

SUPPORTING NOVICE RESEARCH STUDENTS IN LEARNING TO WRITE LITERATURE REVIEWS

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BACKGROUND

Students who are beginning to write about research (their own and others') need to develop capability to create a literature review. This new type of task for them is challenging because of the high-level intellectual demands of critiquing and synthesising, as well as an unfamiliar genre and its conventions. The work described here supports Science Honours research students by giving them opportunities to practise on manageable chunks of the process involved in creating a literature review, and builds on the surprisingly-few relevant learning resources, e.g., Greetham (2021), and Davis and Morley (2018).

ACTION

Learning activities, contextualised within the Physics discipline, have been developed and implemented to assist students in writing literature reviews. First is some familiarisation through exposure to samples of literature review text, then structuring a review document is considered. Students have difficulties moving from a collection of notes on research papers to a cohesive, logical summary and critique of a research field. An annotated bibliography is a useful link. Students were given an example annotated bibliography for an accessible physics topic. I created this by "reverse-engineering" a published review article. Students were asked to organise the summarised ideas into a feasible structure for a literature review. We discussed their responses, then I revealed published reviews on that topic (including the reverse-engineering source). We dissected how ideas were structured, and signposted, by the authors; students were asked to identify how logical transitions were communicated.

REFLECTION

Students engaged with the tasks, producing a notable range of variations for possible structure of the literature review. These variations prompted useful discussions of communication strategies. A by-product of the process of reverse-engineering a published literature review was an articulation of what is valued in the discipline's research. Explicitly acknowledging a discipline's research values gives clarity about what students should focus on when critiquing research literature. How common are these research values across sciences? Further work is exploring how the strategy of these discipline-contextualised learning activities could transfer across the sciences and mathematics.

REFERENCES

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