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The potential of digital tools for enabling the observation of comprehension in the secondary classroom



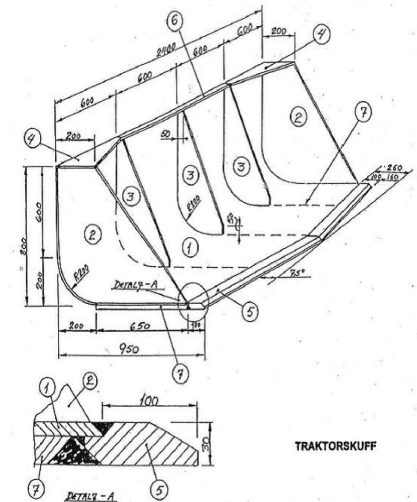
Emphasizing digital competence



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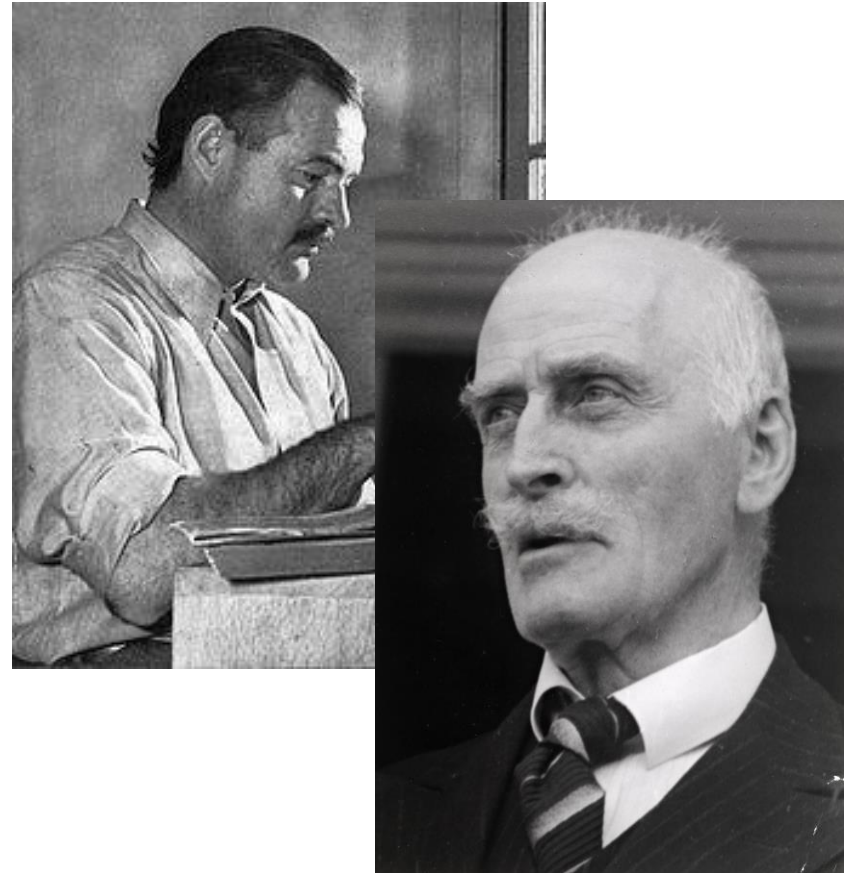
Four classrooms – four practices



Case 1 – Mundane use of digital tools enhancing comprehension

The teacher's choice of the simple and popular classroom device of the online word-cloud software transformed the somewhat uninviting nature of Wikipedia texts into something that was immediately vivid and accessible to the whole class, effectively engaging them in a process of collective comprehension.

As a pedagogical tool, this appeared to be effective, and to some extent it proved effective also in providing a shared point of reference by which the students were able to articulate their developing comprehension of the topic to the teacher.



Case 2 – Internet Explorations



Case 2 – Observing comprehension of digital texts



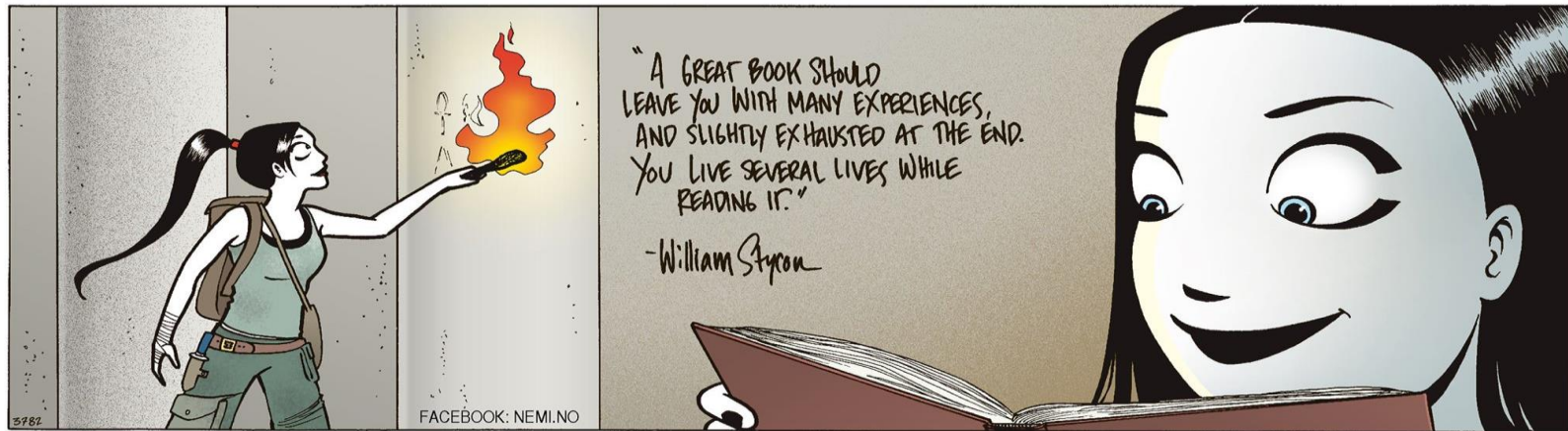
The teacher skilfully utilised a digital tool by having his students carry out active digital searches for information they were then to present to the class orally.

The role of the digital tool might be seen as quite minor here, given that the information collected was subsequently shared orally, but interviews with students indicated that some at least felt their opportunity to carry out their own Internet explorations was liberating and stimulating and, as far as the teacher was concerned, generally encouraged and demonstrated the use of active comprehension strategies.

Case 3 – Summarizing Text



Case 3 – Individual Strategies



Case 3 – Observing digital text production

The students used word processing software in order to write summaries of a demanding text at home, which the teacher, was able to draw on subsequently in class by reflecting on the work of individuals in order to review and validate processes of comprehension collectively.

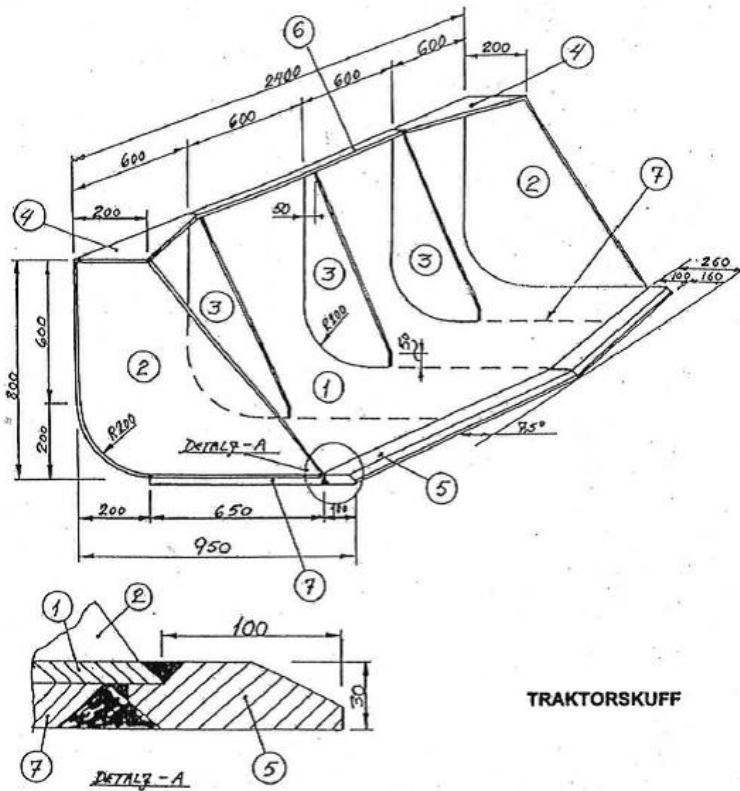
The effectiveness of how the use of this digital tool had previously engaged student thinking and comprehension on an individual basis, was then augmented collectively from the display of individual and collective summarization strategies.



Case 4 – Collaborative Writing



Case 4 – Technical Instruction



1. Cut the materials, 8mm steel plates.
2. Spot weld it. Start with the back plate, position 1.
3. I would place plate nr. 2. It's the bottom plate.
4. Then I would place the side plates. Position 4.
5. I would spot weld position nr. 3.
6. Cut and spot weld the front of the shovel, position nr. 5.
7. I would make the brackets position 6 and 7 and spot weld them to position nr. 2.
8. Fully weld the parts together. And remember the special electrodes, when you weld the front steel to the rest of the shovel.
9. Grind it and paint it, to get a good surface.

Case 4 – Observing student reflection through digital co-production of text

The teacher had his students co-produce technical instruction on the classroom computer which he was then able to project in front of the whole class.

As a result, he was able to observe a process of collective comprehension taking place, involving a cycle of reflection, discussion, and formulation of understanding.

Thus, the use of digital tools enabled active processes of comprehension by individuals and groups in the first instance, resulting in the co-construction of understanding within the class as a whole that the teacher was able to observe in process.



The four cases

Each of these four cases involved a different use of digital tools of one kind or another, using Internet-based resources and computer software in various ways, but all with certain key aspects of how digital tools are characteristically used in classrooms to support student learning and comprehension.

In each case, it is possible to identify ways in which the tools used – either peripherally or centrally – contributed both to fostering processes of comprehension and to making these processes visible to the teacher and, to some extent, to the students themselves.

Emphasizing 'daily' digital competence



Thank you!

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