

Teaching and learning with mobile phones

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There are numerous capabilities we might exploit

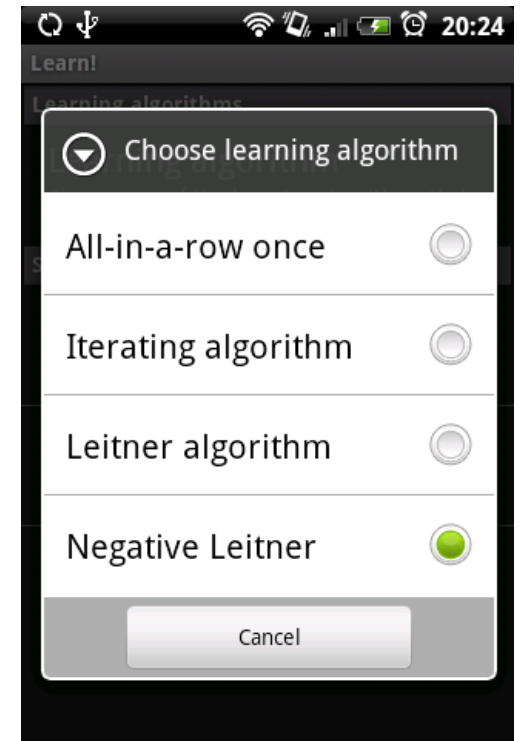


Learn!

- Flash card learning application
- Undergraduate project
- 10 weeks, summer 2009

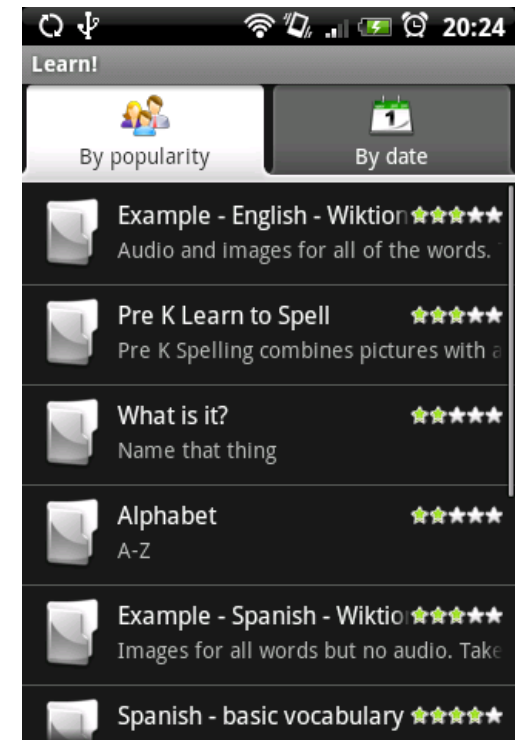
Personalisation makes learning more effective

- Phones are inherently a personal device
- Applications can get immediate attention
 - (for better or worse!)



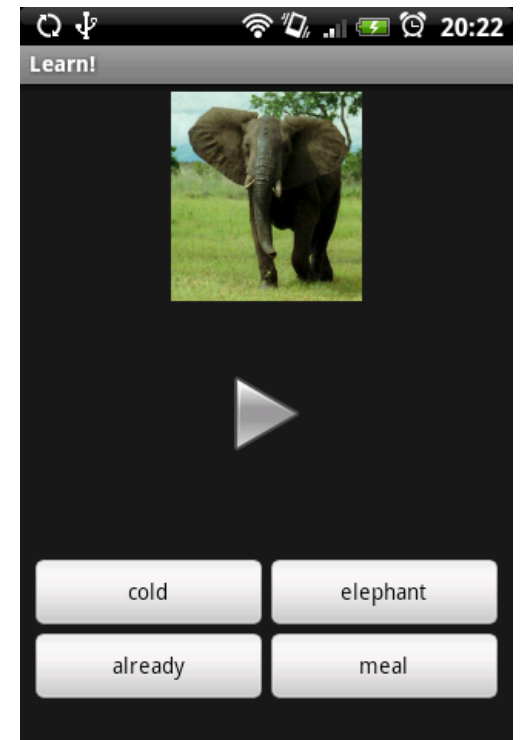
Internet access is available through various methods

- High speed Wifi connection
- Ubiquitous mobile connectivity
- We can share data and social information

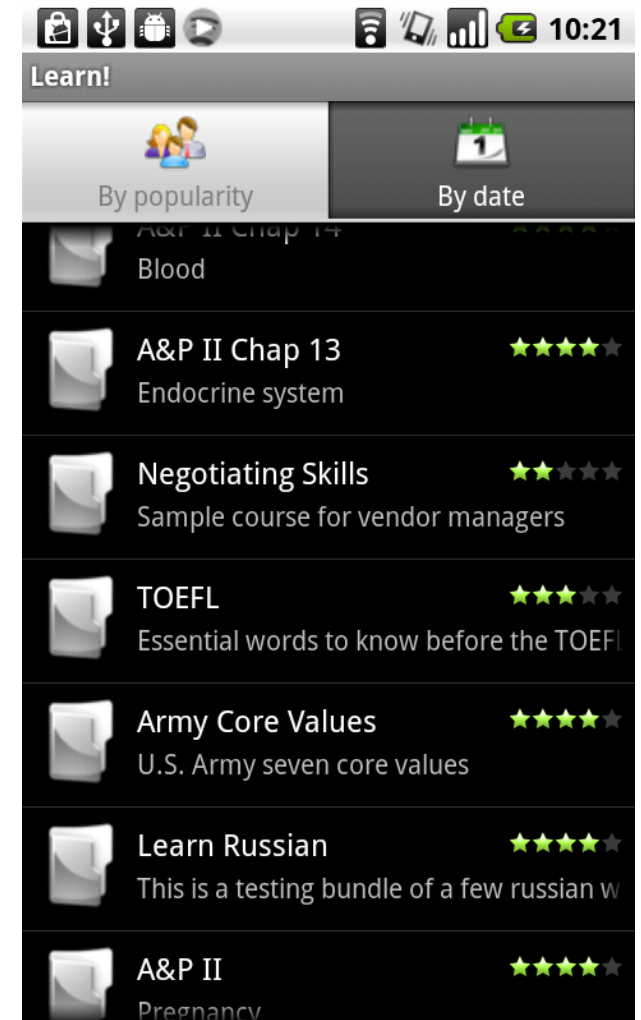


Creating and viewing multimedia content is easy

- Taking pictures and recording videos or sound is a first class activity on the phone handset
- However, text entry is much harder than with a keyboard



We left it to the
community to
create content



Examination bodies could take a role in in certifying content



UNIVERSITY *of* CAMBRIDGE
ESOL Examinations

Crowd sourcing can be used for feedback as well as content



Was this member helpful?    Yes! Extremely helpful!

We can automatically generate relevant content

- Cambridge Learner Corpus (In collaboration with English Profile Programme)
- Contains 15 million (corrected) words from written examination scripts
- A natural language parser was used identify word types at different learner levels
 - CEFR – Common European Frame of Reference
- Build a flash-card collection of the most frequent (new) words at the chosen level

Dictionary collections can be synthetically generated

A2	B1	B2	C1	C2
bus	class	life	sector	society
birthday	holiday	job	programme	culture
book	teacher	work	fact	unemployment
lot	weather	advertisement	event	child
place	lesson	way	department	supermarket
number	hotel	festival	manufacturing	man
car	meeting	experience	performance	reason
train	letter	world	future	father
present	club	show	article	situation

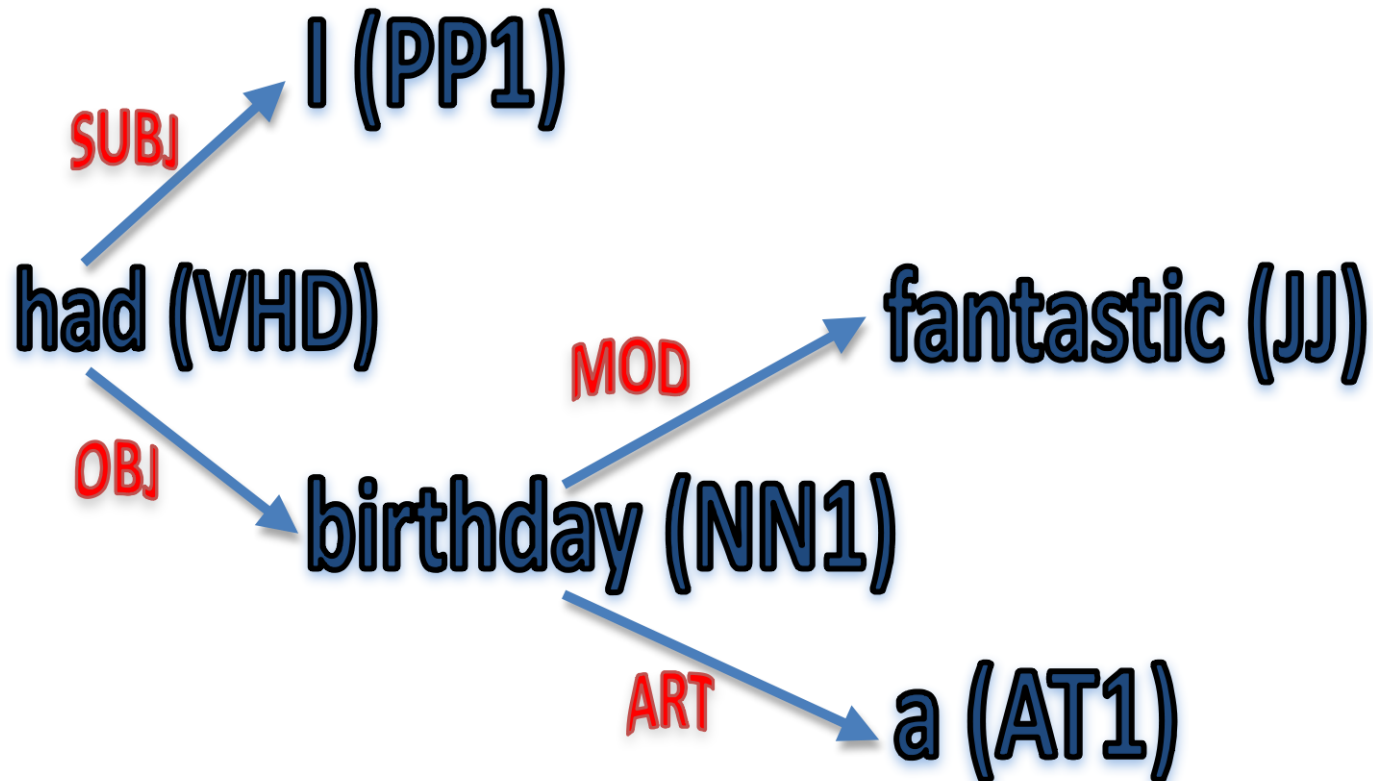
NN1: singular common nouns

Dictionary collections can be synthetically generated

A2	B1	B2	C1	C2
want	tell	use	express	admire
like	attend	live	wear	miss
go	give	ask	reach	earn
see	look	believe	mention	build
sell	join	feel	worry	mean
visit	contact	keep	centre	deserve
arrive	confirm	pay	seem	value
write	stay	show	inform	stop
buy	please	choose	deal	listen

VV0: lexical verb (in base form)

We also have sentence structure to help with generating material



EduCreate investigates more interactive learning



The image displays three overlapping screenshots of the EduCreate mobile application interface. The top screenshot shows the 'Library' section with a list of items, including 'Basic EQ Tutorial' by Simon Beaumont and 'Another Package' by Another Author. The middle screenshot shows an 'Editing toolbox' with options such as 'Insert new content page before this', 'Insert new content page after this', 'Add example page', 'Add question', 'Delete this', '>> Edit page', '>> Edit image', and '>> Edit audio'. The bottom screenshot shows a quiz question: 'What is the generally accepted highest audible frequency?' with three options: 800 kHz (red), 20 Hz (grey), and 20 kHz (green). The correct answer, 20 kHz, is highlighted in green. Below the question, there is an 'Incorrect :(' button. The interface also shows a progress bar for 'Content completion' at 67% and 'Questions attempted' at 67%. The percentage correct is 100%. There are buttons for 'View from start' and 'Resume viewing'. At the bottom, there are 'View', 'Edit', and 'Delete' buttons.

We can link to further information to support active learners

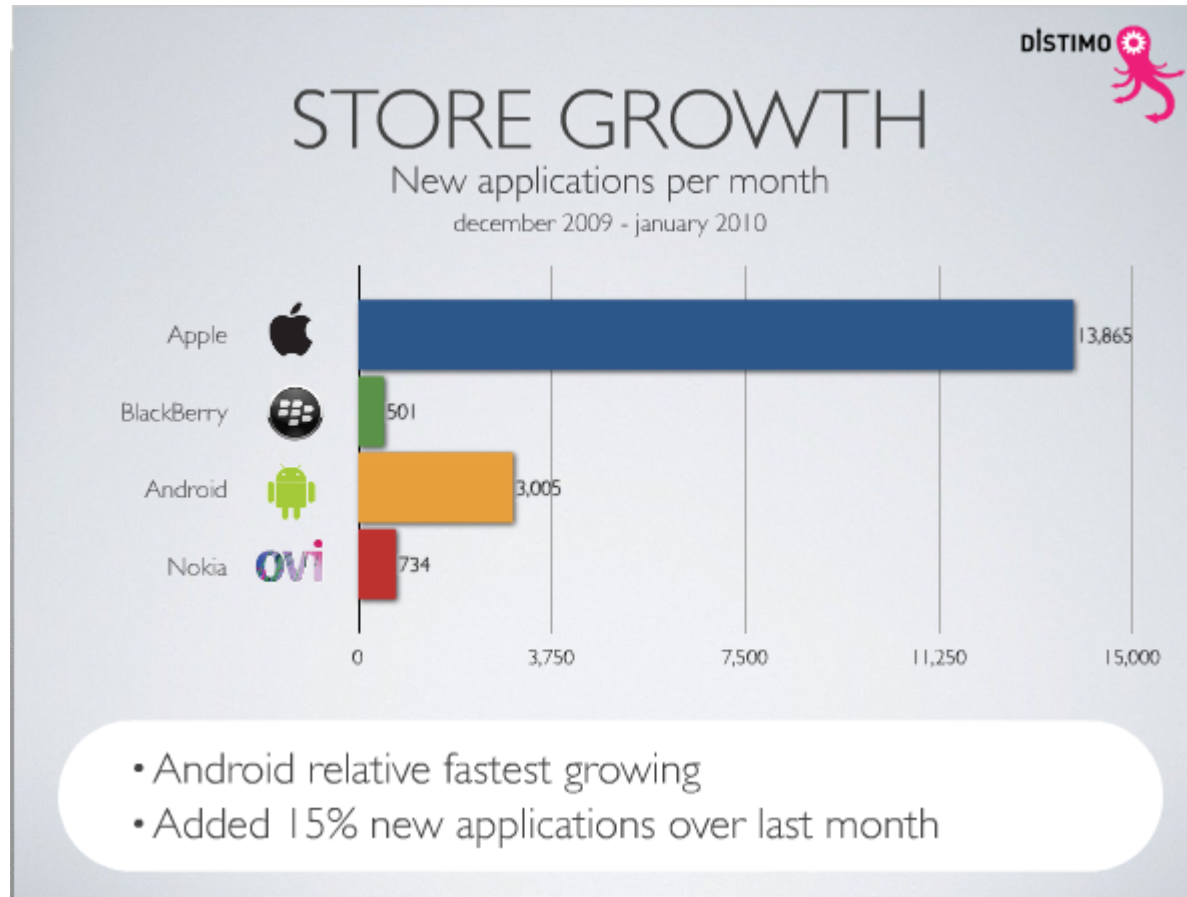
Dictionaries and Thesauri

Conventional text books

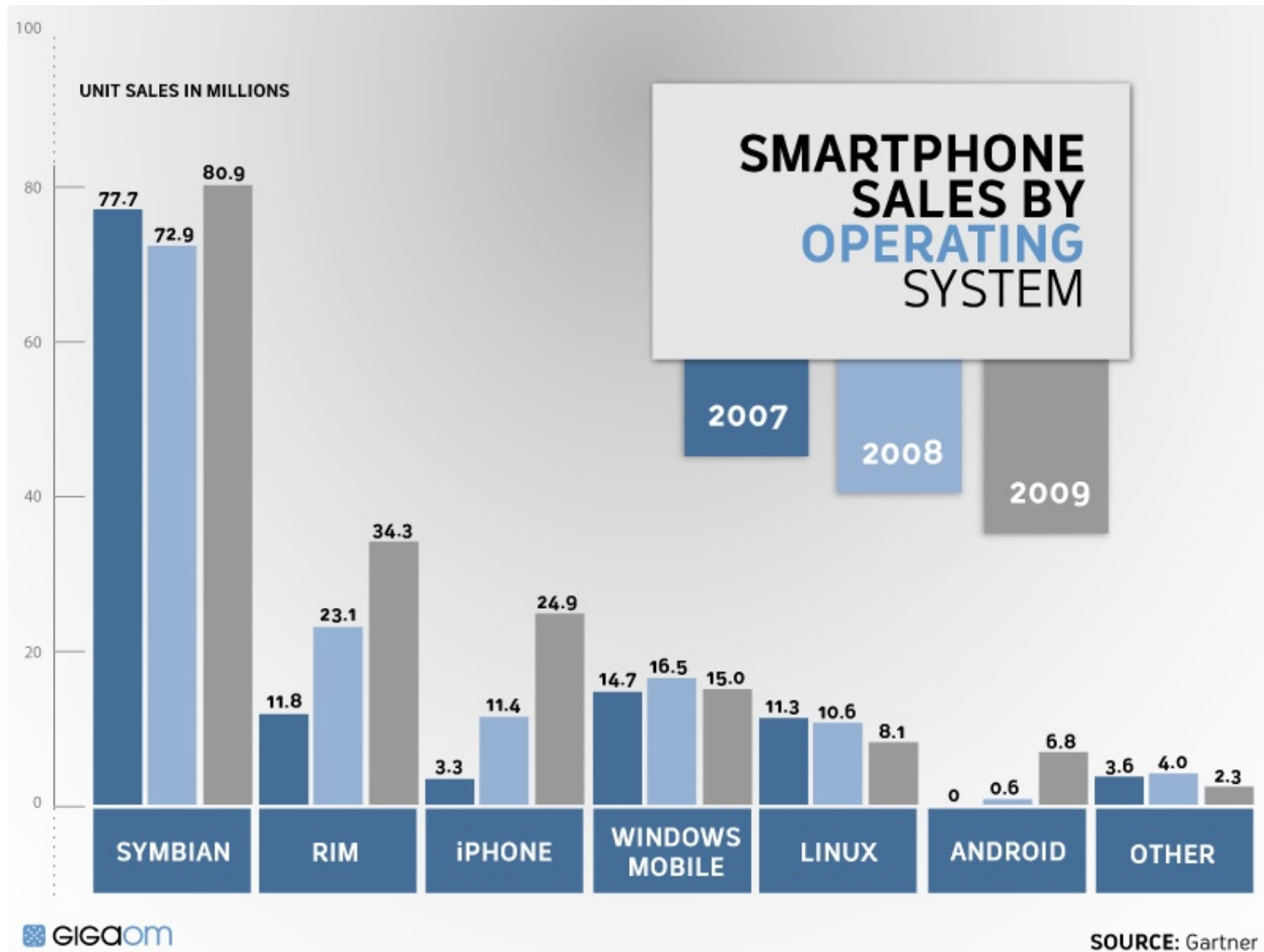
Examination centres

Learner created content

App Stores provide a direct sales route



Platforms grow quickly in popularity



New innovations coming soon...

Location information could provide context-aware learning



Machine translation is about to become a commodity

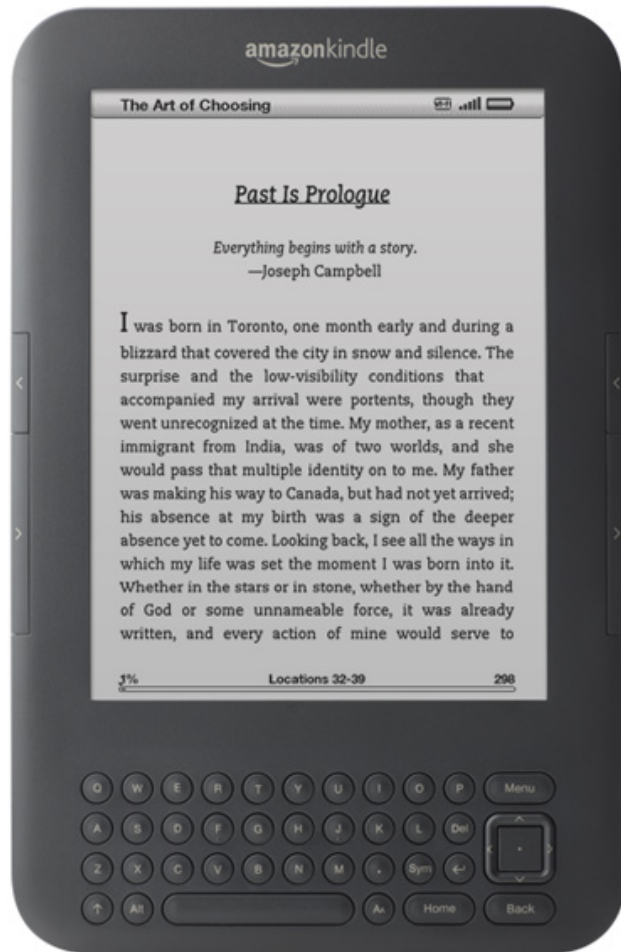
Google Translate conversation mode

- 1) Speak into your phone
- 2) Phone sends audio data to Google servers
- 3) Speech recogniser converts audio to text
- 4) Machine translation to target language
- 5) Speech synthesiser generates new audio
- 6) New audio sent back to phone
- 7) Phone plays translated audio

Augmented Reality



Convergence with other devices will most likely continue



Conclusion

- Mobile devices with Internet access will become prevalent
- New innovations are challenging existing business models and creating new ones
 - Community created content
 - Application stores
 - Open platforms