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Student knowledge creation for assessments in higher education

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The best way to preserve
knowledge is to share it.

Discussion points

Constructing and reconstructing knowledge

1. A review of the literature
2. The method – learning from the users
3. The findings – knowledge gained and created
4. Conclusions

A Review of the literature

Information discovery → Synthesis → Knowledge creation.

- The discovery phase.
 - ❖ Simple tools used by students and instructors.
- Creating initial knowledge from searches
 - ❖ Surfing the ocean of information.
- Re-creating knowledge from discovered sources
 - ❖ Skimming abstracts....and some of the full text.

The Method – learning from the users

Intervening in the search process

- Focus on novice and experienced students.
 - ❖ Three phases – including transition-to-university, and senior students as participants.
- Observing the users with eye-trackers and screen monitoring
 - ❖ Simple tasks requiring information searches from subject assessments
 - ❖ Adding a word cloud app in phase 3.

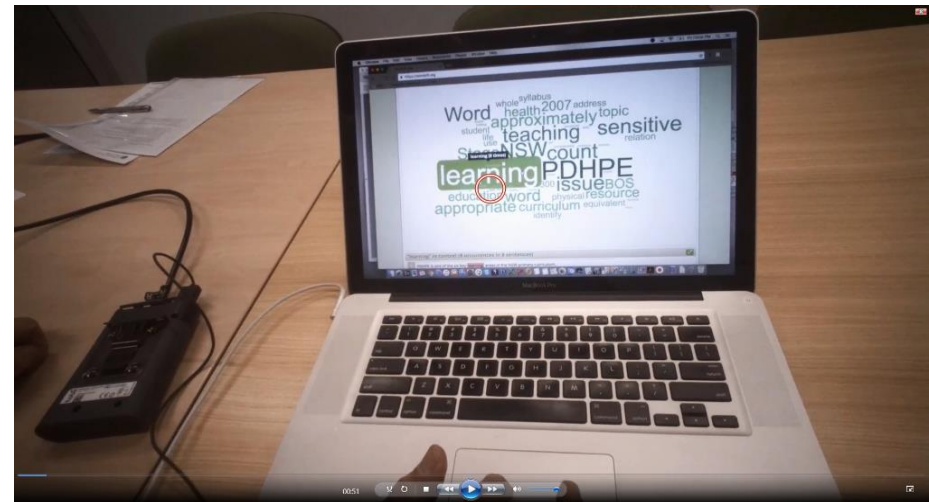
Eye-tracking the reading process



Tobii X120 desktop eyetracking unit



Tobii wearable eyetracking unit



The Findings – Knowledge gained

Translating the requirements into searches

- Reading the task and learning from initial searches
 - ❖ Preliminary knowledge creation from search tools. *The 'get in get out' approach – Shallow knowledge.*
- Constructing a better search.
 - ❖ Initial search results + task + word cloud → better engagement.
 - ❖ Mental models

The Findings – Knowledge created

Synthesizing discovered information into knowledge

- Cherry picked reading using keywords.
 - ❖ Abstracts/beginning & differentiated texts as key knowledge sources
- Higher order thinking & Visual mapping.
 - ❖ Engagement with texts (reflections, back reading, note taking) → better information synthesis

Contact Information

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