



<https://goo.gl/t7nAzF>

Current Trends in Instructional Technology

Dr. Odin Jurkowski

Missouri Association of Colleges for Teacher Education (MACTE) Fall Conference

2015.10.27

1.30 - 2.20 pm

This presentation is

- not about how to use any particular tool
- not about new software
- not about “app of the week”
- not about selling a product (*though it may sound like it at times*)

This presentation is about

how we prepare candidates for a variety of educational environments

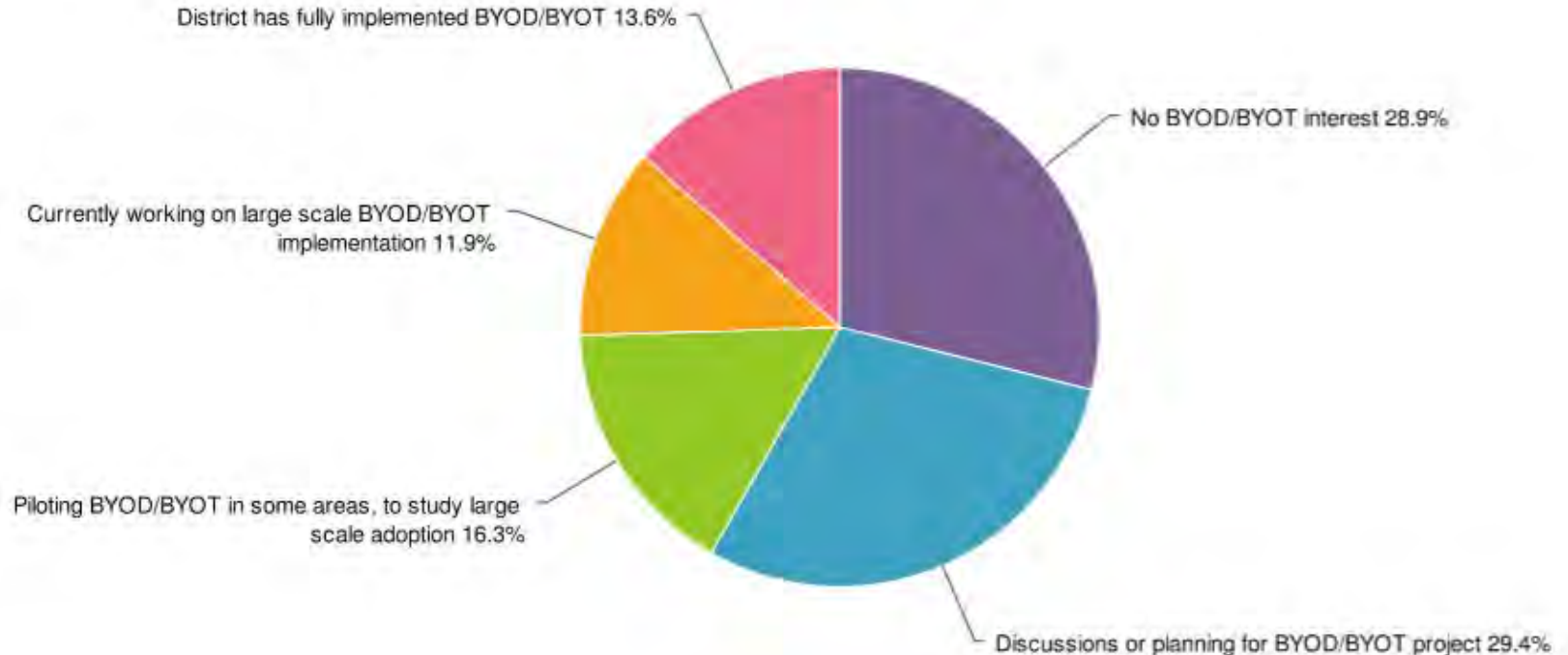
- the big picture
- breadth and depth
- market trends
- faculty awareness
- what is actually happening in k-12 schools **today**
outside of anecdotal evidence or pockets we observe

Agenda

- BYOD / 1:1
- Phones
- Tablets
- Laptops
- Learning Management Systems
- ISTE Standards and Curriculum Mapping
- Classroom Management
- Professional Development

Bring Your Own Device (BYOD)

Does your district have a BYOD/BYOT policy as part of a 1:1 initiative?



Phones



Media coverage of iPhone 6s



Reality

September data shows sharpest iOS market share drop in months as Android gains

By Zach Epstein on Oct 1, 2015 at 1:16 PM

MOBILE

“Apple’s new iPhone 6s and iPhone 6s Plus were on sale for nearly a week in September, but that seemingly wasn’t enough time to curb the platform’s steepest market share decline in months.”

Phones

In a BYOD environment, what are students bringing? Look to sales of phones:

Market Share		
	World Wide	U.S.
Android	82.2%	51.6%
Apple	14.6%	44.1%
Windows	2.5%	2.9%
Other	.7%	1.3%

53% of U.S. children get their first cell phone by age

6

1:1 Initiatives

US ANNUAL UNIT SHIPMENTS & MARKET PENETRATION

Move to digitise assessments has led to significant investment in PCs from Districts. Further growth expected in mid term as some Districts are still to deploy.



- Annual shipment data represents sales of Notebooks, Netbooks, Chromebooks, Tablets into K-12 institutions, not including 'Bring Your Own'
- Market penetration data, refers to the number of students/teachers in US K-12 institutions with a device

Tablets



Tablet Sales Worldwide

Current tablet sales in total

	Worldwide %
Android	70%
Apple	21%
Microsoft	9%



Tablets Are a Fad – They’ll Largely Disappear in 2-3 Years

By Cathie Norris, Elliot Soloway | 07/31/14

Apple iPad Fad Is Over

The iPad is so over, even Apple seems to be moving on

Slowing innovation, slowing sales, and Apple's new areas of interest suggest we're approaching 'Apple 3.0'

September 15, 2015

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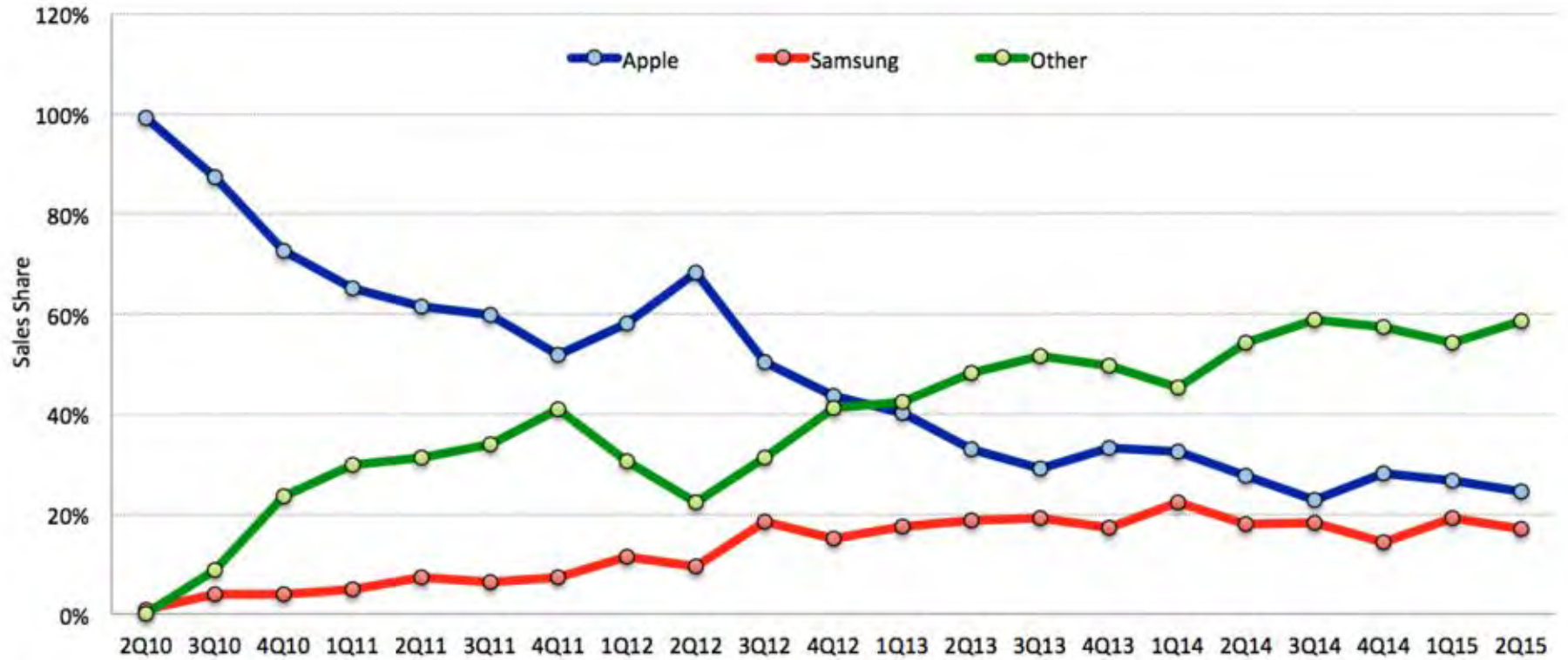
[Education Week's blogs > Marketplace K-12](#)



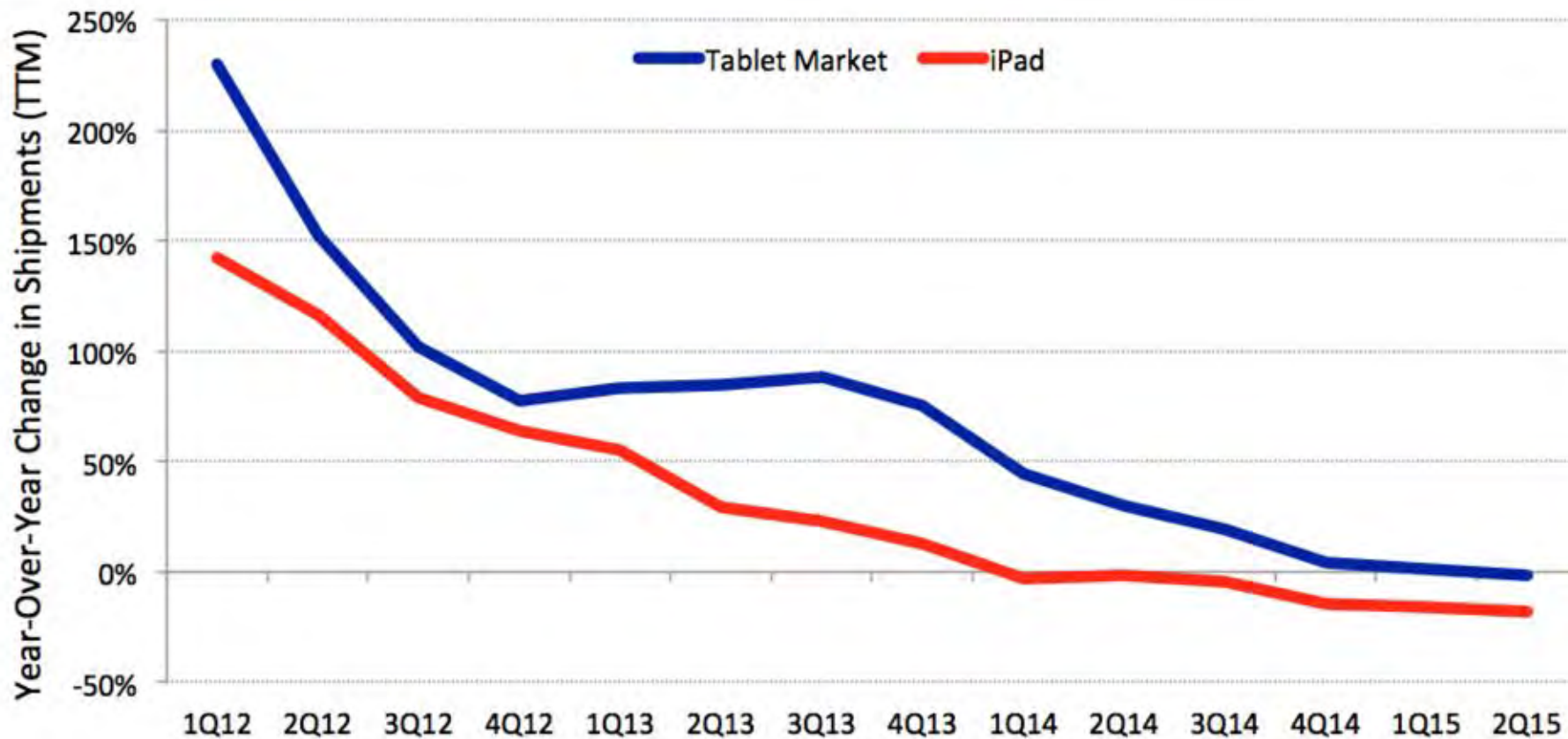
[« Play #EdTechJargon Bingo With Us From ISTE 2015](#) | [Main](#) | [ISTE 2015 Kicks Off With Array of Learning, Networking Activities](#) »

Amplify Reported to Be Dropping School Tablet Business

Global Tablet Market Sales



Source: IDC, AboveAvalon.com



Source: IDC, AboveAvalon.com

Laptops



Google Chromebooks: The most popular classroom computing device

Lost in all the buzz about Google's new Nexus smartphones and Chromecast devices was that Chromebooks are now schools' favorite computer device.



By Steven J. Vaughan-Nichols for [Linux and Open Source](#) | October 2, 2015 -- 11:37 GMT (04:37 PDT) | Topic: [Hardware](#)



DEC 1, 2014 @ 12:04 AM 26,277 VIEWS

Google Unseats Apple In U.S. Classrooms As Chromebooks Beat iPads



Anthony Wing Kosner, CONTRIBUTOR

Quantum of Content and innovations in user experience

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FULL

As of the third quarter of 2014, Chromebooks have displaced iPad as the most popular device in U.S. classrooms, a huge win for Google in a market historically dominated by Apple. Google shipped 715,500 of the low-cost laptops into

Chromebooks are eating Microsoft's lunch and dinner



US Chromebook sales reach 5 million as Microsoft loses education sector

Redmond faces battle to hang on to valuable education software sales



By [John E Dunn](#) | Mar 23, 2015

MORE GOOD READS

Are Chromebooks a danger to open source software?

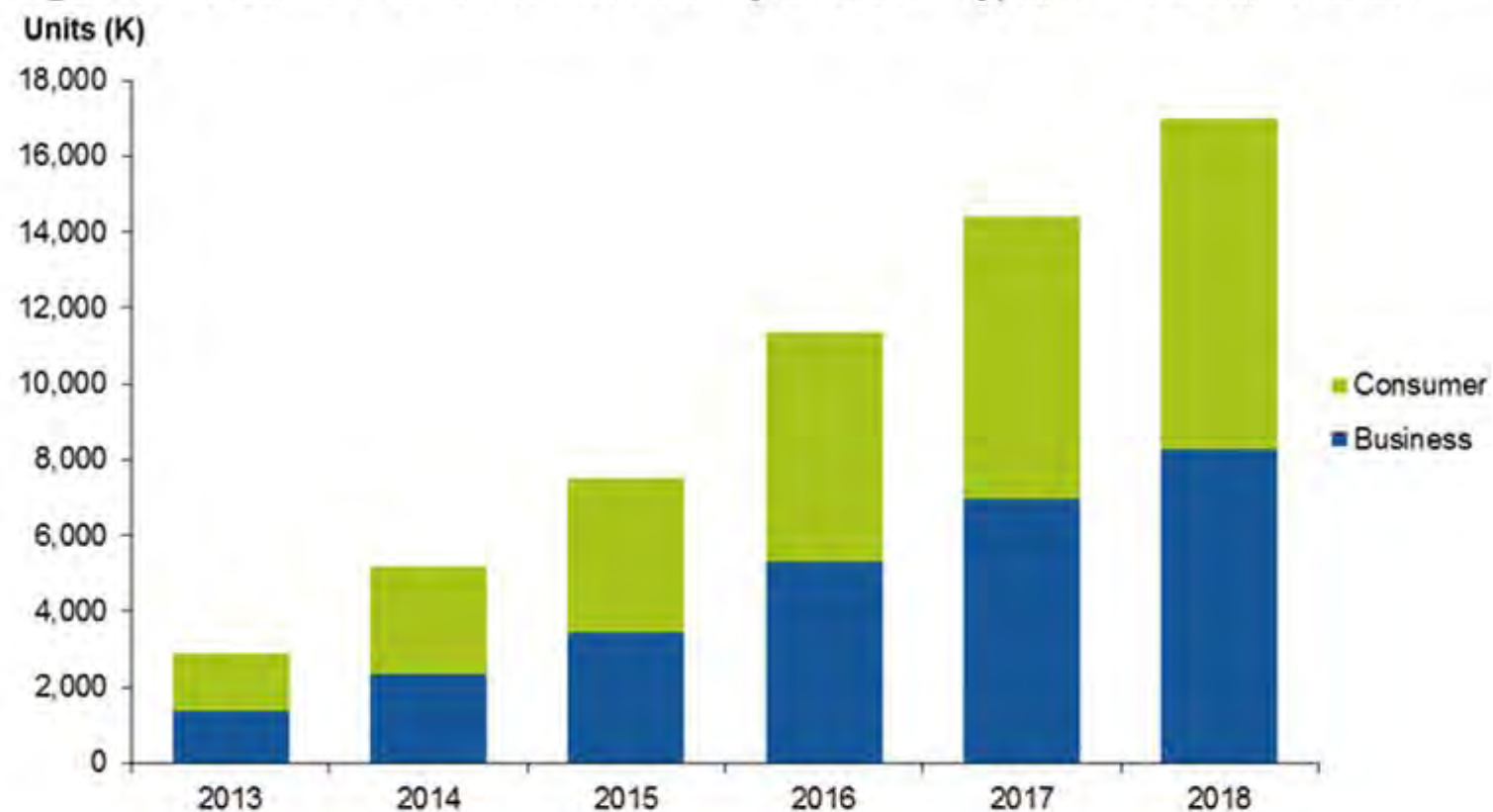


Why Windows 10 won't kill Chromebooks

Chromebooks versus CloudBooks: Microsoft beat Google?

on IDG Answers →

Figure 2. Forecast of Chromebook Sales by End-User Type, Worldwide, 2013-2018



Note: Sales to the education sector are included in "Business"

Chromebooks

- Lower device cost
- Lower cost for software
- Lower support cost

“Chromebooks take 69 percent less effort to deploy and 91 percent less time to manage Chromebooks over Windows laptops and Apple iPads”

69%

less labor to deploy

91%

less labor to support

82%

less teacher time spent
troubleshooting

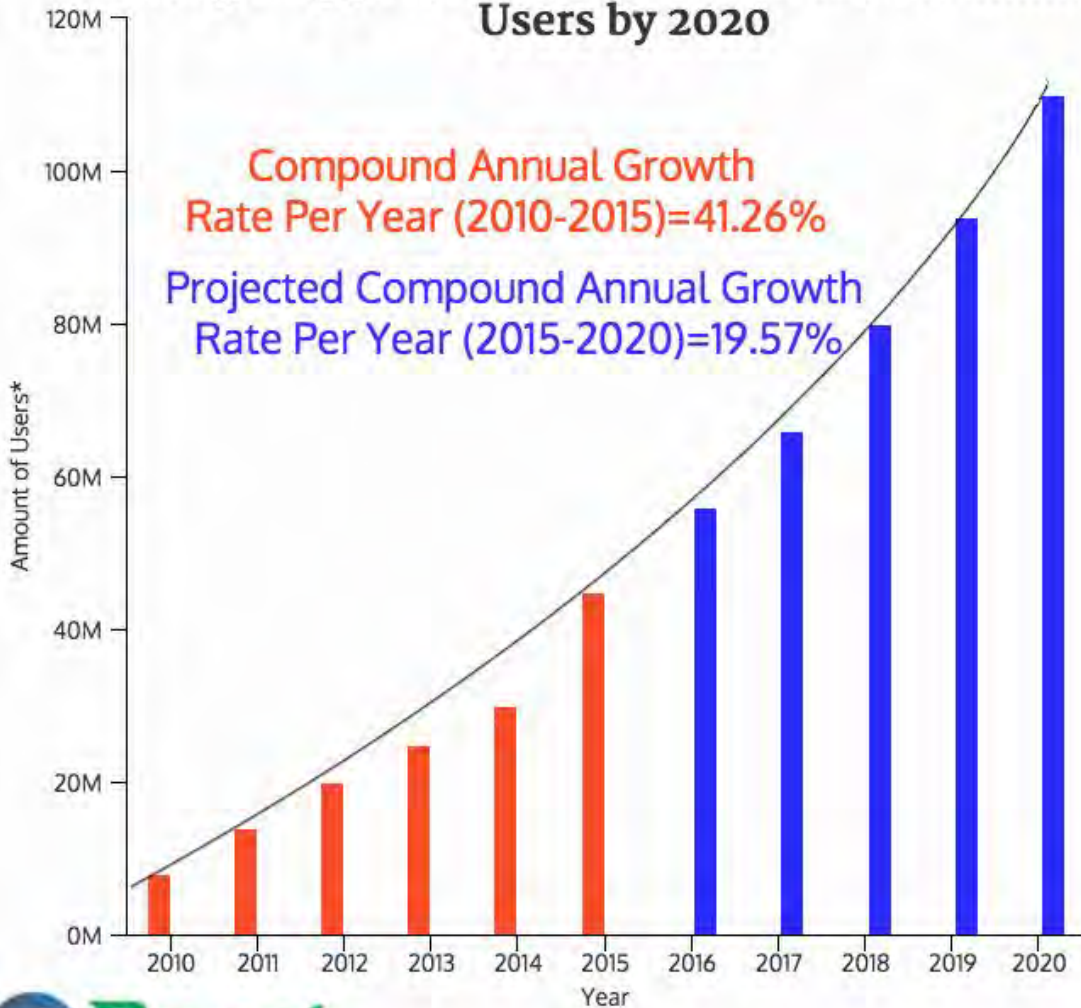
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hours addressing virus
issues

\$1,135

saved per Chromebook
every 3 years

Google Apps for Education to Reach 110 Million Users by 2020



Learning Management Systems (LMS)

Over 40 vendors in a \$8 Billion industry

- Blackboard
- D2L
- Moodle
- Edmodo
- Canvas
- Google Classroom

Trends

- Tablets are the past (but if there are tablets then Android dominates)
- BYOD is temporary and/or complementary; current generation want to use their phones (Android)
- 1:1 laptops are the goal for most schools (with Chromebooks dominating) with some kind of LMS; Google Apps

ISTE Standards for Teachers

1. Facilitate and inspire student learning and creativity
2. Design and develop digital age learning experiences and assessments
3. Model digital age work and learning
4. Promote and model digital citizenship and responsibility
5. Engage in professional growth and leadership

1. Facilitate and inspire student learning and creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.

- a. Promote, support, and model creative and innovative thinking and inventiveness
- b. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources
- c. Promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes
- d. Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments

2. Design and develop digital age learning experiences and assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the Standards•S.

- a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity
- b. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress
- c. Customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources
- d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards, and use resulting data to inform learning and teaching

3. Model digital age work and learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

- a. Demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations
- b. Collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation
- c. Communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital age media and formats
- d. Model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning

4. Promote and model digital citizenship and responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.

- a. Advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources
- b. Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources
- c. Promote and model digital etiquette and responsible social interactions related to the use of technology and information
- d. Develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital age communication and collaboration tools

5. Engage in professional growth and leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

- a. Participate in local and global learning communities to explore creative applications of technology to improve student learning
- b. Exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others
- c. Evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning
- d. Contribute to the effectiveness, vitality, and self renewal of the teaching profession and of their school and community

Curriculum Mapping to ISTE Standards

Standard	Course 1	Course 2	Course 3	Course 4...
1a	Introduced	Reinforced		Mastered
1b				
1c				
1d				
2a				
2b...				

Curriculum Mapping to Specific Technology

Technology	Course 1	Course 2	Course 3	Course 4...
Docs	Introduced	Reinforced		Mastered
Slides				
YouTube				
Maps				
Apps				
Forms...				





Professional Development

- Don't focus on the “app of the week” sessions
- Do create a multi year plan (curriculum) with an overarching structure (map); a certificate
- Do map out what is being taught in every education course
- Do ensure a basic minimum level of skills for all faculty
- Do maintain currency, especially as faculty come and go

Are we preparing teachers for the future or the past?

Present / Future

- BYOD
- 1:1 Chromebooks
- GAFE
- LMS

Past

- computer labs
- tablets
- Microsoft Office



<https://goo.gl/t7nAzF>

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Synopsis

Instructional technology is continually changing and requires ongoing attention. Educators in teacher preparation programs who have not recently taught in a k-12 environment may not realize what teachers are really using let alone what they could do to enhance their classroom instruction even further. This session will provide a broad overview of current trends, from hardware and software to communication and collaboration. With an eye on cost and support considerations and what schools are actually doing we'll get a better picture of how teacher preparation programs could prepare candidates for when they graduate. As opposed to a simple list of websites or apps we'll delve into the trends and the considerations that school technology directors and instructional technology coaches are reviewing.

