A preview of *Words, ideas and optimal knowledge-building A foolproof 'self-help guide' to academic (and all other) thinking, writing, and problem-solving inquiry*

Introduction: Exemplary knowledge-building as a 'publish or perish' challenge?

The wider significance of the large and underestimated global problem of those who struggle to either successfully complete a PhD dissertation or to produce any really productive academic publications.

Over the last few decades, the globalization of the knowledge economy (along with societies around the world) has seen a linked explosion in the numbers of not just international universities – but also of higher education students and graduates, and likewise young academics trying to either get work or stay employed in those universities[1]. This has been especially so in traditionally non-English-speaking 'emerging economies' with a large emerging middle class (in China, India, South East Asia and so on). One related symptom of all this has been that 'academic English' (like 'business English', almost an industry in its own right) has become a key factor in the related exponential growth around the world in the academic (and other) 'publish or perish conundrum' that emerged generations earlier in the USA (e.g. Shumar, 1997). As we further discuss in the chapters of this book, other contributing factors to the emerging crisis of academic writing, research and publishing have especially included the dominant rise of English-language academic journals, the growing importance of research performance indicators in international university bench-marking systems[2] and the related 'commercialization' for profit of postgraduate as well as undergraduate degrees[3].

The actual term 'publish or perish' emerged in the American universities in the 1940s[4]. The growth in the number of American colleges and universities around that time anticipated the recent

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[1] Dovetailing with my long-term interest in a relevant and sustainable model of academic (and other) knowledge-building, in around c2010 I was also in a unique situation to clarify what was then the emerging Higher Education Hub model that had been apparently conceived by Singapore and which many other countries wanted to copy – that is, a model of higher education internationalization that had transformed a former 'public good' into an increasingly privatized, commercialized business by particular national governments. I was able to help clarify that Singapore had borrowed, appropriated and selectively transformed the 'higher education hub' internationalization model of its neighbor Malaysia in ways that worryingly subscribed more to the new GATs model than the traditional notion of education a as public good. [Richards, C. (2012). The emergence of the Malaysian Education Hub policy: Higher education internationalization from a non-Western, developing country perspective, *Going Global: The landscape for policy-makers and practitioners in tertiary education*, eds. M.Stiasny and T. Gore, Emerald Press, 157-168] Cf. also my Compare paper [Richards, C. (2019). Higher education privatisation, internationalisation and marketisation: Singaporean versus Malaysian models of Asian education hub policy, *Compare: A Journal of Comparative and International Education*, 49(3), 375-391. DOI:10.1080/03057925.2017.1413638.

[2] In other words, the 'best universities' tend to cite such ranking systems as evidence that they also provide 'a good education' (when the related diminution of 'teaching and learning' to rather prioritize 'research' makes this highly questionable in many instances).

[3] The 1995 General Agreement on Trade in Services (GATS) formally recognised education as not just (or no longer) mainly a 'public and common good' to be supported by governments as such. As discussed in a number of our related policy essays that should be the focus of another book, this development influenced various related 'commercialised' imperatives of higher education internationalisation over recent decades.

[4] As a term about the pressures for academics to 'publish', it is believed to have been first used by Logan Wilson in his 1942 book *The Academic Man: A study in the sociology of a profession*.

global development which in some ways replicates it. From the beginning the term generally referred to the pressures on young academics to publish academic research work as a key requirement to ensure future success in an academic career after at least getting an initial academic appointment or work. The recent global version includes that original meaning of the term, but little doubt it has come to suggest a whole range of related imperatives that include the 'rankings competition' between institutions as well as the 'educational competition' between students trying to create a future for themselves.

In his influential critique of an emerging 'knowledge factory' model of the American university in the later stages of the 20th Century, Aronowitz (2000) took a selective view of how a growing 'credentialism' (also in international higher education generally) has ironically been linked in recent decades to rising unemployment rates for graduates[5]. According to Aronowitz, many universities have typically defaulted on their traditional purpose to also encourage deep learning, critical thinking and 'civic-mindedness' (etc.). However, his explanation for this move (i.e. that to better service the needs of 'industry' universities have adopted a 'corporatized model' of becoming mainly focused on the mass-production of 'credentials' for compliant workers with specialized training only) has only partial relevance and is somewhat inaccurate. This is evidenced by how the rising rates globally of university graduate unemployment are mainly because of a basic and growing mismatch between academic training and industry needs. Or to put this another way, industry employers and community observers alike have grown concerned that university degrees and other higher education certificates have become increasingly devalued because of, and not simply despite, how graduate 'credentials' have become so specialized – and in the process graduates have likewise become 'less employable' because of a conversely growing 'lack of generic or soft skills'.

Aronowitz's related view that universities have increasingly given up on traditional notions of encouraging deep learning and critical thinking (and indeed some of the other generic skills that many universities are likewise trying to superficially 'retrofit' - such as basic communication skills) is at least selectively correct. But it still ignores a wider and deeper problem (addressed in Part A) of 'deep learning' sacrificed for more influential imperatives of 'descriptive knowledge' and/or 'surface learning' (especially in terms of universities as bastions of 'modern science'). This is reflected in how the term 'knowledge factory' might be more appropriately applied to the changing landscape of the university 'publish or perish' imperatives as a variation of higher education credentialism. Conversely then, the very integrity of the academic research process has come under growing suspicion and criticism from the tactics of many of the growing number of 'would be academics' to 'get published' as either an extension of postgraduate degree completion or for career advancement. Common to universities as both sites of higher education and research is the convergent criticism also in recent decades (e.g. Lewis, 2006) that an increased obsession with quantity or numbers has too often been at the cost of quality or integrity maintenance.

In recent decades also then, the publish or perish imperative in increasingly research-focused universities has mostly been focused on the number of postgraduates' undertaking mainly Doctor of Philosophy (PhD) degrees - but also including Masters degrees and 'professional doctorate' degrees. Many universities seem to have forgotten that even a postgraduate degree (with universities still also known as 'places of higher education') is still basically also a process of

[5] In the context that university degrees have generally become 'the basic requirement for any professional occupation', Gatenby (2015) likewise points out that the related mass production of 'certification' has been linked to perceptions that (a) 'academic credentials are losing meaning and value', and (b) that qualification are likewise being increasingly and too often reduced to mere 'status conferring pieces of paper'.

'learning' requiring adequate support and educational 'structure'. As Lewis's excellent book points out so well, many of 'the best' modern universities (such as Harvard according to Lewis) have effectively become research institutions whilst conveniently forgetting two related points. One is that universities ultimately remain places of 'higher or tertiary education'. Second, 'research' within or beyond a university is likewise still ultimately and basically some mode of 'formal learning' (even 'industry scientific research'). [*See also our related book sub-titled 'optimal lifelong learning from experience, reflection and 'inner wisdom' (Richards, 2026a). In our related model, all forms of effective 'knowledge building' represent in some way transformational processes of 'deep learning' – as distinct from the kinds of 'surface learning' that typically inform mere 'descriptive research'*].

The traditional model of the PhD has been so much focused on the assumption of a lengthy original research project written up as a dissertation or thesis, that the importance of also providing support and guidance of this - as also a guided or supervised 'learning process' - has been often scarcely acknowledged or adequately assisted. Rather the factor of 'unhelpful or even obstructive supervision' (interpreted by many university departments and their increasingly pressured and time-challenged academic staff as mainly one of 'gatekeeping' entry into academia) is often cited by PhD students who 'fail to complete' as a critical factor in this. This is in addition to other related challenges such as isolation, personal hardship, and unrealistic expectations.

This brings us to the 'big secret' about PhD students which provided the key motivation for some of the ideas and methods discussed in this book. Most universities around the world (including universities in the USA, UK, and Europe as well as the 'emerging economies' and others) tend to avoid acknowledging and would rather you not know about this related problem. It relates to how a very large percentage of such student cohorts (i.e. often of 'up to 50%' and sometimes much higher) in universities around the world typically 'fail to complete'. Instead of any reference to 'failure rates' this issue has long been typically referred to by Universities as one of mere 'attrition rates' - as if this was ALL (and not just partially) some kind of inevitable natural 'survival of the fittest' process.[6]. So, most universities do not advertise this fact. And if they reference this situation at all, tend to do so only indirectly as 'incompletions' explained as an apparently normal and acceptable case of natural 'attrition rates'. At least in the USA, UK and Europe over the last two decades (where they have been particularly active in also attracting international fee-paying postgraduate students from other countries), wider 'higher education sectors' (but not usually individual universities) have gradually come to acknowledge and at least 'begin' to more constructively address the both the general problem and some of the various related core issues discussed in this book [7]

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[6] E.g. An example from Australia (where there are high rates of international postgraduate students): "*From 2010-2016 437,030 domestic and international students enrolled in postgraduate research programs in Australian public universities. Only 65,101 completed within the same six year period. This discrepancy does not necessarily mean postgraduate research students "failed" their degree*" [theconversation.com/phd-completion-an-evidence-based-guide-for-students-supervisors-and-universities-99650]

[7] From the late 1990s there was growing alarm in American universities about what was referred to as the '*typical 50% attrition rate of PhD students*" (e.g. Caruth, 2015). A 2025 article published in the J*ournal of College Academic Support Systems* (https://doi.org/10.58997/7.1pp1) refers to how "*Reported statistics on doctoral attrition over the past decade* [in American universities] *have consistently remained at 50%".* In the UK similar earlier high rates of PhD attrition rates have come down significantly (although on closer inspection much of this may be related to tactics of often trying to disguise or only superficially address the larger contributing issues). So, despite various attempts to address the 'PhD failure' problem, a 2019 report

To gain entry into any particular university postgraduate research degree program is usually quite difficult and often just open to the 'cream of the crop' of 'undergraduates' coming through - that is, to some of the smartest and resilient as well as ambitious and/or idealistic young people coming through. But the shameful truth that is even ignored in the uncommon cases where the larger problem of 'PhD incompletion (failure) rates' are at least acknowledged by higher education systems around the world is just how traumatic and destructive the process can be to students not provided with the appropriate support. But this is not only for those 'who fail to complete'. The lives of these 'promising students' are not always ruined, but are too often heavily impacted and negatively so – sometimes tragically and mostly in various ways including psychologically and socially as well as financially[8]. And there are too often related tales (some now being documented) involving abusive misconduct towards sometimes cohorts or teams of PhD students under a supervisor apparently intent on exploiting, manipulating and even bullying in order (mainly) to further their own academic publication numbers[9].

However, as we discuss in coming chapters of this book, experience has taught that the main reason really for non-completions is that so many people tend to get 'lost in the process'. Yet a large percentage those who do 'complete' end up submitting what may be referred to as a 'lost dissertation' (in at least one or perhaps all of the "four ways and stages of a 'lost' dissertation" indicated in chapter 3)[10]. This indicates I think a basic problem with both postgraduates and others understanding (and getting supported to understand) the crucial importance of achieving early on a relevant 'methodology of design' (which might otherwise be referred to as a relevant 'focus and structure' for developing and writing up an appropriate 'thread of inquiry'). This problem is also I think at the heart of an increasingly 'short-cuts' focused industry of academic publishing that is increasingly in crisis – especially as the 'AI revolution' takes hold with its facility for 'co-writing' interface agents (i.e. artificial entities who may seem human-like but are not).

As we discuss below, many of those who do graduate with a PhD also end up becoming quite cynical about academic work, careers and scholarship or 'publishing'. Many of them had the residual hope that they would be able to find and pursue some intrinsically interesting inquiry purpose and challenge that would be a great adventure of ideas they could later share with the world. And many had hoped for a career of researching and/or teaching in a future university. But the casualization of academic work and positions in many countries saw postgraduate researchers as the focus of low-paid short-term or part-time contracts for academic duties (extending from 'marking assignments' or providing research assistance to full-time academics to other teaching and administration work). As Bhatnagar (2022) pointed out not long ago, "*postgrad researchers are the cheap labour of Britain's universities".* But this situation has often not improved after graduation. For instance, by 2021 '*almost one third of Australia's academic staff were employed*

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by the *Times Higher Education* [https://www.timeshighereducation.com/news/third-phd-students-europe-fail-complete-six-years] indicated that (with supervision highlighted as a central challenge still) around a "*third of PhD students fail to complete in six years* "' (or at all).

[8] A not atypical account of a PhD student who 'did not complete' was posted to the *Lex Academic Blog* (www.lexacademic.com/blog/it-happened-to-me-how-i-failed-my-phd-and-how-to-pass-yours-lex-academic-blog/)

[9] E.g. Uni of Trente 's Independent Journalism piece 'how PhD students suffered years of misconduct, www.utoday.nl/spotlight/76308/how-phd-candidates-suffered-under-years-of-misconduct-by-professor-m

[10] All the four 'ways and stages that a PhD postgraduate and/or 'their dissertation' 'get lost' mainly discussed in Chapter 3 are reinforced by related but additional counter-productive tendencies. These include 'getting lost' because of a paralysing and fearful perfectionism, and likewise some failure or refusal of the basic requirement that one should first 'put ideas into your own words'

as casuals, or contractors on a part-time basis' (Burch, Khosa & Oxdil, 2023). Those within the system have increasingly become worried about their own positions and further disinclined to voice complaints. As universities have become more focused on pursuing international rankings as a numbers game in terms of an intellectual culture of 'mediocrity and institutional silence' (e.g. Sham, the less they were concerned to remain or to become effective learning organisations – for instance, in terms of the seven dimensions of Watkin's and Marick's (2003) influential model of continuous organizational learning and transformation.

As implied by the short overview above of the economic globalization imperatives behind how the 'new publish or perish' syndrome has emerged in recent times, the PhD failure rates are another key indicator which also serves as an indictment of a university system increasingly more worried about its numbers, reputation and what might be called the new commercial bottom-line for universities encouraged by many governments to go in this direction. And so, there is often a sense of desperation behind the obsession with many of seeking a 'short-cut' that will somehow solve any or all of the main challenges faced. Of course, those who prioritize taking 'short-cuts' are also reflecting the deteriorating values (but growing chronic stress and uncertainty) of a wider emerging knowledge economy in the 21st Century modern age that Bauman has called 'liquid modernity'.

Since there has been an acknowledgement of (and greater focus on) on the significant issue of PhD 'incompletion/failure/attribution rates' the higher education sectors in some countries (especially in Europe) have been able to show some related general improvements in these rates. This has apparently been linked to more proactive support and guidance in awareness of related issues. But this is typically only compared with universities which tend to leave their postgraduate researchers 'to their own devices' (i.e. let them 'sink or swim') with supervisors seen as more gatekeepers than helpful guides[11]. Some of the 'remedies' adopted by universities to an at least internally-recognized problem have had to do with some alternative models provided (e.g. collaborative or 'teamwork' PhDs, 'cumulative PhDs' by publication, formulaic program designs being given to particular postgrad cohorts to follow, and 'rigid monitoring') as well as 'revised' expectations as well as definitions about a 'successful completion' of the process or candidature (as well as when it actually 'begins' and 'ends' to deter the practice of some researchers remaining on the books endlessly).

We think that on closer inspection the remedies to the 'problem' have generally not fixed but rather further disguised or ignored the underlying problem/s – and in the process have perhaps weakened or lost the traditional rationale of undertaking a PhD (increasingly a 'commercial transaction' from both perspectives and their related expectations). A case can be made then that this is often still at the cost of the 'traditional integrity of the process' as well as the projected 'traditional model of a written dissertation' (especially in the humanities and the social sciences) giving candidates the opportunity and related assistance to make an 'original and substantial contribution to knowledge'.

[11] It should not be necessary to point out the following - but we will to avoid a misunderstanding here: Whilst many of the university systems of universities around the world may have been failing to sufficiently provide the guidance needed, this is not to say that there are many individual or local exceptions to this – i.e. the many university PhD supervisors (and indeed particular University departments) who do their best and often go out of their way to do so.

An example of this is '*the growing disquiet over PhDs by publication'* – the focus of a recent *Times Higher Education*[12] article (Bloch, November 28, 2025). This term (and its alternative in some countries – the 'cumulative PhD') generally refers to a growing number of universities (especially in certain fields like economics and business administration) which no longer require the submission of a coherent or overall 'dissertation' for the PhD award and, instead, require 'several published papers'. The problem is that an initial model that was supposed to demonstrate substantive achievement (and in many individual cases early on did so) has often then been 'watered down' or otherwise compromised– especially in terms of how such papers are so often attributed to 'co-authors' which may include 'other collaborators' as well as 'the supervisor'. This has been overseen not just by the participating universities (in terms of criteria such as authorship, originality, and a relevant outcome) but also by students inevitably themselves looking for 'shortcuts' to produce those papers and get them 'published'. And similarly fueling a rampant 'cash for publications' industry of new often 'predatory' academic journals (e.g. Wallace, 2019) competing with established ones (etc.) many universities (in developing countries especially) either informally or formally then began requiring a certain number of publications *in addition to a dissertation submission* to be awarded a PhD[13].

With academic careers also generally defined more than ever before by 'academic publications' (rather than the primary 'teaching and learning' purposes of universities as institutions of 'higher education') postgraduate researchers need to compete with early career academics. And with this same imperative repeated exponentially in all the new universities that have arisen around the world in recent years (including in emerging or developing economies), it's not just the shortcut of publishing in 'predatory journals' that have attracted many. There is general indication that many are taking shortcuts in the writing up or *production of academic papers either without real or much 'substance' or with fabrications* – in turn, papers which partly (or wholly) plagiarize others or simply and fraudulently 'fabricate and/or falsify' research evidence and findings (Oransky & Marcus, 2023). In certain fields (especially those that involve some kind of 'empirical results' and post-university scientific careers) there is a growing phenomenon referred to as *'the replication or reproducibility crisis'* (Institute for Policy Research, 2024) – published papers with 'results' (then suspected to be 'manufactured') that other researchers are then unable to reproduce[14].. And then there is the growing associated claim that the main commercial publishers of most of the 'non-predatory' academic and scientific journals are themselves involved

[12] Previously a supplement of the UK newspaper *The Times*, the 'Times Higher Education' (THE) is not just a now separate publication. It is also one which in collaboration with the academic publisher Elsevier in particular (as well as others past and present) provides an influential list of World University Rankings.

[13] The basic focus of exploitative practices by certain academic journals – including by those which have been blacklisted (e.g. by 'Beall's list' of predatory journals) - is the 'author processing charge' to get or be published. This especially applies to the many Open Access journals that have set up mainly in developing countries since around 2010. But many would argue that the whole industry of academic publishing (including some 'scholarly journals' of the past) has becoming increasingly 'commercialized' (and often 'predatory') in terms of the prioritizing of a costly 'numbers game' over a 'traditional scholarship' rationale.

[14] As Chakraborty S. (August 14, 2025) wrote in a Leiden University blog article "*Between 2018 and 2022, research articles witnessed a 22.78 growth to 5.14 million. Yet concerns over research integrity persist. In a 2016 survey by Nature, involving over 1500 scientists, more than 70 per cent failed to replicate another scientist's experiment, and over 50 per cent were unable to even reproduce their own results. Nearly a decade later, another survey by Nature, having more than 1600 researchers, reinforced these concerns, with the majority identifying a worsening reproducibility crisis while citing 'pressure to publish' as the prime cause behind it*."

in variations of some 'lucrative scam' at the general expense of academics as well universities (e.g. Abizadeh, July 16, 2024).

Even the 'good journals' of the past are finding it increasingly difficult to separate quality papers from those with 'issues'. And it is no longer so easy to find conscientious academics willing to volunteer to be part of (and maintain quality standards in) the typical academic 'peer review process' – but a good deal easier to find those willing to circumvent such standards for at least indirect personal benefit in some way (e.g. Irfanullah, April 9, 2025). The practice of *'citation collusion'* (academics colluding with 'associates' to cite each other to promote fraudulent referencing as a means of inappropriately or even dishonestly 'inflating' impacts and rankings) was reported recently to have been organized as 'cheating on an industrial scale' (Ansede, May 24, 2024). And there are other cynical 'recycling' strategies – such as that called '*salami slicing'* ("*fragmenting single coherent bodies of research into as many publications as possible*") (e.g. 'Dr Nancy', Jan 29, 2025). Even more serious and threatening are the '*paper mills'* which sell authorship on (and citations for) 'fake' academic or scientific papers – a practice that reportedly has become rampant (and now done 'in bulk') at the current time with the use of AI programs to greatly inflate this earlier practice further (e.g. Langin, 12 Feb 2024). These are the kinds of strategies which are likely to see the related misuse of AI programs designed for 'helping' with academic writing purposes.

When the 'emerging industry' of AI programs or agents advertised to assist with writing PhDs and academic papers came along, it was then able to exploit the various institutional and student imperatives for effective 'shortcuts' to the larger problem of effective yet relevant academic research and writing models. Some of these AI programs or agents are promoted also alongside assurances clearly at odds with the basic (and related ethical) requirements (e.g. such claims as 'we will assist you to write a PhD in as little time as a week' - made by one such AI agent - being an extreme but not atypical example). So, universities are increasingly in a further quandary about how to handle the situation.

Some of the LLM agent tools (e.g. for assisting with information searching and for 'language correction') may have a role to play in particular parts (e.g. searches as part of the literature review process) or generally with overall editing and revision – and therefore may have some ultimately acceptable role in 'assisting' with some of the related issues behind the attrition/completion/failure rates for PhD programs. As Brook (2025) indicates, the Large Language model (LLM) agents used for any kind of writing process have effectively become 'co-authors' in the typical usage of AI programs by an increasing number of would-be academic and other writers. But a dissertation is supposed to have been an original production of a particular candidate not a 'co-written' job – or one mostly 'written by a non-human generative AI agent.

However, generally speaking the AI revolution threatens basic notions of authorship, originality and 'contribution' that that get to the heart of the question of 'what is a deserving PhD award' along with the general relevance of the accreditation function of global higher education[15]. As Reeves (9 Dec, 2025) has pointed out it's not just artificial intelligence which has what has

[15] As Reeves (2025) goes on to warn about related threats to the future of all academic research "*AI allows the volume of rubbish to be scaled up to unmanageable levels so that traditional quality-control mechanisms like peer review are overwhelmed. We are on the verge of academic virtues and standards falling away, the "signal" being drowned out by the "noise" across the board, at which point research may face a downward-spiralling bad imitation of itself, from which there is no obvious escape*".

been referred to as a 'slop problem'[16]. As he further indicates, "*the problem is not restricted to AI research – their slop generators have flooded other disciplines that bear no blame for this revolution. As a peer reviewer for top ethics journals, I've had to point out that submissions are AI-generated slop'.* And as Vergano pointed out the same week, '*AI slop is spurring record requests for imaginary journals'* by academic researchers to their librarians/.

But when used to also accelerate the production of academic outputs (along with other modes of AI coding) with little vetting or concern for quality standards – a process known as 'vibe coding' – then it is as much a temptation for all (and not just postgraduate) researchers as it is a challenge for 'scholarly publishing' generally[17]. Down (6 Dec, 2025) has written about the example (of what has been termed 'vibe coding') involving the CEO of an AI research and mentoring company for high schoolers. Whilst also in the process of becoming a graduating student. this man had recently claimed (it seems) to have authored 113 academic papers in the newly emerging academic field of 'AI research' -not just this, but doing this in just one year whilst also undertaking what may have been a mere undergraduate computer science degree. In any case, this is just one of a growing number of such examples of the kind of 'short-cutting' sacrifice of the relevance of 'deep understanding' that some would say has increasingly characterized the wider field of academic publishing.

Yet we also need to recognize that 'the AI challenge' is just one additional dimension to several related existing problems. The main one is that at its core the modern university has come to privilege 'mere data' over knowledge directly grounded in human experience and/or thinking)[18]. But then there are the related issues and examples set for PhD students aspiring to enter academia. This is typified by the recent case of an associate Dean at a Hong Kong university who immediately resigned after having to formally retract a published paper co-written with a PhD student who used 'AI-generated references to publications that didn't exist') (Ho, 18 Dec 2025). The traditional quality standards of adequately recognizing, valuing and promoting patient and rigorous scholarship (or at least relevant and insightful intellectual depth) often seem to have long gone by the wayside. Hence, it is perhaps now apt to refer rather to a 'shortcuts—dominated' 21st Century academic ethos?

But does it have to be this way? Or can the 'traditional dissertation' model of a demonstrated and clearly proficient original contribution to knowledge worthy of a doctorate be 'rescued'?

As we will indicate further in this book, there is yet another approach by which 'would-be academic knowledge builders' might apply a sufficient degree of 'academic integrity' and likewise effectively 'fail-proof' the key ways, stages and elements of both the PhD degree process and outcome. As described below, many of the ideas and methods linked together as part of a general method outlined in this book were developed to more helpfully support postgraduate students we could see were struggling and typically 'lost' in various ways and stages of the process. By

[16] The US dictionary Merriam-Webster has defined AI 'slop' as "*digital content of low quality that is produced , usually in quantity, by means of AI*". This reflects how AI is prone to superficiality and inbuilt inaccuracy as well as bias. AI 'slop' is often compared to 'spam' as a ind of digital pollution or rubbish.

[17] The term 'tortured phrases' (including the well-known example of 'bosom peril' for 'breast cancer') has been invoked to refer to the more obvious signs that an AI chatbot has been used to reword plagiarised text in academic writing (e.g. Cabanac, Labbe & Magazinov, 13 Jan, 2022).

[18] It at least highlights that not only will a compulsory 'viva defense' stage (i.e. 'oral testing' for understanding) be increasingly important to retain a process with sufficient integrity – but that this will be needed to be part of a wider integrated solution to a number of the related issues (including those involving the distinct parts and stages of in the research and writing of a dissertation or any other 'academic paper').

contrast, our own efforts over some years to develop and share a 'foolproof approach' guide to more effective academic writing and research' was not one of looking to provide the kind of 'alternative shortcuts' to getting a PhD by avoiding or circumventing the traditional model (i.e. of a substantial inquiry which original contribution to knowledge) that some other individuals or rather their institutions have come up with or have been seeking – indeed, quite the reverse.

As will be shown in the various sections of Part A. (i.e. re *'the four key ways and stages that postgraduate researches often get lost in whilst undertaking a dissertation'*) the larger emerging problem is not just exemplified by the 'non-completions' – but perhaps more tellingly in many ways by how the 'completed dissertation' so often becomes rather a 'lost thesis' without a pivotal relevant question (both significant in its own right and in relation to an existing field or topic of 'knowledge') linked to a demonstrable 'original contribution to knowledge') to develop an effective response that also integrates the various parts of academic writing and research[19].

As the introduction chapter indicates, we have long been interested in various ways in which academic writing and research can be more effective, retain a basic integrity and achieve the goal of 'making original contributions to the sum of human knowledge'. So it was that around two decades ago that we found ourselves invited to see if we could assist a struggling PhD student to somehow avoid her apparently destined fate to 'fail' (with her supervisors at that time projecting a likely refusal to allow a 'final submission').

We knew that we might only be able to help advise on the 'rewriting' (and related re-working) of an already completed dissertation draft if there was 'something there' sufficient to work with in and across the introductory, literature review, methodology and research 'data collection/analysis' sections. So on top of the key requirement of clarifying a relevant and viable central research question, we realized that the various related parts of a dissertation needed: to be able to demonstrate: (a) a sufficiently integrated effort generally, (b) that this should also be further indicated in the various linked ways that in both the general and particular 'answers' to a central or pivotal focus research question, and (c) how the basic protocols of academic writing and research remain the key to demonstrating the essential integrity and quality of the research overall. After being able to identify find a hidden basic integrity to the works so far of this particular postgraduate student, we were able to further assist them in the 're-writing' of this before any formal submission by which they were then able to achieve 'successful completion' ultimately.

Our efforts with this (and also assisting some other such 'postgrads' led to an invitation to work in a different university in a different country doing more of the same. So it was that I soon found myself formally (if unusually) appointed as the 'dedicated mentor' to several hundred postgraduate research students (many of them international students often struggling with other as well as related challenges to postgraduate research study). My brief was also to support the appointed supervisors who were often too busy and preoccupied with their other responsibilities to give these students their full attention to help at either the outset (i.e. find an appropriate research question or problem) or in later stages or parts of the process. As much as I was able to be helpful about various aspects of the 'academic writing process', I soon realized that my main role for most was in generally assisting with the one thing that universities around the world typically ignore or

[19] Whilst a focus on 'related issue of the writing process' (i.e.) has also generally been ignored, one useful exception to this has been provided as part of a Franklin University guide (https://www.franklin.edu/blog/6-reasons-people-fail-to-finish-their-doctorate-how-to-finish-yours. The rise of 'writing book camps' in the USA and American over the last decade has further put the focus on the pivotal importance of universities not just assisting with relevant skills - but recognising that better PhD completion rates are directly linked to the encouragement of more effective writing as well as related research strategies.

underestimate - that is '*the methodology of academic writing and research design'* (as distinct from the typical 'research methodology' course so often these days focused on usually quantitative ways of first collecting and then descriptively analyzing 'research data').

Many universities discourage or even forbid students from any early decisions on coming up with some particular research focus to be further developed from an early or initial stage. The related tendency to likewise often demand this be found in 'long extended searches of particular fields and/or literatures' also encouraged a related top-down approach that typically ruled out considering prior or intrinsic 'interests' – and whether this might be converted into an acceptable or appropriate academic design. It is on those often required long initial searches when many postgraduates first get 'lost'. A related effect has too often been one also where a literature review section is followed by the mere statistical analysis of 'data' too often not linked to any central relevant research question with any originality or substance (the related problem of researchers getting 'lost in the data'). And then the typical last-minute 'dissertation rescue-job' (of putting it all together in rushed and somewhat ad hoc fashion as a submitted dissertation) – if the postgrad has persevered to make it this far - is almost guaranteed to result in 'hasty writing and/or editing' that may well typically and/or inevitably 'lose the reader' (even an examiner who has special knowledge of a particular academic area or chosen field).

As part of my new role, I conducted regular workshops about the key stages and parts of the doctoral dissertation process. But I also made myself available for one-on-one consultations to assist with either finding or refining the most effective and relevant research focus that would both help clarify and concentrate as well as motivate the writing of a dissertation. As indicated in Chapters 3 and 4, I soon came up with a well-received and effective as well as efficient method (and also template) for being able to work with just about anyone to come up with the possible research design of some sufficiently 'academic question and topic' in a typical 30-minute consultation. My 'empty template' model to explore possible research designs required one central research question (with just two nouns to link particular and general knowledge domains) and three supporting questions that would help frame the related 'knowledge-building pyramid' processes of both 'literature review searches' and similarly focused 'data building and analysis'. We would also produce together through dialogue around five sentences that as an 'abstract' could frame the overall purpose of either the PhD or some related academic paper linked to this.

In this way I then developed an introductory or overview workshop which first highlighted how an effective initial research design and question could help postgraduate (and early career) researchers avoid 'the four main ways and stages' that they typically either remain or become 'lost' in – either throughout the overall process or as rationale for 'discontinuing' or 'dropping out'. When I was later invited by other departments or universities to conduct such workshops I would always get an immediate 'reception' when: (a) I would begin by rhetorically asking if anyone present also (like many others do) felt 'a bit lost' either generally or in relation to particular requirements of the PhD/research process), and (b) then followed up by saying that at the very least they should get from the workshop a better appreciation of the importance of finding some viable 'thread of inquiry' linked to a relevant focus question which (like Ariadne's thread) – and a related appreciation of how this might help them apply a 'foolproof approach' to 'avoiding the four main ways and stages that researchers get lost'.

And so, this book writes up these methods as part of a 'self-help guide' also to what might be referred to as the related process of 'optimal knowledge-building'. To the extent that a 'relevant problem' might be framed as both an initial 'focus question' and a related framework of supporting questions to engage both 'the existing literature and related theories' and a data-gathering process

linked a relevant framework of analysis; this approach generally helps optimize the process with a 'thread of inquiry' that clarifies and encourages an effectively integrated culmination of 'the four ways and stages' through an effective related design or plan. The projected outcome of such an approach is a meaningful response and 'answer' to some 'relevant academic focus question'. This should help guarantee even in a modest way some 'original contribution to knowledge' as ultimately (or overall) a transformative process to some sufficient degree rather than merely superficial and generally disjointed or ad hoc 'descriptive' academic writing and/or research.

The key to such a design then lies in how the 'key words' of any writing can and should link or correspond with the 'key concepts' (and related 'ideas') of an academic or other inquiry. In other words, either explicitly or implicitly an effective dissertation should entail an integrated 'semantic map' that links the different sections in similar fashion to how this (also as a related 'concept map') guided a focused 'thread of inquiry' from the initial to culminating stages of that inquiry. In such ways then, a relevant 'thread of inquiry' can and should help any thinker, researcher, thinker and/or writer to avoid getting lost' in 'unfocused distractions', 'in the literature', 'in the data' and 'in "write-ups" that typically lose the reader'.

It's an approach (with related methods) that is 'foolproof' to the extent that it is guaranteed to reliably help postgraduate students, early career researchers, and (applied also to non-academic productions) and also various others 'avoid getting lost' - generally as well as in the 'particular ways and stages'. Such an approach does not just encourage but demands a transformative not 'merely superficial or descriptive' process of knowledge-building as also a process of deep learning. This is in large part because the focused use of questions, words, concepts and related inquiry designs likewise demands an effort to achieve and maintain an effective 'deep understanding' of the overall project undertaken. And any such understanding further engages individual as well as shared 'prior knowledge' both experientially and reflectively (as effective critical thinking). In this way an effective inquiry design should result in the achievement of at least some modest 'transformation of knowledge' that by definition will be 'original' as well as relevant to others if it was a recognizably 'relevant question' in the first place.

Additional note - Much of the advice in this book (in subsequent essays) has relevance beyond postgraduate researchers and early career academics wanting to 'get published' or achieve the 'successful completion' of a research-based project and dissertation. So it should be further pointed out that the various related insights and methods discussed should also be useful to really *anyone who wants to engage in 'optimal knowledge-building'* as (1) a process of reflective inquiry ultimately grounded in human understanding or experience, and (2) a process also one of meaningfully linking 'words and ideas' as a relevant and constructive 'general concept map' as well as related 'semantic maps' (i.e. as progressive lexical coherence, grammatical/textual cohesion and communicative relevance). In other words, the 'traditional PhD dissertation' is useful as a focus for discussing the process of 'optimal knowledge- building. This is not because it necessarily provides privileged examples of this, but rather because it can and should be re-approached as a (potentially) exemplary genre of the general process – as well as a recognized 'pinnacle' (at least) of academic research-related writing which effectively demonstrates mastery of recognized, substantial and sufficiently 'original' knowledge-building[20].

[20] This is not unrelated to the history of how the modern PhD derives from the formal recognition in European medieval universities of a *magister artium* degree - a 'master of knowledge'. This is a worthy title indeed that should still really mean something today, but with a history that has unfortunately become too often forgotten or simply ignored and degraded.

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