

PUTTING KNOWLEDGE AT THE CENTRE: THE UPTAKE OF LEGITIMATION CODE THEORY IN HIGHER EDUCATION STUDIES IN SOUTH AFRICA

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ABSTRACT

In the context of rapid change in higher education, there is a great demand for powerful theory and methods to address key issues, particularly related to teaching and learning. This chapter traces the uptake of Legitimation Code Theory (LCT) in higher education studies in South Africa to make sense of how and why this theory has become so popular. LCT draws on the works of Bernstein and Bourdieu to provide a powerful theoretical and analytical toolkit with which to analyse social practices. In the chapter, we argue that the attraction of this theory is that it attends to a 'knowledge blindness' whereby much higher education research, particularly that focussed on teaching and learning, fails to consider the nature and effects of the discipline or field being learned. The use of this theory is illustrated in the chapter by reference to a number of publications. In doing so, we illustrate the importance of conceptual tools that allow an interrogation of what we are teaching, who we are teaching and how this social practice takes place.

Keywords: Legitimation Code Theory; knowledge; knowers; social justice; curriculum; epistemological access and teaching and learning

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INTRODUCTION

Processes of massification (Trow, 1973) have led to a burgeoning research interest in higher education around the world. As universities open their doors to a growing and more diverse student demographic, taken-for-granted practices are increasingly being criticised as unable to accommodate the learning needs of a changing student body (Masehela, 2018; Trowler, 2020). Parallel to these pressures, the notion of the ‘knowledge economy’ has influenced how universities are understood in society and the role or purpose they serve. Increasingly, universities are seen as a training ground for skilled graduates who are ready to contribute en masse to the workforce of a country, rather than as a place for nurturing scholarly individuals who can critically engage with abstract principles of disciplinary knowledge (Ashwin, 2020).

Many higher education institutions are also experiencing pressure to respond to the resilience of their colonial heritage. In South Africa, the 2015/2016 student protests brought into acute focus the need to decolonise curricula, pedagogies and cultures of universities. Students and scholars working in higher education contexts are calling for our normalised and common-sense academic practices and ways of being to be scrutinised and transformed (Luescher & Klemenčič, 2016; Nyamnjoh, 2016) so that students achieve more than simply formal access to university and are also afforded ‘epistemological access’, that is access to principled, disciplinary knowledge as well as the associated dispositions and literacies (Morrow, 2009) in ways that do not only privilege a narrow way of knowing or set of knowledges.

Given these pressures on universities, there is a growing volume of research taking up various issues facing higher education contexts. In response to calls for decolonisation of education, epistemic justice and attending to the dual effects of massification and the knowledge economy, much of this research hones in on teaching and learning concerns. Such research on teaching and learning is found both within the field of higher education studies as well as associated disciplines such as sociology, politics and psychology.

RESEARCH ON TEACHING AND LEARNING IN SOUTH AFRICA

The research on teaching and learning in South Africa largely draws on the same approaches that dominate such research elsewhere (for an overview of topics and methods commonly being drawn upon, see Tight, 2014, 2019). In common with concerns raised about teaching and learning research internationally (Clegg, 2009a, 2009b; Harland, 2009), in South Africa, there is a concern about the a-theoretical nature of much of it (Shay, 2012) and the dominance of small-scale studies (Deacon, Osman, & Buchler, 2009), which often result in more descriptive ‘show and tell’ offerings. Without the help of powerful theory, the insights provided by these descriptive studies are locked into a specific context, and as such, offer little transformative value to the broader field. Much of this research has a

strong ideological intention; however, the lack of theoretical foundations makes it susceptible to often-problematic common-sense conclusions (Boughey & McKenna, 2016; Clarence & McKenna, 2017; Hlengwa, McKenna, & Njovane, 2018).

The existing research on teaching and learning can be broadly categorised as adopting one of two concerns. The first is *the student*, through studies on learning styles, approaches to learning, motivation and so on. Such studies are often light on theory but where they do draw on theory, they are largely informed by psychological frameworks focussing on the cognitive processes of the individual (see, for example, Ramnarain & Ramaila, 2018; Shuttleworth-Edwards, Gaylard, & Radloff, 2013; Tachie, 2019). These studies are useful for exploring how students come to construct personal understanding and build knowledge schemas; however, they have a blind spot in relation to the broader social structures within which the student lives and from which the university emerges. Boughey and McKenna (2016, 2017) have argued that the focus on the student often assumes a ‘decontextualised learner’, whereby students’ success or failure is seen to emerge entirely from attributes inherent within them. The student is decontextualised from the norms, values and practices of their home, school and other social groupings, and the often-alienating nature of the university environment is also absented in such accounts.

The second main concern addressed in teaching and learning research in South Africa is the *social structures of higher education* and how teaching and learning practices are guilty of replicating social injustices. Such research typically adopts sociologically informed approaches focussing on the university as a social structure. Such studies highlight the ways in which university norms privilege particular sets of practices and ignore others (Case, Marshall, McKenna, & Mogashana, 2018), and they call into question the dominant account of the university as a meritocracy, though usually without engaging in deliberations regarding the specific nature of knowledge in the academy. As Donnelly and Abbas (2018, p. 13) indicate, such accounts often describe the injustices without providing the ‘theoretical power to generate knowledge about how the status quo might be disrupted’.

PUTTING KNOWLEDGE BACK IN THE SPOTLIGHT

One of the limitations of a field like higher education studies is the prevalence of theory trends and schisms. Furthermore, research in an area such as teaching and learning includes a range of methodologies to consider numerous topics such as pedagogy, assessment, feedback, student retention and more. As a result, an array of perspectives and foci exist which are able to offer varying insights into different aspects of a problem but as Tight (2014, p. 93) alerts us, despite the field being ‘healthy and growing... it lacks a strong or disciplinary identity’. In some cases, there is also a territoriality around different approaches which prevents meaningful conversations across theoretical approaches.

Over the last 10 years, scholars internationally and in South Africa have been gradually building an argument that existing research on teaching and learning has overlooked an important consideration: knowledge itself. Scholars point out that a focus on *the kind of knowledge* students are required to learn has been sidelined in favour of focussing on content knowledge (i.e. what goes into a curriculum) or processes of learning. In effect, knowledge as an object in its own right has been neglected in research about teaching and learning, resulting in a curious ‘knowledge blindness’ (Maton, 2014). Maton explains the existence of this blind spot as being due to a ‘false dichotomy’ between positivist absolutism and constructive relativism. The result of this dilemma is that an either/or distinction is created: either knowledge is treated as a decontextualised, value-free, detached and certain entity (positivist absolutism), which essentially treats knowledge as truth; or, it is treated as a social construct dependent on the cultural and historical conditions and inherently tied to dominant social values (constructivist relativism) which reduces knowledge to the practices of its ‘knowers’.

To avoid this dilemma, scholars engaging with issues of teaching and learning have increasingly based their research in a social realist understanding, adopting a ‘both/and’ approach which is able to acknowledge that knowledge does exist (i.e. it is real) while simultaneously recognising knowledge as a social phenomenon that is fallible rather than absolute or relative (Maton & Moore, 2010). Working within this orientation, scholars have not only argued for knowledge to be brought back into the spotlight but also pointed to the need to better understand the subjective nature of knowledge practices. In this respect, students’ identities, dispositions and disciplinary literacies (Gee, 1999; Lea & Street, 2006), and the impact they have on disciplinary knowledge, are argued to be a key aspect missing or underestimated from existing research on teaching and learning.

In South Africa, a growing number of scholars are grounding their research in social realist perspectives and enacting a range of substantive theories and analytical tools to consider knowledge and the subjects involved in the knowledge practices. Social realism entails an understanding that all social phenomena emerge from a complex interplay of structures, cultures and agency. This means that we need to go beyond human experiences to identify the mechanisms which enable or constrain our agency. The notion of mechanisms is important because it suggests that there are structures in the world which are real whether we know about them or not. Knowledge here is treated not only as an effect of the interplay of mechanisms but as a mechanism in its own right.

In particular, Bernstein’s code theory has been used to provide powerful tools for looking at the nature of disciplinary knowledge as well as the differences between knowledge production, recontextualisation and reproduction (see, for example, Booi, 2018; Muller & Hoadley, 2018; Shalem, 2018). Bernstein’s work is particularly useful because it encourages empirical exploration of how education can both replicate or disrupt the social order (Donnelly & Abbas, 2018). In post-apartheid South Africa, there was a particular desire to make sense of the role education played in reproducing social inequalities.

Other research drawing on New Literacy Studies has pointed to the different kinds of knowledge practices and associated identities required of students as they become recognised members of different disciplines (see, for example, [Dison & Moore, 2019](#); [Jacobs, 2013](#)). While such studies highlight the power of such tacit and normalised practices, they do not explain how or why these different practices emerge ([Clarence & McKenna, 2017](#)).

Building on the foundational work of theorists like Bernstein and Bourdieu and taking into account the identity focus of New Literacy Studies, a more recent framework is enjoying increasing attention in international and South African research on teaching and learning: Legitimation Code Theory (LCT). LCT is a theoretical framework offering a conceptual toolkit and analytical methodology that asks the important questions of why it is that certain knowledges are legitimated and others are not, and how it is that each discipline structures its knowledge and determines the kind of ‘knowers’ deemed worthy of disciplinary membership (see, for example, [Clarence, 2021](#); [Maton, 2014](#); [Winberg, McKenna, & Wilmot, 2020](#)). In this sense, it provides a realist way of thinking while at the same time maintaining the social character of knowledge.

The Uptake of LCT in South African Higher Education Studies

The relatively quick uptake of LCT in South African higher education studies is attributed to it proving to be a generative lens for looking at social justice issues in our higher education context, particularly in terms of equity, social redress and epistemological access by addressing issues of ‘what’, ‘how’ and ‘who’ ([Clarence, 2021](#); [Winberg et al., 2020](#)). The increase in use of this theory is noticeable in the number of peer-reviewed publications using LCT to address a variety of research questions.

We have traced the use of this theory in journal articles and book chapters about higher education by South African authors from 2010 to 2020. Since 2010, there have been 86 peer-reviewed publications using LCT with just four publications in 2010 increasing to 19 publications in 2020 (see [Fig. 1](#)). While the number of research outputs has increased across all fields in South Africa ([Department of Higher Education and Training, 2019](#)), the increase in LCT publications is significant, especially because we excluded PhD and master’s studies and conference proceedings in our tally of outputs.

Of those published during this 10-year period, most have been in journals on recognised lists such as Scopus and Web of Science (in South Africa, funding is provided to universities for research outputs provided that the journal is on one of six accredited lists ([Department of Higher Education and Training, 2019](#))), while approximately a third were published as book chapters (see [Fig. 2](#)). Interestingly, although the uptake of LCT in South Africa has grown steadily (as [Fig. 1](#) attests), the dissemination of this knowledge is not limited to a South African audience, as the majority of the journal articles published up until 2020 were in international journals (see [Fig. 3](#)).

The geographical distribution of the research suggests that the findings have relevance for a broader audience than just that of South Africa. By implication,

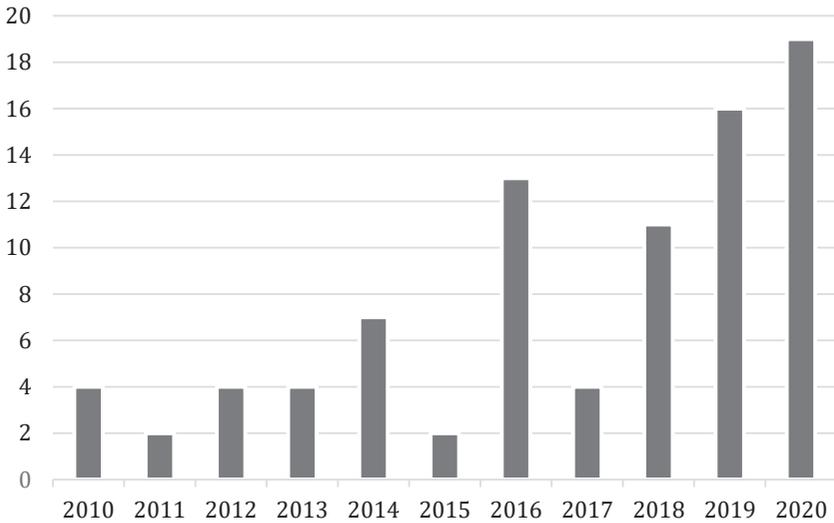


Fig. 1. Total Number of Higher Education Studies Publications by South African Authors Using LCT.

this growing body of research is seemingly able to overcome the context-dependent ‘show and tell’ limitations of much past research on teaching and learning. The publications also suggest that the move to highlight knowledge as an object, as well as the social implications of those involved in the knowledge practices of higher education, is not a conversation happening in isolation. Rather, the prevalence of this research in well-regarded international journals such as *Teaching in Higher Education* and *Higher Education Research and Development* shows that this research focus and the use of a theory such as LCT is an international concern in higher education studies.

To understand why LCT is increasingly being taken up as a theory and methodology in higher education research, the remainder of this chapter will

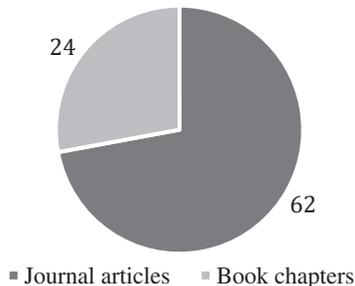


Fig. 2. Publication Type.

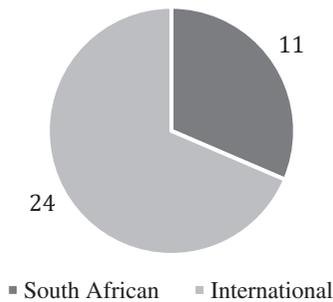


Fig. 3. Distribution of Journals.

provide a snapshot of how the theory works, how it has been used in South Africa and the insights it affords the field of higher education.

The Enactment of LCT as a Conceptual Framework and Analytical Tool

LCT is a theoretical framework offering a conceptual toolkit and analytical methodology (Maton, 2014) that has been used in studies across a number of disciplines and, in relation to our focus, has allowed a consideration of the nature of knowledge as a conditioning mechanism in higher education. It provides a strong theoretical framing for studies and also the analytical tools that can look at knowledge at varying levels of detail. It has thus been used for studies that look at institutional or even sector-wide level down to studies that analyse a single course guide. LCT builds on the work of Bernstein and Bourdieu to reveal the ‘rules of the game’ by making explicit the basis of success of any practice. This has major implications for social justice in higher education, as these ‘rules’ can then be taught and learned more explicitly, and they can be challenged and changed. The theory has five different dimensions; however, the two most commonly used in South African research to date are Specialisation and Semantics.

In brief, Specialisation allows us to identify the basis on which any practice is specialised or distinct. It is premised on the simple notion that everything we do is oriented toward an object and is enacted by a person. In this sense, all knowledge practices are said to involve relations to both objects and subjects (Maton, 2014). Based on this understanding, any analysis of knowledge needs to consider two aspects: it needs to consider the relationship to the object of study (known as *epistemic relations*) as well as the relationship between knowledge and the people who are considered legitimate producers or users of that knowledge (known as *social relations*) (Maton, 2014, p. 29). In doing so, a Specialisation analysis is able to reveal ‘what’ is considered legitimate knowledge in any given context, at a particular point in time, as well as ‘who’ can be considered a legitimate knower in any given field. These two concerns will always be present in any practice: there are always knowledge and knowers; the difference between practices lies in how much emphasis is placed on the ‘what’ and the ‘who’. The value of these tools is

that they give insight into the often tacit, taken-for-granted aspects of teaching and learning such as what kind of knowledge is legitimated, what value systems are espoused, the kinds of ideal dispositions students should acquire and how these aspects shift and change over time.

A number of South African scholars have used the concepts from Specialisation in their research to explore and understand issues in teaching and learning. For example, Ellery (2018) looked at a science programme at a South African university to understand what was needed in order to enable epistemological access to the discipline. Through the use of tools from Specialisation, Ellery was, in the first instance, able to distinguish two different but concurrent learning processes: the acquisition of principled scientific knowledge and procedures as well as a particular kind of disposition or 'way of being' that students needed to embody in order to gain access to powerful knowledge. In doing so, she was able to challenge the dominant empiricist view of science as being a collection of neutral facts about the natural world which students come to know through 'objective enquiry', and rather showed that the kind of dispositions, values and literacies a student has to acquire (i.e. the social aspect of scientific knowledge) played a key role in students' success. Critically, from a social justice viewpoint, Ellery was able to show how the 'knower' aspect of teaching and learning – which often forms part of the hidden curriculum – becomes a gatekeeper as some students with particular (privileged) home and educational contexts are more easily able to acquire these knower attributes than others. By making these covert practices explicit, Ellery also provides insights into how these aspects can be more effectively taught in future in similar contexts to her research site.

In another example of research using Specialisation, Lück, McKenna, and Harran (2020) looked at the relationship between industry expectations and the curriculum. They found that the public management curriculum at a South African university focussed significantly on knowledge, skills and processes with very little attention being paid to cultivating particular dispositions. Under apartheid, public administration had been primarily focussed on controlling citizens and ensuring that various bureaucratic requirements such as the 'dompas' (the documentation that all black South Africans were required to carry with them at all times to ensure that they remained in the areas designated to them) were effectively managed. In post-apartheid South Africa, there were calls for the public sector to play a particular role in shifting technicist and callous apartheid administration to a system led by compassionate and critical individuals. The study showed that, while the content of the public management curriculum had changed extensively post-apartheid, the basis of success remained on acquiring a set of fairly technical facts and management skills rather than on acquiring a disposition of 'service'. There was thus what is termed a 'code clash' between the kinds of knowledge and knowers that were being valued in the formal curriculum to that which was being demanded by the field.

These studies are just two examples of the diverse ways in which Specialisation is being used in higher education research to open up new spaces for pedagogic development and to facilitate access to powerful knowledge (see Winberg et al.,

2020 for more examples of how these ideas have been taken up across a range of international higher education contexts).

The second LCT dimension much drawn on by South African higher education scholars is Semantics. This offers a different set of conceptual and analytical tools that are able to reveal the forms that knowledge takes and how this impacts the basis of success. In brief, Semantics explores the context-dependence and complexity of practices (Maton, 2016). These two concerns are conceptualised as *semantic gravity* and *semantic density*. Semantic gravity refers to the degree to which meaning relates to a particular context. For example, if the meaning being conveyed is highly dependent on a particular context (e.g. a lecturer pointing to the board and saying ‘Over *here* we have...’), it is said to have stronger semantic gravity. If the meaning transcends immediate contexts (e.g. a lecturer saying ‘Globalisation has impacted on the economic order’), it is said to have weaker semantic gravity. Semantic density, on the other hand, relates to the complexity of meanings. The stronger the semantic density, the more complex the meanings, which typically emerges as a result of condensing many meanings into instances of practice. In many instances, these will be condensed in specialist terms (e.g. ‘constructivism’) or symbols (e.g. ‘CO₂’). The weaker the semantic density, the less complex the meanings.

Scholars have taken up these concepts to explore a range of teaching and learning issues in higher education. For example, it is proving to be a particularly valuable tool for looking at pedagogic practice and curricula that encourage and enable cumulative learning. One of its key affordances is that it is able to analyse data at varying levels of detail. Clarence (2016), for example, draws on the concepts of semantic gravity and semantic density to unpack political science classroom pedagogy in order to enable a deeper understanding of how different subject areas construct knowledge in different ways. In this particular study, Clarence was able to use the analysis for staff development by showing lecturers how one central proponent for constructing arguments in political science is to apply complex theoretical concepts to varying socio-historical contexts. In effect, what was required of students was being able to apply theory to real-world scenarios. Using the analyses afforded by Semantics, Clarence engaged lecturers in conversation about what kinds of concepts and real-world applications are valued in their courses and how they could more effectively structure their pedagogic practice to make this explicit to their students.

Other scholars utilise the Semantics tools at a more micro level, often focusing on one classroom or assignment or working closely with curriculum documents. For example, Rootman-le Grange and Blackie (2020) use Semantics’ analytical tools to assess the efficacy for enabling cumulative learning of a chemistry assessment used in an introductory health science course. Through the analysis of the actual assignment (i.e. textual analysis), they show how the basis of success of the assessment lay in students’ ability to shift between abstract, highly condensed meanings and relatively context-dependent, simple meanings in their written answers. Crucially, what the analysis helped them to understand was that some of the assessment designs were not well suited to produce the desired learning outcomes. By interrogating the assessment practices and design using the

analytical tools, the authors were not only able to show what was valued in the course (i.e. the basis of success), but they were also able to offer insights into how assessments could be more effectively designed in future to encourage the development of cumulative learning in similar contexts. In this sense, the theory and tools provided them with the means to offer insights for the broader field, not only their particular South African context.

As these snapshots of research suggest, one of the most coveted aspects of using LCT as a theoretical framework and analytical tool is that it is able to be used at varying degrees of analytical detail to understand knowledge practices. Furthermore, it can be enacted in any field where there is a need to understand how knowledge works. In South Africa alone, the diverse application of the theory is considerable, including for educational concerns in academic development (for example, [Bosman & Strydom, 2020](#); [Clarence, 2018](#); [Clarence & van Heerden, 2020](#); [Luckett, 2010](#); [Quinn & Vorster, 2019](#); [Quinn, 2020](#); [Shay, 2016](#); [Vorster, 2020](#); [Young & Jacobs, 2020](#)), African philosophies ([Luckett, 2018](#)), biology ([Mouton & Archer, 2019](#)), chemistry ([Blackie, 2014](#); [Rootman le-Grange & Blackie 2018](#)), doctoral writing ([Wilmot, 2020](#)), engineering ([Dorfling, Wolff, & Akdogan, 2019](#); [Winberg et al., 2016](#); [Wolff & Luckett, 2013](#); [Wolff & Hoffman, 2014](#); [Wolmarans, 2016](#)), English literature ([van Heerden, Clarence, & Bharuthram, 2017](#)), higher education studies ([McKenna, 2014](#); [McKenna, Quinn, & Vorster, 2018](#)), journalism ([Kilpert & Shay, 2013](#)), law ([Clarence, 2016](#)), marketing ([Arbee, Hugo, & Thomson, 2014](#)), physics ([Conana, Marshall, & Case, 2020](#); [Cornell & Padayachee, 2020](#)), postgraduate supervision practices ([Vahed, 2016](#)), science foundation programmes ([Conana & Marshall, 2019](#); [Ellery, 2018, 2019](#)), sociology ([Luckett, 2012](#)), teacher education ([Ruszynak, 2018, 2020](#); [Walton & Ruszynak, 2020](#)), theology ([Meyer, 2019](#)) and vocational education and work-integrated learning ([Hudson, Engel-Hills, & Winberg, 2020](#); [Shay & Steyn, 2016](#)) to name a few. As this non-exhaustive list demonstrates, the range of areas is diverse though we noted a strong focus on academic development.

CONCLUSION

With the growing pressures on universities to massify, diversify and produce employment-ready graduates for the knowledge economy, research on teaching and learning is becoming significant as scholars aim to understand what we are teaching, for what purpose and what kind of student we are nurturing. Research in higher education studies is especially concerned with epistemological access as student demographics change and assumptions about teaching and learning are problematised. Furthermore, those working in the Global South, in particular, have been called upon to address the need to decolonise the curricula. These processes necessitate that higher education scholars interrogate *what* we are teaching, *who* we are teaching and *how* that interaction takes place. In order to do this kind of work, strong theoretical lenses are needed. Such lenses need to focus

on social structures and include an explicit focus on knowledge as an object in its own right.

This chapter has provided insight into how South African higher education scholars are increasingly adopting a focus on the nature of knowledge as they attempt to understand our complex higher education context. The theoretical and analytical framework of LCT has provided a powerful set of tools for this community in undertaking this important work and, in doing so, these scholars are contributing understandings of the nature of teaching and learning to an international conversation.

REFERENCES

- Arbee, A., Hugo, W., & Thomson, C. (2014). Epistemological access in Marketing: A demonstration of the use of Legitimation Code Theory in higher education. *Journal of Education*, 59, 39–63.
- Ashwin, P. (2020). *Transforming university education: A manifesto*. London: Bloomsbury.
- Blackie, M. (2014). Creating semantic waves: Using Legitimation Code Theory as a tool to aid the teaching of chemistry. *Chemistry Education: Research and Practice*, 15, 462–469.
- Booi, K. (2018). Science teacher educators' views on incorporating a thematic approach in science teacher education curriculum in South Africa. In Proceedings of ICERI2018 conference, Seville, Spain, 12th–14th November 2018.
- Bosman, J. P., & Strydom, S. (2020). Building the knowledge base of blended learning: Implications for educational technology and academic development. In C. Winberg, S. McKenna, & K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 198–219). London: Routledge.
- Boughey, C., & McKenna, S. (2016). Academic Literacy and the decontextualized learner. *Critical Studies in Teaching and Learning*, 4(2), 1–9.
- Boughey, C., & McKenna, S. (2017). Analysing an audit cycle: A critical realist account. *Studies in Higher Education*, 42(6), 963–975.
- Case, J., Marshall, D., McKenna, S., & Mogashana, D. (2018). *Going to university: The influence of higher education on the lives of young South Africans*. Cape Town: African Minds.
- Clarence, S. (2016). Exploring the nature of disciplinary teaching and learning using Legitimation Code Theory semantics. *Teaching in Higher Education*, 2(2), 123–137.
- Clarence, S. (2018). Understanding the student experience through the lens of academic staff development practice and research. In P. Ashwin & J. Case (Eds.), *Higher education pathways: South African undergraduate education and the public good* (pp. 204–215). Bloemfontein: African Minds.
- Clarence, S. (2021). *Turning access into success: Improving university education with Legitimation Code Theory*. Abingdon: Routledge.
- Clarence, S., & McKenna, S. (2017). Developing students' academic literacies through understanding the nature of disciplinary knowledge. *London Review of Education*, 15(1), 38–49.
- Clarence, S., & van Heerden, M. (2020). Changing curriculum and teaching practice: A practical theory for academic staff development. In C. Winberg, S. McKenna, & K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 145–161). London: Routledge.
- Clegg, S. (2009a). Forms of knowing and academic development practice. *Studies in Higher Education*, 34(4), 403–416.
- Clegg, S. (2009b). Histories and institutional change: Understanding academic development practices in the global “north” and “south”. *International Studies in Sociology of Education*, 19(1), 53–65.
- Conana, H., & Marshall, D. (2019). Supporting student learning in foundation programmes and beyond: Using Legitimation Code Theory as a theoretical lens to think about transition. *Alternation*, 26(2), 183–212.
- Conana, H., Marshall, D., & Case, J. (2020). Semantics analysis of first year physics teaching: Developing students' use of representations in problem-solving. In C. Winberg, S. McKenna, &

- K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 162–179). London: Routledge.
- Cornell, A. S., & Padayachee, K. (2020). Re-visioning the postgraduate preparation of theoretical physicists: An autoethnographic account using the specialisation dimension of Legitimation Code Theory. *Physics Education* arXiv:2010.07666.
- Deacon, R., Osman, R., & Buchler, M. (2009). *Audit and interpretative analysis of education research in South Africa: What have we learnt?* Report to the National Research Foundation, South Africa. Department of Higher Education and Training (DHET). (2019). *Report on the evaluation of 2017 universities' research outputs*. Pretoria: Government Printers.
- Dison, L., & Moore, J. (2019). Creating conditions for working collaboratively in discipline-based writing centres at a South African university. *Per Linguam*, 35(1), 1–14.
- Donnelly, M., & Abbas, A. (2018). Using the sociology of Basil Bernstein in higher education research. In J. Huissman & M. Tight (Eds.). *Theory and method in higher education research* (Vol. 4, pp. 1–17). Bingley: Emerald Group Publishing Ltd.
- Dorfling, C., Wolff, K., & Akdogan, G. (2019). Expanding the semantic range to enable meaningful real-world application in chemical engineering. *South African Journal of Higher Education*, 33(1), 42–58.
- Ellery, K. (2018). Legitimation of knowers for access in Science. *Journal of Education*, 71, 24–38.
- Ellery, K. (2019). Congruence in knowledge and knower codes: The challenge of enabling learner autonomy in a science foundation course. *Alternation*, 26(2), 213–239.
- Gee, J. P. (1999). Critical issues: Reading and the new literacy studies: Reframing the national academy of sciences report on reading. *Journal of Literacy Research*, 31(3), 355–374.
- Harland, T. (2009). People who study higher education. *Teaching in Higher Education*, 14(5), 579–582.
- van Heerden, M., Clarence, S., & Bharuthram, S. (2017). What lies beneath: Exploring the deeper purposes of feedback on student writing through considering disciplinary knowledge and knowers. *Assessment & Evaluation in Higher Education*, 42(6), 967–977.
- Hlengwa, A., McKenna, S., & Njovane, T. (2018). The lenses we use to research student experience. In P. Ashwin & J. M. Case (Eds.), *Pathways to the public good: Access, experiences and outcomes of South African undergraduate education* (pp. 149–192). Cape Town: African Minds.
- Hudson, L., Engel-Hills, P., & Winberg, C. (2020). The potential of a simulated workplace environment for emergency remote teaching. *International Journal of Work – Integrated Learning*, 21(5), 559–772.
- Jacobs, C. (2013). Academic literacies and the of knowledge. *Journal for Language Teaching*, 47(2), 127–139.
- Kilpert, L., & Shay, S. (2013). Kindling fires: Examining the potential for cumulative learning in a journalism curriculum. *Teaching in Higher Education*, 18(1), 40–52.
- Lea, M. R., & Street, B. V. (2006). The “academic literacies” model: Theory and applications. *Theory Into Practice*, 45(4), 368–377.
- Luckett, K. (2010). Knowledge claims and code of legitimation: Implications for curriculum recontextualisation in South African higher education. *Africanus*, 40(1), 4–18.
- Luckett, K. (2012). Disciplinarity in question: Comparing knowledge and knower codes in sociology. *Research Papers in Education*, 27(1), 19–40.
- Luckett, K. (2018). A critical self-reflection on theorising education development as ‘epistemological access’ to ‘powerful knowledge’. *Alternation*, 26(2), 36–61.
- Lück, J., McKenna, S., & Harran, M. (2020). Curriculum powerful knowledge for public administrators and managers. *Africa Education Review*, 17(3), 90–106.
- Luescher, L., & Klemenčič, M. (2016). Student power in 21st-century Africa: The character and the role of student organising. In R. Brooks (Ed.), *Student politics and protest: International perspectives* (pp. 113–127). London: Routledge.
- Masehela, L. (2018). The rising challenge of university access for students from low-income families. In P. Ashwin & J. Case (Eds.), *Higher education pathways: South African undergraduate education and the public good* (pp. 165–176). Cape Town: African Minds.
- Maton, K. (2014). *Knowledge and knowers: Towards a realist sociology of education*. London: Routledge.

- Maton, K. (2016). Legitimation Code Theory: Building knowledge about knowledge-building. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in Legitimation Code Theory* (pp. 1–24). Abingdon: Routledge.
- Maton, K., & Moore, R. (2010). Coalitions of the mind. In K. Maton & R. Moore (Eds.), *Social realism, knowledge and the sociology of education: Coalitions of the mind* (pp. 1–13). London: Continuum.
- McKenna, S. (2014). Higher education studies as a field of research. *The Independent Journal of Teaching and Learning*, 9, 6–44.
- McKenna, S., Quinn, L., & Vorster, J. (2018). Mapping the field of Higher Education Research using PhD examination reports. *Higher Education Research & Development*, 37(3), 579–592.
- Meyer, B. (2019). What is a gospel? Reflections on developing an integrated literacy lesson cycle in a first year tertiary module using Legitimation Code Theory. *Alternation*, 26(2), 240–266.
- Morrow, W. (2009). *Bounds of democracy: Epistemological access in higher education*. Pretoria: HSRC Press.
- Mouton, M., & Archer, E. (2019). Legitimation Code Theory to facilitate transition from high school to first-year biology. *Journal of Biological Education*, 53(1), 2–20.
- Muller, J., & Hoadley, U. (2018). Pedagogic modality and structure in the recontextualising field of curriculum studies: The South African case. In B. Barrett, U. Hoadley, & J. Morgan (Eds.), *Knowledge, curriculum and equity: Social realist perspectives*. London: Routledge.
- Nyamnjoh, F. (2016). *#RhodesMustFall: Nibbling at resilient colonialism in South Africa*. Mankon: Langa.
- Quinn, L. (2020). The role of assessment in preparing academic developers for professional practice. In C. Winberg, S. McKenna, & K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 255–271). London: Routledge.
- Quinn, L., & Vorster, J. (2019). Why the focus on curriculum? Why now? The role of academic development. In L. Quinn (Ed.), *Re-imagining curriculum: Spaces for disruption* (pp. 1–22). Stellenbosch: Sun Press.
- Ramnarain, U., & Ramaila, S. (2018). The relationship between chemistry self-efficacy of South African first year university students and their academic performance. *Chemistry Education: Research and Practice*, 19, 60–67.
- Rootman-le Grange, I., & Blackie, M. (2020). Misalignments in assessments: Using Semantics to reveal weaknesses. In C. Winberg, S. McKenna, & K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 76–89). London: Routledge.
- Rootman le-Grange, I., & Blackie, M. (2018). Assessing assessment: In pursuit of meaningful learning. *Chemistry Education: Research and Practice*, 19, 484–490.
- Ruszynek, L. (2018). What messages about teacher professionalism are transmitted through South African pre-service teacher education programmes? *South African Journal of Education*, 38(3), 1–11.
- Ruszynek, L. (2020). Supporting the academic success of students through making knowledge-building visible. In C. Winberg, S. McKenna, & K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 90–104). London: Routledge.
- Shalem, Y. (2018). Scripted lesson plans – What is visible and invisible in visible pedagogy? In B. Barrett, U. Hoadley, & J. Morgan (Eds.), *Knowledge, curriculum and equity: Social realist perspectives*. London: Routledge.
- Shay, S. (2012). Educational development as a field: Are we there yet? *Higher Education Research and Development*, 31(3), 311–323.
- Shay, S. (2016). Curricula at the boundaries. *Higher Education*, 71(6), 767–779.
- Shay, S., & Steyn, D. (2016). Enabling knowledge progression in vocational curricula: Design as a case study. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in Legitimation Code Theory* (pp. 138–157). London: Routledge.
- Shuttleworth-Edwards, A. B., Gaylard, E. K., & Radloff, S. E. (2013). WAIS-III test performance in the South African context: Extension of a prior cross-cultural normative database. In S. Laher

- & K. Cockcroft (Eds.), *Psychological assessment in South Africa: Research and application* (pp. 17–32). Johannesburg: Wits University Press.
- Tachie, S. (2019). Meta-cognitive skills and strategies application: How this helps learners in mathematics problem-solving. *Eurasia Journal of Mathematics, Science and Technology Education*, 15(5), 1–12.
- Tight, M. (2014). Discipline and theory in higher education research. *Research Papers in Education*, 29(1), 93–110.
- Tight, M. (2019). *Higher education research: The developing field*. London: Bloomsbury.
- Trow, M. (1973). *Problems in the transition from elite to mass higher education*. Berkeley, CA: Carnegie Commission on Higher Education.
- Trowler, V. (2020). Researching social justice in higher education from both insider and outsider perspectives. In J. McArthur & P. Ashwin (Eds.), *Locating social justice in higher education* (pp. 53–69). London: Bloomsbury.
- Vahed, A. (2016). Legitimizing supervision from different academic territories: An auto-ethnographic account. In M. Fourie-Malherbe, R. Albertyn, C. Aitchison, & E. Bitzer (Eds.), *Postgraduate supervision: Future foci for the knowledge society*. Stellenbosch: SUN MeDIA.
- Vorster, J. (2020). Academic development: Autonomy pathways towards gaining legitimacy. In C. Winberg, S. McKenna, & K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 272–289). London: Routledge.
- Walton, E., & Ruszyna, L. (2020). Cumulative knowledge—building for inclusive education in initial teacher education. *European Journal of Teacher Education*, 43(1), 18–37.
- Wilmot, K. (2020). Building knowledge with theory: Unpacking complexity in doctoral writing. *Critical Studies in Teaching and Learning*, 8(2), 18–38.
- Winberg, C., Bester, M., Scholtz, D., Monnapula-Mapesela, M., Ronald, N., Snyman, J., ... Machika, P. (2016). In search of graduate attributes: A survey of six flagship programs. *South African Journal of Higher Education*, 32(1), 233–251.
- Winberg, C., McKenna, S., & Wilmot, K. (2020). ‘Nothing so practical as good theory’: Legitimation Code Theory in higher education. In C. Winberg, S. McKenna, & K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 1–15). London: Routledge.
- Wolff, K., & Hoffman, F. (2014). Knowledge and knowers in engineering assessment. *Critical Studies in Teaching and Learning*, 2(1), 74–95.
- Wolff, K., & Luckett, K. (2013). Integrating multidisciplinary engineering knowledge. *Teaching in Higher Education*, 18(1), 78–92.
- Wolmarans, N. (2016). Exploring the role of disciplinary knowledge in engineering when learning to design. In R. S. Adams, P. Buzzanell, & J. A. Siddiqui (Eds.), *Analyzing design review conversations*. West Lafayette, IN: Purdue University Press.
- Young, G., & Jacobs, C. (2020). Legitimate participation in program renewal: The role of academic development units. In C. Winberg, S. McKenna, & K. Wilmot (Eds.), *Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code Theory* (pp. 220–236). London: Routledge.