

# MindMargin: Capturing Reader Engagement with an Article-Adjacent Commenting Platform

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## ABSTRACT

### Author Keywords

Guides; instructions; author's kit; conference publications; keywords should be separated by a semi-colon. **Mandatory section to be included in your final version.**

### ACM Classification Keywords

H.5.m. Information Interfaces and Presentation (e.g. HCI): Miscellaneous

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## INTRODUCTION

### Motivation

Many websites support the ability to give content-related feedback in the form of comments. Such websites include news pages, media sites, online shops, blogs and social networks. Both reading and adding comments can engage the user in information exchange, personal reflection and lively discussion. In addition, such engagement can impact real world actions like voting, purchasing a product, making choices or participating in a cause.

Traditional commenting systems are featured at the bottom of the content which impedes the reader's ability to view comments alongside the reference media. They also lack a mechanism to reference sections of the original media. Furthermore, it is common to up-vote popular comments to enhance their visibility but this risks suppressing newer, but less popular, comments.

### Approach

We explore how different commenting models encourage and facilitate engagement by proposing a new system. As opposed to traditional systems, our system **MindMargin** displays comments in a horizontal infinite scroll alongside the

reference media. We compare the two systems by quantifying the quality of readers' comments and their follow-up actions. We take into account the ratio of substantial responses to overall responses, instances of referencing the text correctly/incorrectly, and follow-up actions.

We have several hypotheses regarding the comparison of these two interfaces:

1. Readers will generate more substantial comments using MindMargin
2. MindMargin reduces instances of misquoting and confusion by referring directly to the reference media
3. MindMargin increases user engagement with the reference media and motivates follow-up action

### Contributions

This project includes the following novel contributions:

- a horizontally structured user interface for anchored comments on websites
- a metric to ensure newer comments are still visible beside popular comments while non-constructive comments are less visible
- insights how comments can enhance user engagement regarding
  1. online discussions
  2. resulting actions (ideally in offline scenarios)

### RELATED WORK

Previous research has analyzed how different user interfaces facilitate the gathering of information and the digestion of articles. The *Brussell* system uses a semantic model to provide references across various news articles [6]. By highlighting and interacting with passages in the original article, the user can request additional background information from different sources. Another tool that supports collaborative document annotation within academic institutions is called *NB* and focuses on honing users' understanding of lengthier articles [8]. The authors report how students' comments in the *NB* system have impacted teachers to adapt their teaching style. One of the key features of *NB* is the geographic locality of annotations next to the article that helped facilitate student comprehension. This optimization of screen real-estate through a horizontal layout was also studied in connection with user engagement [7]. Students were found to reflect

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more critically on articles when comments were anchored on the side. This horizontal structure aligns with MindMargin's juxtaposition to its reference media. *Opinion Space* presents another novel interface for commenting: a visualization technique that focuses on the diversity of aggregate comments rather than solely popular ones [2]. MindMargin addresses this issue as well by maintaining comments in traditional textual form to reduce any disturbance to the user's engagement.

It is important to consider the distinction between engagement and such disturbance. When applied to designing user interfaces, active pop-up comments have been found to be highly useful to designers, but also somewhat disruptive to their concentration [1]. An interface that has too many moving elements may disturb the reader's focus more than engage them or supplement the material. However, some degree of disturbance is necessary for visibility. Because the active decision of commenting is a secondary task to the user's main goal of passively reading the article, users are more likely to engage in a secondary task if the threshold of engaging with that task is low. However, methods that lower barriers to the task most effectively, like pop-ups, are also highly disruptive [3]. Improving comments must thus optimize for minimal disruption and maximal engagement. Other studies have looked into ways to complement commenting systems. *Reflect* is a platform that enables users to summarize each others comments in order to enhance comprehension and provide feedback on comments [4]. *Balancer* is a complementary widget that provides information on how politically skewed a user's aggregate source of news is [5]. These studies reveal that there exists a need in current commenting platforms to enhance engagement so that users better comprehend the reference media and consider the views of others.

## PLAN

### • Milestone 1 (10/31/2013)

- Complete relevant literature review research
- Explore other methods for measuring engagement (in addition to sharing articles)
- Design experiment and identify method of targeting participants (Question to be answered: how will we get people to participate?)
- Compile a summary of existing commenting platforms and their features (<http://www.hongkiat.com/blog/3rdparty-comment-discuss-systems-reviewed/>)

### • Milestone 2 (11/05/2013)

- Prepare working prototype
- Two different commenting systems – identify which features are constant
  - \* Vertical (existing)
  - \* Horizontal (novel)
- Complete relevant literature review research
- Explore other methods for measuring engagement (in addition to sharing articles)

- Design experiment and identify method of targeting participants (Question to be answered: how will we get people to participate?)
- Compile a summary of existing commenting platforms and their features (<http://www.hongkiat.com/blog/3rdparty-comment-discuss-systems-reviewed/>)

### • Milestone 3 (11/12/2013)

- Describe, design and execute experiment
- Begin data collection

### • Milestone 4 (11/19/2013)

- Organize preliminary results
- Analyze data and compare with hypotheses
- Draw conclusions

### • Milestone 5 (11/26/2013)

- Revise all sections for final review

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