

Collaborative visual annotation of reading materials by the freely enrolled online students

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Background

- It is the era of the internet
- Everyone can access tons of knowledge freely
- Massive open **online courses** are trending
- Contents offered include
 - video, audio, text, assignments, quizzes, discussions
- Students are free to enroll in such courses

Problem in online courses

- Low completion rate due to
 - Initial mismatch of content topic
 - Too busy with work/life
 - No interest in completion
 - **Content issues**
 - Too difficult/lengthy
 - Low interaction with peers

Contents that students want

- That can teach them the topic
 - Very well
 - In shortest possible time
 - With least effort as possible
- However such content
 - Is difficult to create
 - Can make students passive/dependent learners

Reading materials

- Most online contents are video based
- However, majority of documents in the world is in the form of text
- To be able to understand such information is more useful than being dependent on videos

Ideal student development

- Students learn to
 - Tackle difficult contents
 - Identify and solve/express their confusion
- ---> Inquiry

Inquiry in online courses

- Accomplished through forums
- 4 problems makes inquiry difficult
 - Large amounts of comments leading to a mess
 - Not so useful for other users while reading
 - Must be specific when asking questions
 - No incentive for inquiry

Collaborative Annotation

- Extension of course materials by participants
 - Questions, answers, definitions, summaries attached directly into the course contents using visual annotation
- Makes it easy to
 - Keep inquiry organized
 - View inquiry
 - Create inquiry

SlideMarker

- Is a collaborative annotation system
- Considers incentive important and employs
 - Image based communication
 - Monetary scores
 - Appreciation feedback

SlideMarker

The screenshot shows the SlideMarker web application interface. At the top, a browser window displays the URL `slidemarker7070-wasabi.soi.asia/view.html#hamlet`. Below the browser window is a navigation bar with a series of slide thumbnails numbered 1 through 11. A black box labeled "Monetary score" points to a "\$2650" icon in the navigation bar. The main content area displays the text "The Tragedy of Hamlet, Prince of Denmark" with the word "Hamlet" highlighted in red. A black box labeled "Appreciation feedback" points to the word "Hamlet". Below the main text is a copyright notice: "ASCII text placed in the public domain by Moby Lexical Tools, 1992. SGML markup by Jon Bosak, 1992-1994. XML version by Jon Bosak, 1996-1999. Simplified XML version by Max Froumentin, 2001. The XML markup in this version is Copyright © 1999 Jon Bosak. This work may freely be distributed on condition that it not be modified or altered in any way." A black box labeled "Visual Annotation" points to the word "Hamlet". On the right side, there is a social media-style comment section. A pinned comment by user "Antan" features a meme image of a man with a knife and the text "THIS IS CONFUSING!!!". Below it, a comment by user "anna" says "A very small town". Another comment by user "Antan" features a meme image of a man pointing and the text "THANKS!". A black box labeled "Image based communication" points to the "THANKS!" meme image. The bottom of the interface shows a "Reply" button.

Usage

- Teacher uploads material
- Student creates comments of following type
 - Definition
 - Elaboration
 - Summary
 - Question
 - Answer
 - Thanks

Based on NB

	SlideMarker	NB	DIIGO	WebAnn
Annotate	Anywhere (Image)	Anywhere (Image)	Text + Sticky Notes	Text
Over-Annotate	Yes	Yes	No	No
Annotate Multi-area	Yes	No	No	No
Discussion location	Floating window	Split screen	Floating window	Split screen
Target	Free Online students	Real classroom students	Real classroom students	Real classroom students
Incentive	Yes (3)	No	No	No

Research goal

- Find effectiveness of SlideMarker on freely enrolled online students who are not obligated to participate in any way

Survey plan

- Announce and recruit 10 participants
 - Focusing on student property rather than numbers
 - Effect in real online courses should magnify due to larger number of population (100000s)
- Teach them how to use SlideMarker fully
- Let them use SlideMarker for a week
- To study 4 different genres of reading materials
- Give them choice on how to comment, where to comment and observe

Evaluation points

Point	Success Condition
Choice of annotation vs general comment	More annotation
Choice of image based vs non image comment	More image based comment
Distribution of images choices	None
Comment rate per person	More or equal than 4
Perceived amount of asked questions	More people asked all
Amount of unanswered questions	More no. of answered
How long it takes to reply	None
View coverage of comments	More people covered all
How helpful they felt about using SlideMarker	More people felt helpful
Do they want to use SlideMarker in future	More people want to use

Future works

- Students real face for image
- Monetary scores to purchase virtual items