

## 'glish: Designing an interactive environment for global language learning

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## Motivation for 'glish

- Experiences of rural children and teachers
- Training and expertise of teachers
- 3rd world library facilities
- 500 m Globish speakers vs 300 m first language English speakers
- Jean Paul's story
- Library skills in a new context
- ==>> use cases for 'glish

## Experiences of rural children and teachers

- Most of the resources are for first-world kids and draw on their experiences
- Most of the resources are, in fact, not really usable on all devices (not adaptable to teachers' needs)
- Most suitable resources expect users to pay to use them



## Use case 1

- Akiko-san is a typical teacher. She wants a story that she can read to her children; that they can listen to when she is busy; that she can ask them to read; that she can ask them to illustrate; that she can combine with their images to download on their MP4 players, and that they will be able to re-tell in their own words.

## Training and expertise of teachers

- Teaching in 3rd world countries is usually very didactic and reinforces socio-political structures - students are not taught to take initiative, they are not encouraged to become investigative, they are not taught to solve problems.
- Critical, creative, informed thinkers are needed everywhere but especially in 3rd world countries



## Use case 2

- Amito-san is a Japanese person who supports a remote rural school that has local teachers working in it. She knows that they need help in the classroom because their teaching skills are very weak. She has supplied them with computers, but she does not know how to train and support the teachers remotely.

## 3rd world library facilities

- In the Hanoi University Library, a few years ago, students sat for days at a large table waiting for their turn to read a single book.
- In the Phnom Penh Library today, there is no proper catalogue of the few books, many of which have been donated (discarded) by expatriots returning home, and there is no access to global catalogues.

## 3rd world library facilities

- In the Ulaan Bataar Library, ancient manuscripts are piled high in open-air storage facilities and
- too few librarians struggle to serve the needs of too many library visitors



### Use case 3

- Building libraries and supplying them with books is an impossibly expensive exercise for poor countries. Many people cannot travel to libraries. Sugimoro-san has re-usable books (cheap computers) and wants to find suitable texts and also help with the lack of literacy in such regions.

### 500 m Globish speakers vs 300 m first language English

- 800 m people share a single language (it sounds very different when they speak!)
- 'globish' speakers use their hands and faces, they repeat what they say, they wait...
- There is no formal recognition for a simplified version of English
- Globish might become a de facto standard...



### 500 m Globish speakers vs 300 m first language English

- Voice of America operates with 1500 base words and some special extras.
- Publishers of books for language/literacy learners use limited 'head words'.
- ESL speakers do not need more than a functional set of grammar and vocabulary.

### Use case 4

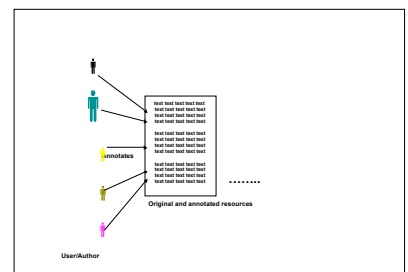
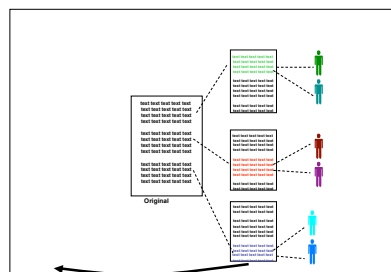
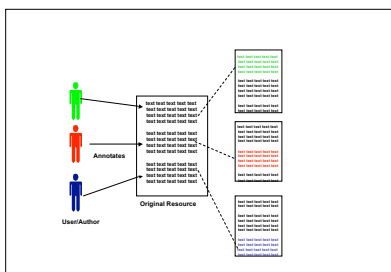
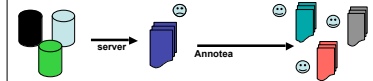
- Pi-san reads and re-writes classic Japanese stories in English for adolescent readers. He does not know which words to use to be sure the students have a clear vocabulary list so he can use it, and add definitions for extra words he uses.

### Annotation

- Often we'd like to annotate an existing Web page without touching the original page
- Teachers and kids want to make use of content without doing permanent damage (and to stay within electronic environment)
- Significantly, teachers and kids often need to use preferred languages to support learning


### W3C's Annotea

- Uses W3C standards and technologies
- Uses RDF metadata framework
- User accessible
- Create, store, edit and delete annotations



## AccessForAll - user-centred approach

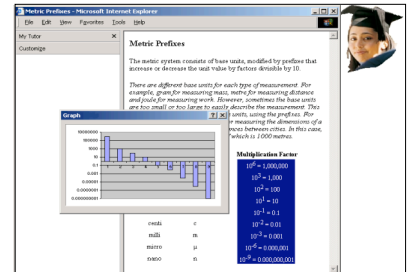
- Users have a range of needs including some from permanent disabilities, some from device or location changes
- Resources need to adapt to the user's needs, not expect the user to adapt to them
- 'AccessForAll' metadata strategy - TILE
  - ISO/IEC JTC1 2008:N24571
  - Dublin Core, CEN, AGLS, .....



The Inclusive Learning Exchange

E-learning environment that enables learner-centric transformation of learning content and delivery

- Authoring support for transformable content and Metadata
- Browser
- Learning Object Repository
- Learner Preference System

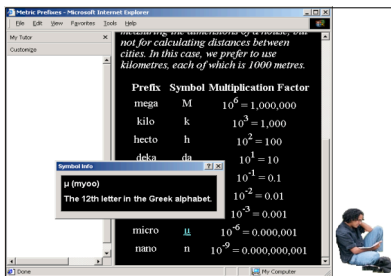


Metric Prefixes - Microsoft Internet Explorer

The metric system consists of base units, modified by prefixes that increase or decrease the unit value by factors derivable by 10.

There are different base units for each type of measurement. For example, prefixes for measuring mass, such as measuring distance and area, or measuring work. However, sometimes the base units are too small or too large to easily describe the measurement. This is done by using the prefixes. For measuring the dimensions of a room, for example, the unit is metres. In this case, which is 1000 metres.

Prefix	Symbol	Multiplication Factor
mega	M	$10^6 = 1,000,000$
kilo	k	$10^3 = 1,000$
hecto	h	$10^2 = 100$
deka	da	$10^1 = 10$
deci	d	$10^{-1} = 0.1$
centi	c	$10^{-2} = 0.01$
milli	m	$10^{-3} = 0.001$
micro	$\mu$	$10^{-6} = 0.000,000,001$
nano	n	$10^{-9} = 0.000,000,001$



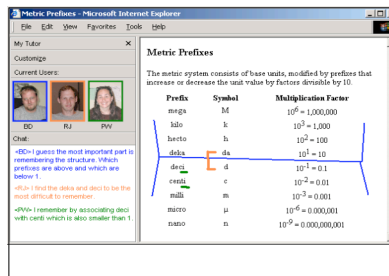
Metric Prefixes - Microsoft Internet Explorer

...measuring the dimensions of a room is metres. In this case, we prefer to use kilometres, each of which is 1000 metres.

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Symbol info  
 $\mu$  (myoo)  
The 12th letter in the Greek alphabet.

Chat  
-Edo I guess the most important part is remembering the structure. Which prefixes are above and which are below?  
-Wol I find the deca and deci to be the most difficult to remember.  
-Wol I remember by associating deci with teeth which is also smaller than 1.

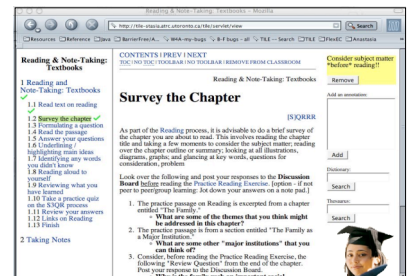


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Reading & Note-Taking Textbooks - Mozilla

1 Reading and Note-Taking Textbooks

1.1 Read text on reading

1.2 Survey the chapter

1.3 Formulating a question

1.4 Read the passage

1.5 Answer your questions

1.6 Highlighting main ideas

1.7 Identifying any words you don't know

1.8 Reading aloud to yourself

1.9 Reviewing what you have learned

1.10 Take a practice quiz on the SQJRRB process

1.11 Review your answers

1.12 Links on Reading

1.13 Finish

2 Taking Notes

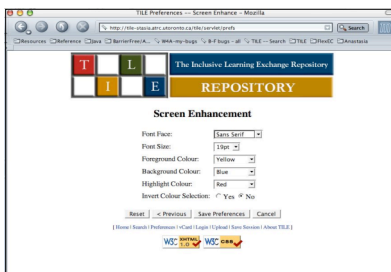
2.1 What are some of the themes that you think might be mentioned in the chapter?

2.2 The practice passage is from a section entitled "The Family as a Major Institution."

2.3 What are some other "major institutions" that you can think of?

2.4 Consider: Before reading the Practice Reading Exercise, the following "Review Questions" from the end of the chapter. How your responses to the Discussion Board.

2.5 What is the family, and what are its important roles?



TILE Preferences - Screen Enhance - Mozilla

The Inclusive Learning Exchange Repository

Screen Enhancement

Font Face: Sans Serif

Font Size: 12pt

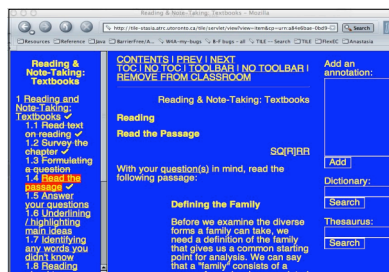
Foreground Colour: Yellow

Background Colour: Blue

Highlight Colour: Red

Invert Colour Selection:  Yes  No

Reset | < Previous | Save Preferences | Cancel



Reading & Note-Taking Textbooks - Mozilla

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Equivalent Video Content: Default

Video Control

00:05:33.2

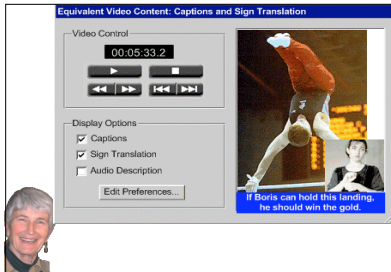
Display Options

Captions

Sign Translation

Audio Description

Edit Preferences...



In summary, a digital library ..

- To provide teachers and kids with
  - 'books' that can be used in many formats
  - reading/writing activities
  - speaking and listening opportunities

and offer

- discovery support via a catalogue (metadata)
- protection by referral (not in catalogue = not available)
- community development (taggers, content developers, forums, and cataloguers)
- Web services (local or by referral)

Social networking - the down-sides

- Protection of children
  - Privacy etc as a moral issue
  - Privacy as security in a life-safety sense
  - Filtering of unacceptable content
- Engaging but so far not very useful
  - Metadata generation
- Solutions?
  - Proxy servers
  - Extend AccessForAll and TILE
  - Engage with FLUID

Technical design

- There's a long list of requirements but so far no obvious way to realise them.
- I need help!!!!

Educational perspective

- 'Creativity' is a strong driver in education and very important for children in authoritative, under-served regions of the world.
- Effective 'education' is lifelong and requires lasting learning practices.
- Epistemologically, this is a 'constructivist' era that calls for 'constructionist' education.

Constructivist education

- Requires teachers to provide students with what they need to build effective knowledge - not necessarily the 'knowledge' itself.
- In fact, providing the 'what you need to know' often detracts from students' ability to determine and learn in a meaningful and permanent way.

'glish as a constructionist site

- Activities to
  - attract kids
  - support kids and teachers
  - provide constructive stimulus
  - extend kids' capabilities within 'proximal zone'
  - exemplify active learning and constructionist teaching

Learning as a 'side-effect'

Alan Kay talks about the benefit to children of making the toys with which they later play ...

Learning as a 'side-effect'

- The children have built an electronic toy and now they are playing with it.
- They took photos of themselves, edited and integrated them into the Scratch environment, wrote a program to control their images and now they can play with them - and share them with the world.
- <http://scratch.mit.edu>

### Where do these children live?



### Motivating and facilitating learning

- The MIT Media Lab's LLK group is working on the idea of extending kindergarten - that period when we learn naturally by safe exploration
- Electronic environments can provide equivalent opportunities to older people with 'microworlds'
- Microworlds do not specify activities so much as provide context for them - users take what they can/need

### Rich microworlds

- Electronic environments in which one learns inevitably eg compare a Logo turtle with the real world:
- On the screen FD 100 RT 0 FD 100 results in a neat angle



### Rich microworlds

- Electronic environments in which one learns inevitably eg compare a Logo turtle with the real world:
- On the road, FD 100 RT 90 FD 100 has dire consequences - why???



### Man'glish

- Take advantage of Japanese experience with manga as a form of communication across domains and ages (and languages?)
- Support manga authors with grammar and imagery (using Scratch??)

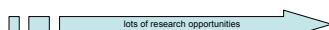
### Scratch

- Microworld (computer science plus...)
- Interactive multimedia
- Collaborative practices
- Internationalisation
- Creativity based on systematic thinking
- Fun
- Literacy.....



### But....

- We know a lot of things we want to do
- And some that are challenges such as:
  - system design and implementation
  - sustainability -- content development
  - privacy -- content evaluation
  - security -- accessibility
  - promotion to teachers and kids



- and hardware ....

### Research collaboration...

- Across
  - ages
  - domains
  - languages and cultures
  - national borders
- Please - if you have or know of interested students or have an interest yourself - come and join us!
- See <http://glish.org> and finally, to make all this happen ....

### What better than one laptop per child ?



One laptop per teacher!

