

## JOTTINGS IN THE MARGINS – USING DIGITAL ANNOTATION TO SUPPORT 21<sup>ST</sup> CENTURY LEARNING

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### INTRODUCTION

In this review, I evaluate Hypothes.is (<https://web.hypothes.is/>), a digital tool which enables users to highlight and annotate any text-based content on the internet. I will first give an overview of the pedagogical basis for using text annotation as a learning strategy and then explore the additional benefits – and risks – of online annotation. Against this background, I then evaluate the specific capabilities of Hypothes.is as a tool for teachers and learners. For this, I draw on my own experience of seeing Hypothes.is in action in courses run by the OERu ([www.oeru.org](http://www.oeru.org)), and two academic articles reviewing the authors' experience of using Hypothes.is with their tertiary students.

### WHY ANNOTATE?

The highlighting of words and writing notes in margins are long-established techniques for learners working with printed text. Annotation is recommended as a personal study strategy by universities such as Eastern Washington University, which advises learners that it “enhance[s] the reader’s understanding of, recall of, and reaction to the text” (Writers’ Center, Eastern Washington University, n.d.). Annotation is recognised as having a particular role in improving literacy, as it “promotes active reading behaviours, such as asking questions, evaluating information, identifying key words and ideas, synthesising and summarising” (National Centre of Literacy & Numeracy for Adults, University of Waikato, n.d., p. 2).

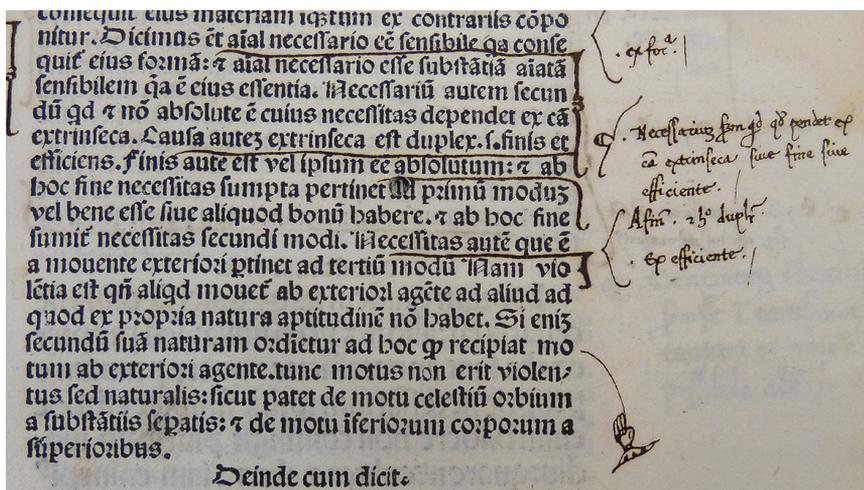


Figure 1. Manicule. Source: Provenance Online Project, University of Pennsylvania, on Flickr.com.

Going beyond its use in self-directed study, teachers can design annotation-based learning activities to support desired learning objectives. Cognitive processes that can be prompted by annotation exercises include criticism, evaluation, analysis, classification, and making sense of unfamiliar words or concepts.

Brown and Croft (2020) present a useful summary of the literature evidencing the benefits of annotation, while also noting that its impact on learners' critical thinking is a contested area. Unsurprisingly, they argue that the *design* of learning activities using annotation is key to its success or failure.

## GOING DIGITAL

As learners increasingly rely on online resources, it is clearly practical, and less wasteful of paper, to use tools that allow digital note-making. However, online annotation brings additional affordances and challenges for teaching and learning.

While online annotation can be a purely personal activity, one benefit is the ease with which learners can work together, either amongst their own classmates or with internet users across the world. Brown and Croft (2020) describe this 'social annotation' as "the use of collaborative technologies to help students draw meaningful connections to texts in-line alongside their peers." With well-designed learning activities involving annotation, learners can conduct joint research projects, support each other's learning, and develop new understandings and concepts together. Research has shown that the ability to work collaboratively is one of the capabilities most highly valued by New Zealand employers (Otago Polytechnic, 2019).

Another benefit is the opportunity to extend learners' digital skills and digital literacy, both widely recognised as essential attributes of twenty-first century 'digital citizens.' Using the Netsafe definition of successful digital citizenship (Netsafe, 2015), we can see, for example, that through positive experiences of using an online annotation tool, learners can become more "confident and capable users of ICT", will "use ICT to relate to others in positive, meaningful ways", will develop literacy "in the language, symbols, and texts of digital technologies", and "respect the concepts of privacy and freedom of speech in a digital world." Specific examples of some of these aspects in the context of an English literature course are discussed by Kennedy (2016).

In addition, teachers themselves can be more actively involved in the annotation process if it is online. For instance, a teacher can annotate a web page with questions or comments before the learners read it, or they can respond to learners' annotations afterwards. Reviewing learners' notes can also alert a teacher to aspects of a reading that need clarification in a tutorial.

As with any online environment, however, there are also risks associated with participation. The most basic arise from the need to create a user account; teachers and learners should ensure they are aware of the privacy policy that applies to the specific software they are using (see, for example, <https://web.hypothes.is/privacy/>). More complex risks, in the arena of social equity, are perceptively examined by Brown and Croft (2020), who discuss how instructional design needs to mitigate the potential for micro-aggressions and exclusivity in the online classroom, particularly to counteract their impact on already marginalised learners.

## USING HYPOTHES.IS FOR WEB ANNOTATION

Hypothes.is is a free digital tool which can be added to any browser on a laptop or desktop computer in a few simple steps from <https://web.hypothes.is/start/>. After installing the software and creating an account, users can activate Hypothes.is on any web page, including PDF documents that are opened in a browser.

Hypothes.is cannot currently be added to browser apps on mobile devices; however, users can paste a link into a special box on the Hypothes.is website and then have the same functionality (Hypothes.is, n.d.). This does not give such a smooth user experience and is regrettable given the number of learners who use mobile devices for study.

It can be hard for first-time users to notice the collapsible annotation sidebar at the side of the screen, but, once this has been recognised, use of the tool is very intuitive. As with a printed document, you can highlight and annotate specific text or make more general notes on a whole page. Highlighting is only available in one colour, but this limitation is easily outweighed by the ability to add 'tags', which allow you to search for your chosen key words throughout all your online annotations. Another bonus is the ability to include hyperlinks and images, as well as text, in your annotations.

For each annotation and page note, the creator has three options for its visibility on the web: 'only me', public, or a group (Hypothes.is, n.d.). Any user can set up a group and invite others to join. This means that a teacher can set up a group for their learners, to enable classmates to view and respond to each other's annotations, with the benefits of social annotation discussed above. Teachers will need to tailor their choice of group set-up for their particular teaching context and objectives. For example, will they want to set up a group for a whole class or for small groups of learners? Will they want learners from one cohort to see the notes of previous cohorts or not? Alternatively, are there greater learning opportunities (as well as increased risks) in making the annotations fully public?

Kennedy (2016) and Seatter (2019) have both provided detailed and balanced reviews from a tertiary teacher's perspective of using Hypothes.is (and in Seatter's case, other annotation tools) in their English literature courses. Both are positive about online annotation activities in general and Hypothes.is in particular, but helpfully draw attention to potential pitfalls and barriers to success, such as the risk of learners annotating different websites containing the same text, or inadvertently posting publicly instead of to a group. However, as Kennedy notes, if well-managed by the teacher, all these risks can give opportunities for learners (and teachers) to develop their digital literacy.

## **ANNOTATION AS A TOOL FOR VOCATIONAL LEARNERS?**

There is clearly significant potential in using social annotation as a learning strategy, provided that it is used in the right context, with careful design and appropriate guidance and safeguards for learners. Hypothes.is, while not perfect, provides an effective, and free, platform that is relatively easy to use for this purpose. It is to be hoped that, as both teachers and learners become more confident with using a range of digital tools, Hypothes.is or similar social annotation software will become another valuable tool in the teaching and learning toolkit.

Hypothes.is' website, and the academic literature, provide many interesting examples of use of the tool in tertiary education, but most come from the humanities and social sciences. I believe that there are many potential uses within vocational education as well. These could include improving general literacy, engaging with applied research and industry-specific websites, inter-professional collaboration, and responding creatively to words through images.

I would welcome feedback from teachers, particularly in the vocational sector, if you have used or are interested in using Hypothes.is, so that we can develop a shared set of examples for using digital annotation in this context.

**Want to see Hypothes.is in action?** The OERu (<https://oeru.org/about-oeru/>) makes use of Hypothes.is in its free online courses, encouraging learners across the world to contribute ideas and support each other. One example is in the 'mini-challenge' on the Digital skills versus digital literacies (<https://course.oeru.org/lida101/learning-pathways/introduction-to-digital-literacies-digital-skills-versus-literacies/>) page of *Digital literacies for online learning*. If you install Hypothes.is and visit the article (<https://www.literacyworldwide.org/blog/literacy-now/2016/02/03/knowning-the-difference-between-digital-skills-and-digital-literacies-and-teaching-both>) referred to in the activity, you can view public comments made by OERu learners.

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