# Using Shared Inquiry to Develop Students' Reading, Reasoning, and Writing in the Disciplines

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**Abstract:** It is commonly accepted in the academy that developing a critical thinking capacity and related capabilities will make students more effective thinkers and writers, and that these are desirable traits for graduates to have no matter what path they take after graduation. While most academics agree that critical thinking is an essential component of university education, they are less clear about what constitutes critical thinking and how it is, or can be, incorporated within their own teaching and assessment practices without displacing disciplinary content (Moore, 2011). This article discusses how the Shared Inquiry (SI) discussion method can be deployed to teach disciplinary content and critical thinking simultaneously. Qualitative evidence from the method's application in a Screen & Media Studies subject taught at Flinders University, South Australia, is presented to demonstrate the benefits of SI in developing critical thinking among undergraduate student cohorts.

## Introduction

The American Academy of Arts and Sciences' recent report, *The Future of Undergraduate Education* (2017), observes that the essential components of undergraduate education are "the more lasting capacities for critical thinking, problem-solving, communication, and civic participation" (p. 88). The report foregrounds the centrality of critical thinking in shaping an adaptable workforce:

> [G]raduates in every field need to master a blend of so-called soft and hard skills, technical training as well as socio-emotional, problem-solving, and critical thinking skills, so they can perform effectively at work, participate meaningfully in community and civic affairs, and pursue learning throughout their lifetimes. Vocational training focused on narrow job-related skills helps students find jobs when they are young, research finds, but they are often not prepared to adapt to changes over time and thus are more likely to be unemployed or have lower salaries when older compared to those who received a more academic general education. (p. 10)

In Australia, the *Australian Qualifications Framework* (AQF) is the policy statement which "underpins national regulatory and quality assurance arrangements for education and training" through an elaborate taxonomy of learning outcomes for each recognized qualification (e.g.

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Bachelor, Masters, etc.). Within this schema, the AQF states that graduates of a Bachelor degree will possess "cognitive and creative skills to exercise critical thinking and judgement in identifying and solving problems with intellectual independence" (AQF, 2013, p. 16). Alongside these nominated skills in thinking and judgement, the AQF learning outcome descriptors also state that "[g]raduates of a Bachelor Degree will have . . . communication skills to present a clear, coherent and independent exposition of knowledge and ideas" (p. 16).

To meet the standards outlined by the national framework, individual Australian universities commonly claim "critical thinking" and communication skills among the promised attributes their graduates will possess (National Graduate Attributes Project, 2011). Yet, reading comprehension and written expression are areas where incoming students lack preparation or skill (Arkoudis, 2014; Briguglio, 2014; Vered, 2016). With more than twenty years of university teaching experience, the authors of this paper have come to perceive the "writing problem" as equally a reading problem. This view is shared by scholars in the United States but has not had much attention in Australia (Horning, 2007, 2013; Carillo, 2016). In this article, we discuss how the Shared Inquiry (SI) discussion method could be deployed to simultaneously address the development of critical thinking, reading, and writing as related components of academic discourse (Bean, 2011). Our example, a first-year Screen & Media Studies subject, *Convergence Cultures*, aimed to develop students' critical thinking capacities, deep reading habits, and writing abilities as they explore industrial, social, and scholarly developments in the global media landscape. The latest change in the course pedagogy was to incorporate the SI method in weekly tutorial sessions (discussion groups), where the focus of student learning was coming to understand the assigned subject readings with the expectation that students would deploy this knowledge in their own writing about media issues.

In this article, we demonstrate how the SI method increased student accountability for reading, contributed to the development of critical thinking skill and capacity, and helped students come to understand the complex ideas in their assigned readings so that they would have greater control over those ideas when pursuing writing exercises and tasks.[1]

## Context Matters

While academics themselves accept the centrality of critical thinking to the academic enterprise, defining precisely what this entails is more elusive (Moore, 2011). In this paper, we define critical thinking as the process of analysing, evaluating and synthesising information in order to increase our understanding of the object at hand, whatever that may be (text, image, concept, etc.). A primary purpose of critical thinking is to reach the most reasonable conclusions we can about the world we live in and find the best solutions for what we want to achieve, given the evidence we have. Within an academic context, this will require the "capacity to critically analyse and evaluate the claims of others as well as the capacity to justify one's own claims, by using sound reason and logic" (Egege & Kutieleh, 2013, p. 1).

Once equipped with a definition and tasked to ensure that graduates are skilled in critical thinking, academics still find it difficult to secure the curricular space in which to teach it within their own subjects (Wilson, 2017; Moore, 2011). The definition we provide above accepts that critical thinking is a set of "general principles" which can be learned and are applicable across contexts (Ennis, 1987; Abrami, et al., 2015, p. 281). This position can serve as justification for teaching critical thinking as a subject in its own right (e.g. Critical Thinking 101), and such stand-alone subjects have been shown to be effective in teaching critical thinking (Ennis, 1987). Abrami et al. (2008, 2015) demonstrate, however, that a more effective way to develop critical thinking is to

embed the practice within a disciplinary context. They show that an instructional design using a mixed method of discipline content combined with *explicit* instruction in critical thinking produces the most significant improvement in students' critical thinking capacities. Abrami et al. (2015) also stress that critical thinking principles must be explicitly articulated in both the learning objectives and in the classroom pedagogy so that students are aware that this is what they are doing.

Unlike the American four-year bachelor's degree, which often requires first-year composition among other general education and writing requirements, the Australian bachelor's degree is commonly a three-year course and does not provide a place for general instruction in writing or rhetoric. First-year composition and rhetoric subjects, programmatic Writing Across Curriculum (WAC), and stand-alone critical thinking subjects are rare in Australia.[2] As Harper and Vered have observed, in Australian universities, following a tradition of individual remediation (2016, p. 689), students demonstrating 'problems' with writing, speaking or the English language are referred to their institution's academic language and learning unit. Moreover, there is little history of overtly teaching critical thinking in high schools, and first-year university students are often unfamiliar with the concept of critical thinking. This means that Australian students can graduate from university without ever having been exposed to explicit critical thinking instruction. Concern about student preparedness for university study is growing as Australia pursues a national agenda for widening participation in higher education. Unlike the U.S. context, where widening participation occurred in periods of economic growth and was met with institutional expansion in both number and kind, the current phase of growth and diversification in Australian higher education gained momentum with the *Bradley Review of Higher Education*, commissioned in June 2008, on the crest of the global financial crisis – a period of economic constraint rather than plenitude.

Within this complex of financial and other constraints, an important question arises: How can we develop in our students the requisite and promised critical thinking and communication skills required by the AQF? The option to provide stand-alone subjects is problematic because the three-year degree has very little capacity to accommodate additional subjects and still maintain the signature flexibility of a bachelor's degree. Offering electives in critical thinking is an option but, like all electives, they will only reach a subset of self-selected students. The alternative – to develop students' reading, reasoning, and writing abilities within disciplinary coursework – is more feasible for the Australian context and is confirmed by research as the more effective approach. We suggest that SI is a method that can be adopted for this purpose. SI provides an explicit pedagogy that applies critical thinking principles to given subject content, allowing the development of critical thinking in concert with reading and writing skills, without displacing content learning (Bean, 2011).

## Critical Thinking and Shared Inquiry Across the Disciplines

According to Paul (2004), there is a necessary link between critical thinking and skilled reading and writing. These links are well established in the literature. Horning's critical literacy (2007), Carillo's mindful reading framework (2016) and Sullivan's deep reading pedagogy (2017) all illustrate the constitutive links between critical thinking and the close, critical reading that promotes learning and development of discipline knowledge.

Alice Horning (2007), for example, argues for a definition of reading in terms of "critical literacy" which she defines as

> the psycholinguistic processes of getting meaning from or putting meaning into print and/or sound, images, and movement, on a page or screen, used for the purposes of

> analysis, synthesis and evaluation; these processes develop through formal schooling and beyond it, at home and at work, in childhood and across the lifespan and are essential to human functioning in a democratic society. (p. 2)

Ellen Carillo's (2017) "mindful" reading stresses the importance of encouraging cognitive self-awareness in students. By applying mindfulness to their reading practice, "students become *knowledgeable*, *deliberate*, and *reflective* about *how* they read and what different reading approaches allow and enable" (emphasis in original, p. 190). Rather than a way of reading per se, for Carillo, mindful reading is a framework for reading that accommodates numerous ways of reading. To be a mindful reader suggests an ontology of reading. The mindful way of being a reader is "characterized by intentional awareness of and attention to the moment and the demands that it makes on reading" (2017, p. 190). Mindful reading takes into view both reading as action and the reader as actor (Carillo, 2016, p. 11; Paul & Elder, 2008).

Deep reading is characterized by Patrick Sullivan (2017) as a "signature pedagogy" – a way to define disciplinary learning. Following Shulman (2005), signature pedagogies, Sullivan says, are "pedagogies of uncertainty" and the classroom must be a place that accommodates and accepts unpredictability and uncertainty. An essential part of Sullivan's deep reading pedagogy is giving class time to "discussing reading strategies and decoding assigned readings collaboratively," with an emphasis on big ideas rather than key words (2017, pp. 146-148). Giving time to reading and engaging in a collaborative meaning-making process that allows for uncertainty are central to SI as it has been applied in the subject, *Convergence Cultures*.

There is also a remarkable overlap between Sullivan's outline for deep reading as a signature pedagogy, Horning's critical literacy, and programs for teaching critical thinking. Sullivan positions deep reading as a pedagogy to "provide opportunities for students to engage in metacognitive thinking about the *process* of learning, and to help students assess and reassess their own mental models for understanding the world" (p. 147). Ultimately, Sullivan says, deep reading is a "form of inquiry that is built around the integration of reading, writing, and thinking in ways that are specifically designed to promote the transfer of knowledge to other disciplines and other areas of life beyond the classroom" (p. 145). The medium for that transfer is the student. We want our students to become critical thinkers so that they can carry that skill with them, from one meaning-making context (discipline) to another.

Irrespective of the variations in their positions, it is clear these writers agree that deep, close, critical, or mindful reading practices are 1) essential to develop in students; 2) generalizable and transferrable across disciplines; and, 3) can provide a framework for pedagogy applicable within and across disciplines. Critical reading, which assumes Carillo's mindfulness and Sullivan's deep practice, is the underlying skill that facilitates growth of the critical literacy essential for developing critical thinking (Horning, 2007). If critical reading is generalizable and capable of providing a pedagogy across disciplines, then it follows that this pedagogy will facilitate the development of critical literacy and critical thinking across the disciplines. As Paul and Elder state, "critical thinking is not just one of many divergent educational aims, but rather a way of teaching and learning at a high level of effectiveness within any subject, field, or discipline" (2016, p. 1).

Like Abrami et al., Horning stresses that, for students to engage in academic discourse, the goals must be "stated explicitly, taught directly, and required in students' work" (p. 4). This can be achieved by adopting a method that requires explicit instruction in reading, reasoning, and writing development which is applicable within any disciplinary context. SI is such a method. It can be applied to any disciplinary content that is capable of being subjected to interrogation.

## Shared Inquiry

Shared Inquiry (SI) is a method of teaching and learning in which a group of learners collaborate in a dialectic process to explore the meaning(s) of a text. SI is a hallmark method of the Great Books movement founded by philosopher Mortimer Adler (Great Books Foundation). The method is most commonly associated with literary studies, religious studies (Lee, 2000), and courses on intellectual traditions, but has also been used in second language learning (Browning, Halvorsen, & Alquist, 1996) and historiography (Corbett & Miller, 2006) and, in the example that we present here, Screen & Media Studies.

SI is also traced to Matthew Lipman's development of Philosophy for Children. Lipman sought to convert the elementary school classroom into a "community of inquiry" where students collaboratively search for "shared meanings" (Lipman, 2014). His aim in bringing the Socratic process to school classrooms was to develop students' thinking ability rather than their capacity to memorize information. The dialogic method of philosophical inquiry, asking questions and thinking collaboratively, informs SI and our contemporary understanding of critical thinking as a process.

Observation of the Seminar Program at St. Mary's College of California influenced the adoption of the SI practice we discuss here. The Core Curriculum Committee of St. Mary's College of California explains why they use the SI method:

> Shared inquiry is the act of reasoning together about common texts, questions, and problems. It is a goal of the core curriculum to advance students' abilities to develop and pursue meaningful questions in collaboration with others. Through the habits of shared inquiry students will be able to carefully consider and understand the perspectives and reasoned opinions of others, reconsider their own personal opinion, and develop rhetorical skills. (Core Curriculum Committee, n.d.)

Central to SI is an understanding that the group of students form a learning community. Collectively and collaboratively, students draw out meaning from a text through a process of questioning and sharing interpretations and understandings with one another. That reasoning process, however, must be linked to the text. When a speaker shares a view, she must be able to state what in the text prompted her thinking. Driven by a demand for textual evidence, discussion continually circles back to the text. Following the Socratic method, reading and meaning-making are moved from private and individual practices to public and collaborative processes through which students practice the principles of evaluation and judgement – the hallmarks of critical thinking and the scholarly enterprise.

Following the SI model (Great Books Foundation), the teacher is a facilitator in this community; their role is not to instruct but rather to guide. Bean (2011, p. 9), following Myers, describes this as "coaching." The aim is for students to generate and drive the discussion by questioning one another and the text, with as little intervention from the instructor as possible. The instructor should not present as having answers to the questions and should instead pose questions only when discussion wanes.

In order to participate in this process, students must be prepared by having read the assigned text. Students are accountable to the community of inquiry, to one another, for having done the reading. The goal is not to achieve consensus or agree on a singular truth for a text. Uncertainty persists as students come to understand that a text can generate different meanings depending on our individual experience, knowledge, and perspective. Through the collaborative and dialogic process of making sense of a text, students become aware that meaning is not a given.

SI's signature collaborative and dialogic processes of meaning-making in the classroom offer productive spaces for developing students' reading and writing abilities as they intersect with critical thinking. As students work through new, confusing, and challenging ideas that they encounter in shared texts, SI demands that they return to the text for evidence, analyse and evaluate their thought processes and those of their colleagues, and have the chance to arrive at different conclusions after considering the evidence. SI requires close reading and drives critical reading because there are always implied questions: What do you think about this text? What ideas struck you as interesting or important? Why? How do you justify that claim? Where in the text can we find traces of that idea? Discussion cannot remain at the level of impression and instead moves into the realm of critical reasoning. This process drives students to engage with the subject content more deeply and demonstrate their understanding of that content in discussion and assessment. Deploying the SI method to existing subject content facilitates learning within the chosen discipline.

## Shared Inquiry Process in Media Studies

*Convergence Cultures* is a first-year media studies subject with an enrollment of 100 to 120 students; it is normally delivered in the first semester. The subject has a weekly 80-minute lecture and a weekly 50-minute tutorial session (equivalent to a U.S. discussion section); tutorial enrolment ranges from 15 to 22 students. One author of this paper was the subject coordinator and tutor for five years and the sole tutor for the last two years.[3] The SI method was introduced in 2017 to complement Writing Workshops (WW); both activities take place in the tutorial sessions. Assessment of student writing and subject content is determined through linked and nested tasks in collaborative SI and short written "reading responses" (500 words). The writing tasks fall under the descriptor of medium-stakes writing-to-learn exercises and their aims include learning to write using evidence and incorporating the ideas of others in one's own writing – features fundamental to academic writing and critical thinking. These written tasks require students to respond in three to four paragraphs to a question or prompt about the reading selection. Each written task is peer workshopped in draft form during a tutorial session the week before it is submitted for grading. (For a description of the subject before SI was introduced, see Vered, 2016.)

While active participation in the SI and WW sessions accounts for 50% of the final subject grade, attendance has always been incentivized in this subject to encourage participation in a scholarly community. Full marks, however, are not given for attendance alone. For SI sessions, marks are assigned in equal thirds for bringing annotated readings and questions, participating in small group work, and participating in large group discussion. WW marks are evenly allocated between presenting a draft for peer feedback and providing feedback to others on their drafts.

Each Reading Response is developed through the following cycle over three to four weeks. In week 1, the lecture introduces the intellectual concepts, discursive context, and key terms of an assigned text and students read the text before the tutorial; SI is pursued in the tutorial. In week 2, a draft Reading Response is submitted for peer feedback in the WW tutorial. In week 3, the draft is revised outside of class for submission. Across all of these activities, collaboration and dialogue are made central to the processes of meaning construction.

The focus of SI is coming to understand the assigned texts. To help orient students to the critical reading practice, they are given a set of questions to guide their active reading of non-fiction texts. A *Critical Reading Guide* (Appendix 1) is first presented in an early lecture and applied to a shared text. For SI tutorial sessions, students are required to bring their annotated readings to class along with a question or two that the reading has stimulated for them. In small groups of three or four, students discuss the reading with the goal of putting forward a single question for consideration by

the whole class. In documenting their reading practice and sharing ideas in small group discussion, students reflect on their understanding of the reading content and how it articulates with other subject components.

Ultimately, each group puts their question on the board and the whole class votes to determine the order in which questions will be pursued. While every question may not be covered in a session, acknowledging the contribution and work that everyone has done outside of class is important. Putting the questions on the board also gives the instructor a window to talk about what is a productive question and how one can be formulated to generate discussion (e.g. how to avoid the yes/no trap; how to ask questions that ensure we stay close to the text). At this stage, the questions can be revised in consultation with the whole class. Discussion proceeds with students seated facing one another (we find nametags are helpful).

While the discussion may not progress to cover the key ideas in the sequence that an instructor might prefer, students take control and ownership of how the material is treated, setting their own priorities and pursuing them at their own pace. The structured requirements of SI have resulted in more students coming to class having done the reading, and more students participating in discussion and showing greater engagement with and command of the material.

In lecture or tutorial, class time is given to coming to understand the Reading Response prompt so that writing can proceed more easily and with less angst over the answer (Harris, 2017, p. 233). To reinforce the aims of critical reading and thinking, the writing tasks ask "why" and "how" questions to focus the writer's attention on the process of argument that the reading selection has offered (Carillo, 2017, p. 195). For a text that is associated with a Reading Response, the WW will occur one or two weeks after the SI session on that text. Students are required to bring three hard copies of their (500-word) drafts to exchange with peers for feedback. They work in small groups of three to four and follow the "put the pen down" approach to feedback provision, wherein only the writer writes on his/her paper. Students comment orally to one another on their drafts. Using a dialogic method, readers ask questions of each writer about their respective drafts.

This method mirrors the SI process by subjecting student writing to a similar process of close reading, analysis and critique. The writer responds orally and also takes notes in his/her own words for revision of the draft. In a 50-minute tutorial, for the last 10 minutes we return to the larger circle and each writer shares the type of feedback s/he received and how s/he is going to revise the draft based on that advice. Bringing student writing into a public arena in this way reinforces the dialogic features of academic discourse and standards for scholarship within a community of practice. The final draft is due for marking the following week.

## Evaluation of Effectiveness

In order to evaluate the effectiveness of the SI method on students' writing, we looked to see what could be quantitatively measured and compared, bearing in mind the difficulty of isolating the impact of SI from other variables. To ensure that we had a comparative measure for the two years after the introduction of SI as well as the years prior to the introduction of SI, we identified a Reading Response prompt (RR) that had remained constant from 2016 to 2018, where 2016 was a non-SI year (see Appendix 2). The RR was marked out of a possible ten points (see Appendix 3 for marking rubric).[4] We used the mean from this RR score from each year to see if there was any discernible difference between them. From 2016 to 2018, the mean score for the RR was 6.2, 6.9 and 6.4 respectively. While this demonstrates a slight increase in the average mark overall, which is encouraging, it is too early to indicate a direct correlation.

WWs have been part of the pedagogy for several years and we are confident in their positive contribution to student writing development. Our current interest is to isolate the effectiveness of SI on student learning as registered in both oral discourse and writing. To do this, we used the same RR scores as above (but for 2017/18 only), and correlated these scores with attendance at the SI and WW tutorials which dealt with the related RR prompt. Our inquiry was guided by the following questions:

- Does participation in SI correlate with a higher score on writing tasks?
- Does participation in WW correlate with a higher score on writing tasks?
- Does participation in both WW and SI correlate with a higher score on writing tasks?

To answer these questions, the students' RR scores were correlated with three categories of attendance at both SI and WW – high, medium and low. If students were in the 75$^{th}$ percentile or higher with respect to their total participation scores for either SI or WW, they were classified as "High" for that session type. If they scored between the 33$^{rd}$ and 75$^{th}$ percentile, they were classified "Medium." Otherwise, they were classified "Low." In addition, to isolate the effect of SI alone, the RR scores were correlated to high attendance at WW and SI, high attendance at WW but not SI, and high attendance at SI and not WW. The results are shown in the tables below.

**Table 1: SI Attendance and Average RR Score 2017/18**

| SI Attendance | Average RR Score |
|---|---|
| High SI attendance | 27.94 |
| Medium SI attendance | 26.01 |
| Low SI attendance | 24.80 |

**Table 2: WW Attendance and Average RR Score 2017/18**

| WW Attendance | Average RR Score |
|---|---|
| High WW attendance | 29.13 |
| Medium WW attendance | 23.07 |
| Low WW attendance | 21.27 |

**Table 3: WW and SI Attendance and Average RR Score 2017/18**

| SI Attendance | Average RR Score |
|---|---|
| High WW & high SI attendance | 29.51 |
| High WW & low SI attendance | 28.43 |
| High SI & low WW attendance | 21.50 |

Tables 1 and 3 clearly indicate that there is a significant correlation between high attendance at the WW and higher RR scores, while attending SI without also attending WW did not, on average, increase their RR scores. Table 3 also seems to indicate that attending SI has only a minor impact on

RR scores, as long as there is also high WW attendance. This indicates that attending the WW is the most important variable in achieving higher scores. At the same time, however, it is clear from the data that high attendance at *both* WW and SI is the better option for students. There is a small but significant difference in RR scores between high attendance at SI and low attendance at SI.

As expected, the evidence confirms the value of attending WWs for student writing development. More important to note for our purposes here is that the subject elements are structured in such a way that the WWs build on the critical analytic work undertaken in the SI sessions, which precede WW. The peer review feedback process used in the WWs draws upon the collaborative meaning-making that occurred in the prior SI session. Students who have attended the SI session apply the SI standards to their assessment of other students' written work in the WW. This means that all students stand to benefit from the SI sessions if they attend the WWs, *even if they have not attended the SI session themselves*. Based on classroom observation, the nature of student discourse in the WWs has improved in quality since the introduction of the SI method.

A clearly positive influence of SI on student learning and engagement can be ascertained from student comments in the Student Evaluation of Teaching (SET).[5] Response rates to this voluntary evaluation tool are generally low in most subjects. The high return rates of 26% (2017) and 30% (2018) compared with the previous three years' return rates, which were between 15% and 21% from smaller cohorts, indicate a measurable increase in student engagement with the subject. More compelling support for the value of SI is the agreement rate to the survey item, "I developed my ability to think critically and analytically." Before introducing SI, the agreement rate for this item ranged from 84% to 89%. Since the introduction of SI it has increased to between 87% and 100%.

Further evidence of the value that students ascribed to SI is demonstrated in their qualitative feedback to the open-ended question, "What aspects of this topic most helped you learn?" The most commonly cited aspects were features of the SI sessions, such as "the interactive tutorials," "class discussions," "discussing readings," "class discourse," "discussing ideas," "understanding things from a different point of view," "critically analys[ing] articles," and "critical reading." Students also commented on the development of their communication skills and confidence levels in contributing their ideas in discussion. As one student said, "the topic heavily encouraged class participation which helped me to express my ideas in a more verbal way."

Most notably, SI has transformed the experience of teaching and learning in this subject for staff and students. Although direct data was not collected in years 2014–2016, the primary tutor observed that compared with previous years, since the introduction of SI in 2017 more students came to tutorials having read the required texts and more students engaged in discussion about the text. SI increased student accountability for reading and intellectual engagement. As a consequence, the quality of class discussion improved both intellectually and as a process. Students took control of setting priorities, guided the direction of discussion, and raised challenging questions of the text and of one another. Students reported that the small group work built their confidence by allowing them to rehearse their ideas in a more intimate setting before contributing to the large group discussion. In the larger class discussion, students drew more on each other's ideas and challenged their peers. Even students who presented with Access Plans excusing them from class participation, contributed to the small and large group discussions and later took the time to tell the instructor how pleased they were with their own participation.[6] All of these improvements were observed by the subject coordinator.

We attribute several generalizable benefits to the SI practice. The structured requirements of participation in SI motivate more students to read and read carefully. Requiring students to bring annotated readings and questions about those readings to class reinforces the material dimensions

of textuality and helps students connect ideas to the ways in which they are presented. Discussing their questions with peers in small groups provides them with an opportunity to not only practice but also reflect on their reading and reasoning practices. This outcome is well articulated in one student's feedback comment: ". . . one is allowed to think one's own mind and put such thoughts forward, so long as it was founded in sound reason and shouldered by others." When bringing these skills to bear on a scaffolded writing task, students are better able to write with confidence and demonstrate command over their ideas and those of others. They are demonstrating a greater capacity for critical thought.

## Future Directions?

While it is difficult to demonstrate a direct causal relationship between SI and improved writing outcomes, the preliminary data looks promising. Even more encouraging are the qualitative feedback and observational reports from students and staff. We are confident that the SI method can improve critical thinking by improving critical reading and critical literacy within a disciplinary subject. As a discipline agnostic method, any subject matter that is open to interrogation can become an object of SI. This makes SI a method that can be used to develop critical thinking skills within any discipline without the need to displace disciplinary content.

We are aware, nonetheless, that it remains a challenge for instructors to adopt this approach in their own teaching as they would need to adapt their curricula and pedagogy to accommodate this method. The tradition in Australian universities has been to rely on external specialist units to develop and deliver extra-curricular modules in academic literacy, writing, and critical thinking (Harper & Vered, 2016). One might expect that the regulatory framework for higher education (AQF and TEQSA) would drive changes to pedagogy that enhance development of critical thinking (CT) and writing across the sector. Although we cannot see widespread evidence of such pedagogical change within the disciplines, there are institutional incentives for offering stand-alone topics in CT or in Writing. When asked by regulators, "Where in your curriculum do you teach CT?," pointing to a subject called CT 101 can demonstrate that the requirement is being met. Another driver for such stand-alone subjects is the internal push and pull of university budgets. If a unit or division can develop a subject (CT 101) and offer it through service teaching across the university, enrollment revenue flows to that sponsoring division; in this way, stand-alone subjects are incentivized.

On the other hand, to ensure that all graduates can exercise critical and independent thinking, as the AQF advises, such topics would need to be mandated. While we can see some merit in taking this path, it is more costly for the university as a whole and it takes up precious curricular space in what is already a tight three-year degree structure. The alternative, to integrate CT development within disciplinary teaching, is the better option. As WAC programs have shown for writing development, teaching CT is most effective when it is explicitly taught within a discipline's discourse. The SI method provides a pedagogically sound means of achieving this without displacing content. Not only is an integrated model more effective, it is relatively inexpensive compared to establishing and running a required stand-alone CT subject. This will, however, require effort and commitment from teaching staff. As has been shown, effective teaching of CT requires overt and explicit demonstration and modelling. To effectively incorporate the SI method, or something similar, into disciplinary teaching may require some adjustment to assessment tasks, teaching pedagogy, and presentation of disciplinary content. It is up to institutions to provide appropriate staff development to ensure that teaching staff have the requisite skills to implement a pedagogy like SI.

Although Australian universities do not have a general education tradition or similar degree-wide or university-wide requirements, in the last few years, they have begun the process of establishing foundation subjects or limited core curriculum. A recent survey of Australian universities found that most BA degrees required at least one compulsory subject, most commonly a communication or writing subject (Gannaway & Sheppard, forthcoming 2018). Of the 35 institutions represented in their survey findings, eight have requirements within the BA for a subject that explicitly identifies CT in the descriptor. The government is also in the process of approving "sub-bachelor" degrees. These are one-year, terminal degrees that provide an entry level bridging course into university study. Both of these emerging trends suggest spaces where stand-alone subjects in CT, reading, writing, and numeracy are likely to appear. While these developments are interesting in the light of our proposal, they are in the embryonic stage and will take some time to become widespread. If we are to satisfy the AQF's current requirements for CT, then adopting a method similar to the one we have suggested here is still the most viable option for the immediate future.

# Appendix 1

## Critical Reading Guide

Answering the following questions about an assigned reading will help make your reading a deliberate and active experience. The responses you produce will also establish a good set of notes from which a written or oral summary of the text can be developed. The questions below provide a framework for understanding scholarly writing. Keeping a notebook (or electronic file/folder) of reading summaries will prove useful in essay writing and study. Although it might not be possible to answer all the questions immediately, it is useful to go back later and answer them when time permits.

1) Author's background – What is the author's profession or discipline? Does the writing suggest that the author is engaged in a debate within the subject area, discipline, or field? Is this work part of a body of writing on the subject by this author or a group of writers/theorists?
2) What is the main point of the article (the big idea)?
3) What is the author's position or thesis? (What is the author trying to convince the reader about?)
4) Does the author make assumptions that are crucial to the argument? Identify these assumptions and jot down how they shape the approach to the subject.
5) Describe how the argument is waged. (Historical, comparative, etc.)
6) What type of evidence does the author use to support the argument? (Historical, statistical, ethnographic, mixed, etc.) Is the evidence reliable?
7) Does the evidence suit the argument?
8) What is your emotional response to the work? (Do not disregard feelings; they can inform critical and intellectual work.) Clarify unusual or unfamiliar vocabulary and terminology.
9) Are you convinced by the argument? Explain why or why not.
10) Any other observations, reflections, or responses that you may have to the work should also be noted.
11) When reading about a media issue or subject, jot down media examples (films, websites, clips, etc.) to illustrate a point by the author or your opinion on the subject. These examples will be handy later, if you write about the subject or issues.

# Appendix 2

## Assessment

A strong focus of assessment in this topic is to develop and improve capacity and skill in the related scholarly practices of reading, critical thinking, and writing with evidence. We approach this goal through a combination of Shared Inquiry of the assigned readings and a series of written responses to questions derived from those readings. The aim of these exercises is to improve your observational and analytical skills by learning to

1) read thoroughly and carefully;
2) identify the important ideas in a given text;
3) understand and express the author's main point and argument in your own words;
4) describe the type of evidence that the author deploys and assess its reliability; and,
5) assess how effective the author has been in relaying the main idea and convincing you (the reader) of that position.

Each of your written responses will be workshopped and submitted to peer review in draft form in tutorial before you revise your draft for submission and final marking. Points toward your topic grade are earned through participation in the collaborative Writing Workshops in addition to assessment of the final submission for each response.

## Assessment Criteria

- demonstrating a close reading of the given text;
- clarity, accuracy, and logic in responding to the question or statement;
- selective quotation from the text in support of your interpretation;
- demonstrating integration of the given text with other topic components;
- coming in close to the word limit (between 400 & 500 words, certainly no more).

# Appendix 3

## Reading Response Marking Rubric

Reading Responses are graded from a total of 10 marks.

Marks are allocated to Content, Organisation, & Presentation.

Proportions and criteria for each aspect are outlined below.

### *Content (5/10)*

- Addressing the question/topic thoroughly and creatively
- Demonstrating understanding of texts (readings/media)
- Provision of examples and evidence
- Appropriate use of research and quotation

### *Organisation & Presentation (5/10)*

- Introduction states the problem (question) or position (thesis) you are pursuing
- Ideas are organised in logical sequence, linked with smooth transitions, and form a coherent whole
- Effective conclusion
- Clarity of writing & expression (paragraphs, sentences, vocabulary, grammar, punctuation, spelling)
- Engaging style (keeps the reader interested)
- Adequate and correct referencing of source material

# Notes

[1] Support for this article was made possible with an Australian Award for University Teaching (2016) to Karen Orr Vered. Ethics approval is covered by Project 7532, Flinders University Social and Behavioural Research Ethics Committee.

[2] General Education Requirements are not the norm for Australian bachelor's degrees; however, required core curricula have been established by a handful of institutions across the country in the last five years.

[3] Due to a University-wide restructure in early 2019, the instructional staff for this subject has changed and we do not expect that the research will be ongoing.

[4] The RR prompt was, "In three paragraphs, explain why Singer (2011) compares WikiLeaks to the concept of a 'panopticon.'"

[5] Student Evaluation of Teaching is an electronically administered survey through which students provide feedback and evaluation of subjects and the associated teaching. It is not compulsory. Responses are either 5-point Likert Scale choices or open-ended text.

[6] Access Plans are provided by the Student Disability Service to inform instructors of accommodations that should be made for students with various issues related to physical or learning challenges.

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