Teaching information literacy for engineering students in a rapidly changing landscape

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Teaching information literacy for engineering students in a rapidly changing landscape

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(work in progress w/Drs. Rosa Lönneborg & Maria Unger)
A rough timeline of changes

2005

2010

Today
Global changes

Google Scholar

Discovery tools

Students' Perspective*
Students' perspective – (sloppy) summary

• ”Why not just Google it?” [1]
• ”What is a bibliographic database?” [existence=full-text]
• ”Do I have to read the course literature?” [Swedish ”full-time” university studies]
• ”I will work as an engineer/programmer, not as a scientist.” [frequent comment on student evaluations]
• ”I know exactly what kind of information I need.” [The student claims to be an expert.]
Changes locally@KTH

2005:
?

Budget deficit => cuts in databases

ExLibrisPrimo
Media plan
Teaching and learning quality development via syllabus update – our 1 week course

<2009

Today

>2010
Changing the course focus – signalling it via change in course name

"Information searching"

? 

"Source-critical information management"
Changing the course focus by changing the Intended Learning Outcomes

- Intended Learning Outcomes (ILOs) are the content declaration or "contract" for the course.
- Constructive alignment gives that a change in the ILOs implies a change in teaching activities and assessments.
- Hence, a course change is an iterative process where you:
  1) write ILOs,
  2) construct relevant exam activities
  3) define the structure of learning activities.
- This is summarized in the KTH official course syllabus and in detailed course memos to the students.
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- **Synergistic effect 1**: this is a basis for continuous assessment of our IL-teaching via performance rates and course evaluations.
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- **Synergistic effect 2**: this is also a tool for marketing our IL-activities for integration into other KTH-programs and thesis/project courses.
Changing focus via change of verbs
Intended Learning Outcome 1: ”search”

(Boolean) Search
  Use interfaces
  Retrieve documents

Find relevant info
  Iterate searches
  identify different "scientific" sources

Identify info-need
Choose resources
Iterate searches
Intended Learning Outcome 2: "evaluate"

- assess the source and reliability of information
- Source-critically analyse the total set of search results
- Criteria for credibility
- Pluralism in science
Intended Learning Outcome 3: "cite"

- Correct use of Intellectual properties in text
- Interpret and write complete literature references
- no ILOs
Changing course prerequisites=eligibility [answer to a need for earlier IL-teaching]

”>2 years of studies” ~0.5 years (30 credits)

~1 year (40 credits)
Changing didactics teaching IL

- Plenary lectures
  - "Behaviouristic" interpret. of IL
- Interactive labs
  - Flipped classroom
  - Socio-cultural IL
- Peer teaching
  - MOOC module?
Summary of focus changes

Licensed databases
Boolean searching

Source-criticism
Iterative searching
Modernized pedagogics

Tool-independent information literacy
Using IP in text
Links & documents

- KTH Library: www.kth.se/kthb
- ECE-courses: https://www.kth.se/student/kurser/org/LGC
- ~5 years of student feedback and course evaluations.
Bibliography, selected


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Questions? Contact? Thanks!

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