Introduction: The Theory and Practice of Interdisciplinary Pedagogy

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This book provokes a pedagogy of practice that is transformative for both students and staff. As bell hooks emphasises (1994, 12), 'the classroom remains the most radical space of possibility in the academy'. Focusing on the practice of teaching interdisciplinary studies, the book showcases the experiences of interdisciplinary teaching and learning from the practitioners' perspectives. The authors are all passionate advocates of interdisciplinary thought and practice, and, as the chapters will demonstrate, we see the good in such an approach in varied and diverse ways. We aim to detail interdisciplinary teaching and learning from theoretical and practical angles. We have all worked as Fellows on such a course at an elite British university, The London School of Economics and Political Science (LSE). The course, LSE100 (LSE's flagship interdisciplinary course), initially emerged from recognising the ambition of interdisciplinary education at university as something claimed but not delivered. In its current guise, LSE100 is a mandatory course taken by all first-year undergraduate students across all disciplines. As detailed later in the chapter, students choose a topic they want to investigate further out of a predetermined selection, attend interactive seminars, and complete assessments.

The shared experience of teaching a team-taught interdisciplinary module at LSE was an essential context for developing this volume. While, individually, we completed our PhDs in various departments (geography, history, politics, philosophy, media and culture studies, and sociology), we have now found ourselves as early-career researchers undertaking the so-called 'undisciplinary journey' without primary affiliations to a disciplinary department (Haider et al. 2018). Whereas previous work has highlighted the 'uncomfortable space' occupied by interdisciplinary researchers, we felt an opportunity to chart our routes through the similarly challenging terrain of interdisciplinary pedagogy – not least because teaching is often the primary activity of newly qualified academics (Haider et al. 2018: 197). From our experiences developing and teaching this course, the way we understand interdisciplinary pedagogy is as much about the inclusion and the collaboration of people as it is about scholarship. It is about challenging the often-myopic assumptions associated with the forced demarcation of the social science disciplines, and

scoping out space for reflection and partnership. We see the importance of promoting interdisciplinary pedagogy to respond to the world's interrelated (social, economic, and climate) crises. We feel it can offer more well-rounded solutions to these ongoing global threats and offer a knowledge base that gives students a chance to reflect on their position in the world.
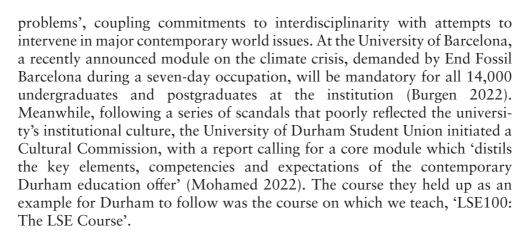
Though interdisciplinarity has not yet provided a clear pathway for new ways of structuring the university, it has and continues to blur disciplinary boundaries, foster new connections between departments, and, more fundamentally, challenge the assumption that we can only produce knowledge about the world by retreating into our respective areas of expertise. The book will answer questions about the steps taken to realise interdisciplinarity. For example, what can teachers do to foster interdisciplinary pedagogy? How does an interdisciplinary course enhance student experience? Though there have been other books on interdisciplinary teaching and learning, they either cater for a specialist area (Lansiquot 2016) or consist of collections of chapters around the broader theme of interdisciplinarity (Frodeman 2017). This volume differs as it focuses closely on the experiences of practitioners from one specific institution, enabling a thread of knowledge and context to run through each chapter and considering the practical and ethical implications for students.

The book is timely because recent years have seen a steady explosion in interdisciplinary undergraduate modules at universities in Britain and internationally, with the recognition that encouraging interdisciplinary 'habits of mind' should begin early, 'when disciplinary identities are still emerging' (Newell and Luckie 2019; Turner et al. 2022, 14). In some institutions, the emphasis is on student choice in selecting a range of modules. At the University of Manchester, interdisciplinary courses are run by the University College of Interdisciplinary Learning and typically available as optional units for second- and third-year undergraduates; the 'Interdisciplinary Electives' available at University College London are broadly similar and overlap thematically with the university's 'UCL Grand Challenges' initiative. The 'Ruskin modules' introduced at Anglia Ruskin University, compulsory for second-year undergraduates, combine responsiveness to UN Sustainable Development Goals with a clear statement of institutional identity. Others have experimented with 'short-fat' four-week immersive, interdisciplinary modules as a compulsory part of first-year programmes, though the faculties' responsibility for course design remained (Turner et al. 2022).

In other institutions, including LSE, student choice is more limited, with fewer interdisciplinary modules to cultivate a shared institutional identity. In the United States, experiments with cross-institutional compulsory modules have sought to provide a shared foundation of academic skills training (Goodman and Huckfeldt 2014). At King's College London, optional 'Innovation Modules' emphasise multi-and-cross-disciplinary approaches to cultural competency and supporting students' transitions to and through university. Often, interdisciplinary courses have focused upon specific 'wicked

problems', coupling commitments to interdisciplinarity with attempts to intervene in major contemporary world issues. At the University of Barcelona, a recently announced module on the climate crisis, demanded by End Fossil Barcelona during a seven-day occupation, will be mandatory for all 14,000 undergraduates and postgraduates at the institution (Burgen 2022). Meanwhile, following a series of scandals that poorly reflected the university's institutional culture, the University of Durham Student Union initiated a Cultural Commission, with a report calling for a core module which 'distils the key elements, competencies and expectations of the contemporary Durham education offer' (Mohamed 2022). The course they held up as an example for Durham to follow was the course on which we teach, 'LSE100: The LSE Course'.

The British University Context

It is worth outlining the educational context in which these interdisciplinary programmes operate. We are educators employed on fixed-term, precarious contracts, and we are acutely aware of the current trajectory that British higher education is taking. We do not have a sense of where we will be in the future, nor if we will have a future academic career. In that sense, this book cannot help but offer some critical insight into our experiences in our current university system, where courses increasingly become exercises in bureaucratic decision-making, standardisation, and quantification (Harvie and De Angelis 2009). British universities are in the middle of a crisis of epic proportions, which has damaging long-term potential for democracy. Over the last decades, our higher education institutions have exponentially been threatened by forces that have turned learning into a commodity. A single value measures education's worth: The economic market (Nussbaum 2010).

Before losing power in 2024, the British Conservative government announced its plans to make monetary cuts to the arts, humanities, and social sciences in favour of more funding for science, technology, engineering, and maths (STEM) courses (Weale 2021), cuts that do not seem to be reversed by the new Labour government. Coupled with this is an astute belief in education as a business. In *Capitalist Realism: Is There No Alternative?* Mark Fisher describes how in the public sector, capitalism has 'successfully installed a "business ontology" in which it is simply obvious that everything in society, including healthcare and education, should be run as a business' (Fisher 2009). Universities have incorporated this 'business ontology' into their current and future management strategies at the expense of a learning experience that promotes the person's intellectual, social, and emotional growth. Faced with a series of global and planetary crises, we also face what Martha Nussbaum terms an educational crisis of the soul (Nussbaum 2010, 6). Putting aside the word's religious and spiritual connotations, think of soul as what ignites our critical and creative capacities that make us truly human (Nussbaum 2010, 6). To have soul, in this sense, requires us to take on a

teaching and learning strategy that is transgressive, transformative (for both students and educators); and ultimately aims to negate the very economic forces that are shaping our everyday lives in the classroom: Neoliberal business education.

Competition amongst university students is nothing new but has been intensifying in tandem with the neoliberal restructurings of universities in the UK (Wilkinson and Wilkinson 2023). Though the motivations of students are diverse and unfixed, the high price/debt of undergraduate degree programmes, declining staff-student ratios, frequent summative assessments, and the need/desire to survive and thrive in an ever more competitive market upon graduation encourage individualistic, instrumentalist, and competitive approaches towards university education.

Despite the current conditions of our higher education system, the authors of this book feel that interdisciplinary teaching and learning give students a chance to engage critically, reflectively, and creatively on topics that have real-world impacts. It enables the development of 'soul'. As Nussbaum argues, it is a way to make 'our relationships rich human relationships, rather than relationships of mere use and manipulation' (Nussbaum 2010, 6). By practising interdisciplinary teaching and learning, we can better recognise our relationality to each living being in the world, think critically, embrace reciprocity, have empathy, and live as truly 'global citizens'. All this can be enfolded within the curriculum and gives students a way to understand the complexities of our world by drawing on many different kinds of understanding of human (and nonhuman) experiences from various disciplinary perspectives. LSE100 allows students to become humble yet critical global citizens. As this book will demonstrate, it is only by moving beyond disciplinary boundaries that we can genuinely have well-informed and knowledgeable citizens of the world. At this point, it is worth outlining the history of LSE100 and documenting its past, present, and future role in fostering this type of holistic learning.
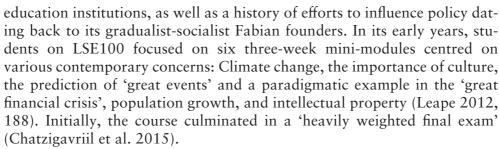
LSE100: Its Past and Present

LSE100 originates in a 2008 teaching taskforce established to address concerns raised by the National Union of Students Student Survey results and the sense that economists and other social scientists had been poorly prepared to respond to the 2007–2008 financial crisis (Secker et al. 2010, 2; Leape 2012, 183). After a pilot in 2009–2010, LSE100 became compulsory for all first-year undergraduates at the university in 2010–2011, initially taught across the second term of the first year and the first term of the second year, with students attending one of two weekly two-hour lectures in the 999-seat Peacock Theatre as well as weekly one-hour classes of about 12 students drawn from across LSE's (then) 15 departments and 37 undergraduate degrees (Secker et al. 2010, 3).

LSE, a single-faculty institution focused on the social sciences and consistently ranked amongst the most competitive universities in the world, has opportunities and advantages not necessarily shared by other higher

education institutions, as well as a history of efforts to influence policy dating back to its gradualist-socialist Fabian founders. In its early years, students on LSE100 focused on six three-week mini-modules centred on various contemporary concerns: Climate change, the importance of culture, the prediction of 'great events' and a paradigmatic example in the 'great financial crisis', population growth, and intellectual property (Leape 2012, 188). Initially, the course culminated in a 'heavily weighted final exam' (Chatzigavriil et al. 2015).
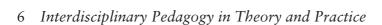
While many of the course's original aims and intended outcomes have remained unchanged, the content and structure have been considerably adjusted over the past decade. Initial changes included reducing the mini-modules to five and shifting away from the exam towards portfolio assessment. Still, the workload challenges of marking such large numbers of students persisted (Chatzigavriil et al. 2015, 5–6). There was also, perhaps, a sense that in spreading students so thinly across different topics, and with large lectures by leading academics such an essential part of the course, some of the interdisciplinary depth and rigour were being lost – problems which have also been encountered on interdisciplinary courses elsewhere (Turner et al. 2022). As at other institutions which have introduced first-year interdisciplinary modules in the second term, this could be compounded by students having spent an entire term in their disciplinary departments before joining LSE100, making it difficult for inter-department friendships to develop as intended (Turner et al. 2022, 13). Finally, some of the understanding of the relationship between the traditional disciplines and LSE100 has also changed. In contrast, Jonathan Leape, one of the architects of the course, primarily focused on 'multidisciplinarity'. Today's LSE100 course description discusses 'interdisciplinarity', and the interdisciplinary systems thinking approach runs through much of the course material (Leape 2012; LSE undated).

After its suspension during the covid-19 pandemic and the over-recruitment which followed the 2020–2021 A Levels scandal, LSE100 was relaunched and reformatted in 2021–2022 (Vanelli 2020, 4). Students now begin the course in the first term of their first year, continuing into the second, with a 'flipped classroom' approach which scrapped the large lectures in favour of fortnightly 90-minute classes (with approximately 25 students in each) and roughly 10-minute-long 'talking heads'-style video interviews with leading academics from across the university.

During the pre-enrolment process, students select one of three streams structured around an overarching question: In 2022–2023, these were 'How can we control AI?' (the only stream delivered in 2021–2022), 'How can we avert climate catastrophe?', and 'How can we create a fair society?'. The first four classes of the first term are content-based, dealing with material specific to these themes, and assessed through an individual 'event analysis'. The last class of the first term and the entirety of the second term focus upon an assessed group project in which students put together a 'strategic plan' or 'policy proposal' (delivered as a presentation and a 3000-word digital report)

to address a 'focus problem' of their choosing, with the class content centred upon applying systems thinking tools such as Donella Meadows' leverage points model (Meadows 1999). While the streams are relatively distinct and were designed semi-independently by the teachers working on them (and with the oversight of the course's co-directors), this systems thinking approach and some of the possible 'focus problems' tend to tie them back together – an essential requirement of the relaunch, pushed for by LSE's Climate Emergency Collective, was that the climate and ecological emergency would be embedded in every stream (Vanelli 2020, 4).
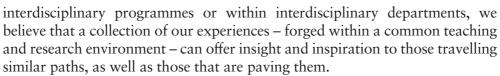
LSE100 was initially delivered by a large teaching team comprising a mix of hourly-paid teachers and a smaller number of teaching fellows (Chatzigavriil et al. 2015, 3). As part of the relaunch, LSE100 transitioned to being taught by LSE Fellows, a 'career development' position which includes time for research – eight (rising to nine in 2022–2023, another year marked by over-recruitment) with eight fortnightly classes each, and approximately 200 students total. The first term of the 2021–2022 course was taught online, whilst in the second term (due to the difficulties securing covid-compliant classroom space), some of us gained experience co-teaching in combined classes in a single larger room. In addition to our teaching and research, LSE Fellows are expected to take a more significant role in course design; each LSE Fellow had particular responsibility for designing one content-based class in the two new 2022–2023 streams, with the artificial intelligence (AI) classes, carried over from the 2021–2022 academic year.

The interdisciplinary department – headed by two co-directors and otherwise composed of early-career researchers on roughly identical contracts, plus professional services staff – has provided 'an arena for personal and collective reflexivity through which we came to understand and think strategically about the undisciplinary journey' (Haider et al. 2018, 201). We have a series of termly research seminars which encourage us to share our works-in-progress: Often a source of interdisciplinary insight as we find connections between each of our research, despite our different disciplinary backgrounds, and with the content taught on LSE100. It was from these discussions that the concept for this book emerged, drawing directly upon our teaching experiences (on LSE100 and elsewhere) and different theoretical and methodological perspectives to provide a pedagogically focused discussion of interdisciplinarity today – an instance, in a sense, of reclaiming a spirit of 'teaching-led research', as our priorities as early-career researchers evolve in response to our work as teachers (Harland 2016).

While we hope that this volume will prove valuable to those that are involved in establishing or leading interdisciplinary first-year modules or who are interested in interdisciplinary pedagogy more generally, we also wanted to take the opportunity to write for those who, like us, are setting out on an 'undisciplinary journey' which is as much about our teaching as it is our research. As course structures and module provision in higher education continue to change, and as more early-career researchers find themselves teaching on these types of

interdisciplinary programmes or within interdisciplinary departments, we believe that a collection of our experiences – forged within a common teaching and research environment – can offer insight and inspiration to those travelling similar paths, as well as those that are paving them.

The book consists of seven substantive chapters. In the first chapter, 'The tragedy of the knowledge commons: Reclaiming non/human knowledge(s) in the neoliberal university classroom', Catherine Duxbury develops a critique of the pedagogical practice in universities caused by their neoliberal character. Focusing on the absence of nonhuman knowledges eschewed by the market-oriented demands placed upon contemporary university education, the chapter traces the gradual demise of education as a public good. Commodified education has no rational reason to grapple with such issues, Duxbury argues, as the knowledge commons is being dismantled, tracing the political and economic shifts in higher education that have led to this situation. In the process, the promise of interdisciplinarity is under real threat, which is illustrated with reference to the example of critical animal studies and pedagogies.

In the second chapter, 'The climate crisis and interdisciplinary pedagogy', Lukas Slothuus argues that the kind of neoliberal education explained by Duxbury in Chapter 1 takes on a particular character in relation to the climate crisis. This crisis amplifies the problem of the commodification of education, as a more interdisciplinary approach is required due to the systemic character of the climate crisis. Slothuus outlines three different models of education and pedagogy which interdisciplinarity could take: Humboldtian, neoliberal, and critical, arguing that only a critical Humboldtian interdisciplinary pedagogy is appropriate for understanding and tackling the climate crisis. The chapter draws on the practice of interdisciplinary teaching of the climate crisis and the limits of doing this justice in a neoliberal educational context.

The third chapter, 'Students as partners in the competitive classroom' by Dave Ashby, zooms in on a particular development in some parts of the neoliberal university: The development of students into teaching and learning partners in a collaborative setting. This emerges in the broader context of a competitive classroom where students are pitted against one another as competitors rather than collaborators. The partnership model seeks to address this by empowering students and challenging privilege and unequal classrooms, yet new problems emerge in this partnership model. Ashby suggests three possible ways of addressing these problems: Encouraging a revision of contentious statements, encouraging suspension of judgement for students during disagreements, and occasionally directly challenging students who break the collaborative bond of the classroom. These can practically improve the collaborative partnership model in the neoliberal classroom.

In the fourth chapter, 'Education as liberation: Embodying and embracing inclusivity in the interdisciplinary classroom', Shereen Fernandez argues that educational spaces such as universities must be reclaimed for liberatory purposes through interdisciplinary and critical practices, drawing on Paulo Freire's liberatory pedagogies. Fernandez argues that the imposition of the

counter-terrorism Prevent duty by the British government on educators is a threat to democratic education, specifically targeting Muslim students and educators who have to self-censor and police their speech. Liberatory interdisciplinary pedagogy is difficult in the context of Prevent, particularly in an age of a purported wish by universities to decolonise their education and in the face of the genocide in Gaza.

Chapter 5, 'Centring the body as a site of interdisciplinary learning: A creative intervention' by Nina Vindum Rasmussen, emphasises the central role of the body in cognition and broader learning. Focusing on a feminist, creative-embodied interdisciplinary pedagogy, Rasmussen rejects the Cartisan dualist separation of mind and body in order to develop a more compelling proposal of how educators can incorporate corporeal dimensions into their teaching practice. This involves going beyond merely seeing bodies discursively but also physically in space, expanding on this through a range of concrete examples from the university: Creative exercises in research, practical workshops on algorithmic culture, and interactive teaching on an interdisciplinary AI course.

In Chapter 6, 'Fostering a relationship-rich environment in the interdisciplinary classroom', Emma Taylor shows how the creation and cultivation of relationships in the classroom is essential to good teaching and learning practice. Such a relationship-rich environment extends beyond the classroom as well, to include educators as colleagues. These relationships can combat inequality and hierarchies in the classroom, centring the role of care in ameliorating the often-individualised and sometimes isolating experience of university education. Taylor's chapter makes a compelling case for the importance of community and collaboration across disciplines to enhance both teaching and learning in the university.

In the seventh and last chapter of the book 'The indisciplinary schoolmaster: things in common on a team-taught interdisciplinary course', Daniel Frost argues that the work of Jacques Rancière is crucial for developing a vision of 'indisciplinarity'. Focusing on the case of an interdisciplinary university course on fairness, the notion of a 'thing in common' is central to Frost's claim that learning is a collective process whereby the teacher is not necessarily an expert transmitting their knowledge, but such knowledge is actively co-produced in the classroom. Frost ends with an important cautionary note for the entire book on the perils of interdisciplinarity being a possible Trojan horse that can smuggle in and carry the sharp end of neoliberal commodified education under a veneer of liberation.

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