



Exploring Quality Issues in the Use of LOs:

To Tag or Not to Tag?

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Outline

- Quality issues in the use of LO
- Context of work
- Student tagging observations
- Tagging in a learning quality process



A Researcher and a Teacher ...

Topics

- XSL-FO processing
- Similarities with and differences from CSS:
 - Display types
 - Borders and margins
 - Colors, fonts, and alignment
- Page layout and page masters
- Flowing content into pages
- Static content; headers and footers

Week 0411 Converting Data Models

XSL Formatting Objects

- XSL-FO an XML-application for creating paper documents

```
graph LR; XML[XML] --> XSLFO[XSL-FO]; XSL[XSL] --> XSLFO; XSLFO --> XSLFO; XSLFO --> PDF[PDF];
```

- XSL-FO namespace:
 - `xmlns="http://www.w3.org/1999/XSL/Format"`
 - Common to use as `xmlns:fo`

Week 0411 Converting Data Models

Similarities with CSS (1)

- Display types:
 - Inline
 - Block
 - List
 - Table
- Borders and margins:
 - Content may be encompassed by borders
 - Padding and margins controls space around content

Week 0411 Converting Data Models

Similarities with CSS (2)

- Color, font and text properties:
 - Color: `color`, `background-color`, ...
 - Fonts: `font-family`, `font-size`, `font-style`, `font-weight`, ...
 - Alignment: `text-align`
 - Space and break properties

Similarities with and differences from CSS:
display types
borders and margins
colors, fonts, and alignment
page layout and page masters
flowing content into pages
static content; headers and footers

Converting Data Models

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Quality Issues in the Use of LOs

- Quality of learning object (and metadata):
 - Classical work often result of iterations of feedback
 - Student evaluations are overlooked and neglected
- Quality of the learning processes:
 - Discrepancy between the teacher's intention and the students' reception
 - Student interpretation and misinterpretation might both be fruitful
 - Professors need to develop their skills as teachers in tagging their LOs



Context of Work

- Blended learning at Gjøvik University College:
 - On-campus students in classroom
 - Distant students (often lifelong learners)
- Lectures recorded and made available as Learning Objects (LOs):
 - Some professors break lectures into smaller chunks
- Focus on the use of LOs in current teaching:
 - For distant on-campus students **and** distant students
 - Less focus on reuse – more on utilization of LOs of in daily learning activities



The Study (1)

- Duration:
 - During the spring semester of 2010
- Participants
 - Two courses, 8 LOs in each course
 - Two groups of master students, approx. 10 students in each group
 - The professors teaching the courses
- Purpose:
 - Study the difference between the professor and student view of LOs
 - Study the potential role of LOs in a college setting
 - Seek added value for students **and** professors



The Study (2)

- Part 1:
 - Professors assigned keywords to the LOs
 - Students tagged the LOs
- Part 2:
 - Some students were interviewed
 - Professors were interviewed



The Metadata

- The focus of the study was on *descriptive* metadata, such as:
 - Dublin Core Subject
 - LOM General.Keywords
 - LOM Classification.Keywords



The Tagging User Interface

Adding comment and tags - Windows Internet Explorer

http://www.stud.hig.no/~080455/addc.php?loid=2010011234&title=Basic Video Compression Techniques

Adding comment and tags

Adding your comment for this material

Basic Video Compression Techniques

You can evaluate this material, write your favorite words which can be used to describe it, and also you can write down comment for it.

User's Name: (nullable)

Please input your tags to describe this material (you can use "," to separate each tag)

Your rating

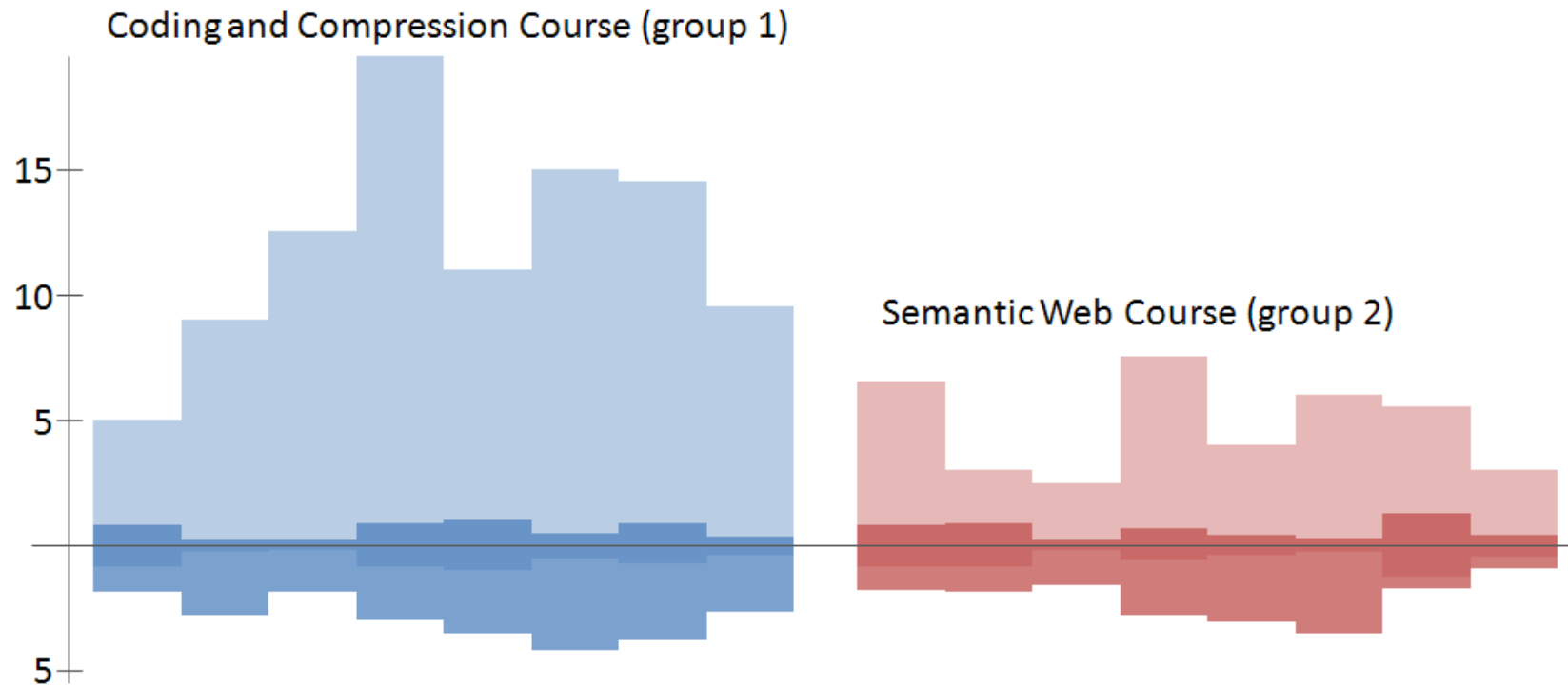
Content quality	Difficulty
<input type="radio"/> ★★★★★	<input type="radio"/> ★★★★★
<input type="radio"/> ★★★★	<input type="radio"/> ★★★★
<input type="radio"/> ★★★	<input type="radio"/> ★★★
<input type="radio"/> ★★	<input type="radio"/> ★★
<input type="radio"/> ★Poor	<input type="radio"/> ★Easy
<input type="radio"/> No rating	<input type="radio"/> No rating

Please write down your comment



Overlap (1)

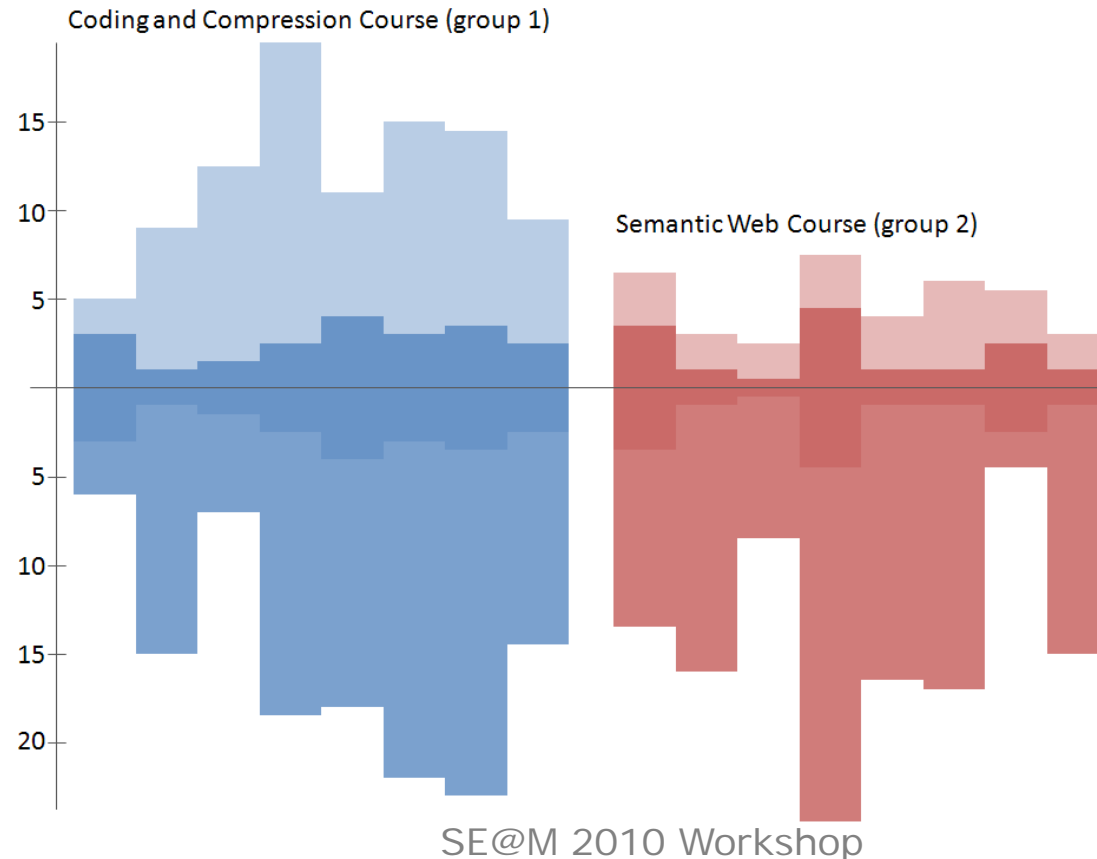
- Overlap between professor keywords and average student tags





Overlap (2)

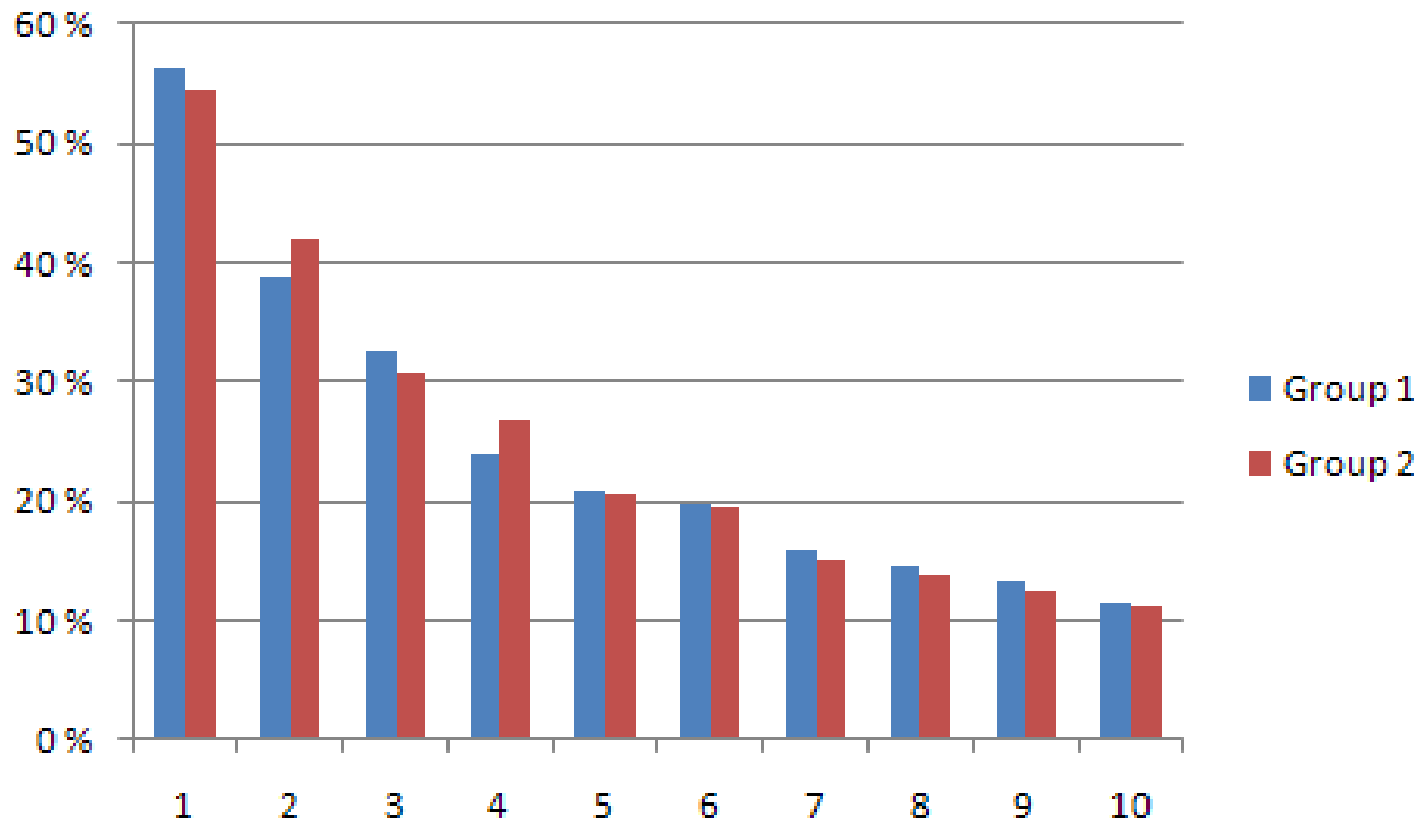
- Overlap between professor keywords and sum of student tags:





Intra-student Agreement

- Level of agreement for the most popular tags:





More Observations

- Professor-assigned keywords tended to be more abstract and/or general in nature
- Professors assigned more contextual keywords
- About 55% of tags were used by one student only
- The study was too short for a folksonomy to develop



Student Interview Results

- Quality of the learning objects/meta-data:
 - Tagging considered a good way to provide feedback regarding the quality of the LO
 - Students would like to see the tagging system being used in all courses
- Quality of learning processes:
 - Easier to understand the professor's intention after reading the keywords
 - Being able to see other students' tags were considered to be helpful for the learning process also



Professor Interview Results

- Quality of the learning objects/meta-data:
 - Tag feedback considered useful in improving the learning object
 - Some of the students' tags should have been included as keywords
 - None of the original keywords should be removed
- Quality of learning processes:
 - Tags useful in understanding how well the students grasped LO intentions
 - Future teaching would be affected by the feedback



Conclusion

- There is an observable difference between the professor keywords and student tags
- The difference may be useful:
 - Can be used by the professor to improve the LOs or accompanying metadata
 - Can be used to take future (teaching) action
 - Student tags may be helpful to fellow and/or future students in interpreting the LOs



Further Work

- Longitudinal effects (social network effects):
 - The development of a folksonomy
 - Importance of former students' tags
- Will students and professor be willing to do what they claim they will?
- Assistive learning tools for creation and use of tags
- Search and exchange of student tags and evaluations