

Perusall - An Effective Tool for Engaging Students in Pre-class Reading Activities

Background

How can we get our students engaged in pre-class reading? Such challenges exist in both face-to-face and online teaching at HKU, especially when flipped classroom approaches are adopted.

On average, only 20-30% of students do pre-reading activities (Burchfield & Sappington, 2000; King, 2021). This makes flipped classrooms less effective than they could be. Teachers need a tool to engage students in the preparation tasks to maximise the benefits of flipped classroom learning. Perusall is an effective solution to ensure students are prepared for classes.

What is Perusall?

Perusall (<https://perusall.com/>) is a social e-reader designed for engaging students in *peer learning via collaborative annotation exercises*. It was developed by three Harvard University professors (Gary King, Eric Mazur, and Kelly Miller) and a software engineer Brian Lukoff. Apart from readings from journals or open educational resources (OER), the platform was recently upgraded to accommodate multi-media, such as video and podcasts. It supports teachers to engage students in meaningful discussion on the assigned readings in or outside the classroom.

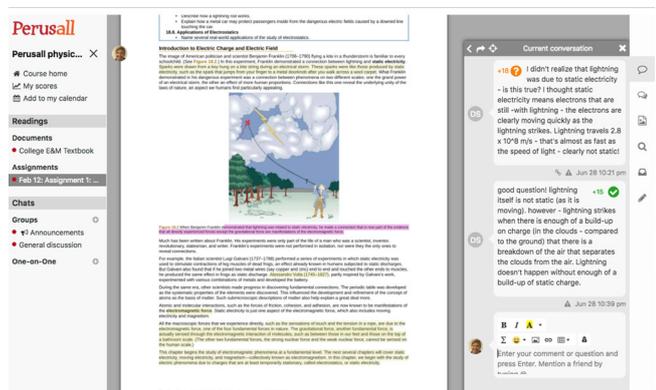


Fig. 1: Reading assignment in Perusall (Miller, et al, 2018)

Perusall fosters student engagement by its *unique chat feature* which allows students to annotate comments and pose questions about the assigned readings (Fig. 1). Students will see their peers online if they are viewing the readings at the same time. If students have difficulty understanding a concept, they could highlight a specific sentence/paragraph or a part of

an image and pose a question there to start a conversation with each other. While some students could reply to questions in the chat, others could review the answers and vote for the best questions, responses, or explanations.

For each Perusall assignment, *data analytics* on student participation help to visualise to what extent the students are ready for the class (Fig. 2 and 3).

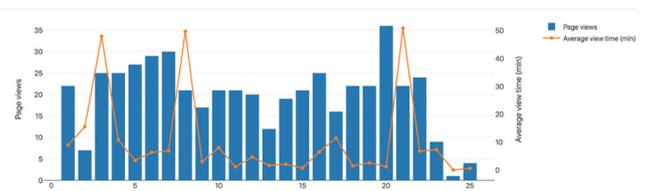


Fig. 2: Analytics of page views and average view time (Walker, 2019)

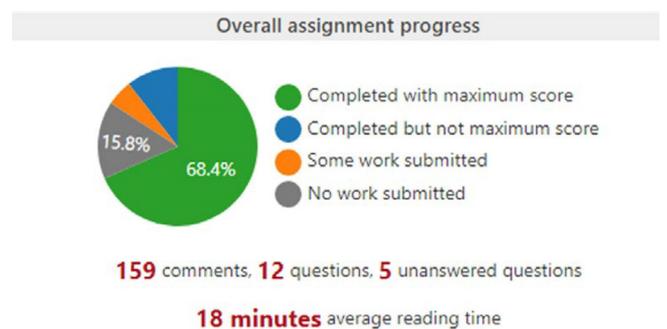


Fig. 3: Overall assignment progress (Gray, 2021)

Confusion Report, summarising the top areas of student confusion, generated automatically will also support teachers to prepare formative feedback for students on any misunderstanding (Fig. 4).

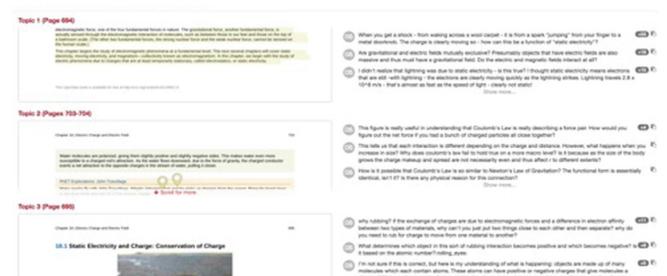


Fig. 4: Layout of confusion report (Miller, et al, 2018)

Three Major Benefits of Perusall

Engaging Students in Collaboration

Perusall changes the nature of reading from an individual responsibility (isolated learning experience) to a collective effort or social engagement. Biro (2021, p.252), describe the assigned reading in Perusall as “a living document”, in which students exchange and review their different interpretations. Interesting arguments and perceptions are created throughout the asynchronous conversation.

Visualising Student Participation in Data Analytics

The platform collects a variety of data analytics on student participation, such as:

- Active reading time or viewing time of videos
- Number of different types of annotations
- Number of upvotes given on questions and responses
- Number of upvotes received from other students

These statistics visualise student participation and allow teachers to understand how students perceive the readings and where the areas of confusion are.

Understanding Student Reading/Learning Behaviours

Based on the statistics, teachers could also identify what kind of roles the students are trying to play in the collaborative reading exercises (such as critical reviewers, interpreters, etc.). Teachers could pre-set bonus points as an incentive to acknowledge the favourable behaviours, such as posting, voting and other constructive peer interactions.

Selected Case Studies

Increasing publications reported the positive impacts on student learning in various disciplines/courses, such as [Business/marketing](#) (Ortigosa-Blanch & Planells-Artigot, 2021) [Physics](#) (Miller, Lukoff, King & Mazur, 2018), [Chemistry](#) (Sigmon & Bodek, 2022), [Law](#), (McFarlin, 2020), [Medicine](#) (Lee & Yeong, 2018), [Philosophy](#) (Biro, 2021) and [Education](#) (Adams & Wilson 2020), [Engineering](#) (d’Entremont & Eyking, 2021), [English language](#) (Gray, 2021) and [academic writing courses](#) (Walker, 2019), etc.

Quick Guide

Perusall is a free platform that could be integrated with HKU’s Moodle. For details, please refer to the step-by-step [guide](#), developed by the e-Learning Team, Faculty of Education, HKU.

References

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