E-LEARNING MASHUPS IN THE OPENSOURCE WAY

A presentation for BCS, Thursday 30th July
Hello and welcome

• IT Manager for over 15 years, in both private industry and academic fields

• Currently Head of Department of Digital Computing and Technology, GSM London

• My personal focus is on removing fear as a barrier to computing – at both personal and organisational levels.

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Common challenges to development of E-Learning platforms

- Variable government spending on education, e.g. 0.8 billion on primary compared to 24.2 billion on secondary in 2015
  http://www.ukpublicspending.co.uk/year_spending_2015UKbn_15bc1n_20#ukgs302

- Variable in-house IT skills

- Variable staff buy-in

- Variable viewpoints – content delivery platform to interactive flipped classroom; from news bulletin to privacy nightmare

- Lock in with existing IT purchase decisions

- Curricular demands leaves little time to create online resources
Common development requirements

- Open communication in principle; yet controlled access for some, closed access for others.

- Collaboration within a hierarchical education system.

- A platform which is a success whether everyone uses it or not.
Common development requirements

- Avoid lock-in with one provider, yet we want support
- Spend little to nothing extra
- Same features as other schools, but not to *look* same!
- Reinvent the wheel (slightly!)
Combining “opensource way” with Web 2.0 technologies

Open exchange, participation and community
• enable parents, staff and students as producer, consumer and curator
• decentralise content creation

Sustainability of resources, rapid prototyping
• move information flow to a write once, distribute many format
• can be built on by non-technical staff
• requires little or no additional infrastructure investment
A browser side mashup

- a single Web application that combines features and information from multiple Web sites
- emphasis on interactive user participation and the Frankenstein-like manner in which they aggregate and stitch together first and third-party data

...using Web 2.0 technologies. Web 2.0 acts to decentralise content creation, connect peers and allows for reusable code.
Objective 1: enable all stakeholders as producer, consumer and curator

A possible solution:

Emphasis on a single platform for curation, with the curated tools being used for production and consumption.

In this way, one platform can be reconfigured as better tools arrived – no one tool is supreme, lock-in is avoided and rapid prototyping can be achieved.
Curation: Curating tools and resources using Google Sites. Access controlled by group memberships.

RSS feeding Google Calendar – content customised based on Google Apps login.

Embedded collaborative spreadsheets.

Icons as links to external apps, Google apps, websites, Docs, Sheets etc – can theoretically link to ANY URL, including passing credentials within customised URLs.

RSS feeds from school blogs.

RSS feeds from external news sites.
Enabling creation

Free collaborative document editing tools, such as Google Docs, allows for intervention DURING the student writing process.

Also allows inclusion of multimedia, e.g. text, video and picture of Romeo and Juliet!
Enabling creation

Free notebook tools such as Evernote allow for collaborative syllabus writing.

Mixed media also allows for multiple learning styles.
Tools used to create Sites “mashup”

Google Apps for Education – Sites, Calendar, Groups
https://www.google.com/edu/products/productivity-tools/
Cost: Free

Weebly – external website and blogging
http://www.weebly.com
Cost: $0-$8 per month

External blogs and newsfeeds
• http://news.bbc.co.uk/cbbcnews/hi/newsid_4900000/newsid_4907000/4907020.stm
• http://www.rssmix.com/uk-news-feeds
Cost: Free

RSS feed management, to move information between all 3
http://feed2js.org/
Cost: Free
Objective 2 – decentralise content creation

One solution

“Mash in” tools that allow for content to be separated from structure, i.e. tools that support RSS.

Use blogs, RSS and automated email for automation.
Objective 2: decentralise content creation

Drag and drop interfaces offered by content management platforms, e.g. Weebly, Wordpress offer a low cost alternative to outsourcing of website builds.

Little technical skills are required, and platform can be built up as public school website at low cost.
Blogs in disguise!!

Children have very busy lives today and sometimes their reading time may be overlooked. We encourage parents to spend at least twenty minutes a day, even a fluent reader will benefit. Children are encouraged to note their child’s progress in their school work and take an interest in their school work. Children benefit from reading together, discussing aspects of the books they are reading.

Alongside daily reading, children are supported in English and also in relation to topics taught according to Key Stage but require a specific task, homework, or assignment by an agreed date; as noted by the child in their Home School Book. Parents are encouraged to continue helping their child to complete the work at home and sign the green Home School Book to confirm the work has been completed.

Please see below for a summary of our homework timetable for Key Stage 2:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Literacy</th>
<th>Maths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everything in one place</td>
<td>School Calendar</td>
<td>Homework</td>
</tr>
<tr>
<td>Resources</td>
<td>Lunch Provision</td>
<td>Welfare</td>
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<td>Pupil Premium</td>
<td>Policies</td>
<td>Photo Gallery</td>
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</table>
Objective 2: decentralise content creation

Website builders such as Weebly and Wordpress have inbuilt blogging tools

1) allows multiple users, and access levels per user
2) encourages controlled co-creation of content.
Objective 3: move information flow to a write once, distribute many format

School Twitter

St Helen's College
@StHelens_Prepp
Events This Week
sthelenscollege.com/2/post/2015/07... via @weebly

St Helen's College
@StHelens_Prepp
Amazing 'Aladdin'!
sthelenscollege.com/2/post/2015... via @weebly

..Content can even be resyndicated to social media streams
..write once, distribute many!
Tools used in website, blogging and newsletter “mashups”

External website and blogging tools

www.weebly.com
Cost: $0-$8 per month

Syndicated calendar feeds

https://support.google.com/calendar/answer/37083?hl=en
Cost: free

Resyndication of blogs to email and social media

http://feedburner.google.com/
Cost: free
Objective 3: Sustainability of resources

Challenge

• Moving to a network based solution places a drain on the supply of hardware devices
• Typical educational offerings are aging or underpowered, e.g. Intel Atom with Windows 7

One solution

• Zorin OpenSource OS – lightweight install from USB/CD
• Windows, Mac, Linux skins removes uncertainty of navigation for staff and students
Removing the fear barrier
Tools used

Zorin OS – Educational version
http://zorin-os.com/
Cost: Free
Low-cost small school setup I have found works best (so far!)

- External platform (public, parents): weebly.com
- Internal platform (students, staff, parents): Google Apps for Education, with a curated Sites page as launching point
- Connecting to external content, e.g. KhanAcademy
- Internal and external platforms connected via RSS


- Wireless connections will quickly outnumber wired, generally 3:1 – invest in centrally managed wireless, e.g. Ruckus, Netgear, Aruba, Aerohive
Won’t we need IT Support?

“Mash in” sites with **support and hosting built in**, e.g. Google provides free phone and online support, while Weebly offers email support. Both also have vibrant online user communities.

Invest in Edugeek – a fantastic edutech resource!

If the tool is not critical, support is not so essential and it can be replaced if an alternative arrives – the aim of the mashup is not to say this tool is best *always*, but these tools are best *now*. 
Frequently asked questions

What happens if the network goes down?
Worse case scenario, connect personal devices to mobile phone network, and work as usual.

How can we keep children safe?
• “Mash in” tools that automatically use https
• “Remix” Gmail content filters, e.g. content filters, block external email, auto-redirect questionable emails to your head https://support.google.com/a/answer/1346936?hl=en
• Explore the content filtering options already in your firewall. Alternatively invest in a content filter e.g. Smoothwall, Lightspeed
Frequently asked questions

I’m currently locked in with the council, e.g. Grid for Learning
Most GFLs will now port you to Apps but mostly as a branch of their own domain – this limits your ability to tweak how your domain is run. For support on moving away, see https://edudirectory.withgoogle.com/en

How can this link to educational value?
Blended learning, flipped classroom, collaborative document editing, curated Internet resources...

By creating a mashup of best tools at that time, rapid prototyping of best fit is always possible.
Questions?
Building up – an educator’s perspective

• Please welcome Mr. Mark Lewis, Director of Studies for St Helens’ College in Hillingdon.

• Mark would like to discuss how he built on his “mashup”, from an educator’s point of view.
Thank you very much for your time

Please feel free to get in touch if you have any questions

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