

Looking at Knowledge and Knowers Through Legitimation Code Theory (LCT): An Interview with Professor Karl Maton

Thomas Amundrud

Nara University of Education

Ayumi Inako

Kobe City University of Foreign Studies;
Konan University

Dominic Edsall

Ritsumeikan University

“Knowledge is everything and nothing,” writes Karl Maton as the opening remark to his book, *Knowledge and Knowers* (2014, p. 1). By this, Professor Maton means that knowledge is both widely described as crucial to modern societies as part of the global knowledge economy, yet the forms taken by knowledge are rarely analysed. Karl offers an explanatory framework or conceptual toolkit called “Legitimation Code Theory” (LCT) that reveals the different forms taken by knowledge practices. Rather than engage in unending debate over what is or is not *knowledge*, LCT assumes that such definitions of *knowledge* are socially and historically contextual and instead offers concepts that reveal the different forms taken by knowledge practices, no matter how they are defined (Maton & Moore, 2010). LCT concepts focus on the attributes of the knowledge being expressed through writing, speech, image, or gestures. It conceptualises organising principles for understanding different dimensions, or aspects, of knowledge practices. Each dimension has its own codes, whereby these organising principles are conceptualised in terms of continuums of relative strength or weakness. For example, the concept of semantic gravity, which looks at the degree of con-



text-dependence of meaning, is described as being relatively stronger or weaker on that continuum.

The widely applicable nature of LCT means it is used to analyse all kinds of subject areas, kinds of education, and forms of data. Researchers using LCT methodology develop ‘translation devices’ (Maton, 2016b, p. 243; Maton & Chen, 2016) to translate between the abstract concepts of LCT and specific empirical data. This enables studies to be explicit and transparent in how they are using the theory. Each researcher can thus adjust the concepts to fit what they are interested in researching. LCT is a very user-friendly theory in this sense and has been applied recently to language teaching related fields, such as Content and Language Integrated Learning (CLIL), English as a Medium of Instruction (EMI), and English for Academic Purposes (EAP) (Brooke, 2019; Ingold & O’Sullivan, 2017; Jackson, 2017; Kirk, 2017). Teachers interested in LCT are gathering to form local LCT communities in different parts of the world, including Japan (LCT Japan, n.d.). To that end, we are very excited to introduce this ground-breaking theory to TLT readers through interviewing Professor Maton.

Thomas Amundrud, Ayumi Inako, and Dominic Edsall: *Legitimation Code Theory or LCT is growing rapidly in education. Can you tell us briefly: What is LCT and why is it growing?*



Karl Maton: One reason is that LCT is not confined to one part of education. LCT is an approach to understanding and changing practice of all kinds. It is indeed growing rapidly in education, including subjects as diverse as teacher education (Walton & Rusznyak, 2019), engineering (Dorfling, Wolff, & Akdogan, 2019), and language education. Often, research into education is limited to one level, such as schools, or one subject, such as language. This is so debilitating—you can’t develop useful ideas for education if you are only looking at one small piece of the puzzle. In contrast, the LCT community of scholars and educators includes all levels, from early-years schooling to universities, and all subjects, from physics to ballet. So, we can build knowledge about education in all its forms.

Another reason LCT is growing is that it helps us to see knowledge itself. This is in contrast to most approaches to education, which focus on how students learn and ignore the role played by *what* they are learning. This reflects the profound influence of psychology on education research, which tends to foreground generic processes of learning and backgrounds both teaching and the knowledge being taught. This not only diminishes the role of teachers, but it also ignores the way different kinds of knowledge may affect classroom practice. We also see this *knowledge-blindness* in broad pedagogic approaches like constructivism. Such approaches are often universal: they announce how teaching should occur without taking into account what is being taught, having no properties of their own, as if they have no inner structure that might influence the ways in which ideas from the subject should be taught.

So, most approaches create generic models of learning that don't take account of differences among knowledge practices. LCT examines these differences—it tries to show the forms taken by knowledge and how different kinds of knowledge may need different kinds of teaching. It doesn't say, 'science is always like this' or 'the language classroom is always like this.' LCT takes for granted that the nature of knowledge practices can vary across contexts and change over time. It provides concepts that allow us to look at knowledge practices. For instance, the concepts of semantic gravity and semantic density explore particular properties so we can see how context-dependent the knowledge being expressed might be or how complex that knowledge is at any moment.

There are other reasons why LCT is growing. It's a practical theory that's theoretically sophisticated but practically useful.

You said LCT is a practical theory. What can it do for teaching and learning?

LCT offers ideas for teaching strategies that are based on careful and sophisticated research into classroom practices, assessments, student writing, and so on. Unlike many other approaches, LCT uses real-world data, not artificial data generated in a laboratory that has little relation to the complexity of real classrooms. LCT also doesn't offer universal solutions. By bringing knowledge back into the analysis, LCT shows what kinds of practices work best for teaching different forms of knowledge to different kinds of students. Above all, LCT gives teachers tools for developing their own teaching—it's the teachers who know their classrooms best. LCT aims to empower teachers.

In classrooms, LCT has been used in two main ways. First, LCT offers insights into how teachers can best build knowledge in their curriculum and teaching practices, such as through using *semantic waves* (see below) and *autonomy tours*. Second, LCT can be taught to students as a way for them to see the basis of achievement in their subjects. Basically, LCT is all about knowledge-building and how to succeed. LCT helps reveal what we call the *rules of the game*. These are bases of achievement underlying social fields of practice, which are often unwritten and unspoken and that, when accessible only to actors from specific backgrounds, generate social inequality. Making these bases of achievement clear helps both students and lecturers.

Many teachers in Japan feel overwhelmed by the volume of information they need to learn to understand educational research. How they can engage with LCT?

I fully sympathise. Teachers everywhere are very busy. A lot of education research is published and not all of it is good. The great thing about LCT is that you can engage with the theory as much or as little as you like. You can learn some simple ideas and try them out in your teaching—you don't have to learn the whole theory. But, if you do become interested, then you can learn more about the theory—if you want to. It is a sophisticated framework that allows detailed and subtle analysis, but you don't have to use or learn it all.

Can you give us an example?

One LCT idea that emerged from extensive analysis of classroom practice is the notion of *semantic waves*, which is crucial for building knowledge over time. A semantic wave is when you move back and forth between concrete, simple forms of knowledge, such as everyday experiences, or empirical examples and abstract, complex forms of knowledge, such as academic ideas and theories. Teaching that moves back and forth between these forms of knowledge, weaving them together, supports knowledge-building through this *semantic waving*.

This sounds obvious, as many good ideas do. However, LCT studies show that teaching often does not do this (see Maton, 2020). For instance, some teaching exhibits what we call a *semantic flatline*, in which teachers remain at either a high level of abstraction, so that students can't see the connection between that knowledge and everyday experience, or they stay only with concrete and simple knowledge, so that students never see how to apply knowledge beyond the immediate context. Another problem found is that teachers often move in one

direction only in what we call a *down escalator*. They often take academic ideas and unpack those ideas into simpler terms with everyday examples. This is to move in one direction only; they don't repack those simpler, concrete ideas back into more complex and abstract academic understandings. If you do that repeatedly, it can be a problem because it doesn't model the kinds of knowledge that students need to display in their assessments.

Studies of the marking of student assessments show that what's rewarded are semantic waves. Students who achieve higher marks are able to move back and forth between complex and simple ideas—between abstract and concrete ideas (e.g., Brooke, 2019). So, teaching that involves semantic waves helps model what students need to do in assessments to be successful.

Obviously, this is a brief outline of these ideas—there is a lot more I could discuss. But you don't need to learn all those ideas to be able to grasp the general idea of semantic waves and try them in your own teaching.

Educational research in Japan is usually either heavily reliant on positivist approaches to data or takes a much more qualitative approach. What research methods are most appropriate for LCT research? What counts as “evidence” in using LCT in research?

There are many false choices that afflict education research. You are expected to choose either quantitative or qualitative methods, either theory or practice, either generalisability or depth, either a scientific approach that explains behaviour or a humanistic approach that explains meaning, and many more. There are no good ontological or epistemological reasons for these “either/or” choices. LCT refuses these false dichotomies.

Rather than “either/or,” LCT says “both/and.” We can use LCT with both quantitative and qualitative methods. We can use LCT to both develop theory and to shape practice. For example, while most research using LCT has been qualitative, we have developed survey instruments that translate LCT into quantitative data collection. We are also translating LCT coding into algorithms to enable, through machine learning, automated analyses of large amounts of data.

To paraphrase one of the sociologists from whom I learned, Pierre Bourdieu, education research is too important and too difficult to deprive ourselves of every resource we can get our hands on. We need to be able to use any method and to be able to collect any form of data. I have little respect for those who believe only one methodology or one method or

one form of data is important. That is like deliberately blinding yourself in one eye. We need to see as much as we can.

That is why LCT is extremely versatile. It can also be used with other approaches. For example, many education researchers who use systemic functional linguistics also use LCT. The two approaches can be used together.

Why have LCT and systemic functional linguistics (SFL) been used together so often? Do we need to be experts in SFL to understand LCT?

No, you don't need to know anything about SFL to understand LCT. They are entirely different frameworks. Simply put, SFL was created by Michael Halliday and has been developed further by scholars like Jim Martin. LCT has an entirely different background that I built on the insights of Pierre Bourdieu and Basil Bernstein to create LCT. They come from different disciplines: SFL is a linguistics theory and LCT is a sociological framework. Both study meaning-making, but they do so in different ways.

Scholars and educators who use SFL in education often also use LCT. They do so for a variety of reasons. Often LCT provides a way of bringing together complex SFL analyses. For example, a researcher may analyse texts in terms from SFL of periodicity (e.g., Martin & Rose, 2007), which is coherence and textual organization, and find all kinds of linguistic differences between the texts. Then they use LCT to show what brings those diverse linguistic features together. LCT often provides clarity and simplicity by cutting through the potential complexity of linguistic findings. So, it might be that one text exhibits a semantic wave and another text exhibits a semantic flatline. The LCT analysis then shows what generates the diverse and complex set of linguistic features. So, SFL can show the numerous and often complex sets of linguistic resources students need to succeed, and LCT shows the knowledge practices that those linguistic resources are required for. Put another way, LCT can show *why* a particular set of language choices are needed to succeed in a particular subject area.

You don't need to know SFL to use or understand LCT, but the two have been in incredibly fruitful collaboration for about 15 years. This dialogue has been very productive in pushing new theoretical developments. For example, we have just published a book called *Accessing Academic Discourse* (Martin, Maton, & Doran, 2020) in which Jim Martin details new concepts in SFL that were influenced by ideas from LCT. And conversely, I continue to learn lots from working closely with linguists like Jim. It's a very productive partnership.

To finish off, may we ask a personal question: Does your practice of Zen have any relationship to your conceptualizing of LCT?

I'm sure it does. My ideas have been influenced by many ways of thinking, from the absurdism of Albert Camus to relativity theory in physics, from the post-positivist philosophies of science of Karl Popper and Roy Bhaskar to Taoist and Zen beliefs. Perhaps that's one reason why LCT is able to reach from physics to jazz music, from English to chemistry. Perhaps it's one reason why LCT emphasises that both knowledge and knowers matter, which is why the founding text of LCT is called *Knowledge and Knowers* (Maton 2014). I spent time in a Zen monastery in England when I was younger and have long been interested in the culture and history of Japan but must admit that I have yet to have the pleasure of visiting Japan. I hope to change that in the near future.

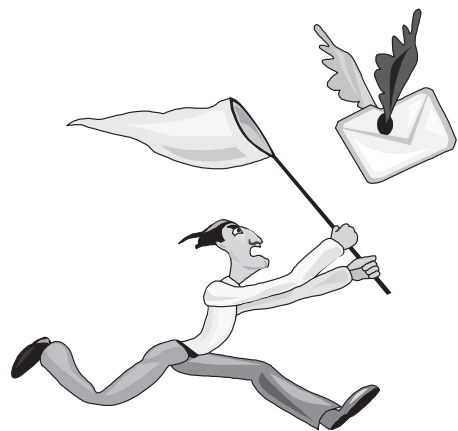
What is the quickest way that teachers could start using LCT?

The quickest way to find out about LCT is via the website: www.legitimationcodetheory.com. This site has lots of LCT papers. There are links to teacher blogs on the Practice and Impact page, and they often do a good job of presenting ideas in teacher-friendly ways. There are also several useful videos on YouTube (search for "LCT Centre"). Teachers can also get in touch with the LCT Centre (LCT.Centre@sydney.edu.au), and we can put them in touch with other teachers and teacher trainers to learn from.

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