In 2007, when the authors of this chapter were being selected to get Ireland’s first writing centre up and running, concerns about postgraduate writing for publication coincided with national and institutional drives to up-skill the population for participation in a knowledge economy. A feature of our context is that our institution began its life as a National Institute of Higher Education and maintains strong ties with local industry to this day. Student retention and transferable skills development were Higher Education Authority concerns that largely determined some goals for our target groups. Those groups included mature students, international students and students coming in through the Access programme as a consequence of low, or the absence of, Leaving Certification exam scores (http://www.examinations.ie/). The national discourse about writing at third level in Ireland up to that time was largely limited to talk about writing development for professional academic advancement.

Surveys conducted by Íde in 2005 and 2006 had given us some insight into teacher and student attitudes towards writing and the teaching and learning of writing, into the ad-hoc writing development initiatives that were already in play and into student and staff preferences for ways forward (see Lawrence Cleary et al., 2009). Both of the authors of this chapter come from backgrounds in applied linguistics with a focus on academic writing—Lawrence also having the additional, very positive experience of Janice Neuleib’s undergraduate writing programme at Illinois State University. Given our backgrounds, we both had some idea of how to satisfy student and staff preferences, but as researchers charged with forming a systematic approach to writing development based on best practice for students and staff across four faculties, we had to do our homework.

Roz Ivanič and Mary Lea (2006) are keen to remind writing developers that choosing one pedagogical theory of writing over another “is always a political act”
(p. 14), even if it is rarely recognized as such. The reminder from Ivanič and Lea is reminiscent of an even earlier caution by James Berlin (1982, p. 765) that choosing one pedagogical theory of writing over another is more than just quibbling about which feature of the writing process to favour. “To teach writing,” wrote Berlin (1982, p. 766), “is to argue for a version of reality, and the best way of knowing and communicating it.” The writer-centred approach adopted by our writing centre is in many ways typical of writing centres in the United States. We do not intervene in students’ papers, but into their processes (Stephen North, 1984), talking to them about strategies for reaching their writing goals. The authority over their paper is theirs. Our approach is largely eclectic, drawing on many traditions including ESP, EAP and corpus and systemic functional linguistics, each uniquely informing and thereby expanding our understanding of student writing and the writing of professionals in the disciplines. Crucial to our politics, however, we draw from the literature on Academic Literacies and one particular form of the US Rhetoric and Composition model, New Rhetoric.

This chapter explores the influence of Academic Literacies and New Rhetoric on the pedagogical approach to the development of writing in one higher education institution in Ireland, namely the University of Limerick. A single lesson in one writing Centre initiative will serve to illustrate how these two traditions can come together to foster the development of a writing tradition that provides writers with the tools and materials needed to evaluate any writing situation, to enter into the discourses relevant to that situation as critical agents in the creation of knowledge—rather than passive recipients of trickle-down ideological and epistemic values and to consider the implications of their lexical choices and structural strategies with respect to their credibility and the realities for which they advocate. Though focusing on a single tutorial, the demonstration reveals much about the politics of our eclectic approach.

**POLITICS AND PEDAGOGICAL CHOICES**

We suspect that most writing developers would struggle to relate Rhetoric and Composition studies with Academic Literacies studies, especially if their experience of Rhetoric and Composition is the ritualized curricula of the dominant Current-Traditional model that most people think of when they think of first-year composition. Sharon Crowley (1985) refers to such a model as the teaching of “a bizarre parody of serious discourse and the process by which it is produced” (p. 159). Correspondingly, John Heyda (2006) links the Current-Traditional model to earlier models of “vocationally-oriented instruction” that quickly proved capable of descending into “a writing-by-the-numbers charade” (p. 155). However, Rhetoric and Composition is not a theoretical monolith, but harbours many competing traditions. The value of integrating aspects of rhetorical theory, in particular

The earlier caution from Ivanič and Lea (2006, p. 14), about the politics embedded in writing pedagogy, results from their recognition that, to paraphrase Orwell’s pigs: “All writing is equal, but some writing is more equal than other writing.” Language is “the prime carrier of ideology” (Romy Clark a& Roz Ivanič, 1997, p. 29) and “[w]riting is of strategic importance to the outcome of those ideological struggles” (p. 21). There is resonance between Clark and Ivanič (1997), Brian Street (2003) and Paulo Freire (2000) with respect to their ideas about the socially situated nature of knowledge and the role of hegemonic forces in maintaining value for particular kinds of knowledge and ways of knowing, not least of which is the dominant educational practice which subordinates students (learners) to teachers (knowers). This recognition of the socially situated nature of language and struggles over how language and social practices mean in any given writing or teaching situation is reflected in the work of New Rhetoric scholars as well:

Rhetorical theories differ from each other in the way writer, reality, audience, and language are conceived—both as separate units and in the way the units relate to each other. In the case of distinct pedagogical approaches, these four elements are likewise defined and related so as to describe a different composing process, which is to say a different world with different rules about what can be known, how it can be known, and how it can be communicated. (Berlin, 1982, pp. 765-766)

Berlin describes reality as one of the elements of the composing process, yet these components taken together “identify an epistemic field—the basic conditions that determine what knowledge will be knowable, and how the knowable will be communicated” (Berlin, 1982, p. 767). The reality we teach is determined by how we treat each component in the writing process. The New Rhetorician values a process of truth-making or meaning-making that makes room for each student’s experience of reality and the perpetual transformation of those truths as a result of the dialectical interplay of writer, reality, audience and language. Truth in this view of the process is “always truth for someone standing in relation to others in a linguistically circumscribed situation” (Berlin, 1982, p. 744).

DO YOU WRITE LIKE AN ENGINEER?

Our demonstration of how the politics of the two traditions combine will be limited to a discussion of a single lesson in one particular provision, ME4001,
Introduction to Engineering, a compulsory module for first-year students in the Engineering Choice programme. The writing component of this module might best be described as a mini-module-within-a-module, comprised of four hours of lectures, entitled Report-writing for Engineers, and four Do you write like an Engineer? tutorial hours. The majority of students on this module are from traditional backgrounds, coming in directly from second-level education having scored well on Leaving Certification exams (see also Fischer Chapter 5, Paxton and Frith Chapter 11 this volume).

Students on this module write three papers for assessment that together constitute forty-five per cent of the student’s total grade. The submissions are assessed by a postgraduate TA and, in the third paper, by two peers. Finally, for each submission, colour-coded feedback for self-assessment is provided by the writing tutor with the help of two postgraduate Engineering students.

Figure 26.1: Comparison for clause-type preferences.

After asking “Why do reports from engineers and essays from students in the Humanities look different from one another?” in the first tutorial, the texts above are projected onto the screen at the front of the classroom. The tutor inquires into the differences in proportional representation of colour. Naturally, students point out the preference for red structures in the text to the left and for green structures in the text on the right. The text on the left is identified as being from an engineer’s feasibility report, the one on the right as belonging to a teaching and learning spe-
cialist writing for an academic journal.

Groups of students are instructed to work together to determine the function of the red and the green with respect to whatever precedes or follows it, be it blue or green or another red strand. The tutor asks, “What is the passage in red or green doing?”

In the samples above, for instance, students are asked about the relationship between the green and the blue in the first sentence. Eventually, we work out that the green is defining students, answering the question: Which students? Interestingly, in the second sample sentence above, students work out that “used to read a DVD,” in red, is doing the same thing, defining the laser. So the question becomes, if they do the same thing, why does this engineer choose red structures over green structures?

This is an opportunity for the writing tutor to model the kinds of inquiry with which good writers typically engage. Perhaps, if we could understand how the red and the green structures are different from one another, we could say why the engineer prefers the red structure. When asked about their thoughts on the differences between the two structures, students usually report that the red structure sounds more factual, more to the point. The tutor has learned that this understanding of the difference is intuited and has merit. He then shares two differences between the structures: firstly, that the green structure contains a conjunction, a word that expresses an explicit relationship—in the case above, a relative pronoun—and a verb marked for tense—time, person, number, and mood; in the second sample sentence, two non-finite verbs (a participle and an infinitive) are left to imply the relationship between the information in the red structure and that in the blue structure which precedes it.

If the green structure expresses the relationship more explicitly through the use of a conjunction, why does this engineer prefer the less explicit relationship expressed by the red structure, as in the second sample sentence, where the relationship needs to be inferred? After all, we usually think of engineers as embracing precision. Asking students to reformulate sentences, changing red structures into green structures and green structures into red structures, students come to see red structures require fewer words. Though less precise than green subordinate clauses, the red non-finite verb phrases and clauses allow for more information to be stacked up in a more concise way. Engineers, after all, love concision too. Students learn that there is a bit of a trade off when choosing this red structure: some precision in the expression of the relationship is sacrificed in the interest of concision. But why does the red structure sound more factual than the green structure?
At this point, students are informed that at the turn of the twentieth century, the writing of scientists and engineers looked more like the sample Humanities text (William Vande Kopple, 2003, pp. 370-371)—hardly any red structures, but lots of blue and green. What changed? Why the gradual increase in preference for red structures over green? Students may offer some theories, but it is not a question they are expected to be able to answer—the question is designed to intrigue them. Students are asked to speculate on the role of time, person, number, and mood absent from the structure currently preferred. Students often portray the red structures as communicating more factual information. An examination of the content, though, does not reveal more facts. However, that the structure sounds more factual, more certain, is clear. Despite not being marked for tense, the structure seems to imply modality or degrees of certainty.

If this structure is preferred by engineers, what allows today’s engineers to express a greater degree of certainty than yesterday’s engineers? In the tutorial, this question is usually followed by a long silence. Students must think about what has happened over the past one-hundred years. With time, someone volunteers an explanation. A typical response might be that today’s engineers and scientists know more. “We know more facts” is how they often express it. Sooner or later, students volunteer that today’s engineers have more knowledge to work with and that they have better, more precise tools. These conjectures agree with the conclusions in the literature: with more precise and reliable measurements, engineers today feel more confident about their results and more readily generalize their conclusions (Vande Kopple, 2003, p. 371). The tensed verb ties the empirical observation to a particular time, implying that the results cannot be generalized beyond its immediate context; a loss of tense has the rhetorical effect of communicating that the occurrence is typical.

These revelations about what the various clause structures communicate leads to a class discussion of cases where it might be inappropriate for an engineer to communicate such typification and of the effect that misrepresentations of degrees of certainty might have on the readers’ sense of the writer’s credibility. This is a rhetorical issue, but it is an issue that is basic to identity as well. If a writer wishes for a text to communicate something about herself, then the writer needs to consider not only how her language choices signify at the level of denotation, but what is implied and what acts are performed, if any, by those choices. The tutor argues that over- or understating the value of the findings in research undermines the reader’s sense of the writer/researcher’s credibility. Using a grammatical structure that incorrectly implies that a case is typical is to engage in faulty reasoning—not a method of justifying conclusions that we typically associate with scientists and engineers. If the degrees of certainty expressed are not reliable, it is only natural that readers would ask: What else is unreliable? What other evidence is not valid? Can I trust this writer? If I were to rely on this engineer’s conclusions, how would I be viewed by the engineering community?
CONCLUSION

This mini-module on the writing for engineers does not challenge the epistemology of science. Instead, we indirectly pose the question to students: Are positivist values alone sufficient for dealing with each and every engineering writing situation? Is it enough to just be factual? Is that the only kind of knowledge that counts? We run across sentences like the following in the relevant literature:

It would appear to be impossible to obtain $J_{\text{c}}$ for tearing and cleavage for the same material—either it will fail by cleavage or tearing at $Q = 0$ giving either $J_{\text{c}}$ or $J_{\text{c}}$; the other must be obtained from a theoretical model or by extrapolating experimental data. (O’Dowd, 1995, p. 463; italics ours)

And the great thing about having electronic texts projected onto a screen in class is that we can search for all sorts of examples of the language of uncertainty and condition, among other features. By asking students to write about issues relevant to professional development, looking at texts on engineering ethics, policy and education to see how engineers write about those kinds of issues, by delving deep into the implications of linguistic features common in engineering writing, we are asking students to reconsider the scope of what it means to be an engineer and to re-evaluate what counts as evidence in each rhetorical situation.

However, it is a little more difficult to engage young engineering students in discussions of how engineering practice is a social practice and about how they are positioned by the requirements of the module, the course, and the discipline/field, particularly with respect to how they are positioned by the process by which they satisfy (or fail to satisfy) those requirements. Though we do not explicitly inquire into how the values of science cohere with the cultural values students bring with them into this new third-level educational context, sometimes the inconsistencies come from the least expected places, and it is the job of the tutor to inquire into the social construction of the epistemological principles that constitute individual realities.

It is interesting that student responses to feedback on their writing—for example, requests for literary sources for particular claims or supporting information or objections to language that calls attention to the author’s cognitive or affective processes or agency—are amongst the best opportunities for exposing some of the values that they do bring with them into university. Objections to citing and referencing requirements and to prohibitions against allusions to one’s own agency are opportunities for a tutor to lead an examination of the confrontation between the language and methods whereby students expressed their authority and agency in the past and how it is expressed in the present writing context. Such objections are opportunities to examine the role of context in the way that knowledge is best posi-
tioned for rhetorical (argumentative) reasons and how audience and language function in this new context to affirm or negate the identity a student wishes to portray. Objectionable practices can become opportunities if viewed as rhetorical strategies for the creation of both knowledge and identity. A sanction invalidates; a strategy authorizes. Just as there is guilt by association, there is credibility by association. By avoiding language that suggests subjectivity, we conjure that sense of indifference that we commonly associate with the unbiased scientist, an identity to which the writer perhaps aspires. These are opportunities to examine the language writers use to establish identity, voice, tone, authority, etc. It is not the goal of our module on writing for engineers, however, to teach linguistic structures. The module, instead, demonstrates to students that they must assess how language is working in a given context in order to make the best determination of whether it is creating the reality for which they wish to advocate.

Just as the Academic Literacies approach has capacity also to value the roles played by the study skills and academic socialization models for writing development (Lea & Street, 1998), writing centres are “firmly grounded in an epistemological mix” (Eric Hobson, 2001, pp. 108-109). Both Academic Literacies and New Rhetoric approaches view each writing situation as a situated social practice “always embedded in socially constructed epistemological principles” (Street, 2003, p. 77) that determine “what can be known, how it can be known, and how it can be communicated” (Berlin, 1982, p. 766). Drawing on these insights, it is our writing centre’s goal to teach a writing process that both foregrounds the writer’s relationship with language, reality and audience in the meaning-making process and makes possible the conditions whereby she may consciously and critically transform the epistemic field into which she writes. The writer we hope is thus both informed and empowered.

REFERENCES


