Teaching Argumentation to University Students

Simon Evans and Susan Edwards
English for Liberal Arts
International Christian University

Abstract

Analysis of the Academic Reading and Writing Stream 3 (ARW3) syllabus in the English for Liberal Arts (ELA) programme at International Christian University (ICU) in Tokyo, Japan, reveals three shortcomings in how argumentation is taught. First, the syllabus needs to distinguish between two main types of argumentation: formal and informal. Second, constructing and evaluating arguments should be treated as a set of skills rather than as a specific topic. Third, the syllabus needs to acknowledge the importance of counter-arguments. To address these specific issues, a Critical Questions Framework is proposed. Students should apply the framework to develop critical thinking dispositions towards what they read and what they write.

University students need to think critically, and as an essential part of this process, to construct and evaluate logical arguments. Most readers will be aware that critical thinking is a widely used yet ill-defined concept. In contrast, argumentation and logic are at first glance more clearly defined. However, the difference between formal and informal argumentation and logic is probably less well understood. A crucial distinction between the formal and informal lies in the type of conclusions reached. A formal argument depends heavily on logic to reach an unambiguous conclusion. In contrast, an informal argument weighs a range of viewpoints to reach a nuanced, tentative conclusion (Lipman, 2003). Thus, one essential question in a university context is which type to teach. A second important question is whether to approach argumentation and logic as a subject or as a skill (Andrews, 2015; Felton, 2005). With this in mind, we analysed the Academic Reading and Writing Stream 3 (ARW3) syllabus at International Christian University (ICU), particularly in the first term, with a view to clarifying formal and informal argumentation and logic, and to appraise the extent to which they are taught as a topic or as a set of skills. As a result of the analysis, we argue that the ARW3 syllabus needs to make explicit reference to the pre-eminence of informal argumentation at university and furthermore, to recognise this as a skill needing time and practise to develop over the academic year. Finally, the paper proposes a Critical Questions Framework which could help acculturate students more consistently into informal argumentation and logic.

Critical thinking, argumentation, and counter-arguments

Many have noted a lack of clarity in defining critical thinking (Andrews, 2015; Felton, 2005). Nevertheless, there is agreement about some of its key features, and this paper draws on Lai's (2011) summation of these key features in her literature review of critical thinking. Lai (2011) discusses the three theoretical strands informing the development of critical thinking.

Primarily, these are the fields of philosophy and psychology, with education providing the third. Lai identifies areas of agreement within these three fields related to abilities, dispositions, and background knowledge. In terms of abilities, critical thinkers can analyse arguments, including associated claims or evidence. They can also make inferences and judgements, and make decisions or solve problems. The dispositions include open- and fair-mindedness, a desire to seek reason, inquisitiveness, wanting to be well-informed, flexibility, and the ability to consider viewpoints different from their own. With regard to background knowledge, Lai notes that most thinkers in the field recognise the importance of this in order to engage critically.

It is significant that in Lai's (2011) summation of the areas of agreement outlined above, argumentation is noted first. The key role of argumentation within critical thinking is clear (Andrews, 2015; Nussbaum, 2021). Indeed, "Argumentation implies critical thinking; one cannot function without the other" (Andrews, 2015, p. 60). The question arises, therefore, as to what is meant by 'argumentation'. Nussbaum (2021) states that an argument needs a claim which is supported by one or more reasons. More specifically, Andrews (2015) describes argumentation in university as being the articulation of ideas in a logical manner to establish the writer's position in relation to others in the field.

The importance of logical thinking in relation to critical thinking and argumentation cannot be overstated. According to Lipman (2003), there are broadly two types of logicians; formal and informal, both focussing on developing and evaluating arguments. Formal logicians, whom Lipman refers to as rhetoricians, focus on the logical force and rigour of an argument. For example, such force can be assessed with deductive reasoning in the form of a syllogism. Formal logicians may also check for logical fallacies which, for formal logicians, usually undermine the force of the argument. Nevertheless, as Felton (2005) notes, one important limitation of formal logic is that very few issues have clear conclusions. In contrast, informal logicians focus on the persuasive force of an argument (Lipman, 2003). In other words, informal logic goes beyond inductive and deductive reasoning, and syllogisms, and provides tools for analysis and assessment of 'real-life arguments'. By association. informal arguments lead to tentative conclusions. Such conclusions are more appropriate for the analysis of many issues, since they lack clear conclusions. Importantly, in higher education, Andrews (2015) asserts that teachers and students invariably engage with informal logic. Furthermore, for Andrews, the most successful students at university are those who can argue effectively in this way. These students can synthesise and articulate different ideas, "in logical and quasi-logical sequences, supported (usually and beneficially) by evidence; and also the positioning of the student in relation to existing bodies of knowledge" (Andrews, 2015, p. 53). It is interesting to note here Andrews's use of the term 'quasi-logical'. In other words, the focus is on the overall persuasive force of the ideas rather than their formal logic (Lipman, 2003). Furthermore, students positioning themselves in the discussion has important implications for considering other perspectives related to the treatment of counter-arguments and logical fallacies.

Another implication of the informal logic approach to argumentation concerns the role of counter-arguments which question or refute the writer's argument. Presenting such arguments is recognised as an important skill in argumentative writing, as outlined by Nussbaum and Schraw (2007). Firstly, considering counter-arguments forces the writer to establish connections between arguments, which in turn, requires deeper cognitive processing of the ideas. Secondly, presenting such arguments indicates that the writer is more balanced and less biased. This point is connected to the idea that students are growing in critical sophistication, and they should be able to demonstrate critical balance (Felton et al, 2015). Thirdly, counter-arguments are connected to the dialogic nature of critical thinking. In other words, the argument presented is part of an ongoing discussion. Although Nussbaum and Schraw (2007) do not label

this as 'informal argumentation', it is reasonable to assume dialogic thinking and informal argumentation are very closely connected: the balanced nature of the conclusions reached through this style of argumentation necessarily entails the discussion of different viewpoints. Significantly, however, novice writers frequently avoid including counter-arguments (Christen-Branum et al, 2018). This may be because they tend to believe that counter-arguments undermine their position (Nussbaum & Kardash, 2005).

An informal logic approach to argumentation also has implications for the function of logical fallacies. Typically, students learn that arguments containing logical fallacies are 'bad', or at least, very weak (Felton, 2005). However, such an understanding only encourages students to dismiss or strongly doubt an argument, forcing them to adopt a formal logic approach to argumentation. As noted above, this is inappropriate given that informal argumentation is usual at university. Therefore, students should be using the fallacies to test the argument (Felton). In other words, logical fallacies should be used as part of an approach towards informal argumentation. Felton (2005) gives an example of dentists advocating fluoride toothpastes. Here, the appeal to authority appears acceptable, as the reader reasonably assumes that dentists know about preventing tooth decay. Thus, the next step is to consider whether the reasons provided by the dentists to approve fluoride toothpaste are persuasive. This ties into informal logic in the sense that the application of logical fallacies should lead to tentative conclusions. That is, having identified a possible fallacy, and assuming that the claim is not clearly flawed, the reader uses this as a starting point to evaluate the claim. It is not an endpoint to dismiss the whole argument.

Finally, one of the most important questions regarding the teaching and learning of critical thinking, informal argumentation and informal logic is whether it is perceived as a subject to be studied and learned, or as a skill to be developed gradually. Cahill and Bloch-Schulman (2012) note the large number of critical thinking textbooks, indicating that it is seen as a topic. However, a number of writers have discussed the skill-or-topic issue and conclude that critical thinking should be seen as a skill (e.g., Cahill & Bloch-Schulman, 2012; Lu & Xie, 2019; Mulnix, 2012). Firstly, students acquire these skills over time, that is to say over an academic year rather than in an intensive period of, for example, two or three weeks (Cahill & Bloch-Schulman, 2012). Secondly, learning should be scaffolded "to usher students from the level of assisted performance (...) to independent performance in critical thinking" (Felton, 2005, p. 12). Thirdly, they should progress from less to more cognitively challenging tasks (Cahill & Bloch-Schulman, 2012) and from understanding argumentative texts to creating their own. Felton (2005) is unequivocal: "If we are to treat critical thinking as the complex skill set that it is, it must be embedded in the curriculum and connected to a comprehensive set of goals and outcomes" (p. 6).

Appraisal of Teaching Argumentation in an Academic Reading and Writing Course

In the ELA programme at ICU, argumentation is taught in the first-year ARW course. This paper examines the teaching of argumentation to students in ARW3, the largest of the four streams. One characteristic of Stream 3 students that is particularly pertinent for the current analysis is that "they have little or no extended overseas experience and are therefore likely to have had little exposure to pedagogy that emphasises critical thinking" (Edwards and Evans 2020, p. 24). Hence, it can reasonably be assumed that they have at most limited experience of studying argumentation.

Recognised as crucial for undergraduate academic work, argumentation is introduced in the Spring Term. However, in the light of the earlier discussion, the current approach to teaching argumentation in ARW3 appears rather problematic. The problems can be traced back to two main causes. One is that students focus primarily on formal logic when they study the critical thinking and argumentation theme. The second is that argumentation features on the syllabus as a content topic, rather than as a skill.

Firstly, the current syllabus prioritises formal argumentation over informal, although developing skills in the latter is crucial for students' academic success. The Spring Term comprises three topics presented as separate units of work: education, critical thinking and argumentation, and literature. Under the argumentation topic, students focus on some or all of the following aspects of argumentation: the basic elements of an argument, including claims, evidence, assumptions and counterarguments; logical fallacies; inductive and deductive reasoning; syllogisms; ethos, pathos and logos. Clearly, the main focus is formal logic and thus formal argumentation. This may be of little practical use to university students who are mostly required to use informal logic and informal argumentation in their academic work.

In reality, however, students have already learnt about some aspects of argumentation before they study the critical thinking and argumentation topic. For the education topic, students read extracts from Meiland's College Thinking (1981). Although the author does not use the term, he dedicates much of his text to describing and justifying informal argumentation. He emphasises the need to ask critical questions of the material presented in college classes and to suspend judgement until one has good reasons to justify beliefs (Meiland uses the word belief as synonymous with argument). Therefore, students are unlikely to realise that informal argumentation is what is being described. Thus, students learn about the core elements of informal arguments before moving on to the critical thinking and argumentation topic. The connection between Meiland's text and argumentation is not made explicit in the syllabus. Nor is the connection between the ideas in his text and those studied under argumentation. It is quite possible that students believe argumentation only comprises formal argumentation. Whilst this does not mean that Meiland's ideas about informal arguments go unheeded, the primacy of informal argumentation over formal argumentation needs to be emphasised.

Secondly, because argumentation itself is labelled as a topic instead of as an integrated set of skills, it is not explicitly revisited in the syllabus. This intensive approach to teaching argumentation presupposes that once students have studied it, they will transfer their knowledge to their subsequent academic work. However, such an assumption runs counter to our understanding of how students acquire skills, as previously discussed. To maximise students' argumentation skills, they need to become a constant and explicit focus of our work in ARW.

Further pedagogical problems arise from treating argumentation as a topic. One is that there is no particular content material stipulated for this portion of the syllabus. Teachers select their own materials which may range from decontextualised sentences to advertisements and articles about controversial subjects such as the death penalty. Although it is not problematic that teachers select their own content, it is reasonable to assume that students may come to believe that argumentation skills are only to be exercised with particular types of controversial or propagandistic texts. This could result in it being more difficult for students to transfer the skills to different contexts, such as other ARW themes or university courses that concentrate on less controversial subjects. Students may also fail to understand that argumentation lies at the very heart of academic work. Our ultimate goal in ARW, as stated above, is for students to apply their knowledge of argumentation to all the reading and writing they do. Separating argumentation from specified content as we currently do makes this less likely.

Just as there is no common material for the argumentation theme, neither is there a specific minimum set of features of formal argumentation to be covered nor a sense of staging. Of course, there is shared understanding and common agreement about broad areas such as fallacies and syllogisms. And some of the learning outcomes for the term do indeed focus on aspects of formal logic. However, the reality is that teachers pick any number of fallacies from a lengthy list. They may introduce them before or after they have presented inductive and deductive reasoning. They may teach syllogisms. They might teach ethos, pathos and logos. This means that, in the one part of the entire syllabus explicitly dedicated to argumentation, what students learn is dictated by each instructor and therefore varies from group to group. In a programme with shared educational goals, and when these skills are so crucial to academic success, this is not an ideal situation. Moreover, and perhaps more fundamentally, it is questionable whether students really benefit from exposure to such a wide range of formal argumentation skills.

In sum, the factors outlined above indicate that students could become more proficient at argumentation if we revise what we teach, and how and when we teach it. We need to move away from formal argumentation to focus primarily on fostering the abilities and dispositions (Lai, 2011) required for informal argumentation, including counterarguments and a more nuanced approach to teaching logical fallacies. We need to carefully select a core set of formal elements to complement our teaching of informal argumentation. Furthermore, argumentation should be taught as a set of skills that are integrated into the ARW syllabus throughout the year so that students can become competent critics of both the texts that they read and that they produce.

Integrating informal argumentation into the syllabus

In terms of what to teach, the following are suggested for the first term, the Spring Term. Students need to know that the basic elements (and meta-language) of an argument are the claims, reasons and evidence. We also believe that a limited number of logical fallacies can be taught, such as overgeneralisations, appeals to authority and false assumptions. These are selected as examples of logical fallacies frequently found in students' writing. In particular, overgeneralisations are very common in students' work in the first term. Together with recognising overgeneralisations, teaching the concept and language of hedging is important. Moreover, hedging aligns with the tentative nature of argumentation. Furthermore, as stated, these fallacies need revisiting in subsequent terms, when others can be introduced. As noted earlier, the presence of a logical fallacy should not be seen as an end-point negating the validity of the logic, but rather as a starting point from which further questions arise. An important addition to the curriculum and syllabus is explicit attention to the counter-argument in student writing. When reading texts, students should be asked to consider alternative arguments to those presented. When writing formal assignments, students should be required to acknowledge some of the counter-arguments to their thesis.

Several writers have suggested that asking questions of texts and ideas is an effective way to develop students' argumentation capabilities and dispositions (Felton 2005; Faccione 2015; Nussbaum, 2021). Building on this, we would like to suggest the following set of critical questions as a framework to incorporate into the ARW3 syllabus. They can be used for analysing the texts that students read and write (see Table 1). In line with our adherence to the skills approach, these questions should be introduced gradually, and scaffolded over a period of time.

Table 1
Proposed critical questions framework

Spring term, text 1: Meiland, 1981	Spring term, text 2: Deresiewicz, 2014
1 Who is the author? → What is their background? → Is the author credible? 2 What is the main argument? 3 What claims does the author make? 4 What reasons are given to support the claims? 5 Is there any evidence? → Is the evidence relevant? Is the evidence reliable? Does the evidence appeal to authority? 6 Are there any examples? → Are they relevant? → Are they persuasive in supporting the claim? 7 What assumptions does the writer make? → Are these assumptions reasonable? 8 Are there any overgeneralisations? Are they acceptable? If not acceptable, how much does the overgeneralisation(s) reflect negatively on the claims? 9 What is the tone of the writing? Is it neutral? Is it emotional? 10 What other perspectives are there on this topic? 11 Has the writer overlooked any important issues? 12 To what extent are you persuaded by the argument?	1 Who is the author? → What is their background? → Is the author credible? 2 What is the main argument? 3 What claims does the author make? 4 What reasons are given to support the claims? 5 Is there any evidence? → Is the evidence relevant? Is the evidence reliable? Does the evidence appeal to authority? 6 Are there any examples? → Are they relevant? Are they persuasive in supporting the claim? 7 What assumptions does the writer make? → Are these assumptions reasonable? 8 Are there any overgeneralisations? Are they acceptable? If not acceptable, how much does the overgeneralisation(s) reflect negatively on the claims? 9 What is the tone of the writing? Is it neutral? Is it emotional? **10a What might Meiland say about the ideas in text 2?** **10b What might the writer of text 2 say about Meiland's ideas?** 11 Has the writer overlooked any important issues? **12a To what extent are you persuaded by the argument?** **12b Has text 2 changed your opinion about Meiland's argument?**

Questions 1-4 help establish the author's background and the main ideas in the text. Questions 5-9 analyse the quality of the ideas, and 10-12 begin asking the student for their response to the text. Question 1 is extremely important because knowing the author's academic background and credibility will influence responses to questions 5-9. For example, Meiland (1981) writes in a style that generally would not be accepted in a student essay, including the extensive use of personal pronouns, employing anecdotal evidence, and presenting a number of overgeneralisations. Meiland is able to do this because of his academic credibility, his many years of experience teaching in a university, and his book having been peer edited. Drawing students' attention to these features can help them to develop a more nuanced approach to critiquing texts in line with informal argumentation.

Questions 10a and 10b are also significant as they help students to appreciate that there are communities of scholars communicating their views on a topic through the texts they

produce. These scholars may not know or may not have read each other's work. However, by reading different perspectives on a topic, students can begin to realise that there is an ongoing debate, with different perspectives, and sometimes opposing viewpoints. In other words, in spite of his credentials, Meiland's (1981) ideas should not simply be accepted. Instead, they need critical analysis and to be considered alongside the ideas of others. Ultimately, students should see themselves as part of this community, as academics in training, and they need to think about where they position themselves in relation to the topics and issues they encounter.

Finally, the wording of Question 12 is important as it sensitises students to the tentative nature of informal argumentation. Rather than posing a response as 'Do you agree or disagree?', the 'to what extent' stem acculturates students into the academic norm of recognising that very few topics can be reduced to 'yes or no' conclusions. Responses to a question can usually sit more appropriately along a cline.

In terms of what to remove from the syllabus, we believe that students do not need to know, recognise and name in a formal sense the concepts of ethos, pathos and logos. ARW teachers simply need to make it clear that arguments should be logical (logos), that writers including students can establish their credibility (ethos) by providing reasons and evidence using sources, and should avoid emotional appeals (pathos). Similarly, knowing the differences between inductive (informal argumentation) and deductive reasoning and syllogisms (formal argumentation) is not useful for students. What they do need to know is that in university, most of the texts they read, and most of the papers they write will reach tentative conclusions.

Conclusion

As discussed, it is crucial to revise the teaching of argumentation in ARW3 to enable students to better meet the expectations of academic work. The main changes that must be reflected in the syllabus are a move away from formal argumentation taught as a topic to informal argumentation, including counter-arguments, which should be taught as a set of skills. This move entails both a reduction in the teaching of formal logic and an expansion of informal argumentation into the reading and writing assignments covered throughout the academic year.

It must be recognised, however, that the ELA offers general foundational courses which set students on their academic paths towards their majors. Like all academic work, argumentation varies from discipline to discipline (Andrews, 2015). The teaching of the discipline-specific nature of argumentation is thus outside the remit of ARW and is perhaps more capably addressed by subject specialists in the College of Liberal Arts. By integrating basic informal argumentation into the entire ARW curriculum, it is nevertheless hoped that the students will depart the ELA with a solid set of skills that they can transfer to other contexts.

More work remains to be done. The learning outcomes need to be revised to reflect the changes in the syllabus. The argumentation skills covered should be referred to in assignment briefs and grading rubrics to ensure further explicit focus on these important skills. The Critical Questions Framework requires development for the Autumn and Winter syllabi.

One final point for consideration is the need for faculty development. This paper has revealed the complexities in definitions of and approaches to argumentation. In a programme such as the ELA it is vital that teachers share and confirm their understanding of key concepts so that there is consistency of teaching across the programme. Moreover, changes in syllabi must be justified by a clear rationale. Therefore, explaining the proposed amendments to the ARW3 teachers is an essential first step in implementing the revisions proposed in the paper.

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