BLENDDED LEARNING IN INFORMATION LITERACY EDUCATION.
How to make the resources stretch?

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1. IL at LUT
2. Pre-assessment for Bachelor’s students
3. Blended learning and the pre-assessment
4. Conclusion
History of IL education at LUT

- Freshmen’s library tours have been around since the early years of LUT
  - reform in 2001 → web course with online assignments

- From 1977 to early 1990’s → an advanced 16-hour-course in information sources and retrieval, lectures and practices
  - one librarian and two information specialists were responsible for teaching
  - financed by the Faculty of Technology
  - was removed from the curriculum because of economic reasons

→ Practically no advanced IL education until 1996
  - IL education for a Bachelor’s seminars first at the Department of Business Administration (later LUT School of Business)
  - national higher education curriculum reform in 2005 → Bachelor’s degree to all → IL education gradually became a part of the majority of Bachelor’s seminars at LUT
IL education at LUT in 2013

- IL education is carried out according to the national recommendations
  - based on the International IL Competency Standards (ACRL, 2000)
  - First-year students → basics of library services and information sources
    1. guided tour in the library
    2. classroom lecture
    3. web course
  - Bachelors-to-be → retrieving and using information in their own discipline and the basics of bibliometrics
    1. lecture
    2. additional hands-on training session
  - Masters-to-be and PhD students → recent changes in the information sources of their fields of science, bibliometrics, reference management
Integrated IL education at LUT

- Integrated in the curricula and carried out in close cooperation with faculties
  - each LUT faculty has its own Introduction to Studies course for first-year students and IL education is a compulsory part of that course
  - professors instructing Bachelor’s seminars request the IL sessions from the Library
  - Master’s and PhD students attend their own teaching sessions which are more occasional and arranged upon request → in connection with faculty’s courses
Teaching resources

- Nearly all (18) of library staff participate in guiding freshmen’s library tours
- All 5 information specialists participate in IL education in class
- One information specialist teaches online

2011
- 4900 students attended IL education at different levels
- 600 students attended online courses in Finnish or in English
IL education for Bachelors-to-be

- Department of Business Administration was the pioneer
  - Later the Department of Industrial Management joined
  - Even later Schools of Environmental and Energy Engineering joined
  - Hopefully the rest of the departments join in the near future

- Content based on the International IL Competency Standards
- With no formative assessment, the students’ existing skills could be only estimated

- 2x45 minutes in class
- For some groups additional 2x45 minutes in computer lab

- Large content in very short time!

- Result: FRUSTRATION
Heureka! I’ll find out what they know and don’t know. Then I can concentrate on the essential things.
But how?

- A questionnaire → I have no time to plan it.
- The student writes an essay → Hmm, perhaps but on what? → Must avoid too much extra work

The faculty teachers want the students to be able to find scientific information for their papers. So, let’s see if they know how to find that kind of sources.

Pre-assessment (2010):
- find a scientific article on your seminar topic and show a link to it,
- report how and where you found it,
- tell about possible problems in information retrieval, and
- explain why you think the retrieved article is scientific.

Report on max one sheet and email it to the instructor by ppmmyyyy
Changes in lecture content based on the pre-assessment

Less is more!

- The students already use the national information retrieval portal (NELLI) → **advanced using of NELLI**
- The students have problems in finding and using search words → tools for that (**online dictionaries, thesauri, truncation, and proximity operators**)
- The students don’t know how to search databases → **quick guides** (1-2 slides) of the most important sources
- The students don’t know what a scientific article is like → **a check list of the criteria of a scientific article and basic bibliometrics**

In addition: **Help in citing** → short presentation of RefWorks
Happy teacher, active students

Teacher
- Valuable information from the pre-assessment → really shows the shortcomings in the students’ knowledge
- Easy method to use → no marking papers, quick to read and pick out the relevant things
- Rewarding to avoid unnecessary topics

Student
- Stops to think what information searching is all about
- Recognizes possible lack in skills
- Engaged in the lesson → better learning
OK with 12 students but in 2012 there were already 160 individual answers. That was way too much for one teacher!

An excellent method, too good to give up.

No extra teaching resources in view.

Could I make them work in groups?

Social media, yes! But which one?

In the Internet?
Abundance of tools

Browser-based

- Adobe Buzzword
- Aloha Wikidocs - Collaborative online WYSIWYG editing for native HTML5.
- Apache Wave - Google's version of this product (named "Google Wave") is in the process of being discontinued, and elements of it are being migrated into other products of theirs; however, other companies and open source projects continue to offer software supporting (or aiming to support) the Google Wave Protocol.
- beWeeVee
- Codiad, a web based IDE with collaborative editing released under the MIT Free software licence.
- collabedit.com
- Scroipe.com
- Etherpad - open sourced after Google acquired and shut down the company
- Etherpad Lite - a Node.js based Etherpad written from scratch
- fp-tools
- Google Docs
- KnockoutSurveys - an online survey tool that allows multiple people to design a survey at the same time
- Kune - Open source federated collaborative real-time environment specialized in group work, with social-networking features.
- Mozilla Skywriter: designed primarily for programming (As of January 2010 merged into the Ace project[12]).
- NotePub: an online public notepad with real time updates.
- Novell Vibe
- Open Cooperative Web Framework: a Dojo Foundation Project that uses an Operational transformation algorithm to enable the creation of Cooperative web applications. Work-in-progress Editor demo
- PiLight (PHPIDE Light) A PHP/websocket(server)-based IDE, currently closed source.
- ShareLaTeX - an online LaTeX editor allowing real time collaboration.
- ShowDocument
- ThinkFree
- Writeurl, a free real time collaborative editor that requires no registration. It uses web sockets, and node.js on the server.
- XaitPorter - Single-source simultaneous co-editing solution

http://en.wikipedia.org/wiki/Collaborative_real-time_editor
EtherPad

- Was chosen by accident → presentation at a conference (SULOP) in Helsinki in March 2012
- Appeared to be a good choice, because
  - Does not require identification
  - Every user writes in different color
  - Each version and production history can be displayed separately
  - Text can be copied to for example Word if needed
  - Easy briefing
  - Chat
  - It is free (not freemium)
Easy briefing

- Only 4 slides
  - links to EtherPad pages
  - basic task
  - schedule
  - Lesson info

Ennakkotasku

- Ennakkotasku tehdään Etherpad-verkkoalustalle ryhmissä

  1. Jokainen ryhmä lasi artikkelin, joka laittaa ryhmän linkin siihen artikkelille ja
  2. Jokainen ryhmä lasi ryhmän artikkelin ja

Ennakotasku

- Ryhmä tuo tiedonhaun
- Käsitellään ennakkotasku

Huuomatka

- Jokainen ryhmä lasi ryhmän artikkelin

Harjoitus

- Harjoitus on 28.1.2013, Mikroluokka 6216 → käytämme aikaa

Tiedonhaun luento

Ti 15.1.2013 klo 10-12 (s. 4511)

- Käsitellään ennakkotasku
- Jos haluat, voit esittää etukäteen
- Harjoitus on 28.1.2013, Mikroluokka 6216 → käytämme aikaa

Ryhmä 1: http://etherpad.ltt.fi/8yqF342jS
Ryhmä 2: http://etherpad.ltt.fi/2yPFilcCh1G
Ryhmä 3: http://etherpad.ltt.fi/chbqbyv6ty

Deadline yhteiselle vastaukselle on to 14.1.2013 klo 08:00.
YMTE Ryhmä 1: [http://etherpad.vtt.fi/8yq2f342jS](http://etherpad.vtt.fi/8yq2f342jS)


Artikkeli löytyy tältä: [https://portti.lut.fi/f5-w-687474703a2f2f777772e736369656e6365646972656374e636f6d$/science/article/pii/S00431](https://portti.lut.fi/f5-w-687474703a2f2f777772e736369656e6365646972656374e636f6d$/science/article/pii/S00431)


Kokeilin kandilähde materiaalini otsikolla, muuntelemalla sitä hieman, ja sain tuloksia vain 17. Haastavaa oli keksiä oikeanlaiseen hakusanateen.


Ärsytti, kun piti etsiä englanniksi. Tuloksia tuli 210, joten en hirveästi jaksanut tutkia niihin artikkelien sisältöä, otin vaan ensimmäisen jonka otsikon ymmärrettävän.


Tiedonhauassa on ongelmallista löytää useiden tuloksiin seosta itselleen hyödyllisin artikkelin. Itseellä tuloksia hakusanan otsikolla tuli 7975 tulosta. Selailin muutanen sitten tuloksia eteenpäin ja valitsin artikkelin, jonka otsikko oli helpoin ymmärrettävä.

Artikkelin lukea täältä: https://portilut.fi/f5-w-687474703a2f2f777777e736365655e63656469726563742e636f6d$%/science/article/pij/$S0043135411000510

Käytän hakusanaa: "Treatment of Odorous Volatile Organic Compounds Using UV/H2O2"

Artikkelin lukea Nellistä pikahaussa ja hakusana käytin "soil contamination". Artikkelin lukea Emerald Journals (Emerald) –aineistosta.

Arvytyn, kun piti etsiä englanniksi. Tuloksia tuli 210, joten en hirveästi jaksanut tutka noitten artikkelien sisältöä, otin vaan ensimmäisen jonka otsikon ymmärsin.


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Valitsin artikkelin "Don't Muddy Your Carbon Footprint", sillä teen harjoitustyötä omasta hillijalanjärjestä. Artikkelin saatavissa: http://content.epenet.com/ContentServer.asp?T=P&P=AN&K=33013244&EbscoContent=dGJyMNh7Esep7E4vNfsOLCm0uep65S6l4SbKWxWXS&ContentCustomer=dGJyMgqqtU%Z82pqSMuePfeoyx%2BEu3q64A&D=bth. Löysin artikkelin Nellistä hakusanailla "carbon footprint calculation" ja artikkelin lukeo EBSCO -Business Source Complete -tietokannasta.

Tiedonhakussa on ongelmalta löytää useiden tuloksien seasta itsellen hyödylliset artikkelit. Itsellen tuloksia hakusanailla tuli 7975 tulosta. Seläältä muutaman sivun tuloksia eteenpäin ja valitsisin artikkelin, jonka otsiko oli helpoin ymmärtettävä.

Tieteelliselle artikkelille tulee löytää lähteet, joihin on myös viitattu asianmukaisesti artikkelissä. Artikkelin tekijä on ollut selkeästi esillä. Lukijan tulee myös kiinnittää huomiota lehteen, jossa artikkelin on julkaistu. Arvostetut tieteelliset lehdet ovat luotettavampia lähteitä kuin tavalliset aikakauslehdet, joiden kirjoittajat harvoin ovat alan/aiheen asiantuntijoita.

Kaikkein artikkelit ovat luotettavista lähteistä (tietokannat yms.), mutta tieteellisten artikkelin tunnusmerkit täyttävät kokonaan vain ensimmäisen artikkelin kohdalla. Ensimmäisessä artikkelissa lähdeviittaukset ovat selkeä ja tekijä helposti löytettävissä. Artikkelin kirjoittajien tiedot on
Observations from the online group answers

- The same kind of problems arose as from individual answers → the basic content of the slide show was ok
  ➢ top problems: finding search words and limiting the search
- The students tended to use the same information sources as the other group members.
  → Learning from each other!
- They were able to create a common definition of a scientific article.
  → Working together. The concept of a scientific article needs, however, some clarifying.

- Although the overall problems were the same, different seminar classes had their distinctive emphases on information searching and use.
  → It is really worthwhile to customize the lesson.
Customizing

- Examples on how to use search words (the vocabulary used within the discipline)
- Including the searching methods in the most important databases and excluding the less important ones
- Taking into account the distinctive problems of the class and leaving other things aside
  - For example: In one case the students seemed to know how to use truncation. That part could be left out and the time could be used on more profound matters.
- Refering to the pre-assessment answers
Win-win situation
The student benefits

- **He learns from other students** while working on the pre-assessment.
- He does not need to listen to things already familiar to him because of the tailored content of the lecture.
- He does not need to waste time at the beginning of the lecture to become aware of what the thing called ’information searching’ is about.
- He does not need to spend time in learning to use databases by trial and error.
- He gets personal counseling on searching information of his own topic at the hands-on training session.
The teacher benefits

Saving time!
- A fixed procedure to perform the IL education \(\rightarrow\) a quality issue
- Less papers to read, yet the same information
- A common Bachelor’s seminar PowerPoint presentation which is easy to tailor \(\rightarrow\) no need to reinvent the wheel
- No extra time needed to find out about the students’ topics while preparing the hands-on training

Motivation
- No need to talk about things already familiar to the students
- Pleased students
Conclusion

- A formative pre-assessment is a good tool to determine the existing IL skills of advanced students.
- It is worthwhile to blend social media in the IL education to make the students work together and save the teacher’s resources.
- Easily tailorable pre-assessment and slide show save teaching resources.
- Productization is also a quality assurance tool.

- At LUT, not all faculties use this method yet but we are working on it!
- The method could be adopted to the students of applied sciences as well but the emphasis should not be on scientific information.
- The method would be easily applicable to Master’s students’ IL education.
Interesting development in the future!
Thank you!