

Digital Learning

Or it's not what you do it's the way that you do it

http://padlet.com/p_hopkins/nqtconf18



paul hopkins p.hopkins@hull.ac.uk

My favourite technology?



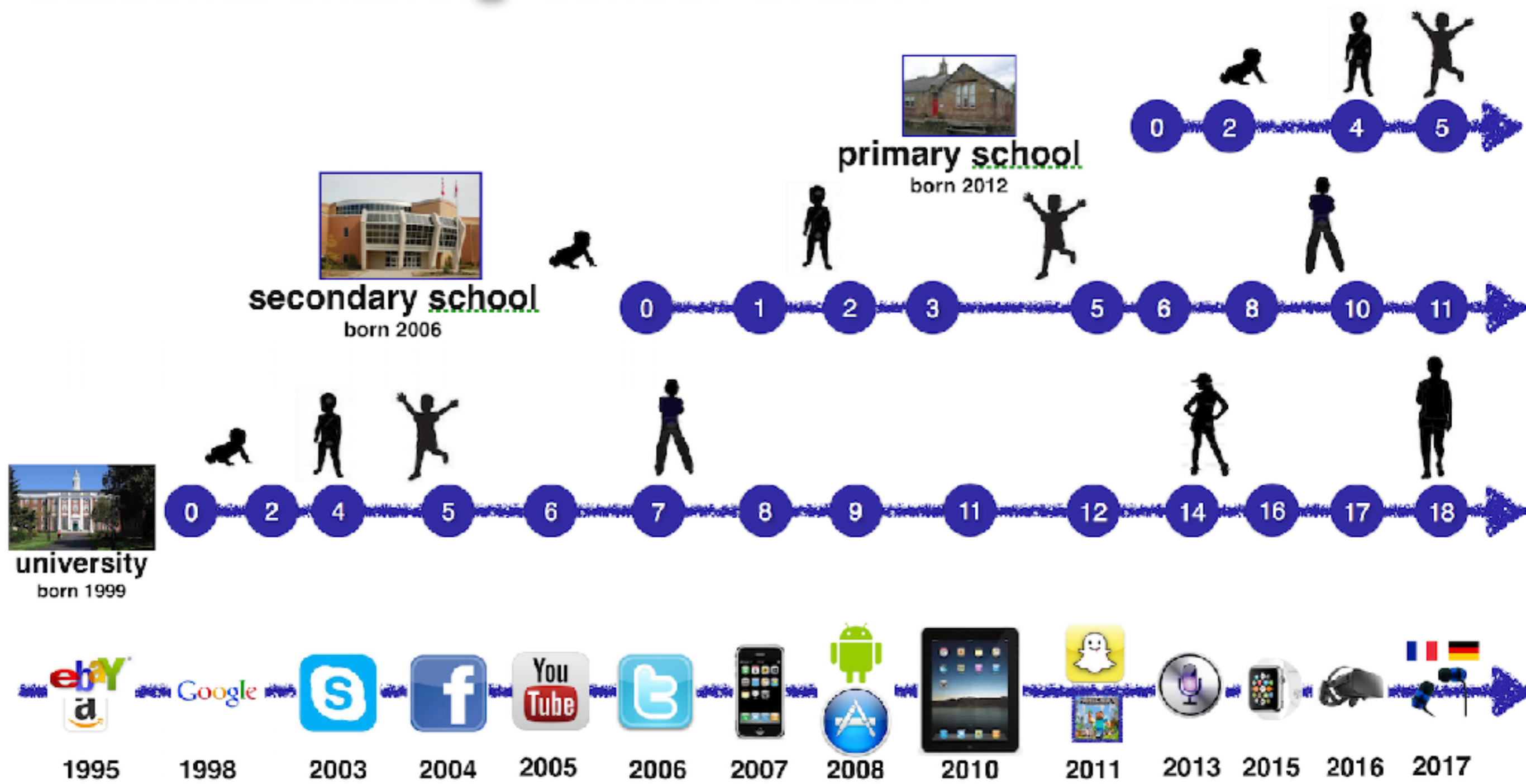


Anything that is in the world when you're born is normal and ordinary and is just a natural part of the way the world works. Anything that's invented between when you're fifteen and thirty-five is new and exciting and revolutionary and you can probably get a career in it. Anything invented after you're thirty-five is against the natural order of things.

(Douglas Adams)

izquotes.com

Students entering 'school' in 2017



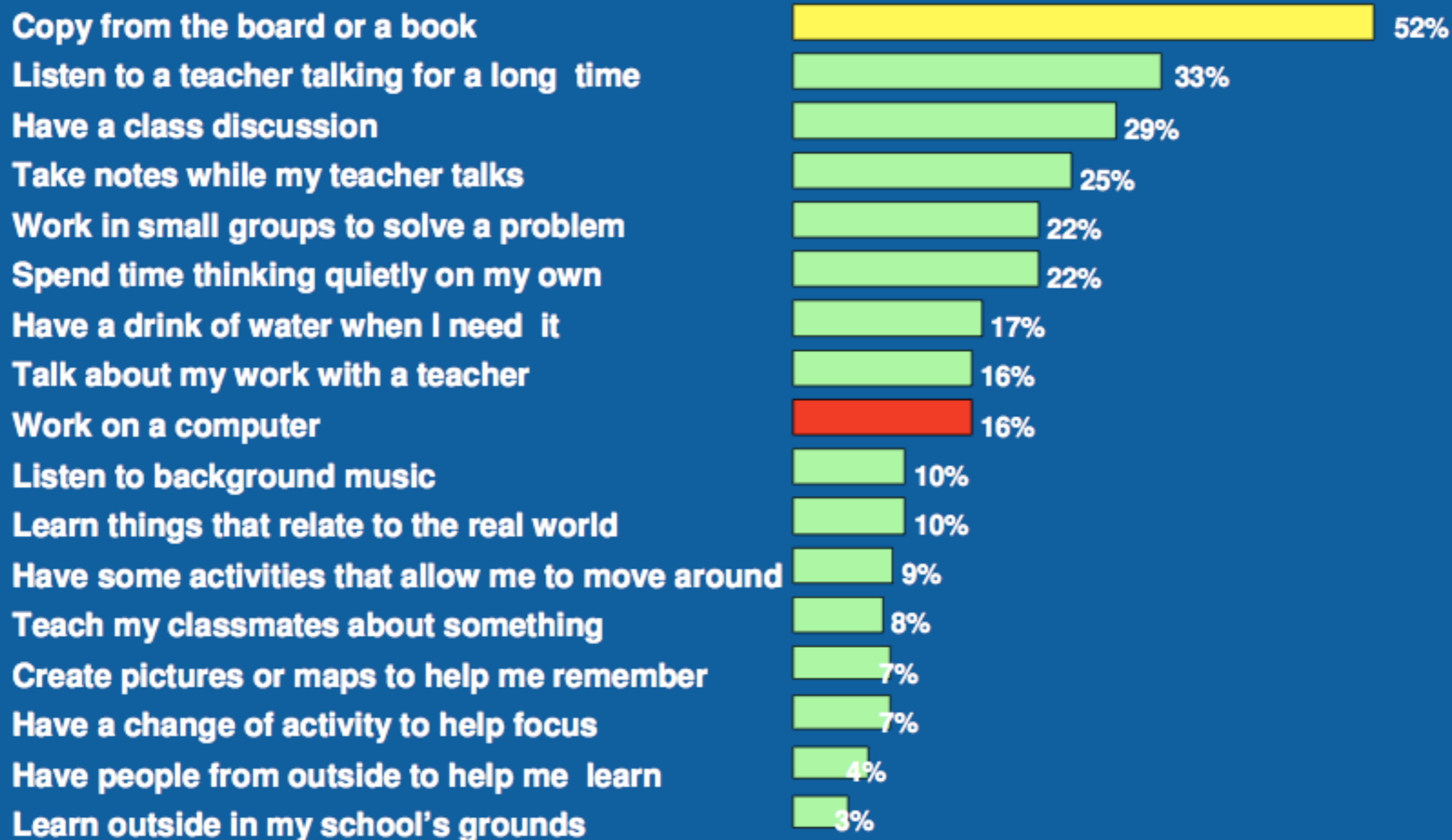






Common classroom activities

Which three of the following do you do most often in class?

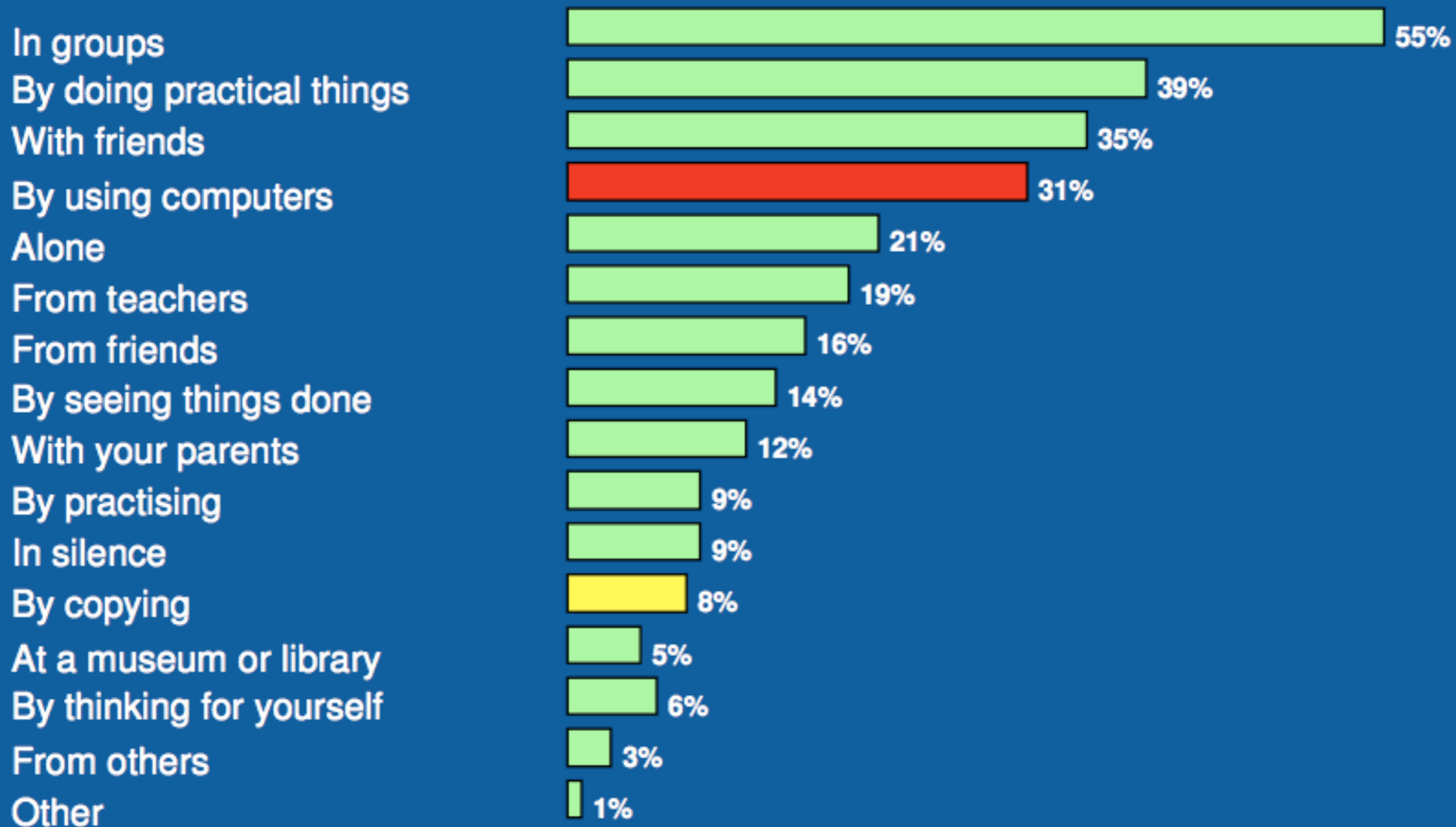


Base: All pupils (2,417)

Source: Ipsos MORI

Most preferred ways to learn

In which three of the following ways do you prefer to learn?



Base: All pupils (2,417)

Source: Ipsos MORI



- Dominant paradigm in technology use in Higher Education (world-wide)
- Developed through strong centralist, strategic coordination (i.e. one size fits all)
- Epitomised in the Virtual Learning Environments (VLEs)
- Assumes learners know what is available and how enticing it might be



- Build on ubiquitous access to technologies amongst the student body – e.g. mobile phones, tablets
- ‘Untethered’ learning – available at the point of need
- Utilises ‘push’ services and principles (e.g. Twitter; SMS text alerts; social bookmarking reading lists)



In the past we have used new technologies
to replicate old practices

MODELS OF LEARNING: SAMR

Transformation

Redefinition

Tech allows for the creation of new tasks, previously inconceivable

Modification

Tech allows for significant task redesign

Augmentation

Tech acts as a direct tool substitute, with functional improvement

Substitution

Tech acts as a direct tool substitute, with no functional change

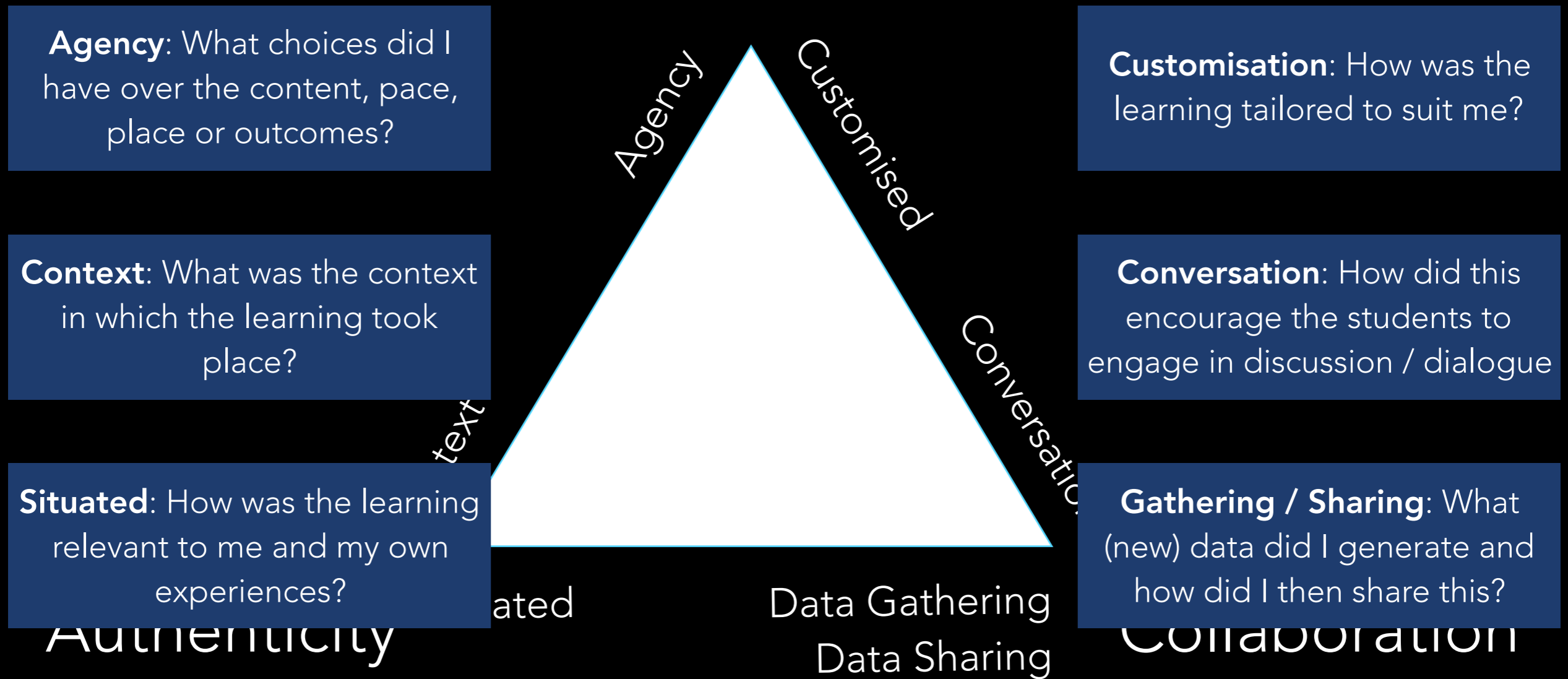
Enhancement



MODELS OF LEARNING

THE IPAC MODEL

Personalisation



10 Digital Skills Teachers Should Have

www.educatorstechnology.com

Find and evaluate authentic web based content

Create visually engaging content

Set up a digital presence for your class(e.g. blog, wiki, website...etc)

Know how to effectively search the web

Leverage the power of social media for professional development purposes

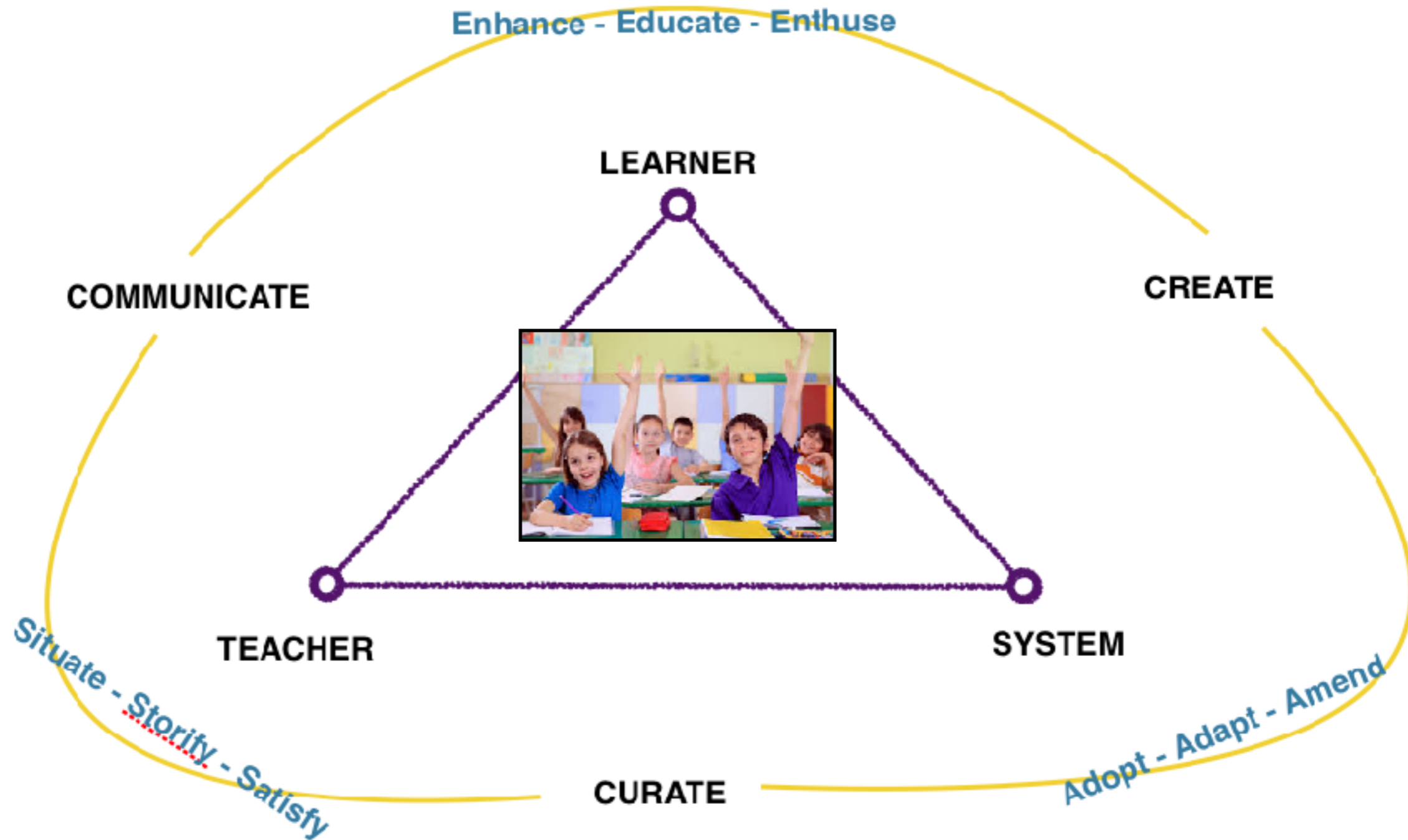
Curate and share educational resources

Create, edit and share digital portfolios

Create, edit and share multimedia content

Use web tools to incorporate learning concepts such as game-based learning, project based learning, flipped learning, mobile learning, inquiry based learning...etc

Create PLNs to connect with other educators



COMMUNICATE



CREATE



CURATE

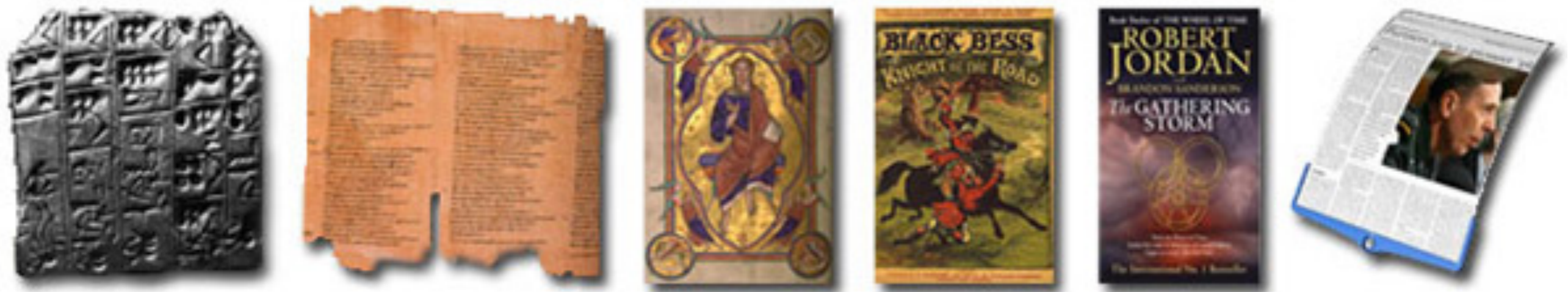


... CLOSER THAN WE THINK!

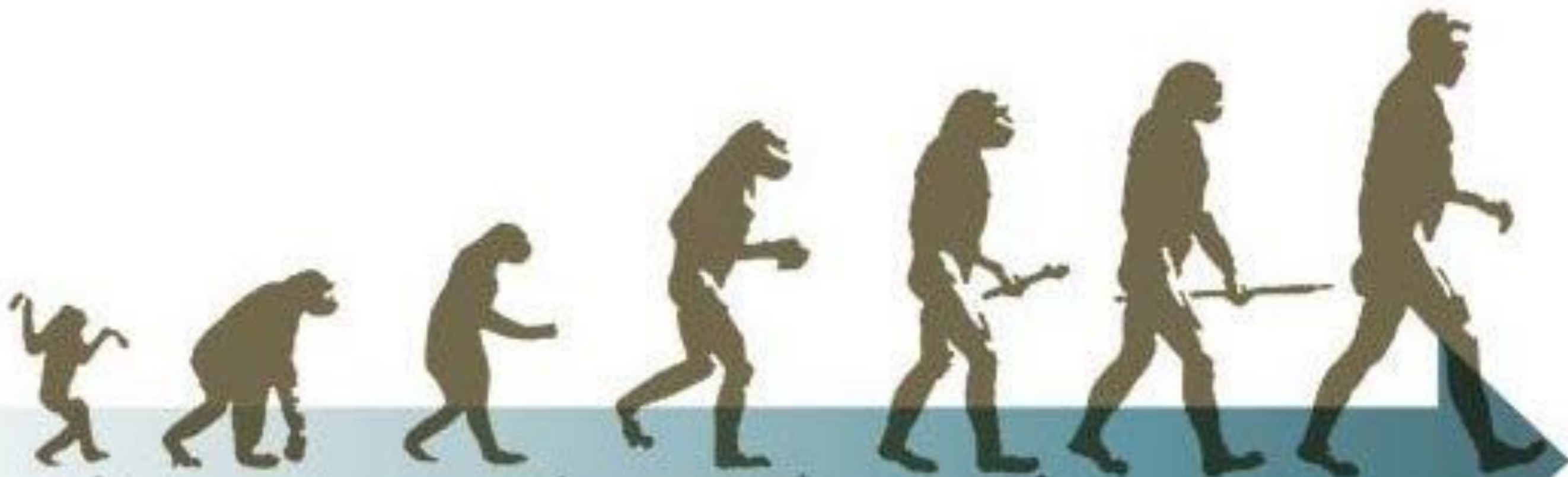
by Radebaugh



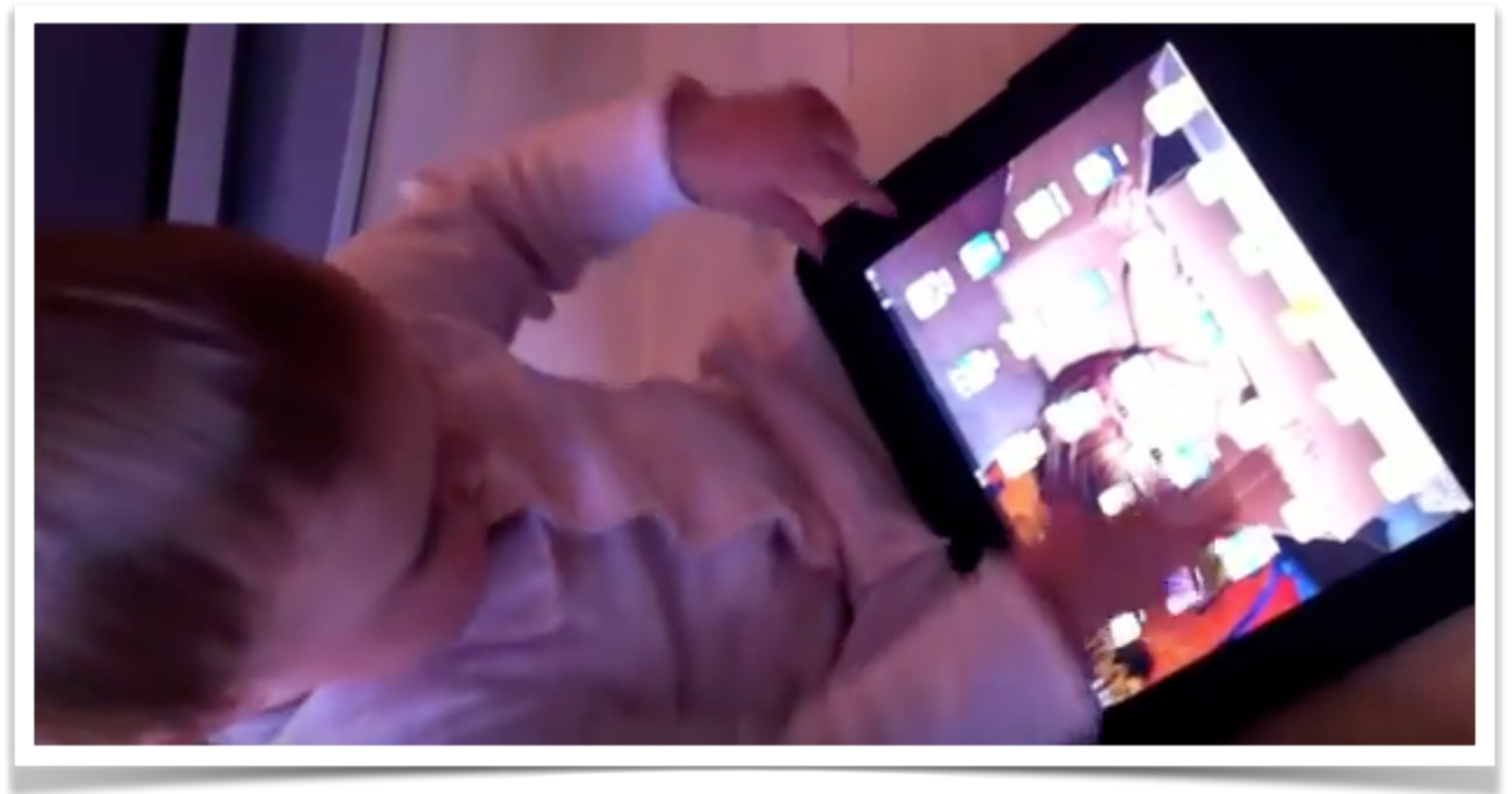
THE FUTURE OF BOOKS?



The Evolution of the book?



THE FRUSTRATIONS OF PRINT ...



<https://www.youtube.com/watch?v=0yuQObPHPhs>



Crushed beetles
onto dead trees

digitised beetles
onto e-paper

added multimedia

interactive
and
collaborative

the p-book

the dp-book

the m-book

the i-book

AFFORDANCES OF THE IBOOK

1

FLEXIBILITY
OF
CONTENT

2

ADAPT-
ABILITY

3

INTER-
ACTIVITY

4

DATA
CAPTURE

FLEXIBILITY OF CONTENT

1
FLEXIBILITY
OF
CONTENT

VIDEO

AUDIO

DYNAMIC

HYPERLINKS

SLIDESHOWS

ANIMATION

ADAPTABILITY

FONTS

COLOUR

SIZE

NO. OF PAGES

LAYOUT

CHANGE

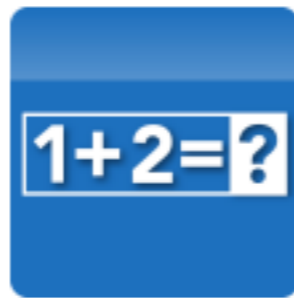
"NEVER FINISHED"

INTERACTIVITY



Active Plot

Change the equation and watch the plot update.



Arithmetic

Practice basic arithmetic operations



Before/After

Compare two pictures.



Bingo Card

Everyone knows Bingo... just add words.



Chart

Fill in the table to create the chart.

[View Example](#)

[Create New Widget](#)



Crossword

A crossword puzzle... just add words.



Exit Slip

Ask your students 2 questions about today's class.



Flash Cards

The classic self-study tool, now embedded in your book.



Frame Sequence

Show a series of related images on a timeline.



Google Maps

An annotated Google Map, with a customizable style.



Hangman

The classic hangman game, you provide the list of words.



Hotspot Image

Video, picture, rich text and webpage popups tied to hotspots on a background image.

DATA CAPTURE

4
DATA
CAPTURE

MARKING

FIELDWORK

DYNAMIC

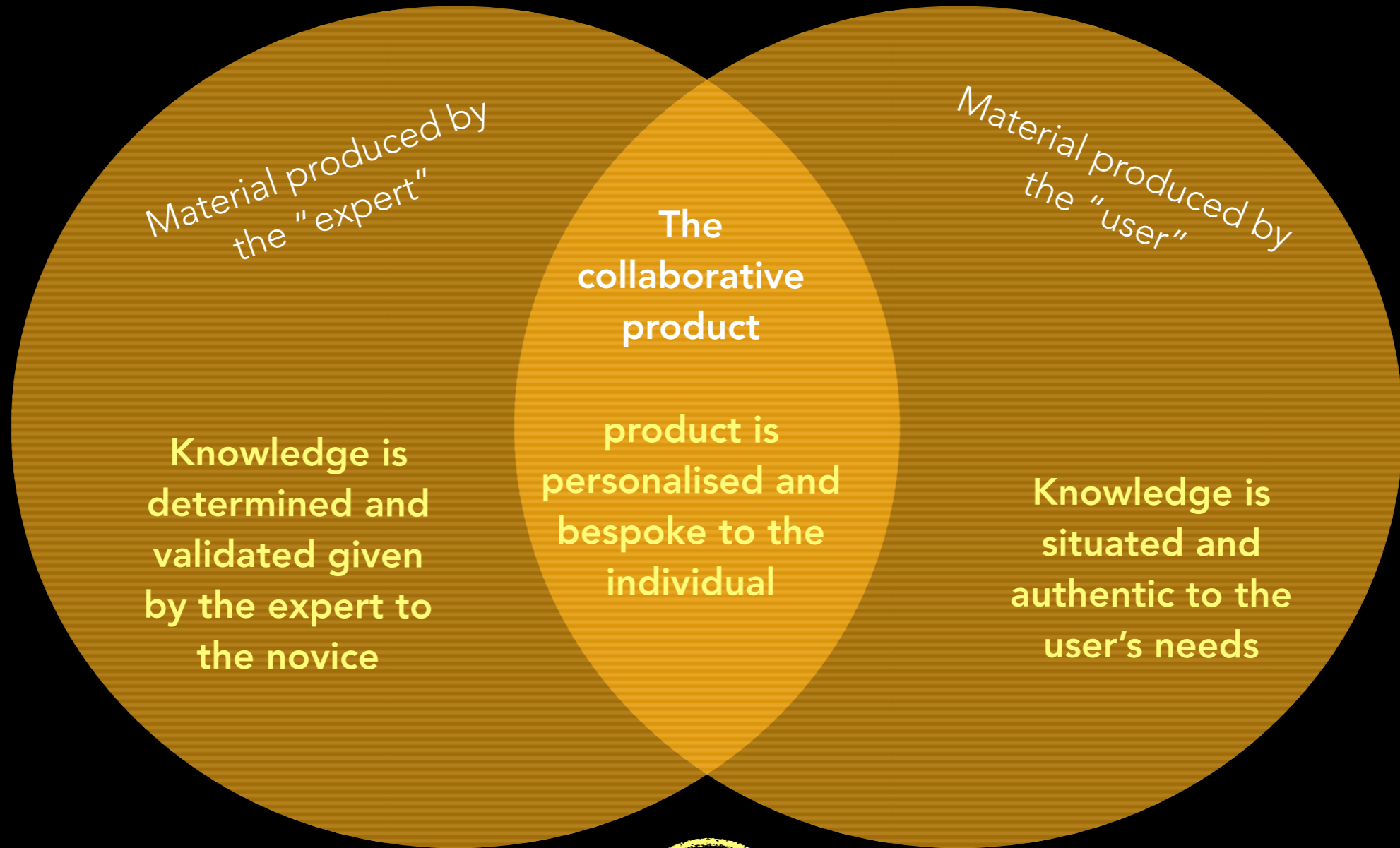
ASSESSMENT

FEEDBACK

ANALYSIS

THE PEDAGOGIC COLLABORATIVE MODEL

Material from the cloud



Material from the 'field'



When connected data can be collaborative and shared - updated and adaptable

TECHNOLOGY IS THE ONLY WAY TO
DRAMATICALLY EXPAND ACCESS TO KNOWLEDGE.
WHY SHOULD STUDENTS BE LIMITED TO A
TEXTBOOK THAT WAS PRINTED TWO YEARS AGO,
AND MAYBE DESIGNED TEN YEARS AGO, WHEN
THEY COULD HAVE ACCESS TO THE WORLD'S
BEST AND MOST UP-TO-DATE TEXTBOOK?
EQUALLY IMPORTANT, TECHNOLOGY ALLOWS
TEACHERS AND STUDENTS TO ACCESS
SPECIALISED MATERIALS WELL BEYOND
TEXTBOOKS, IN MULTIPLE FORMATS, WITH LITTLE
TIME AND SPACE CONSTRAINTS



Andreas Schleicher - OECD (2015:4)

We wants it.

We needs it.

Must have

the precious!



BUT OF COURSE IT IS NOT THE
ANSWER TO EVERYTHING



<https://www.youtube.com/watch?v=-rac21a7qhE>

A top-down view of a white plate with a green double-line border. The plate contains two large, golden-brown roasted chicken thighs, a serving of macaroni and cheese, and a portion of green beans. The text is overlaid on the right side of the plate.

Lovers of print are
confusing the plate for
the food

Douglas Adams

QUESTIONS?



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@mtteppads

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- Boroughs, D.** (2010). *'Bye the book: In educational publishing, the only certainty is change.* PRISM
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IMAGE CREDITS

S1 - *Closer than we thing:* www.smithsonian.com

S3 - *Evolution of Man / Stages of book:* www.darwiinslibrary.com / www.sfbook.com

S4 - *eBook sales:* www.gettyimages.com

S5/6 - *Data on mobile usage:* www.ofcome.gov.uk

S8 - www.timemarcheson.com

S11 - *Flexibility:* www.vertisgroup.com

S12 - *Charles Darwin:* www.theorganicpreper.co.uk

S13 - *Digital Healthcare:* www.kritsinmullertranscription.com

S14 - *Fishing Nets:* www.traveltips.usatoday.com

S15 - *Sydney harbour bridge:* www.sydneyharbourbridge.au

S16 - *Teapot:* www.amazon.com

S17 - *iBooks Store:* www.apple.com

S20 - *Eric Mazer, Adults Talking, Tailoring:* www.mit.edu / www.wtjohnson.co.uk

S21 - *Andreas Schleicher:* www.oecd.eu

S28-30 - *Backgrounds* - www.apple.com

S32 - *Plate of Food* - www.amazonaws.com

S35 - *Child asking questions:* www.ziarulstria.ro

Other images (c) p.hopkins (various dates)

If you're appy and you know it ...



Paul HOPKINS - March 31st, 2017

What is an App?

app¹ 

[ap]

Spell

Syllables

[Examples](#)

[Word Origin](#)

noun, *Computers*.

1. an application, typically a small, specialized program downloaded onto mobile devices:

the best GPS apps for your iPhone.

Origin of app¹

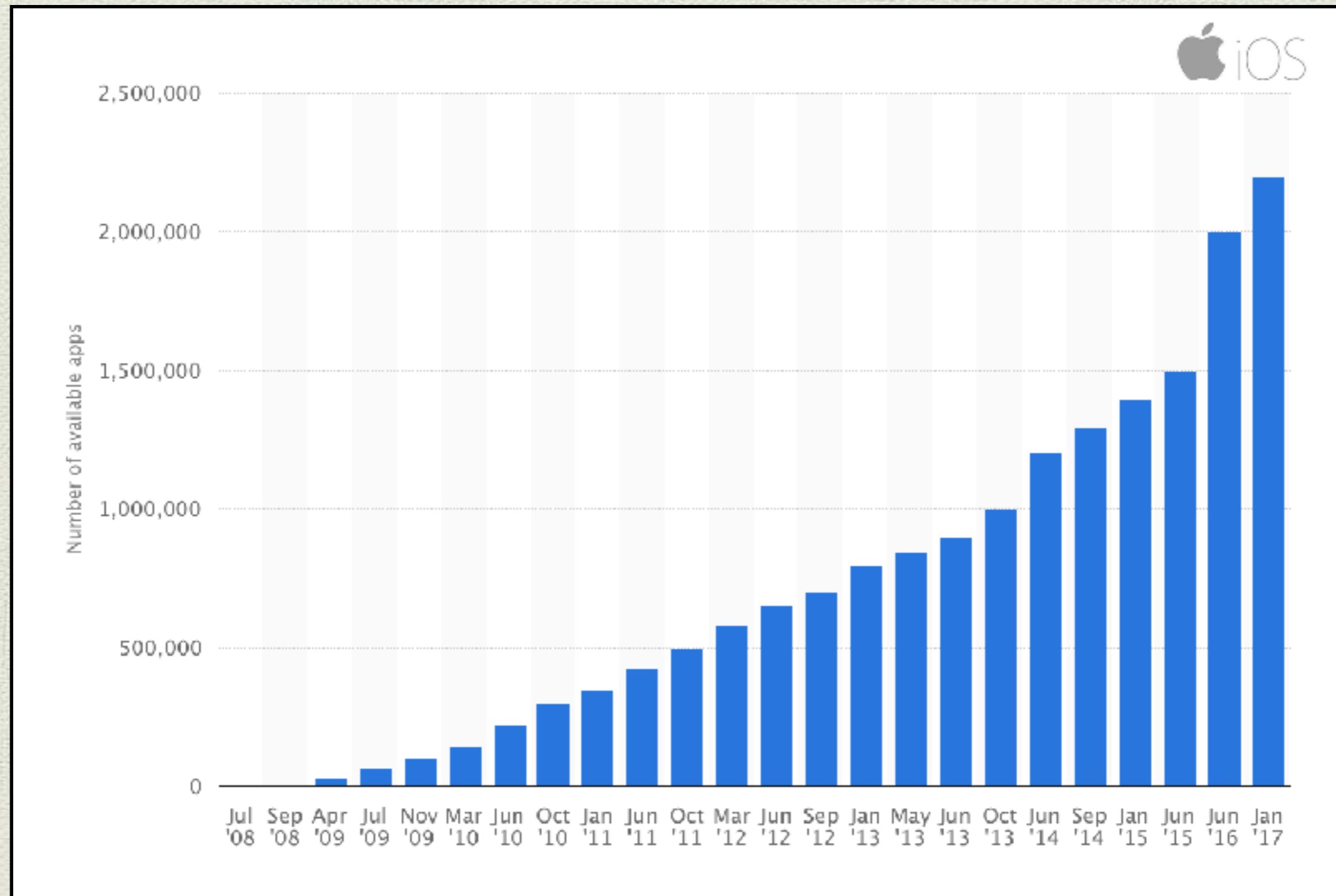
1985-90; shortening of [application](#)



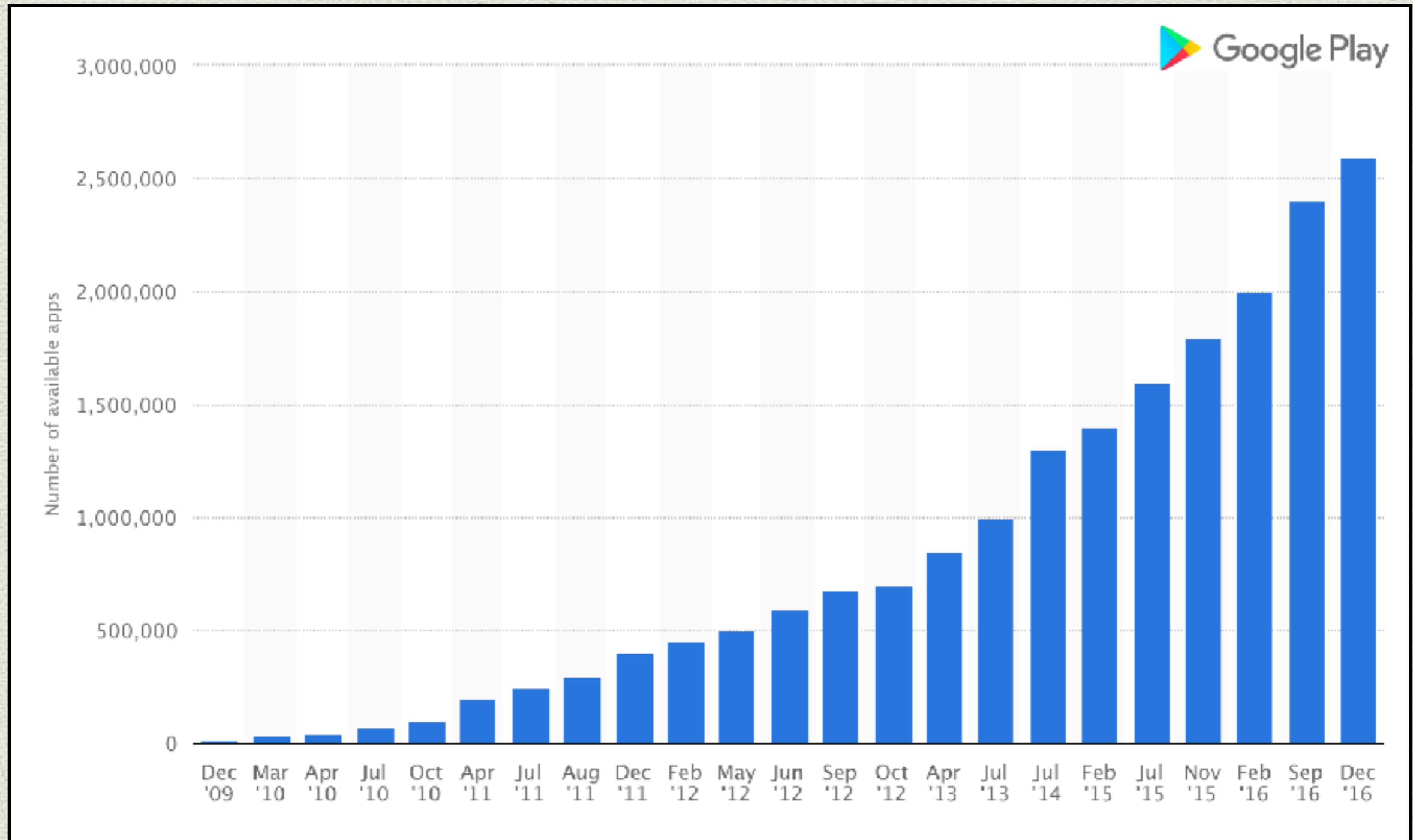
Apps on a device



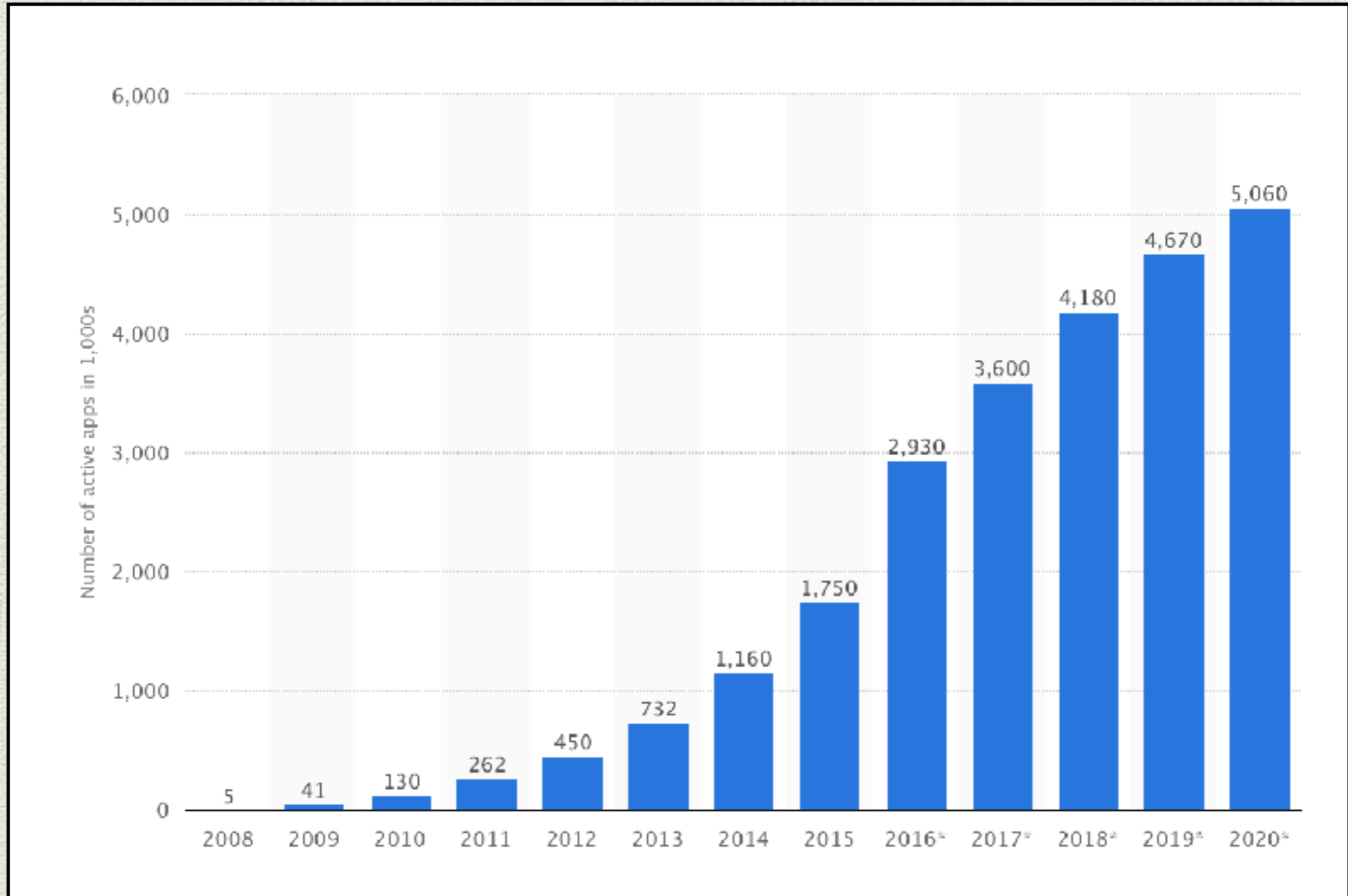
How many apps are there?



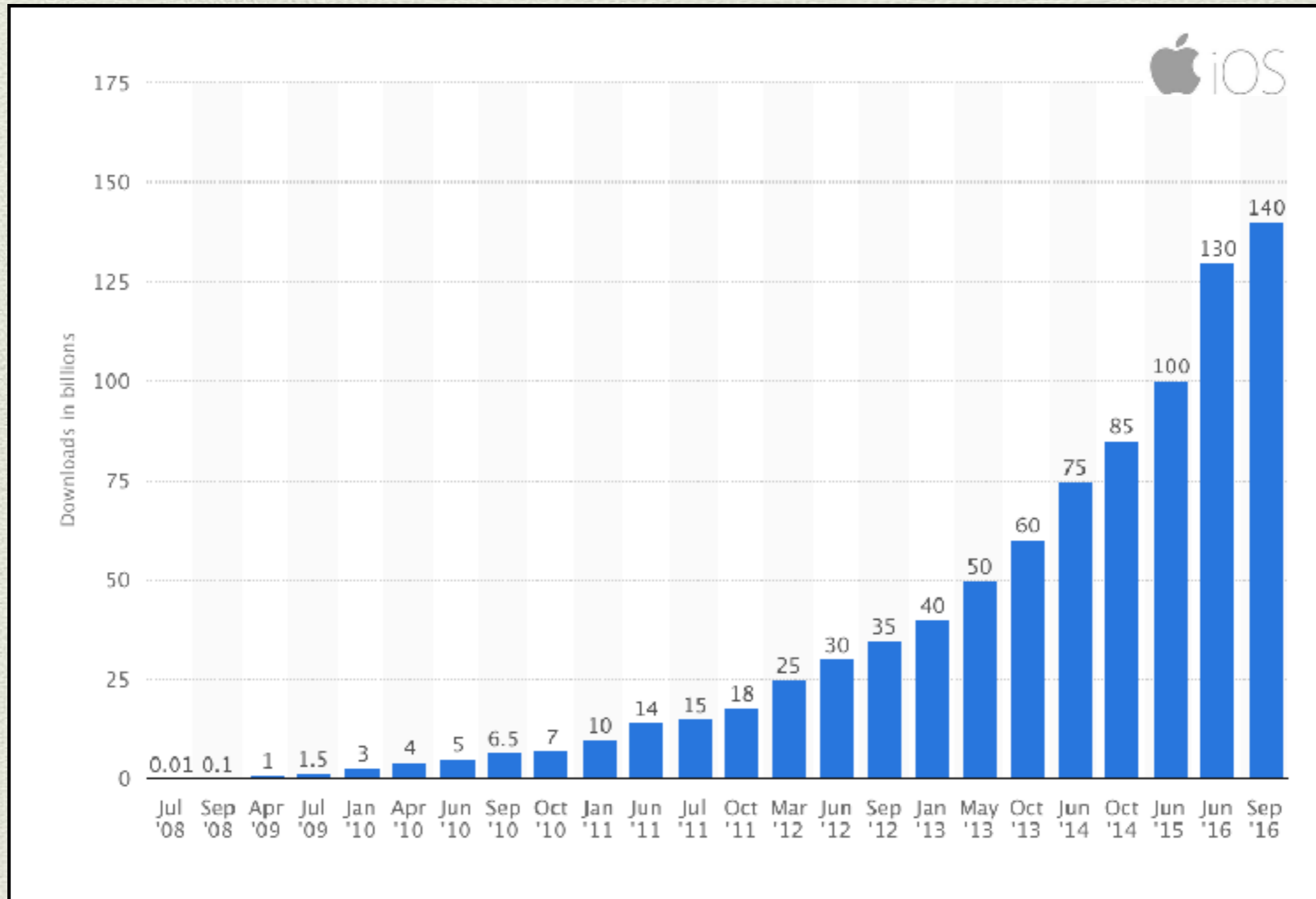
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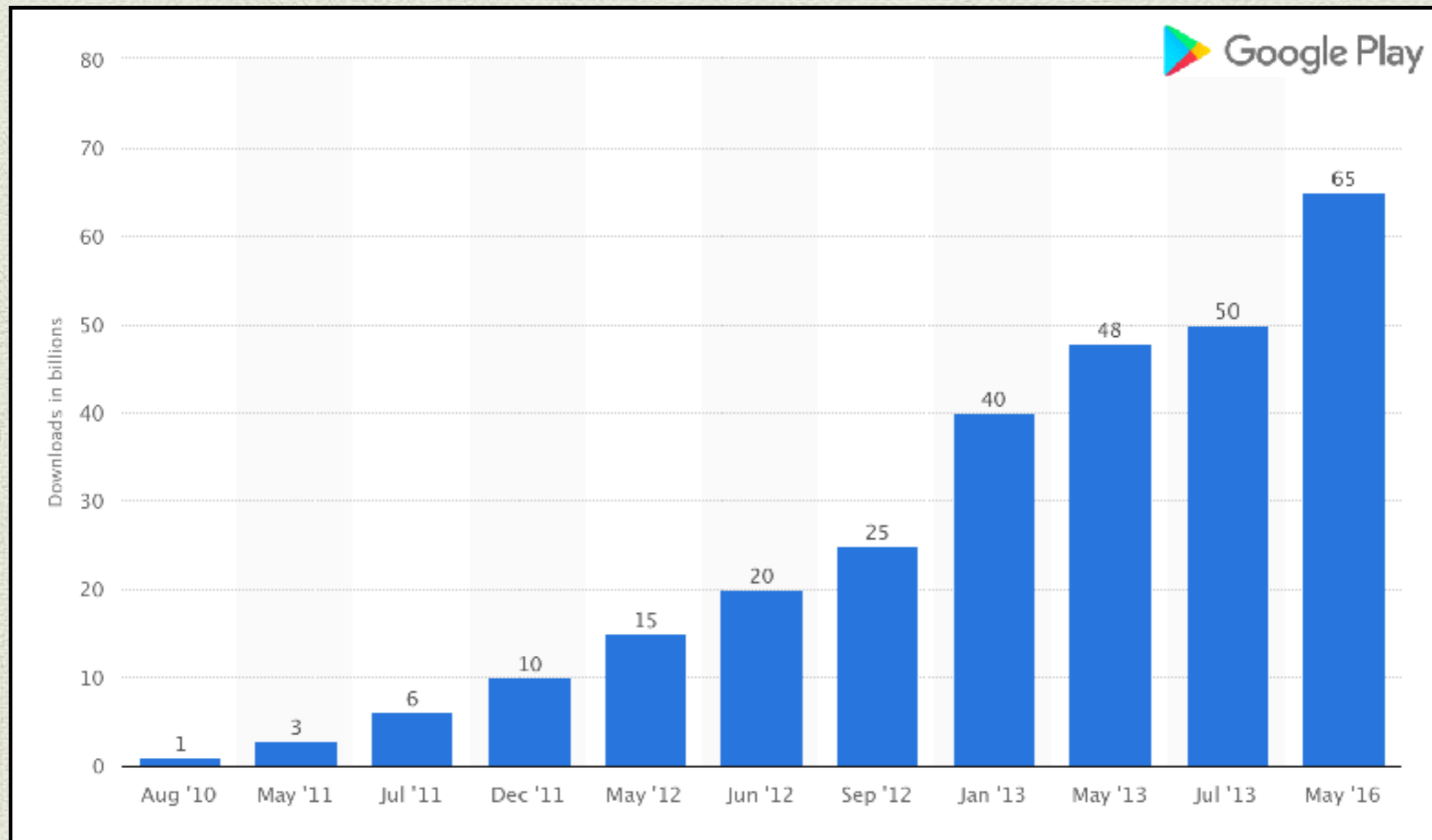
Projected apps



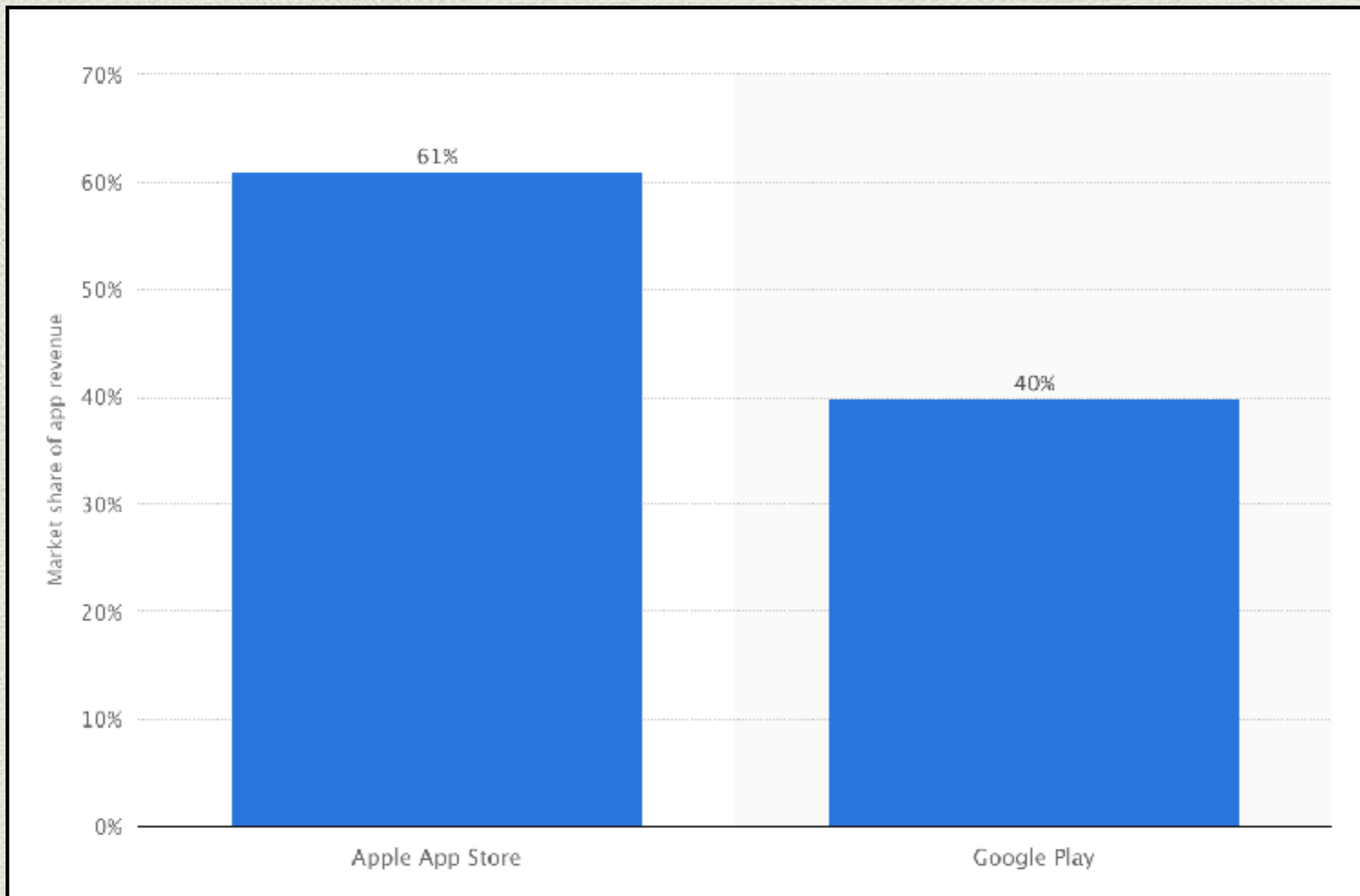
Downloads



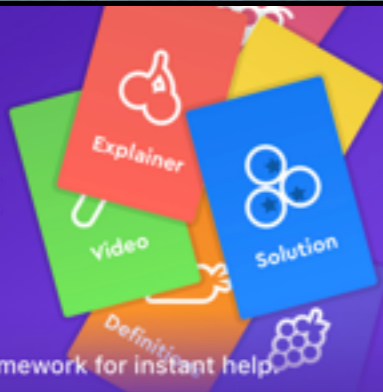
Downloads



Market Share



ic



our homework for instant help



Apple Teacher

tandem

French. German. Dothraki?! Learn a new

Perfect for Every Classroom

See All >



Classic Explain Everything™ Education £7.99	ClassDojo Education	Notability Productivity £9.99	micro:bit Education	Edmodo Education	BrainPOP Featured Movie Education	Autodesk SketchBook Entertainment	Stop Motion Studio Photo & Video	WolframAlpha Reference £2.99	Evernote - stay organized Productivity
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Learn Something New

See All >



Stephen Hawking's... Education £4.99	Mimo: Learn to code on the go Education	Lynda.com Education	Theory Test UK 2017 by miDrive Education	Juilliard Open Studios 1.0 Education	Craftsy Education	Swiftly: Learn to code tutorials... Education	Curious - the game of lifelon... Education	Teach yourself Photoshop Photo & Video £9.99	Skillshare Online Classes Education
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Train Your Brain

See All >



WordWise by Memorado Education	Peak - Brain Training Education	Lumosity - Brain Training Education	Brain Dots - Draw and solve... Games	Quick Maths+ Education £1.99	Threes! Games £2.99	Memorado Brain Training for... Education	Eidetic - Learn & remember... Productivity	Elevate - Brain Training Education	REBUS - Absurd Logic Game Games
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App Store

Education

QUICK LINKS

- Learn More About In-App Purchases
- Education Collections
- Accessibility
- Kids
- iTunes Store

TOP PAID APPS

- The Official DVSA Theory Test Kit for... Education
- Theory Test for Car Drivers - Dri... Education
- Theory Test Kit 2017 - The Offic... 4 Apps
- The Official DVSA Theory Test K... 3 Apps
- The Official DVSA Theory Test K... 2 Apps
- CITB op/spec HS&E test 2016 Education
- Hazard Perception Mega Pack - ... Education
- Toca Hair Salon 3 Education
- Hit the Button Maths Education
- Miffy's World Education

TOP FREE APPS

- Duolingo - Learn Spanish, French an... Education
- Driving Theory Test Free - Driv... Education
- Show My Homework Education
- Babbel - Learn Languages Engli... Education
- Peak - Brain Training



Primary School

- Computing
- Mathematics
- Literacy
- Science
- Social Studies
- Art & Music
- Health & Fitness

Secondary School

- Computing
- Algebra
- Geometry
- Calculus
- Biology
- Chemistry
- Physics
- Citizenship
- History & Geography
- Art & Music
- Languages
- Writing & Composition
- Literature



Test Yourself

Study aids & prep

See more

HomeWork Kwink.com ★★★★★	Test & Learn Lite—CGP CGP ★★★★★	Pocket Physics Geckonization ★★★★★	A Level Biology LearnersBox ★★★★★	My Study Life - Scheduler My Study Life, Ltd. ★★★★★	Physics Notes iStudentWorld ★★★★★

Learn a New Language

See more

Learn Spanish Phrasebook Codegent ★★★★★	Learn English Words Language Course S.L. ★★★★★	Aprender inglés con Wingua Wingua ★★★★★	Angielski - Ucz się języka Tweeba ★★★★★	3350+ English Grammar Practice Buffalo Software ★★★★★

Classroom Tools

Best apps for teachers

Google Classroom Google Inc. ★★★★★	Remind Remind101 ★★★★★	ClassDojo ClassDojo ★★★★★	Nearpod Nearpod Inc. ★★★★★	Socrative Teacher Socrative Inc. ★★★★★

Feed Your Brain

Courses, talks & more

See more

NeuroNation - Brain Training NeuroNation ★★★★★	TED TED Conferences LLC ★★★★★	Lumosity - Brain Training Lumos Labs, Inc. ★★★★★	Khan Academy Khan Academy ★★★★★	Elevate - Brain Training Elevate Labs ★★★★★	Memorado - Brain Training Memorado GmbH ★★★★★

New + Updated Apps

See more

Writing Wizard - Handwriting LEscapadou ★★★★★	Dr. Panda Toy Cars Dr. Panda ★★★★★	Teletubbies Paint Story TabTale ★★★★★	Learn Languages: English Rosetta Stone Ltd ★★★★★	Quizlet Learn With Flashcards Quizlet LLC ★★★★★	Speakaboos: Kids' Songs Speakaboos ★★★★★

Learn to Code


See more

Programming Hub Nexino Labs Pvt Ltd ★★★★★	Learn C++ SoloLearn ★★★★★	Learn HTML SoloLearn ★★★★★	Learn JavaScript SoloLearn ★★★★★	Learn Java SoloLearn ★★★★★	C++ Programming Akshay Bhangre ★★★★★


Top Apps



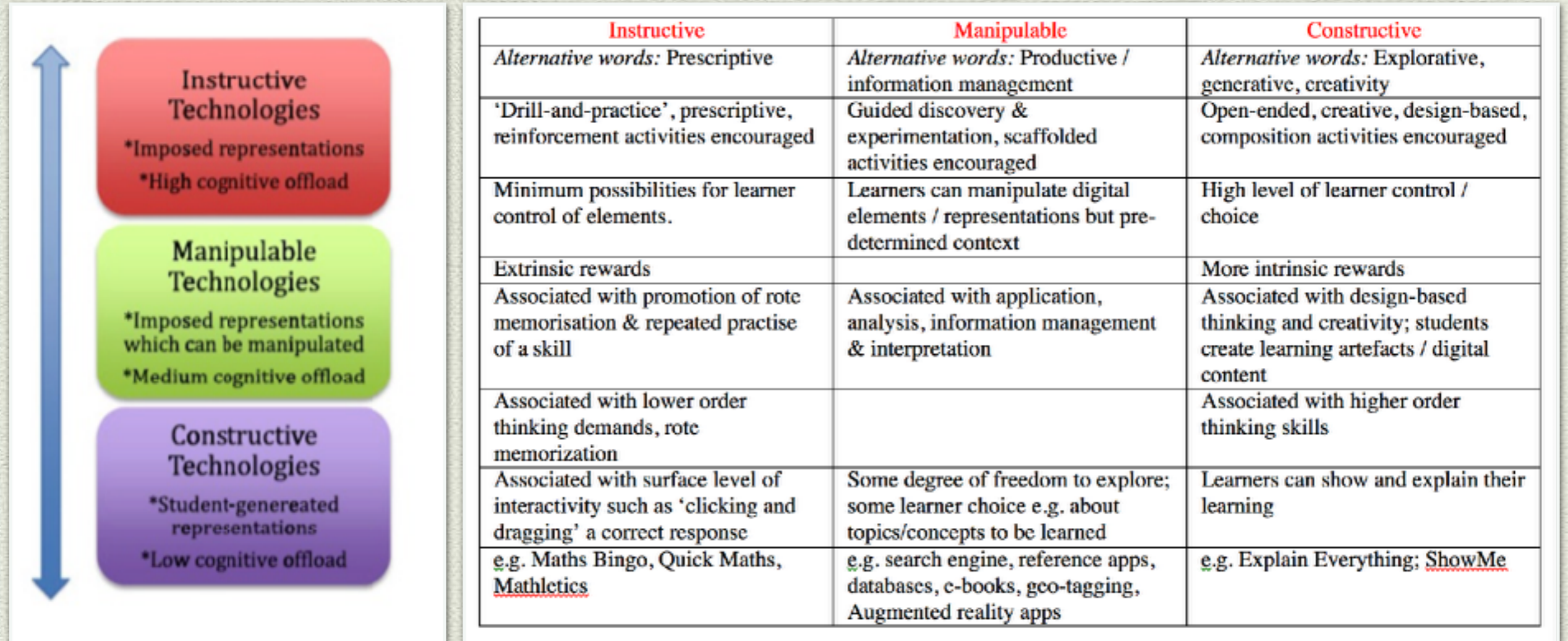
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-  The Official DVSA Theory Test Kit for...
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- Miffy's World
Education

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- Show My Homework
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- Babbel – Learn Languages Engli...
Education
- Peak - Brain Training
Education
- Quizlet: Create Flashcards & Le...
Education
- Memrise: learn languages
Education
- Photomath - Ca...
Education In-App Purchases
- got it! - Homework Help Math, ...
Education
- Kahoot!
Education

Making Judgements? I



Goodwin, K., & Highfield, K. (2013). A framework for examining technologies and early mathematics learning. In L. D. English & J. T. Mulligan (Eds.), *Reconceptualizing early mathematics learning* (pp. 205–226). New York, NY: Springer.

Making Judgements? II

SKILL based Apps

Use recall, rote memorisation, and skill-and-drill instructional strategies to build students' literacy abilities, numeracy skills, standardised test readiness, and subject area knowledge.

Bloom's Taxonomy Implications:
Remembering and Understanding

CONTENT based Apps

Give students access to vast amounts of information, data, or knowledge by conducting searches or through exploring pre-programmed content.

Bloom's Taxonomy Implications:
Applying and Analysing

FUNCTION based Apps

Assist students in transforming learned information into usable forms.

Bloom's Taxonomy Ranking:
Evaluating and Creating

Making Judgements? III

LEARNING skills Apps

Enable students to create their own knowledge by providing them with the precise atmosphere to build their learning

CONTENT learning Apps

Are considered to proportionate students different activities that allow them to rehearse, reinforce, practice and assess curricular content

INFORMATION management Apps

Have the ability to work within the specific context and environment of the learning and have the ability to increase the ease of informal learning

Domingo, M. G., & Gargante, A. B. (2016). Exploring the use of educational technology in primary education: Teachers' perception of mobile technology learning impacts and applications' use in the classroom. *Computers in Human Behavior*, 56, 21-28.

<http://www.sciencedirect.com/science/article/pii/S0747563215302387>

Bloom's Taxonomy for iPads

Creating



Evaluating



Analyzing



Applying



Understanding

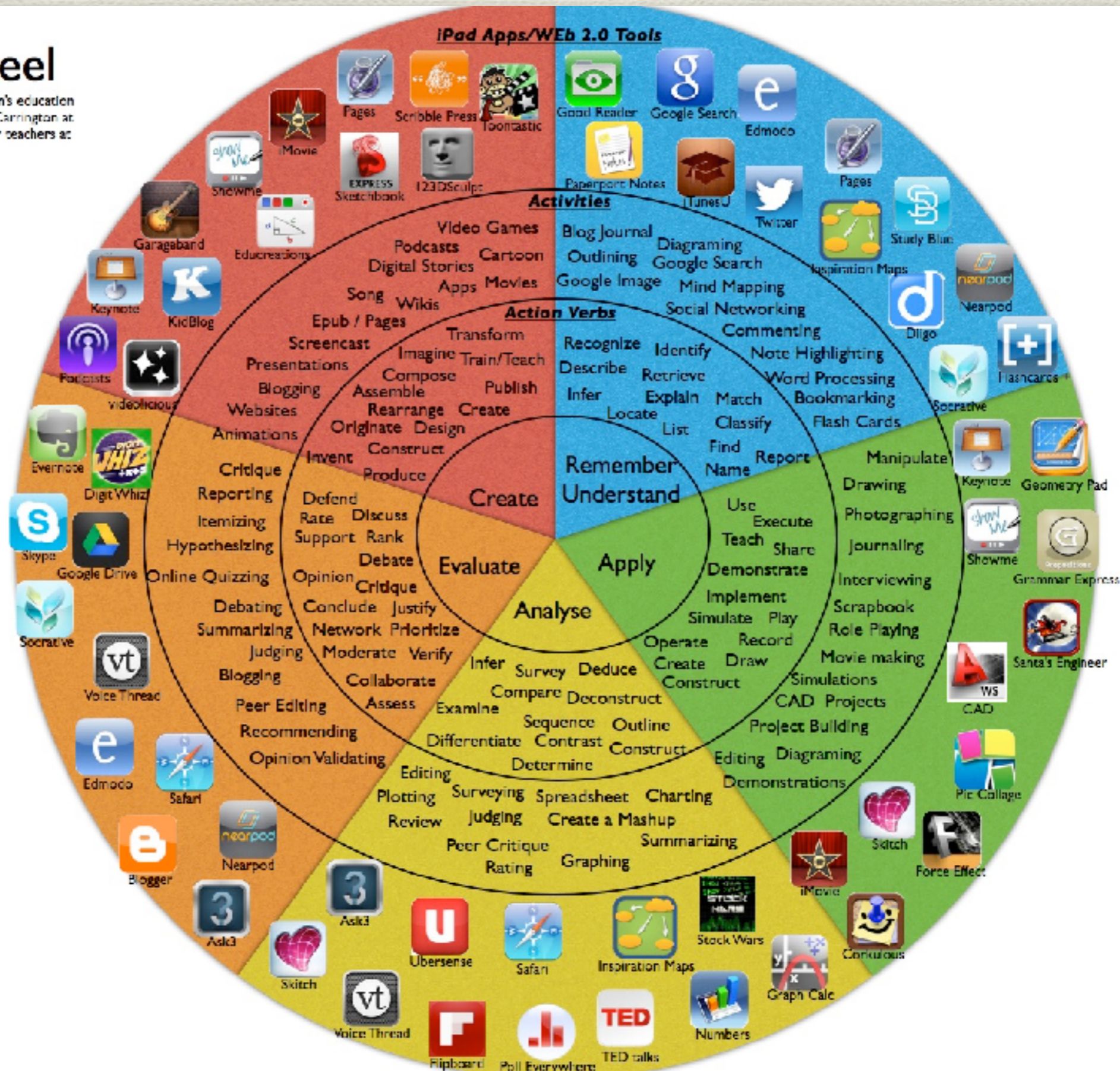


Remembering



iPadagogy Wheel

Originally discovered on the website of Paul Hopkin's education consultancy site paweb.org.uk adopted by Allan Carrington at the University of Adelaide and further modified for teachers at Zealand Public Schools.



EVALUATION RUBRIC FOR IPOD/IPAD APPS

DOMAIN	4	3	2	1
Curriculum Connection	Skill(s) reinforced are strongly connected to the targeted skill or concept	Skill(s) reinforced are related to the targeted skill or concept	Skill(s) reinforced are prerequisite or foundation skills for the targeted skill or concept	Skill(s) reinforced in the app are not clearly connected to the targeted skill or concept
Authenticity	Targeted skills are practiced in an authentic format/ problem-based learning environment	Some aspects of the app are presented in an authentic learning environment	Skills are practiced in a contrived game/simulation format	Skills are practiced in a rote or isolated fashion (e.g. flashcards)
Feedback	Feedback is specific and results in improved student performance	Feedback is specific and results in improved student performance (may include tutorial aids)	Feedback is limited to the correctness of student responses and may allow students to try again	Feedback is limited to the correctness of student responses
Differentiation	App offers complete flexibility to alter settings to meet student needs	App offers more than one degree of flexibility to adjust settings to meet student needs	App offers limited flexibility to adjust settings to meet student needs (e.g., few levels such as easy, medium, hard)	App offers no flexibility to adjust settings to meet student needs (settings cannot be altered)
User Friendliness	Students can launch and navigate within the app independently	Students need to have the teacher review how to use the app	Students need to have the teacher review how to use the app on more than one occasion	Students need constant teacher supervision in order to use the app
Student Motivation	Students are highly motivated to use the app and select it as their first choice from a selection of related choices of apps	Students use the app as directed by the teacher	Students view the app as "more schoolwork" and may be off-task when directed by the teacher to use the app	Students avoid the use of the app or complain when use of the app is assigned
Reporting	Data is available electronically to the student and teacher as a part of the app	Data is available electronically to student on a summary page and may be screenshot to share with teacher	Data is available electronically to the student, but is not presented on a single summary page	The app does not contain a summary page

Student App Review Rubric

Reviewer: _____

App Reviewed: _____



	4	3	2	1	0	Score
Appeal: Looks & Sounds	Excellent graphics and sound. Very appealing. Enhanced my experience.	Good graphics and sounds. Enhanced my learning.	Average sound and graphics. Limited appeal, but a little distracting.	Low quality graphics and sounds. Distracted from app's purpose.	Boring and unappealing.	
Engagement/ Motivation	This app kept me highly motivated and engaged throughout my time with it.	This kept me motivated and engaged most of the time.	Somewhat engaging, but lost motivation after a short time.	Barely motivated.	Boring	
User Friendly Directions & Instructions	Very easy to learn and directions are clear and simple to follow	Easy to learn and direction can be followed.	Kind of difficult to learn. Directions are limited.	Very complex to learn. No directions available	What am I supposed to do with this app?	
Performance/ Ease of Use	Performs and loads quickly. No issues and very reliable	Performs and Loads quickly. Some minor technical issues.	Loads and performs slowly. Sometimes Crashes.	Crashes fairly often and takes multiple times to open.	Won't open. Won't run. Filled with bugs.	
Differentiation in Learning	I can customize the app for myself. Four or more levels difficulty	Some customization. Three levels of difficulty	Little customization and two levels of difficulty.	No customization and one level of difficulty.	Ugghhhh.	



Scoring: **Great** 20-17 **Good** 16-13 **Average** 12-10 **Needs Work** 9-6 **BAD** 5-0

/20
Total

Highlight: _____

Lowlight: _____

Finding Apps?



iPads and Teacher Education: Primary Apps

You are here >> [iPads and Teaching Education](#) >> Apps for the Primary School

Note: The apps on these pages are for the teachers of primary children *not necessarily* for the children.

[English/Literacy](#)

[Maths/Numeracy](#)

[Science](#)

[Computing](#)

[Geography](#)

[History](#)

[MFL](#)

[Art](#)

[Music](#)

[Physical Ed.](#)

[Religious Ed.](#)

[Creativity](#)

http://www.mmiweb.org.uk/hull/ipad/index_3.html

Finding Apps?



iPads and Teacher Education: Secondary Apps

You are here >> [iPads and Teaching Education](#) >> Apps for the Secondary School

[English](#)

[Geography](#)

[History](#)

[Mathematics](#)

[MFL](#)

[Rel. Ed.](#)

[Science](#)

Note: The apps on these pages are for the teacher of secondary pupils not necessarily for the pupils.

http://www.mmiweb.org.uk/hull/ipad/index_2.html

What do we want apps to do?





A FEW
OF MY
FAVORITE
THINGS

nearpod

**Explain
Everything**





Book Creator

reccap

Questions?



References

Kathy Schlock's Website: <http://www.ipads4teaching.net>

Kathy Schlock's Rubrics: <http://www.ipads4teaching.net/critical-eval-of-apps.html>

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Domingo, M. G., & Gargante, A. B. (2016). Exploring the use of educational technology in primary education: Teachers' perception of mobile technology learning impacts and applications' use in the classroom. *Computers in Human Behavior*, 56, 21-28.
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