

## Developing Research-Relevant Information Literacy Skills: The Role of the “Embedded Librarian” in a First-Year Undergraduate Academic Writing Course

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### ABSTRACT

In this reflection paper, we describe how an academic writing course leverages the resource of the “embedded librarian” within the context of a blended learning approach. While the concept of the “embedded librarian” can be variously defined depending on factors like the range of work taken on, level of integration into the course and the specifics of the role adopted, in this paper, we conceptualize the “embedded librarian” as one who collaborates with the course lecturer to develop material appropriate to the learning of research-relevant information literacy skills required in the course. Using the example of an online library guide (“LibGuide”) developed by the librarian assigned to an academic writing course, we show how collaboration between the “embedded librarian” and course lecturer can be leveraged to facilitate online, asynchronous learning of research-relevant information literacy skills that harnesses the specific expertise of the university librarian for a learning environment that is becoming increasingly technologized and less restrained by the constraints of space and time.

**Keywords:** information literacy skills, blended learning, embedded librarian

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## INTRODUCTION

The collaborative potential of librarian-academic partnerships has been documented extensively (Zanin-Yost, 2018). The role of the librarian in this type of collaboration is not confined to the occasional appearance to deliver a talk on the services offered by the campus library but considers how librarians can be embedded in the academic life of the university in ways that encourage “more direct and purposeful interaction” (Dewey, 2005, p. 6) between librarians, faculty members, and students.

Such “embedded librarians” are librarians who focus “on the needs of one or more specific groups, building relationships with these groups, developing a deep understanding of their work, and providing information services that are highly customised and targeted to their greatest needs” (Shumaker & Talley, 2009, p. 9). These types of collaborations have been shown to be useful in helping students develop research skills (Junisbai et al., 2016). However, to our knowledge, such leveraging of academic-librarian partnerships has typically been under-discussed and possibly under-utilised.

The incorporation of research skills into the curriculum, while not new, is usually not done explicitly in most courses unless the course is focused on research methods and methodology. Willison (2012) has argued for the utility of explicitly integrating research skill development in an academic course, showing how students found such explicit integration beneficial. In particular, first-year students who are unfamiliar with academic culture may appreciate the opportunity to learn research skills like ideation and literature search explicitly. Furthermore, research skills have also been linked with the development of critical thinking abilities, with these abilities considered as essential components of information fluency that enable users to adeptly navigate evolving technologies and information landscapes (Mackey & Jacobson, 2011). Since critical thinking skills can be difficult to teach in isolation and require context (Cáceres et al., 2020), incorporating research skills explicitly into a course could be a means to teach students critical thinking skills effectively.

In this reflection, we show how the “LibGuide” used in the context of an Ideas and Exposition course (IEC), UTW1001A – Identities and Ideas in Modern Market-Driven Societies – can be employed to teach research-relevant information literacy skills of ideation and literature search to first-year undergraduates, as well as facilitate students’ use of critical thinking skills. UTW1001A is an academic writing course that aims to teach academic argumentation and writing skills, using the topic of neoliberalism as a focus. Students come from a range of disciplines across faculties, from the humanities and social sciences to engineering and science.

LibGuides are categorised as Web 2.0 library knowledge systems, which librarians use to create and manage a range of multimedia content (Adebonjo, 2010). Studies like Bowen (2014) have argued for how the LibGuide platform can be effective in delivering online instructional content.

For UTW1001A, this LibGuide is curated by an embedded librarian attached to the course for the purpose of teaching students how to ideate potential topics for their research paper assignment and conduct searches for relevant research literature. It contains information and video resources relevant to the aforementioned purpose. In the case of UTW1001A, the faculty

member took the lead in sharing with the librarian what was needed for the LibGuide. From there, the librarian was given the freedom to decide how best to design and deliver the content to students, in consultation with the faculty member.

As part of a blended learning approach that incorporates independent, online, asynchronous learning, students were required to watch the videos in the LibGuide a week before coming for a face-to-face workshop and think about what to write for their research paper using a set of reflection questions (Appendix A). During the workshop, students applied what they had learnt from the video content in the LibGuide to ideate potential research topics and conduct searches for relevant research literature. The blended learning approach was adopted to help students engage more fruitfully with the teacher and peers during the workshop since the video resources in the LibGuide would have provided them with basic information on ideation and research literature searching, which they could then put to practice during the workshop.

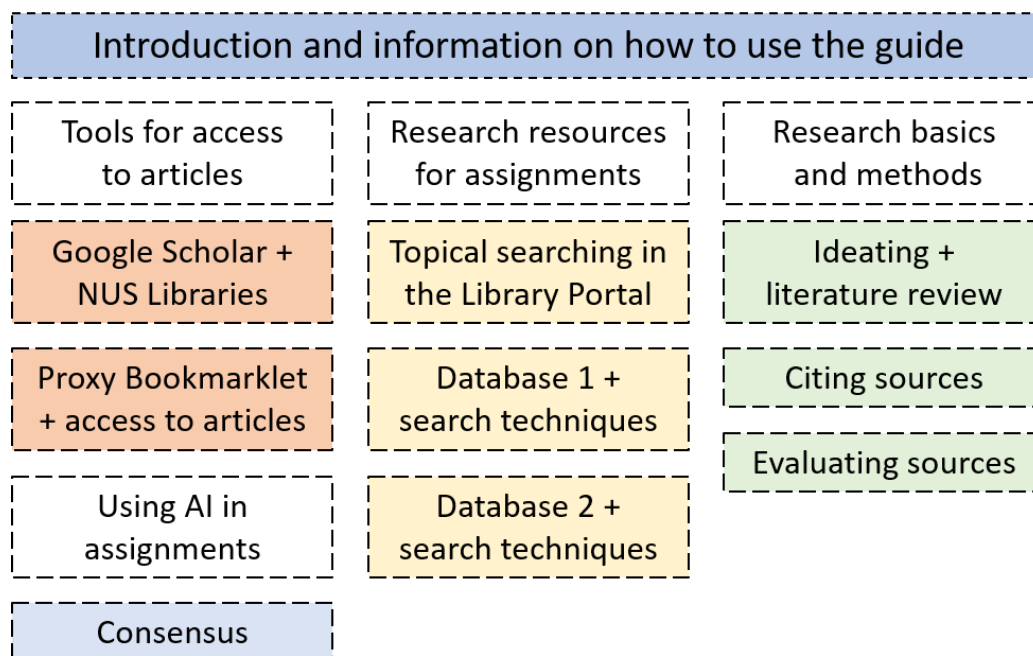
## **UTW1001A LIBGUIDE FEATURES**

The UTW1001A LibGuide is structured using granularised components. Little and Knihova (2014, p.36) have observed how “there is a growing demand for shorter – more ‘granularised’, learning object oriented – e-learning units that are more subject matter focused, [...]containing many hyperlinked additional materials”. Such design, they argue, gives learners the opportunity to take control of the breadth and depth of their learning.

Figure 1 shows a composite of the UTW1001A LibGuide with all its components. The granularity of the LibGuide is evident, with the space divided into modular sections organised according to subject-based topics (white boxes). By organising the content in this way, students are given the autonomy to decide which of these topics would be most suitable for their purposes. For example, if a student wanted to learn more about tools to search for sources specific to NUS Libraries, they could use resources in the first column under the subject “Tools for access to articles”.

Furthermore, using a more granular scale where video resources are split into short two-to-three-minute videos covering sub-topics within a topic also gives students more flexibility since they do not have to view one long video just to get the information they need. For example, in Figure 1, we can see how the category of “Research resources for assignments” contains three short videos.

Essentially, the layout of the LibGuide facilitates student autonomy and flexibility in learning, positioning students as agents who decide what is important and required for their learning.



**Figure 1.** LibGuide Composite for UTW1001A.

## STUDENT OUTCOMES

After using the LibGuide and participating in the face-to-face workshop, students worked on a handout where they summarised what they intended to do for their research paper assignment. They also indicated, in the handout, the sources they would use for their research paper. Figures 2 and 3 show extracts taken from a student's handout.

In the first row of Figure 2, we see how the student has managed to develop a topic focusing on the dominant narrative of the value of pursuing STEM (Science, Technology, Engineering, and Mathematics) courses in Singapore. We also observe how she has approached the topic critically – rather than assuming societal acceptance of STEM over arts and humanities subjects as a given, she states her intent to explore “nuances and complexities”. She then shows, in the next row, via her research purpose statement, a critical awareness of what may be driving the social acceptance of the higher value of STEM, associating this dominance with the market-driven perceived value of STEM in neoliberal society, where knowledge and skills of a person can be commodified as a form of human capital (Urciuoli, 2008).

1. Brief background to your topic that shows the usefulness of your study [Move 2 - Rationale]	In Singapore, the notion that STEM courses contribute to economic growth more than other courses has been perpetuated by dominant groups from the state to companies. However, individuals, particularly university students, may not respond to such narrative uniformly and a bottom-up perspective is needed to examine the nuances and complexities in their perception of STEM courses.
2. What you study aims to do [Move 3 - research purpose statement]	My study aims to investigate university students' prevailing perceptions of STEM courses to argue that STEM courses are more valued by neoliberal society over the Arts.

**Figure 2.** Student Handout – Extract from Preliminary Summary of Proposed Study.

In Figure 3, we see how the student has managed to search for, and evaluate sources to develop a preliminary bibliography, including rationale for choosing these sources as well. Her rationale provided for both sources is detailed and thoughtful, containing a summary of the source as well as justification for the sources' inclusion.

No.	Academic Work	Rationale
Eg.	Holborow, M. (2015). <i>Language and Neoliberalism</i> . Routledge.	Holborow's work looks at language as social capital, which is relevant to my Paper 2 study because...[explain]
1	de Roock, R. S., & Baildon, M. (2020). MySkillsFuture for students, STEM Learning, and the design of neoliberal citizenship in Singapore. <i>Stem and the Social Good</i> , 9–29. <a href="https://doi.org/10.4324/9781003089414-2">https://doi.org/10.4324/9781003089414-2</a>	The authors' work examines instrumental educational policies and the locally specific ways that neoliberal STEM discourses are recontextualized through government-led policies and curricula.  This is relevant to my study as it helps establish the background / context in which the notion of STEM courses being valued more by society is prevalent / pervasive / dominant in Singapore.
2	Carter, L. (2017). Neoliberalism and STEM education: Some Australian policy discourse. <i>Canadian Journal of Science, Mathematics and Technology Education</i> , 17(4), 247–257. <a href="https://doi.org/10.1080/14926156.2017.1380868">https://doi.org/10.1080/14926156.2017.1380868</a>	Carter's work observes that STEM discourse has revolved around competitive national and neoliberal agendas for human capital production and innovation that underpin 21st-century global economies than it is anything else; in other words, the STEM pipeline.  This is relevant to my study as it forms the basis for my hypothesised results and could possibly explain why many students value STEM courses over the Arts due to the economic and human capital generated by STEM courses.

**Figure 3.** Student Handout – Extract from Preliminary Bibliography.

We argue that these justifications evidence reflective judgement, one of the critical thinking skills (Dwyer et al., 2014). For example, for her first source, the student is able to analyse and evaluate why the source would be useful for setting the background for her study – she mentions how the source, like her planned study, is situated in the Singapore context. Also, for her second source, she makes the link between positive valuations of STEM courses and broader societal themes relevant to neoliberal society, pointing out how “competitive national and neoliberal agendas for human capital production and innovation” characterise modern globalised economies. This shows her use of analytical and evaluative skills in her explanation for how the source could help provide support for her hypothesised results in her oral pitch.

We have continued using the LibGuide in subsequent semesters, with minor changes, since its introduction at the beginning of the academic year in 2023. In Table 1 below, we show viewership data of the LibGuide videos taken from the current semester at the time of writing, with 48 students enrolled in the course. For most of the videos, at least half the enrolled students have viewed them, with average completion over 80% for all but one. These data provide some evidence to show that students are utilising the LibGuide videos for their learning, which, together with the above presentation of student work, indicate its potential to facilitate student learning.

**Table 1.** Viewership Data<sup>1</sup>.

Video Title	Unique Viewers	Average Completion
Google Scholar and NUS Libraries	47	90.4%
Scoping Research and Literature Review	46	89.7%
Consensus	44	81.8%
Proxy Bookmarklet and Access to Full-Text Articles	44	91.5%
Topical Searching in the Library Portal	39	89.4%
Database 1 and Search Techniques	30	93.1%
Database 2 and Search Techniques	28	85.1%
Citing Sources	25	78.8%
Evaluating Sources	18	87.9%

## DISCUSSION AND CONCLUSION

In the above description of the implementation of a LibGuide in the context of an academic writing course, we saw how its resources on research-relevant information literacy skills were utilised by many students in the course, with evidence presented using examples of a student's work that displayed the student's use of analytical and evaluative skills as part of critical thinking as reflective judgement.

Studies like Bell and Shank (2004) have argued for more collaborations between librarians and faculty, especially with the changing landscape of higher education that requires a re-thinking of what a librarian's role is in terms of facilitating teaching, learning, and research. In the example of collaboration presented here, the embedded librarian collaborated with the academic, with both functioning as experts on research-relevant information literacy skills. The librarian also serves as an expert on the resources available in the campus library that can be used to fulfil the specific needs of students when it comes to developing and harnessing these information literacy skills. Such expertise would need to be customised for a particular course so that the information delivered to students would be relevant and purpose-driven. This is where the faculty member comes in.

We have described in this reflection paper how a collaboration between an embedded librarian and a faculty member can be conducted, leveraging the expertise of both parties to facilitate the learning of research-relevant information literacy skills for students using a blended learning approach. We first established briefly the basis for this collaboration, as supported in the literature, before describing the UTW1001A LibGuide as an example of how such collaboration can lead to the development of useful learning design and material. We then described, using an example of student work and viewership data, the positive outcomes of such collaboration.

## ENDNOTES

1. The video entitled "Consensus" teaches students how to use an AI-driven platform of the same name to search for research sources.

**ABOUT THE AUTHORS**

Marissa K. L. E is a Senior Lecturer at the Centre for English Language Communication (CELC), National University of Singapore (NUS). She is also a fellow at the NUS Teaching Academy (NUSTA). She has published a monograph – *Discourses of Neoliberalism in Singapore’s Higher Education Context: Individualist and Communitarian Perspectives* – as well as an edited volume - *Discourses, Modes, Media and Meaning in an Era of Pandemic: A Multimodal Discourse Analysis Approach* - with Dr Sabine Tan. She has published and presented in the areas of social semiotics, critical multimodal discourse studies, multiliteracies and the use of multimodality for educational purposes.

Diyana is an academic librarian at the National University of Singapore, where she leads the Collection Development and Education Matrix at NUS Libraries. Her research focuses on Southeast Asia, with particular attention to knowledge production in the Malay World and the decolonisation of libraries and library science. She has presented and published on these themes and contributes to the development of research collections and the teaching of information literacy across disciplines. She is currently pursuing her PhD at NUS.

## REFERENCES

- Adebonojo, L. G. (2010). LibGuides: Customizing subject guides for individual courses. *College & Undergraduate Libraries*, 17(4), 398–412.
- Bell, S. J., & Shank, J. (2004). The blended librarian: A blueprint for redefining the teaching and learning role of academic librarians. *College & Research Libraries News*, 65(7), 372–375.
- Bowen, A. (2014). LibGuides and web-based library guides in comparison: Is there a pedagogical advantage? *Journal of Web Librarianship*, 8(2), 147–171.
- Cáceres, M., Nussbaum, M., & Ortiz, J. (2020). Integrating critical thinking into the classroom: A teacher's perspective. *Thinking Skills and Creativity*, 37, Article 100674.
- Dewey, B. I. (2005). The embedded librarian: Strategic campus collaborations. *Resource Sharing and Information Networks*, 17(1), 5–17.
- Dwyer, C. P., Hogan, M. J., & Stewart, I. (2014). An integrated critical thinking framework for the 21st century. *Thinking Skills and Creativity*, 12, 43–52.
- Junisbai, B., Lowe, M. S., & Tagge, N. (2016). A pragmatic and flexible approach to information literacy: Findings from a three-year study of faculty-librarian collaboration. *The Journal of Academic Librarianship*, 42(5), 604–611.
- Little, B., & Knihova, L. (2014). Modern trends in learning architecture. *Industrial and Commercial Training*, 48(1), 34–38.
- Mackey, T. P., & Jacobson, T. E. (2011). Reframing information literacy as a metaliteracy. *College & Research Libraries*, 72(1), 62–78.
- Shumaker, D., & Talley, M. (2009). *Models of embedded librarianship: Final report*. Special Libraries Association. <https://www.sla.org/wp-content/uploads/2017/05/EmbeddedLibrarianshipFinalRptRev.pdf>
- Urciuoli, B. (2008). Skills and selves in the new workplace. *American Ethnologist*, 35(2), 211–228.
- Willison, J. W. (2012). When academics integrate research skill development in the curriculum. *Higher Education Research & Development*, 31(6), 905–919.
- Zanin-Yost, A. (2018). Academic collaborations: Linking the role of the liaison/embedded librarian to teaching and learning. *College & Undergraduate Libraries*, 25(2), 150–163. ■

## APPENDIX A

### Library Workshop

Use the questions below to help you clarify your thoughts as you prepare for the Library Workshop in Week 6 Tutorial 2.

We will use the time in class to work through these questions.

1. Write down the topic you have in mind for your Paper 2 and Paper 3 assignment (research study). This topic should be relevant to showing how neoliberalism has impacted society.

It doesn't have to be your confirmed topic, just something you're interested in examining in relation to neoliberalism's impact on society.

2. How would you go about collecting research sources (academic journal articles and book chapters) on this topic? How can you use these sources to come up with the rationale for your study?

The rationale can be defined as the basis for your study, i.e., based on what is available in the research literature, why is your study needed?

Try to come up with 2-3 sources relevant to your study and construct a Reference section using these sources that conforms to the APA7 referencing format.

3. What would your research purpose statement be? This would make up your thesis (primary argument).

It doesn't have to be something confirmed, but it would be good to have a sense of what your assignment aims to achieve.

4. How would you collect data to provide analytical findings as evidence for the arguments you'll make?

What claims would you make for the secondary arguments you'll be constructing to support the thesis (primary argument)?

5. What analytical methodology would be suitable for your study and why?

6. What theoretical perspective (political economy or post-structuralist governmentality) would be suitable for your study and why?

7. What broader themes relevant to neoliberalism can your analytical findings be connected to?