Personalised Highlighting & Annotation Tool

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Outline

• Aloha Project: Research Assistant Agent
• Research in Annotation & Highlighting
• Experimental Study
• WiredMarker Tool
• Results
• Further Work
Aloha Project

The project is an endeavour in the direction to:

- Develop an AI agent that facilitate a research assistant job of critically reviewing literatures.
- Provide a specification for the steps, algorithms and processes involved, with the aim that the *pseudo-code* will serve as specification for the application to be programmed.
- Closest contender to Aloha is SkimCast.com, “Skimcast can research a topic on the Internet and prepare annotated outlines and summaries of web pages related to your topic” HOWEVER, what this service is not purport to do is to follow the method actually used by REAL-RESEARCHERS in preparing an initial, critical review of literature, i.e. Finding a *keypaper, key author(s)* and to follow all the potentially fruitful leads.
Aloha Project

ALOHA Research Assistant Agent

Annotation and highlighting
Search, Index and collate
Collaborative agent, user generated content web 2.0

CROSS PLATFORM SYSTEM
Research in Annotation and Highlighting

Active reading substantially improves comprehension of material. Annotation aids active reading.

“Annotation is a key way in which hypertexts grow and increase in value”
(Marshall, 1998, p.23)

“Annotation are not only a way of explaining and enriching an information resources with personal observations, but also a means of transmitting and sharing ideas to improve collaborative work practice”
(Maristella & Nicola, 2007, p.67)

“e-Annotations tool is a vehicle for developing collective knowledge in a multiple form and media by individuals or community of practices”
(Fallahkhatir & Kennedy, 2010)
Research in Annotation and Highlighting

There are a number of different categories of annotations. Interesting categories include:
• Commentary, where users editorialize information with related facts or opinions.
• Highlighting/Marking in or around text, where the purpose of an annotation is simply to draw attention to a single segment of a document.
• Link Making, where readers seek to clarify connections between information contained in a document with other information, either for themselves or for a community.
• Reading records, where readers use annotations as a memory aid.
• A community memory bank, where annotations serve as a vehicle for expressing the evolution of thought or an archive of interaction for a community of contributors.
Typology of E-Annotation

- Using coloured Highlighter
- Underlining
- Interlinear notes
- Marginal notes
- Sticky notes
- Web link to other sources
- Link to multimedia materials, image, video, audio
- Link to other user-generated content, YouTube, Picasaweb, iTunes U, etc.
## Personal Annotation Technique

<table>
<thead>
<tr>
<th>Material you don't understand</th>
<th>?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreement with author</td>
<td>✓</td>
</tr>
<tr>
<td>Disagreement with the author (equivalent to &quot;NO!&quot;)</td>
<td>✗</td>
</tr>
<tr>
<td>Text that throws light on your topic</td>
<td>🔒</td>
</tr>
<tr>
<td>Keyword</td>
<td>←</td>
</tr>
<tr>
<td>Key phrases that will unlock other literature</td>
<td>🍃</td>
</tr>
<tr>
<td>Material that surprised you</td>
<td>!</td>
</tr>
<tr>
<td>Something is left out</td>
<td>λ</td>
</tr>
<tr>
<td>Something that is important to you</td>
<td>*</td>
</tr>
<tr>
<td>Something that is very important to you</td>
<td>**</td>
</tr>
<tr>
<td>Material that you need to note well</td>
<td>NB</td>
</tr>
<tr>
<td>Text you wish to Google (quid Google)</td>
<td>QG</td>
</tr>
<tr>
<td>Text you wish to quote</td>
<td>“”</td>
</tr>
<tr>
<td>Beginning and end of text you wish to comment on</td>
<td>[ ]</td>
</tr>
<tr>
<td>Good material</td>
<td>★</td>
</tr>
</tbody>
</table>
Research Methodology

- Effectiveness of e-annotation tool, *Experimental study*
- Elicit Students’ attitudes towards using e-annotation in *Survey method*
Experiment Study (I)

Aim: Existing course given to students to add value using different techniques:

Methodology:
Course material was given to the students in writing and via VLE.
All class members (90 UG student) had to use 3 annotating techniques:
1. Notebook
2. Pens
3. WiredMarker
Proposal

Proposal Guidelines and Submission

Download
proposal guidelines

The University of Greenwich is organising its eighth one day conference entitled Future Learningscapes at the Maritime Greenwich Campus, on Wednesday, 7th July 2010. Contributions to the conference programme are sought from students, practitioners and researchers in all education and training sectors that provide case study examples of, or project/research reports that address at least one of the conference aims.

The following questions may help you to frame your proposal and to engage delegates in discussion:

- If we believe that future learningscapes incorporate a number of dimensions including physical / virtual, formal / informal, individual / group identity, how might we characterise learning and teaching in the 21st century?
- How do technologies transform learning and teaching?
- In what ways has technology enhanced the learner experience?
- What is the evidence to support the claims that technology can transform learning and teaching?
- What will learning in the future look like – what scenarios, skills, tools and approaches?
They also expressed dissatisfaction at the fact that they could not easily make annotations that were perceptually distinct from the underlying text. This distinctiveness is, in part, what supports quick re-reading by drawing attention to points of interest.
Manchester Business 15 June 2010
Tue, 15 Jun 10
Steve Saul presents Manchester Business from BBC Radio Manchester. Listen live Monday nights from 6pm on 95.1 FM or www.bbc.co.uk/Manchester - First broadcast 14/06/2010
Results

• None had been taught annotation/highlighting, and each they pursue their own way
• Most student relied on manual annotations, mainly because they were unfamiliar with WiredMarker tool
• However, All found e-annotate concept useful, in particular being able to annotat multimedia materials
Results (Cont...) Vertical & Horizontal templates for critical review

Vertical
• Key
• Background
• Viewpoint
• Methodology
• Quote
• Limitation
• Contribute
• Relevance
• Cites
• References

Horizontal
• Synopsis
• Links to other sources multimedia sources
Results (Cont...)

• Benefit for students: encouraging to build their electronic references and critically review sources. Also, the carry-over effect was to remind students to document their resources properly, avoiding plagiarism.

• A side effect of classroom use was that the students have gathered extra materials for enriching course content. Ninety independent minds represents a powerful tool and more importantly enable “learner-centred” way in enhancing course content.
Further Work

• Towards Development of Aloha
• Development of Collaborative tool for e-annotation: includes Web 2.0 concept of user annotation of content and multi-media or multi-modal annotations.
• E-annotation tool will become an essential part of e-books & e-readers and it should now be a prescribed item in the electronic pencil box of every student.