech co, we have little limited credibility in determining usefulness

Opportunities

- Leverage predictive analytics to provide better outcomes for students and more value for orgs.
- Cement Google as ML leader in EDU
- [REDACTED]

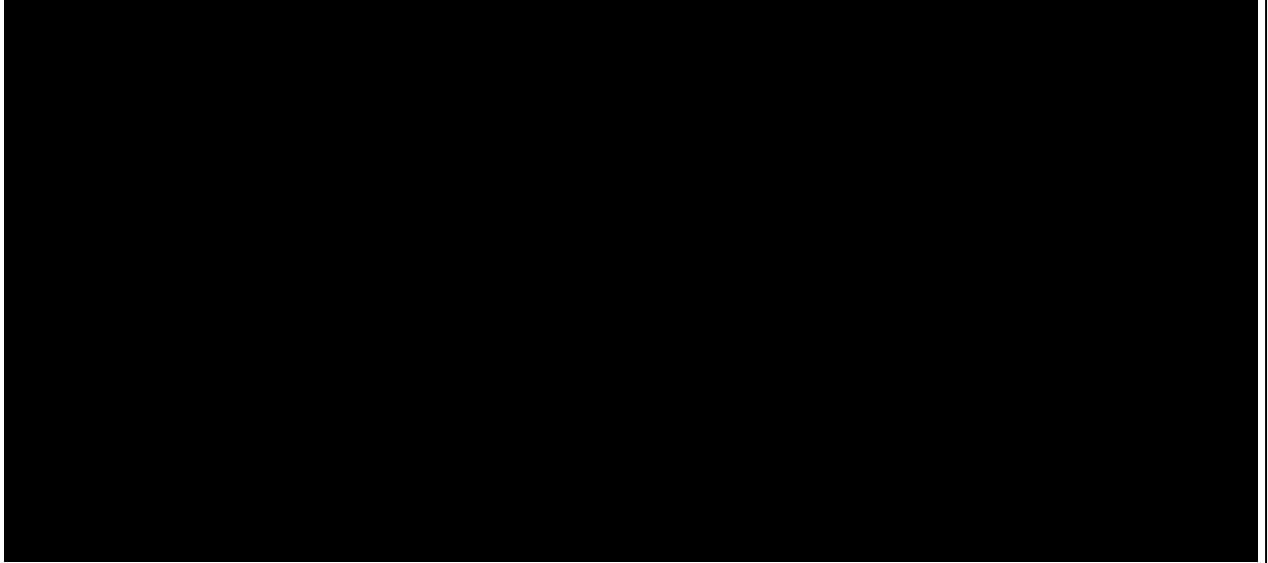
Threats

- [REDACTED]
- Perception of privacy issues stops us taking thought leader position
- Ethical issues with student data and bias in algorithms



recommended

Potential “Build” phases for ML / Analytics



The Video Opportunity

Learners value video as an engaging medium but cannot find safe, educational content easily. While schools spend 38% of their budget on curriculum/content, Youtube is not seen as a safe platform and blocked by 42% of our G Suite for Edu users.

Strengths

- Youtube is most popular video platform with significant EDU usage
- Cloud Video, Hangouts also strong video capabilities
- Content created for other EdTech orgs often hosted on YT already
- Large installed base of G Suite, Chrome, and (consumer) YT users

Opportunities

- Video as a medium is increasing thanks to tutoring and flipped classroom. 83% of schools are incorporating video.
- Schools spend 38% of budget on curriculum / content

Weaknesses

- 42% of GSuite for EDU users block YT
- Difficult to get YT to prioritize EDU product; Current YT monetization doesn't work for ad-free EDU accounts
- Deprecated video editing tool leaves hole in offering

Threats

- PR Risk - influence of video on kids content

Potential “Build” phases for Video

	Phase 1	Phase 2
Vision	Curated video platform ● Curated video content for learners and educators: safe, educational and fun/engaging ● Tagging and heatmap of all edu content (vs. level, subject...) to see gaps	Video recommendation engine ● Personalized recommendations ● Progressive sequences
Strategy and Technology	Youtube for Schools - safe version of Youtube Red for schools , subscription revenue model Prioritize Security and privacy - no ads, comments, related videos Build Advanced features include transcription, snippets of video, in-video quizzes, engagement analytics, admin control	ML-based recommendations : meta-tagging to improve search capability then ML model to suggest personal, relevant content organized in sequences (progressive)
Cross functional teams	● YouTube PM and engineers to develop education subscription product (or similar allocation within cloud with approval to work on YT product; engineers to build ML based recommendation engine ● Augment sales and program managers	
Success Metrics	● Adoption (watch time, 7DA, classroom shares, # of districts) ● Revenue (district subscriptions purchased)	● Adoption (watch time, 7DA, classroom shares) ● Stickiness (video drop-off, continued sequences) ● Revenue (district subscriptions purchased)

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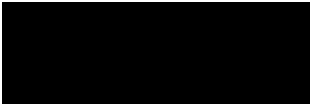
Proposed follow-up and next steps

Google

[Draft] 2019 Priorities - What we are doing differently

1. Double down on Higher Ed

- Modernize HE by engaging with Central IT on student analytics & ML initiatives
- Prepare students for careers with cloud computing by driving GCP usage in courses
- Transform research through AI by engaging with top 50 universities on GCP



2. Don't lose #1 in NA K-12; Achieve #1 in Int'l K-12

NorthAm

- Defend base with focus on adoption; "better together" product integration
- Enable partners to unlock whitespace
- Tell a coherent story across all products and programs

Int'l

- Accelerate MX, BR & JP, continue investment trajectory for '19.
- Invest in current exploratory markets (DE, IT, AR) pending market reports .
- Leverage partnerships we've built in publishing, content and global school networks

3. Leverage our strengths to shape the industry

Redefine EdTech space with Google at its center

- Launch ML Analytics product to lead in ML applications in EDU space
- Launch video product to pair capabilities with clear industry need
- Expand thought leadership in customer success programs and social impact

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19

Keep, Expand, Transform

Next steps for big bets

- Agree up the chain that we are committed to making a sizable bet in EDU
- Align on which bet(s) we want to pursue
- Enlist central BizOps team to help build out a strategy (ideally by mid Oct in time for 2019 budget cycles)
 - Get industry experts to weigh in
 - Size the opportunity
 - Confirm initial strategic direction (build vs. buy)
 - Determine investment requirements
- Resource teams within cloud and/or cross-functionally OR source and proceed with acquisition