### **Reading to write: Exploring how students gather evidence and the link with writing beliefs**

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### **DESCRIPTION OF THE RESEARCH**

This study seeks to examine the role notetaking can play as a gateway to knowledge transformation in the reading-to-write process. Much research has been done into the role that notetaking plays in lectures (Morehead et al., 2019), the impact of longhand notes compared with digital (Allen et al., 2020) and student writing strategies (Wingate and Harper, 2021). Although notes play an important role in evidence-based writing, in both providing a clear record of a student’s reading and increasing encoding and engagement (Voyer, Ronis and Byers, 2022), very little research directly addresses the impact of note-taking strategies in the reading-to-write process.

The study will build on an epistemological beliefs reading model developed originally by Bruning and Schraw (1996) and later applied to writing beliefs by White and Bruning (2005). The model distinguishes between a transmissional approach to writing, which assumes meaning must be transmitted by the author to the reader’s memory, a sort of “knowledge telling” (Baaijen, Galbraith and Glopper, 2014). In this approach, the reader is a passive receiver of knowledge. In contrast, transactional beliefs see reading and writing as “knowledge transforming” and include the active construction of meaning through the integration of one’s own thinking process.

Understanding current student note-taking practices and the link with epistemological beliefs will allow practitioners to more effectively create targeted activities and interventions to support student understanding and engagement with texts in the reading-to-write process. It will also provide a foundation for explicit discussion and reflection of student beliefs about the nature of reading and writing and the link between these beliefs and note-taking practices, encouraging students to see reading and writing as knowledge construction and, importantly, encouraging deeper cognitive engagement and learning.

### **JUSTIFICATION & AIM OF RESEARCH:**

The study has two aims. The first is to build understanding of common student approaches to recording evidence in the reading-to-write process. The associated objectives with the first aim are as follows:

### **Objectives:**

To establish an understanding of common strategies used by students to record information in the reading-to-write process.

To explore how common practices may impact students’ ability to transform knowledge and incorporate it into existing beliefs

The second aim of the study is to determine if there is a link between student approaches to recording information in the reading-to-write process and student beliefs about writing.

The associated objectives with the second aim are as follows:

To determine if there is a link between more active reading and notetaking strategies in the reading-to-write process and high transactional - low transmissional writing beliefs.

To determine if there is a link between less active reading and notetaking strategies in the reading-to-write process and high transmissional - low transactional writing beliefs.

In evidence-based writing, a key aspect of assessment in many HE programmes, the methods that students use to gather evidence can have a significant impact on both the quality of the final product and the learning that takes place during the process. Although there has been research into reading (Castells, Minguela and Nadal, 2022) and the integration of sources in academic writing, for example, studies of student paraphrasing (Bailey and Withers, 2018), there has yet to be a study that explored current student notetaking practices in the reading-to-write process. Insight gained into this important, yet often hidden literacy, will help to inform teaching and learning approaches in academic reading and writing. The understanding also has the potential to inform interventions for plagiarism and related academic integrity issues. Finally, findings about the link between student writing beliefs and current student practices of recording information during the reading-to-write process can help bring the discussion of student writing beliefs into the classroom, promoting a more active approach to learning.

### **METHOD:**

The research will take a pragmatic approach, often associated with mixed methods studies (Coe et al., 2017). In pragmatism, rather than focusing on the selection of a research paradigm, research is seen to be conducted for a reason, in this case, to answer key questions about common student approaches to gathering evidence in the reading-to-write process. The research will be conducted in two sequential phases.

In the first phase, participants will be asked to fill out a survey about the way in which they gather evidence in the reading-to-write process. The survey uses a mix of open and closed questions and takes between 5-10 minutes to complete. Open questions are used to gather information about participants’ educational background and to enhance the quantitative data collected in hopes of identifying novel student practices. Students will then be asked to complete the Writing Beliefs Inventory, developed by White and Brunnings (2005).The total time required is estimated to be between 10 and 20 minutes.

The second phase of the study uses an explanatory design, which aims to create causal explanations of social phenomena (Coe et al., 2017). Qualitative data will be gathered through interviews with participants. Because writing is known to be a complex production task (Baaijen, Galbraith and Glopper, 2014), and little is known about what students do when they gather evidence, the qualitative data will help to more fully explore and understand common practices. The qualitative data will also help to better explore the potential impacts of student note-taking practices on academic integrity and source integration.

### **Recruitment**

The study will seek to recruit second and third year undergraduate students along with postgraduate students from Oxford Brookes University. The justification for excluding first year students from the study is that first year students may have had very little time to develop strategies for gathering evidence. The focus in the first phase of recruitment will be on psychology and healthcare students because of contacts that the researcher has within these two programs. The invitation to participate in the study will be presented in Semester 3. The researcher will present the study purpose to students in the last 10 minutes of lectures, or through an email invitation, making it clear that participation is voluntary. It will be explained to students that although it will be necessary to keep a record of participant contact information so that invitations can be sent for the second phase of the study and to conduct the prize draw, the researcher will keep participants’ identity strictly confidential and will anonymize any identifying information before sharing or publishing the results of the study.

Student strategies for gathering evidence in phase one will be identified and coded. All students will be invited to take part in phase two in-person interviews to be conducted on the Headington or Marston campuses or online if that is more convenient for the student. The aim is to recruit 2-3 students from each of the identified strategies to provide qualitative data to better understand how exactly students are using the strategy. In the event that larger than expected numbers of students agree to participate in the second phase, the first 3 participants to respond to the invitation from each of the coded strategies will be selected.

**Data analysis**

Quantitative data in the first phase of the study will be analysed using descriptive statistics in analysis of the “Evidence Gathering” survey and an appropriate statistical method will be employed to evaluate the link between student writing beliefs and note-taking practices. Qualitative data from the “Evidence Gathering” survey will be analysed using coding to highlight any novel student approaches. In the second phase of the study, interviews will be transcribed manually by the research team and coding will be used to identify explicit explanations of student practices and reasons for the practices.

**REFERENCES:**

Allen, M. *et al.* (2020) ‘Is the Pencil Mightier than the Keyboard? A Meta-Analysis Comparing the Method of Notetaking Outcomes,’ *Southern Communication Journal*, 85(3), pp. 143–154. Available at: <https://doi.org/10.1080/1041794X.2020.1764613>

Baaijen, V.M., Galbraith, D. and de Glopper, K. (2014) ‘Effects of writing beliefs and planning on writing performance,’ *Learning and Instruction*, 33, pp. 81–91. Available at: <https://doi.org/10.1016/j.learninstruc.2014.04.001>

Bailey C. and Withers, J. (2018) ‘What can screen capture reveal about students’ use of software tools when undertaking a paraphrasing task?’, *Journal of Academic Writing*, 8(2), pp. 176-190. Available at: <http://dx.doi.org/10.18552/joaw.456>

Castells, N., Minguela, M. and Nadal, E. (2023) ‘Writing a Synthesis versus Reading: Strategies Involved and Impact on Comprehension,’ *Reading and Writing: An Interdisciplinary Journal*, 36(4), pp. 849–880. Available at: <https://doi.org/10.1007/s11145-022-10341-y>

Coe, R. et al. (eds.) (2017) *Research methods & methodologies in education*. Second edition. London: SAGE Publications Ltd.

Morehead, K. et al. (2019) ‘Note-taking habits of 21st Century college students: implications for student learning, memory, and achievement,’ *Memory*, 27(6), pp. 807–819. Available at: <https://doi.org/10.1080/09658211.2019.1569694>

Schraw, G. and Bruning, R. (1996) ‘Readers’ Implicit Models of Reading,’ Reading Research Quarterly, 31(3), pp. 290–305. Available at: <https://doi.org/10.1598/RRQ.31.3.4>

Voyer, D., Ronis, S.T. and Byers, N. (2022) ‘The effect of notetaking method on academic performance: A systematic review and meta-analysis,’ *Contemporary Educational Psychology*, 68. Available at: <https://doi.org/10.1016/j.cedpsych.2021.102025>

White, M.J. and Bruning, R. (2005) ‘Implicit writing beliefs and their relation to writing quality,’ *Contemporary Educational Psychology*, 30(2), pp. 166–189. Available at: <https://doi.org/10.1016/j.cedpsych.2004.07.002>

Wingate, U. and Harper, R. (2021) ‘Completing the first assignment: A case study of the writing processes of a successful and an unsuccessful student,’ *Journal of English for Academic Purposes*, 49. Available at: <https://doi.org/10.1016/j.jeap.2020.100948>

## **Supporting information**

## **Institutional description:**

Oxford Brookes University is considered, in the UK context, to be a “young university” though its history stretches back 150 years when it began as “Oxford School of Arts.” Ranked 46th of 150 in the University League Table 2025, the majority (83%) of its approximately 16,900 students are full-time. Like many universities in the UK, Brookes benefits from a significant number of international students (17%) who contribute to the university’s culture and also provide important revenue in a sector that is facing a funding crisis after 12 years of flat tuition rates and high levels of competition. Full-time undergraduate degrees in the UK are typically completed in 3 years and masters degrees in 1 year. The study is almost exclusively subject specific.

Departments like the one in which I work, the [Centre for Academic Development](https://www.brookes.ac.uk/students/academic-development/), were often founded in the last 20 years in response to support attainment as UK universities have sought to widen participation in higher education and better support international students. In UK higher education, there is a focus on high stakes assessment and it is not uncommon for a module to have one assessment worth 100% of the module marks. Many of these assessments, particularly in the humanities, focus on evidence-based writing (Essays, reports, etc.). In addition, almost all undergraduate and postgraduate degrees require or offer as an option a dissertation capstone in which students undertake their own research.

Despite the focus on written assessment and evidence-based writing, the academic literacies needed to successfully complete written assessments are either expected to be embedded by programme teams into content modules or are expected to be picked up by students organically along the way. It became increasingly clear to me that the way students were gathering evidence for their written assessment was often interfering with both their ability to understand, learn from and then integrate the text into their writing. My research seeks to understand student approaches to evidence gathering to support the teaching of key academic literacies that support the reading-to-write process.

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## **Key frameworks and theories**

#### Cognitive models of reading and writing

My study draws on research into cognitive models of reading and writing and the belief that deep learning and knowledge transformation is supported by transactional approaches to reading and writing. In 1996, Bruning and Schraw developed a model for measuring reading beliefs (Reading Belief Questionnaire). The model distinguishes between a transmissional approach to writing, which assumes meaning must be transmitted by the author to the reader’s memory, a sort of “knowledge telling” (Baaijen, Galbraith and Glopper, 2014). In this approach, the reader is a passive receiver of knowledge. In contrast, transactional beliefs see reading and writing as “knowledge transforming” and include the active construction of meaning through the integration of one’s own thinking process. This model was applied to writing by White and Brunnings (2005) and has been applied to explore various writing contexts - for example, by Mateos *et al.* (2011) who explored the role of epistemological, reading and writing beliefs when students are reading to write an argumentation.

In writing:

**knowledge-telling (transmissional approach)**: retrieving existing ideas, translating them into words - result - text reflects structure of ideas in writer’s long-term memory (Bereiter and Scardamalia,1987)

**knowledge transforming (transactional approach):** writing guided by writer’s rhetorical goals thinking about the reader - result, text structure modified to readers needs - writers understanding develops as they adapt ideas to rhetorical goals

In reading: Bruning and Schraw (1996) highlight three epistemic world views that readers bring to reading tasks:

**Transmission model (author/text-centered):** meaning transmitted directly from author to reader - reader is passive receiver - object or reading - extract author’s meaning, not to actively meaning make

**Translation model:** meaning in the text is independent of author’s intentions or reader’s interpretations - reader’s job is to decode implicit/explicit messages, but not to reference own experiences

**Transactional model (reader-centered):** texts mean different things to different readers - independent of author’s intentions or text contents. Readers interpret a text based on many factors (personal goals, purpose..) meaning is constructed by the reader using prior knowledge, previous reading experiences, situational objectives. Reading is subjective - not simply receiving or translating meaning.

**Academic literacies** (This section needs further development)

Another founding principle and focus of my work is the importance of explicit teaching of the academic literacies (will define) that support evidence-based writing. I believe, as Lea and Street (2008) state, that in student writing, academic literacies are concerned with meaning making, identity, power and authority and thus are an essential part of the teaching of writing.

**Glossary:** (definitions to be provided)

Epistemic

Epistemology

Knowledge transmission

Knowledge transformation

Academic literacies

High stakes assessment

Widening participation

Reading-to-write

**References/Key studies**

Baaijen, V.M., Galbraith, D. and de Glopper, K. (2014) ‘Effects of writing beliefs and planning on writing performance,’ Learning and Instruction, 33, pp. 81–91. Available at: <https://doi.org/10.1016/j.learninstruc.2014.04.001>

Igo, L. B., Bruning, R., and McCrudden, M. T. (2005). 'Exploring Differences in Students' Copy-and-Paste Decision Making and Processing: A Mixed-Methods Study,' J*ournal of Educational Psychology*, 97(1), pp.103–116. Available at: <https://doi.org/10.1037/0022-0663.97.1.103>

Lea, M. R. and Street, B. V. (2006) “The ‘academic Literacies’ Model: Theory and Applications,” *Theory Into Practice*, 45(4), pp. 368–377. Available at: <https://doi.org/10.1207/s15430421tip4504_11>

Schraw, G. and Bruning, R. (1996) ‘Readers’ Implicit Models of Reading,’ *Reading Research Quarterly*, 31(3), pp. 290–305. Available at: https://doi.org/10.1598/RRQ.31.3.4

Mateos et al. (2011) 'Reading to write an argumentation: the role of epistemological, reading and writing beliefs', *Journal of Research in Reading*, 34(3), pp. 281-297. Available at: <https://doi.org/10.1111/j.1467-9817.2010.01437.x>

White, M.J. and Bruning, R. (2005) ‘Implicit writing beliefs and their relation to writing quality,’ *Contemporary Educational Psychology*, 30(2), pp. 166–189. Available at: <https://doi.org/10.1016/j.cedpsych.2004.07.002>