# 3 eComma: An Open Source Tool for Collaborative L2 Reading

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## Abstract

Reading has increasingly become a social activity thanks to the rise of e-readers such as iPads and Kindles. This means that people can now carry on Internet-mediated conversations with others about the texts they are reading. This case study describes eComma, an open source web application for textual annotation developed by the Center for Open Educational Resources and Language Learning (COERLL). eComma turns reading into a group activity during which learners help each other understand a text. For example, readers mark up a digital text with tags and comments to which other readers may respond. Tags and comments are automatically displayed as word clouds for further analysis. Social reading tools such as eComma provide readers with valuable guidance and feedback during the reading process and thus allow learners to analyze a text together in a more collaborative and exploratory manner. Originally conceived as a tool to facilitate close-reading activities in the English literature classroom, this case study recounts how second language teachers are exploring eComma's potential. It is shown that eComma helps language learners' deal more effectively with unknown vocabulary and grammar. In addition, eComma's hypermedia environment heightens language learners' awareness of the process of textual interpretation.

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**Keywords: annotation, close reading, collaborative learning, multiple literacies, social reading.**

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# 1. Context: Reading literary texts in a foreign language

Foreign-language learners frequently complain that reading literary texts can be a frustrating experience, mainly because of the hours spent hunting for definitions in the dictionary. And yet, there is great benefit to be gained from reading 'real' texts, rather than pedagogically 'doctored' texts so prevalent in the beginning stages of language study. Teachers sometimes attempt to solve this problem by providing lessons on reading strategies, especially the merits of contextual guessing. Teachers also try to lighten the reading load by glossing texts for learners. For example, LitGloss, an open access project from the University of Buffalo, provides digital versions of many foreign language short stories and poems that include grammatical and cultural glosses. Unfortunately, glosses are no panacea. In fact, glosses can actually make learners more passive and less apt to struggle with the demands of reading.

In 2009, a new tool called eComma was created to help struggling learners overcome the problems associated with the close reading of literary texts. Designed by faculty and graduate students from the Department of English at the University of Texas at Austin, the tool's main purpose was to enable a group of readers to build a commentary on a text and to search, display, and share the commentary online in a more pliable form than had previously been available. The tool was the result of a grant from the National Endowment for the Humanities, an independent agency of the US federal government and one of the largest funders of humanities projects in the United States. The tool was also partially funded by an internal grant from the University of Texas at Austin. In concrete terms, eComma provided a suite of free annotation tools and an online space for learners to read in a collaborative fashion.

Originally conceived to facilitate close-reading activities in the English literature classroom, the tool was soon adapted to the second language classroom. After all, reading foreign language texts – literary or non-literary – requires a close, word-by-word approach to textual interpretation. In essence, eComma allowed learners to 'crowd source' their reading burdens by turning a solitary activity

into a group activity. In addition to relieving learners' frustrations over unknown vocabulary and grammar, eComma's hypermedia environment heightened learners' awareness of the process of textual interpretation.

The new tool gave rise to new pedagogical practices by turning reading into a social activity where different readers made different kinds of contributions to meaning-making teams. Some readers enjoyed looking up words in the dictionary. Other readers preferred tackling grammatical problems. And the teacher would often personalize the activity even further by assigning readers different roles to play in the process of interpreting a text. For example, the English literature teacher often began the lesson by handing each learner a note card on which was written a rhetorical device. Next, the learner quickly scanned the text on the computer and highlighted examples of the rhetorical device. After approximately ten minutes, the class had thoroughly marked up the poem with annotations for such tropes as *simile*, *synecdoche* and *metonymy*. After several more passes through the text, the learners were finally allowed to "read" the text in its entirety and to share their interpretations with each other. The result was an online, interpretive activity in which all learners seemed to be deeply engaged. In sum, social reading and collaborative annotation tools helped learners who were struggling with the demands of difficult readings by allowing them to become members of a team. Traditional approaches to reading force learners to perform the same task, that is, to read the text alone. In contrast, social reading allows learners to negotiate strategies for "dividing and conquering the text" with their classmates.

## 2.     Intended outcomes: An open source tool for social reading

A year later, the developers of eComma granted COERLL (Center for Open Educational Resources and Language Learning) permission to reprogram the software in Drupal, a popular open source content management system. COERLL is one of 15 national foreign language resource centers funded by the U.S. Department of Education's Title VI Program whose mission is to produce

and disseminate materials and best practices for language learning. The goal was to create a free, open-source version of eComma for any language at any level. Usability testing and pilot testing in foreign language classrooms took place from 2010-2011 at the University of Texas at Austin and at Cornell University. Based on these tests, COERLL undertook a complete redesign of the original eComma application. In addition to redesigning the interface, programmers at COERLL sought to assure that the new version of eComma would interact seamlessly with different browsers and different operating systems. Finally, another important goal of the redesign was to facilitate research on social reading. This was accomplished by allowing administrators and teachers to download the learners' tags and comments as an XML file. The XML file could then be imported to a Google Doc for analysis.

## 3.    Nuts and bolts

As a Drupal module, the new version of eComma is free and open to the public; however, it requires a server that runs Drupal. Similar to learning management systems such as Blackboard, content management systems like Drupal require technical support. Therefore, instructors interested in using eComma must first contact their computer support staff to determine whether Drupal is available on their campus. All necessary technical information about the eComma module can be found on eComma's Developer page. Directions on how to set up classes and upload texts can be found on the eComma technical page. eComma's system requirements for OSX 10.6 are Safari 5, Firefox 10 and Chrome 17 or higher. For Windows 7 computers, Firefox 10 or higher is required. Today, the open-source version of eComma has a brand new look and several new functionalities:

- a website with information about pedagogical applications of social reading;

- an extensive help page for users;

- a new set of icons to enhance navigation;

- an easy way to download comments and display them as an XML file;

- a simple way to import all user data to a Google docs spreadsheet for analysis.

## 4.     In practice

Even though the open-source version of eComma has been available to the public for only a short time, the new website already features several classroom case studies based on early pilot testing (Figure 1).

Figure 1.   eComma web site



The first case study was based on a graduate course on linguistic variation in French-speaking societies at the University of Texas at Austin. For this activity, the teacher had the learners read a text written in Louisiana Creole,

a short story titled "*L'espoir*". Since there is no standard way to write Louisiana Creole, the author invented his own spellings, borrowing heavily from French orthography. The teacher told the learners to annotate as many variable spellings as they could find. To help them with the task, the teacher demonstrated how to use *eComma*'s word cloud feature to compare spellings (Figure 2). A word cloud is an alphabetical display of all the words that occur in a text in terms of their frequency – the more frequent the word in the text, the bigger the word in the cloud.

Figure 2. Word cloud in eComma



Several eComma features were useful for guiding in-class discussion. The teacher employed the heat maps to draw learners' attention to heavily annotated passages (Figure 3). This led to a discussion about the distribution of different forms of variation found in different parts of the text.

The teacher also used the user list feature to display the comments of individual users (Figure 4). This feature allowed the teacher to demonstrate that some learners paid more attention to nominal morphology and other learners were drawn to verbal morphology. Again, this insight became fodder for further discussion about learning styles and individual differences indexed by the learners' patterns of annotations.
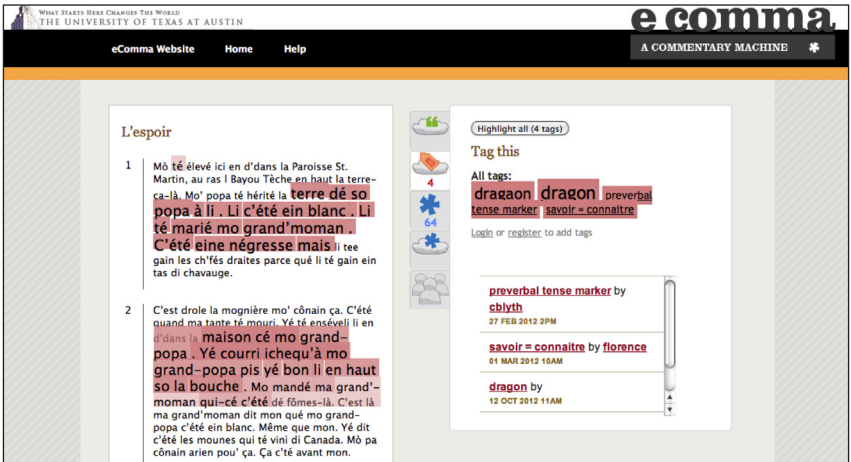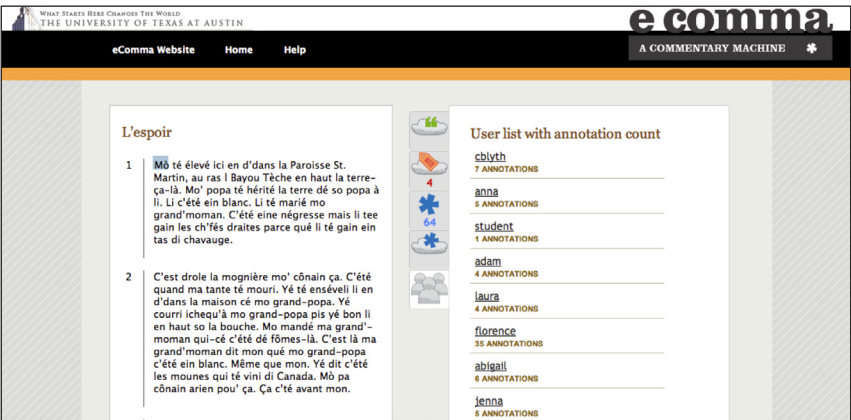
Figure 3.    Heat map



Figure 4.    User list



This case study of eComma demonstrates a consciousness-raising activity that is often used in second language classrooms to help learners discover form-meaning pairings. A more common example of this type of form-focused activity would be to have learners annotate different past tense forms found in a

narrative text, e.g. preterite vs. imperfect. Comparing the different highlighted verb forms in context would help learners to develop their own hypotheses about the meanings of the narrative past tenses. The same could be done for other formal categories: singular vs. plural, definite vs. indefinite, active vs. passive, indicative vs. subjunctive.

The second case study came from its use in a fourth semester French course at the University of Texas at Austin. The teacher instructed the learners to annotate the poem "*Liberté*" by Paul Eluard (1942) in either English or French as part of their homework assignment, an example of an asynchronous use of the tool. The learners were to comment on how the surrealist poem's non-sequiturs and odd juxtapositions made them feel. The teacher was pleased to discover that learners often replied to each other's comments, evidence that they were reading each other in addition to reading the text. And finally, a few of the learners did something unexpected but very much in keeping with the surrealist text – they annotated the text with visual images taken from surrealist paintings! It was an excellent use of multimodal glosses that extended the previous day's discussion of the interaction between literature and the visual arts.

The third case study described how a teacher of beginner French at Cornell University devised a mid-semester reading activity that incorporated eComma. To supplement the textbook, the teacher compiled a selection of prose poems from Dany Laferrière's (1994) *Chronique de la dérive douce*, a book that recounts the first year that Laferrière spent in Canada as a refugee from the Duvalier regime in Haiti. As homework, the teacher had her learners read one of the poems online and share their exploratory commentaries on eComma in English. She followed this activity with a worksheet to assess her learners' comprehension. Based on her eComma "experiment", the teacher drew some preliminary conclusions about social reading:

- it precludes the need for certain kinds of pre-reading activities, especially those that forestall the productive process of grappling with meaning-making;

- it models effective reading strategies for learners who may not employ them on a regular basis;

- the inductive nature of social reading (discovering meaning through social interaction) heightens appreciation of the text and of the fruitfulness of collaboration.

The fourth case study was based on a graduate level course titled *Literacy through Literature* taught by a teacher of German at the University of Arizona. The course explored the role that literary texts and aesthetic reading played in the development of second language literacies. Literacy was used in the course both in the traditional sense of the reading of printed texts and in the wider sense of multiliteracies, which include social and cultural literacies as well as new media literacies. One of the readings for the course was a chapter from narratologist Marie-Laure Ryan's (2001) book *Narrative as Virtual Reality* on immersivity and interactivity as two modes of reading narrative texts. At the end of this chapter, Ryan introduces an example from the book *If on a Winter's Night a Traveler* by Italo Calvino (1979). The teacher decided to implement eComma in a synchronous activity that allowed her learners to consider Ryan's distinction between immersive and interactive reading, and to examine what kinds of pedagogical interventions might encourage one or the other mode of engagement. Here is how the teacher described what happened:

> "After the first few learners had created annotations, I noticed that almost everything that had been posted was an experiential response. I added a couple of comments of my own, including one about Calvino's use of the second person. I was curious to see if learners would follow my lead or if they would continue to post about their personal reading experiences. A couple of people did respond to my comment… [These comments] yielded productive material for our in-class discussion of the degree to which a text encourages either immersive or interactive readings. While [one learner] attempted to build upon what I had said by identifying

other familiar literacy practices in which the second person was used, the better portion of the annotations pertained to their personal reading experiences. Many of these related to the particular experience of working with eComma."

The teacher reported that while some learners experienced initial difficulty learning to annotate the text (she hadn't given the learners an introduction to the software since she felt it was so transparent), all agreed that the software held potential for working with texts in an L2 context. They appeared to be most excited about the flexibility of the software. Several noted that the program could also be used as a space to share learners' findings during a text-anchored Internet research activity.

## 5.     Conclusion

OERs (Open Educational Resources) represent a heterogeneous group of materials that fall on a continuum of size and complexity – from the large-scale OERs such as online courses produced by well-funded institutions to the small-scale OERs such as a set of lesson plans produced by a single instructor. eComma constitutes a large and technically complex OER. It has been funded by two grants from federal agencies of the U.S. government – the National Endowment for the Humanities and the National Foreign Language Resource Centers. In addition, the development of eComma has been made possible by the resources of a large research university that has played a key role as an incubator for the pedagogical application of collaborative annotation.

When COERLL began development of eComma several years ago, social reading was in its infancy and most annotation software was proprietary. Today, thanks to the popularity of e-readers, social reading is on the rise. As a consequence, more annotation tools have become publicly available. And yet, these tools are largely limited to specific platforms, including eComma. What is needed is an interoperable tool that will plug into a school's learning management system or

LMS, that is, the software application used by an educational institution for the delivery of online courses (e.g. Blackboard, Canvas, Moodle).

Unfortunately, the current version of eComma is programmed in Drupal 6 that is quickly being superseded by Drupal 7. By sharing eComma's source code, COERLL hopes to lower development costs and to increase collaboration among interested parties. As one of the fastest growing open source content management platforms, Drupal has a large and active community of developers, many of whom work at universities and colleges. Regardless of eComma's future, COERLL aims to create a community of practice around *open annotation tools* that will bring together teachers, learners, researchers and developers interested in exploring the pedagogical affordances of social forms of digital reading.

## Useful links

Center for Open Educational Resources and Language Learning (COERLL) http://www.coerll.utexas.edu/

Drupal https://drupal.org/

eComma Developer Page http://ecomma.coerll.utexas.edu/ecomma-developer-page/

eComma Technical Page https://drupal.org/sandbox/coerll/1782670

eComma Website http://ecomma.coerll.utexas.edu/

LitGloss http://litgloss.buffalo.edu/litgloss/about-litgloss.shtml

National Endowment for the Humanities http://www.neh.gov/

University of Texas at Austin https://www.utexas.edu/

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Case Studies of Openness in the Language Classroom
Edited by Ana Beaven, Anna Comas-Quinn and Barbara Sawhill