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Peak PhD and Lifelong Learning: Valuing Difference in Doctoral Programmes

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Abstract

This is the moment of the Peak PhD. There are more students in international doctoral programmes than at any point in history. Concurrently, there has never been a greater diversity of doctoral modes, spanning from the traditional doctorate and professional doctorates, to artefact and exegetical models, and PhDs by Publication and Prior Publication. Yet the ideology of the degree – perpetuated through university marketing materials and perpetuated on Google Images – features young men, in lab coats, learning from an ageing – and usually male – professor. This ideology is not real. More women than men enrol in doctoral programmes in many nations, and the average age of students is increasing. Noting this new reality for doctoral education, why are students drawn to this programme? This article frames the PhD within the framework of lifelong learning, exploring why a senior and successful surgeon would enrol in a doctorate, and what this enrolment exemplifies about the future of the degree.

Keywords: Doctor of Philosophy, Andragogy, Diversity, Motivation, Deficit Model of Teaching and Learning, Lifelong Learning

Introduction

PhD programmes are filled with assumptions that can be delusional and frequently destructive. As the doctorate has diversified in both the mode of enrolment and the sociological background of the students, these assumptions intensify attrition and reinforce the experiential ideologies of supervisors / advisors, often unchecked by the burgeoning research fields of Doctoral Studies and the Scholarship of Supervision. It is valuable, and following on from Acker and Haque's research, to "struggle to make sense of doctoral study" (2015). Our article activates the voices and views of a completed PhD student and his supervisor. We are both Australian, but both live outside of Australia. We are similar ages, but were trained in different disciplines and summoned distinctive career pathways.

This article occupies a space of difference, to explore how and why experienced medical science professionals return to formal education and doctoral education, and shows how their presence is a metonymy for the wider transformation of the PhD in terms of the modes of enrolment and the sociology of the students. To enable this project, the stories of doctoral supervision are required (Lee and Williams, 1999). The insights from narrative theory (Propp, 1968; Todorov, 1971) are deployed, moving through both storytelling and storying (Haven, 2007; Phillips and Bunda, 2018). There is a reason for this unusual structure and methodology. This article holds the space for difference, discomfort, challenge, despair, meaning and mattering, commencing with an exploration of the PhD in its definitions and diversity, then moving into a reframing of the doctorate as a mode of lifelong learning. The example of Dr Christopher Young and his PhD by Prior Publication is discussed, concluding with a discussion of the consequences of the deficit model of doctoral education.

A PhD for New Times (Tara Brabazon)

Definitions, determinations, and legacy assumptions of a PhD permeate national legislation, institutional policies and procedures, and the attitudes and expectations of students and supervisors. Often, these three clusters of information do not align. One of the strangest memories I gained as a Dean of Graduate Research was a conversation with a student from the experimental sciences. I was delivering a training session on PhD examinations. The student raised her hand and asked why I was discussing examinations. She – with great confidence – confirmed that a PhD involved doing experiments in the lab and there was no examination in the degree. She had assumed that completing experiments was the only requirement for the awarding of the qualification. Her odd question indicates wider failures of transparency and accountability in teaching and learning in higher education from the first year in an undergraduate degree through to doctoral education. The reality of learning is not shared with the students. The reality of a doctoral degree is not shared with students. These assumptions have profound consequences, including not preparing students for examination.

The PhD is the highest degree awarded in a university, noting the caveat of the higher doctorate. It is also an international qualification. It must demonstrate the capacity to move between nations and signify a standard of verifiable intellectual ability. A few characteristics verify the credibility of a PhD. It is based on competitive entry. Students must hold an already validated qualification to gain entry. The intellectual ability in the candidate is assessed. It is an elite qualification, not because of class or money, but on intelligence. While differing by nation, only 1% of the world's population holds a PhD, and entry is granted through an intellectual track record of excellence (World Population Review, 2024).

The form and content of a doctoral research project must also be assessed. While the thesis has particular requirements and a genre of writing, the definition of a PhD is an original contribution to knowledge. Masters synthesizes knowledge. A PhD must change knowledge, altering the interpretation of the world. Originality is key. There is also a crucial third element: internationally recognized and validated examiners. The characteristic of a PhD is that an independent international expert assesses the research and the candidate. The success or failure of a PhD is about research being evaluated by the greatest scholars in the world. Supervisors do not determine the success of a PhD. Examiners do. Through the different modes of a doctorate – from the professional doctorates to the PhD by Prior Publication and the artefact and exegetical thesis – quality must be assessed and verified for its originality in a specific discipline, or interdisciplinary alignment. There are currently five different doctoral modes:

The traditional doctorate
Creative led PhD – so artefact and exegesis
Professional doctoral suite – in education, health and psychology
PhD by prior publication
PhD by publication

The challenge – and perhaps it is impossible – is to create a culture of equivalence between these modes through the examination process. The organizational principles remain crucial. What clusters these diverse degrees are:

Competitive entry of candidates
An original contribution to knowledge
Empowerment and validation of independent examiners

Such a process maintains standards and stops the confusion between refereeing and examination. If attention is focused on compliance – basic standards rather than excellence – the capacity of a PhD to move between nations and summon an agreement about expertise and value is lost.

While recognizing these international requirements, a PhD is nationally distinctive. The United Kingdom (UK), Aotearoa / New Zealand and Australia have a similar system. Canada and the United States (US) have a similar system. An array of universities around the world take different components from these models. The PhD in Australia, New Zealand and the UK, in the traditional mode – that is, not the professional doctorate – are three-year programmes and do not involve coursework. It is composed of a dissertation between 80,000 and 100,000 words, based on research conducted during the study period. In the US and Canadian model, PhD students complete coursework before beginning their research project.

During the PhD, students may publish and go to conferences. They can gain feedback on their research in that way. But a PhD can be examined and passed with no publications, and without ever attending a conference. The quality of the research is assessed by examiners. This examination differs markedly by nation. Australia is one of the few nations in the world without an oral defence of the thesis. Currently, about one third of the public universities have a viva or oral examination, with the regulations for this event varying to a great degree.

A PhD is a unique experience. So few people in the world have one. Fewer than 2% of the US population – 1.8% – holds a doctorate (World Population Review, 2024). International estimates are more difficult to determine. It is predicted that there are 15 million doctorate holders in the world. The global population is 7.3 billion. Therefore, 0.2% of the world's population holds a doctorate (World Population Review, 2024). This is rare, and important. But it is also difficult. The motivations must be clear, but they are diverse.

A PhD is a degree. It is also a way of completing a research project and a genre of writing. The question is – to cite Horta, Li and Chan (2024) – why are students pursuing a PhD if the degree is in 'crisis' (2024: 505-522)? Are there too many PhD graduates? How is this number and connotation determined? What are the key metrics or tropes to assess the failures of this degree: employability (Chen et al., 2024), a lack of career focus (Szuster and Watt, 2024), unstable university sectors (Kallio et al., 2024), or the inequalities in academic publishing (Mulders et al., 2024)? With the highest number of doctoral students in history dogged by economic, social, intellectual and political problems, how is this Peak PhD to be 'managed'? As with Peak Oil, alternatives must be fashioned, discussed and implemented. One such doctoral trajectory is offered in this article, to understand a PhD as a mode of lifelong learning.

Lifelong Learning and the PhD (Tara Brabazon)

The PhD is an unusual degree. The homological assumptions confirm that young, bright academics continue their education to this 'terminating degree.' I lived at least some of this doctoral tale. When I completed my PhD, it followed a research master's degree. I completed my honours degree at 21, a research master's degree by my 23 birthday, and graduated from a PhD at 25, while working in a full-time academic post.

This seamless and simple narrative - that aligns age with degrees - is changing. The narrative of a young person moving from school to university, and sweeping through a bachelor, honours and PhD, is a minoritarian and increasingly fictional experience. Frequently, the orientation and induction guides for PhD students are built on the assumption of the narrative I have presented. A doctorate is achieved before marriage and family responsibilities (Buchan and Wilcox, 2012). Noting the recent dominance of women in doctoral programmes, even the assumptions presented by Mark Western, Matthais Kubler, John Wester, Denise Clague, Paul Boreham, Warren Laffan and Alan Lawson in 2007 seem antiquated and odd.

> Graduates' earnings appear related to demographic factors, aspirations and motivations, the kinds of career paths with which the PhD intersects, and factors occurring during the PhD itself. Female graduates earned less than male graduates (2007, ii).

Consider the two universities at which I have been Dean. Flinders University students span in age from 22 to 93. The average age of commencing students is 37. One third of the students are part time. At Charles Darwin University, where Christopher Young, the co-author of this article, graduated, the average starting age is 44 years, with very few students in their twenties, and most in the fifties.

Therefore, the alignment of age and degree as a scaffold towards a PhD has changed, and radically. The PhD has become part of lifelong learning, rather than a terminating degree to provide the foundation for a career. Lifelong learning has three characteristics: it is ongoing, voluntary, and self-motivated (Boyer et al., 2014; Mathew and Nair, 2025). It can enhance employability and professional skills, but also provides personal satisfaction and personal development. The first lifelong learning institute was the New School in New York. Beginning in 1962, it formed "learning in retirement" (Martin, 2003). The University of the Third Age continues this goal around the world, but commenced in France in 1972. This movement started with the recognition that in 'retirement,' the desire to learn continues (Casanova et al., 2024).

The University of the Third Age is a powerful and important strand of lifelong learning. The second strand of this movement appeared with a recognition of technological change since the 1960s (London, 2011). The degree from which we graduated has not prepared students for the ongoing the technological, economic and social changes as part of organizational and working requirements (Knapper, 2012). To continue to develop in the workplace, learning and skill development is required to remain relevant (Lock et al., 2021). This mode of lifelong learning is tethered strongly to ensuring continued employability.

The final strand of lifelong learning is to enable personal growth (Grainger, 2019; Collins, 2009). Lifelong learning at any age develops human potential and the capacity of a person to increase their skills, information, and knowledge. It is also a leisure activity that can create both consciousness and empowerment (Boyadjieva and Ilieva-Trichkova, 2021). Universities are recognizing the value of lifelong learning in all three strands. People may return to university to undertake degrees or certificates, or learning experiences outside of credit, such as exists through Coursera or Udemy models. Universities need these new students to ensure economic stability, as there are not enough young people leaving school for the requirements of a highly diversified economy and industries. For these citizen-students, there is also a benefit, as there is a correlation between academic credentials and higher-paying occupations. Distance education enabled through fully online learning has radically expanded the number of students. Students can be at full-time work and / or have caring responsibilities, and learning can fit into their lives.

Therefore, lifelong learning is self-motivated, summoned through a desire to learn a new skill, language, researching an area of interest, or understand a new activity or technology. The PhD can validate most of these imperatives and trajectories, with specific emphases. A PhD can enhance disciplinary and interdisciplinary expertise. Most of us start our undergraduate degrees in the traditional disciplines. For example, my first two degrees were in history from a very traditional department. But that past would not be my future. While I was finishing my research master’s degree in history, I completed a second bachelor’s degree in literature and communication studies. This degree provided the interdisciplinarity I needed to propel my PhD into a different research and disciplinary direction. Similarly, when I was completing my PhD, I enrolled in a second masters, this time by coursework. This coursework degree was selected, because I wanted to move into a new discipline. The master of letters in cultural studies created an ordered and logical progression through the field. I wanted to be taught this new discipline by experts. While some articles were published, I gained the knowledge to enable and improve my PhD, and developed precise interdisciplinary connections. Indeed, my last few professorial posts have been in Cultural Studies, built from a coursework master’s degree. My first academic post was as a lecturer in a very traditional history department, at Victoria University in Wellington, Aotearoa / New Zealand. All subsequent posts were beyond this single discipline.

Besides granting intellectual flexibility, lifelong learning increases the diversity of career options. These additional qualifications may – and probably will - grant career depth and flexibility in troubled times for higher education. While my first full-time job was in history, my second full-time job was in media and communication. I then moved to communication and cultural studies, a chair in media studies, a chair in communication studies, then a professor and head of department of photography and creative media. This progression seems normal, and nested into an interdisciplinary cluster. However, I was made head of school and professor of education, then moving to a Dean of Graduate Research, an institution-wide role. It is rare and difficult for women – particularly from the humanities – to be granted a research portfolio role in universities. One reason that this job was available to me was because of my lifelong learning. If I had not completed those additional qualifications, those positions would not have been within my reach.

A doctoral qualification does not provide any preparation in pedagogy, andragogy, teaching or learning. Yet, the bulk of our time as academics is spent teaching. I enrolled in a Bachelor of Education after the completion of my PhD. I learned so much, with educational technology emerging as a priority, alongside inclusive education. I gained the skill development to teach through this degree, and also, I was scaffolded to a Master's in Education a decade later. While the course was not of great quality, the dissertation became my book, *The University of Google* (Brabazon, 2008). These qualifications meant that when a Head of School of Education appeared, with a Professor of Education tethered to it, I applied. I would not have achieved these roles without the qualifications gained *after* the PhD. Education can open doors for employment that may be closed without specific professional qualifications. This is post-PhD lifelong learning.

While lifelong learning allows academics and citizens to remain students, it also opens a window into the changes and the problems in higher education. Arum and Roksa published a book at a pivotal point in the massification of higher education, titled *Academically Adrift: Limited learning on college campuses* (2011). They conducted a longitudinal study that assessed critical thinking and learning at the start and conclusion of the four-year undergraduate North American degree. Their research revealed little or no improvement in learning or critical thinking through the degree. This study was also provocative for other reasons. They investigated how much the students read, and how much they wrote. They showed that very little reading was completed each year and, in each course, and very little writing was required in the assessment. They were both provocative and accurate. I completed another Master's degree in 2021. It embodied Arum and Roksa's argument. Very little reading was required. Indeed, I completed the entire semester's reading in two days. The featured readings were over ten years old. The course had been recycled, and no one had updated the materials. The assessment tasks involved writing tiny writing tasks, of 1500 or 2000 words. The dissertation was short: 8000 words. Obviously, this is a data point of one, and Christopher's experience in his MBA was distinct. But I have witnessed the decline in reading and writing of coursework master's degrees over thirty years. Therefore, with coursework master's degrees declining in their volume of learning, completing a doctorate becomes a viable option for those requiring more expansive reading and writing.

These social, education and personal justifications for a PhD as part of lifelong learning are undergirded by the ruthlessness of the post-COVID, Generative AI-disrupted, workplace. Careers can be futureproofed, to summon the cliché, through lifelong learning. The critique of this reality is that this worker-enabled learning is financially beneficial for employers, institutions and businesses. Organizations can save money by (dis)placing the responsibility of learning on employees. The cost can be similarly displaced. None of my employers have paid for any of my qualifications, or provided any time to complete the courses. This is privatized professional development. But this commitment allows workers to make choices about future workplaces. The gift of the Australian-based doctorate for domestic students like Christopher Young is that a fee offset is in place. Therefore, this qualification is delivered 'free' to the student. This situation differs from master's degrees that are expensive and highly variable in quality.

These discussions of motivation and development are reliant on resources. This mode of credentialling is expensive. For skill development, Coursera, FutureLearn, Udemy or LinkedIn are cheaper options without major commitments of time. They fit around work and family responsibilities, and are rewarded with a certification. This is part of the micro credentials movement in higher education, where a range of providers – that may or may not be universities – are creating policies to stack micro credentials into certificates. This means that the financial outlay is not great.

Lifelong learning is powerful. It speaks of personal commitment. A person is deciding to test themselves. Motivation has dominated this section of our article. As this section of our article confirms, if a PhD is framed and shaped by lifelong learning, then the admissions, candidature management, professional development programmes, and pathways out of an examination transform. Supervision must also change. The master and apprenticeship model does not work. Mentoring does not work. Indeed, Gorski described mentoring as "code language for 'assimilating'" (2009, 20). Ward and West extended their analysis from language to behaviour, confirming that this apprenticeship model enacts "benign neglect" (Ward and West, 2008, 62). Students who choose to complete a PhD for personal and professional development do not need assimilating into the supposed patterns of academic life as a young scholar. Their research must be assessed by international standards, via examination. But students are whole and complete humans before they enter a programme. They are whole and complete humans when they exit the degree. Therefore, the next section of this article summons storying, to explore how this new mode of learning, and this new type of student, enters a PhD.

Why I Decided To Do a PhD Now? (Christopher J. Young)

> In a minute there is time
> For decisions and revisions which a minute will reverse. (T. S. Eliot, 1917).

The vagaries and the specifics of why do a PhD now are the same, for why does anyone do a PhD at any time, and what is about this time that makes it compelling now. That is not trying to answer a riddle with a puzzle, but instead acknowledging that even within myself there were so many swirling thoughts, aims, desires, objectives, factors and then specific events that culminated in my choosing to pursue a PhD and then a PPP (PhD by Prior Publication).

When you choose to pursue surgery as a career, for most there is the how do I get onto a surgical training scheme and where am I going to practice. The obsession with clinical training and education and subsequent clinical practice and earning an income is so strong, that few look left or right. The reality is that society primarily needs surgeons to provide the service of being surgeons. The other potential components of a surgical career include education, being a teacher, researching, constantly moving towards newer ways and better outcomes, and administrator, guiding the future of the profession, do not need to be practiced by every surgeon, nor should they. But within the profession a certain degree of surgeons must contribute to education, research and administration, or surgery does not even retain a status as a craft.

The greatest momentum within myself has been a desire since I was a medical student to be a colorectal surgeon at a large teaching hospital. The advancement of time and perceptions of minimum criteria has also meant that just having completed general surgical training became no longer acceptable, and that a colorectal fellowship or more was also required in addition. Many teaching hospital surgeons then began acquiring higher degrees, and while most initially acquired masters' degrees, some acquired doctorates. The 'should have, would have, could have' retrospective beating myself up in hindsight only gets you so far. I was offered a few times throughout my training to pursue a higher degree, but I did not take it up. I completed a masters of surgery (MS) in 2006, but that was not enough. It essentially grew upon me over the past eight years that I wanted to improve myself within my own definition and mind, and that achieving other higher degrees was one way to do that.

Since completing the MS, I started attracting many research students, and I strangely found I had no problems editing and rewriting manuscripts and word documents that had been sent to me or started by someone else. In fact, it was very clear, it was the first draft that was my problem and my false perceptions around it. The process of supervising and contributing to surgical research and creating something I found very enjoyable. In 2023, when I was seeking examiners for three of my higher degree students, I found that only examiners with a PhD were acceptable to the university as examiners. That created much annoyance and self-reflection.

There are also personal movements to log. I moved with my family to a small town in Kansas in 2021, and I had much more free time than before in Sydney. Because I already have clinical (FRACS, FACS, FASCRS) and research qualifications (MS), I had for at least the last eight years, wanted administration and educational qualifications. So, in 2022 I completed an MBA while working full-time, and in 2023 began a 2-year doctorate of education that finished in December 2024. In late 2023 I was already looking for a PhD to commence in January 2025, but all the US PhD's have course work that appeared to me to be a repeat of what I have already done, and I came across the PhD by Prior Publication. I also came across the videos of Tara Brabazon, and suddenly I could see a light at the end of the tunnel. These matters and a broader focus on my progress towards a PPP were discussed over the course of a video seminar with Tara Brabazon (CDU, 2024).

From this personal and professional biography, I decided to commence a PhD by Prior Publication. My publications had clustered to reveal a clear and significant original contribution to knowledge. However, there were also personal motivations. My family wished to move from Australia to the United States of America. Because both my children are at college and require my wife and my ongoing support while they pursue their careers, my whole family may be financially dependent on me, and I want to keep working for as long as I can. I realize that completing big cases may become difficult for me in these new life conditions. I want to prepare for an unknown future, which I expect will have more research and education than clinical components in it. While I remain in this small country town in Kansas, and am underutilized clinically, I am developing a different trajectory in my life and career. In fact, the idea that I completed an MBA, EdD and PhD is an important reframing of my life. I am motivated. It was difficult for me to get a job in the U.S., and then I had to sit the USMLE step 3 and get a VISA, and fight and push every step along the way, through COVID lockdowns as well, that the opportunity to do a bit of work does not bother me. It is not having access to opportunity that bothers me. I believe that I completed the PPP now to help me build up a wonderful portfolio to help me be competitive to get an academic surgical position in the U.S. Others may think I don't need to, but I feel like I must and after that I wonder what else can I do to make myself competitive.

There has always needed to be a broader learning from what I was doing, and when I had learned it, I taught it. On the premise that the best way to learn something is to teach it. I have constantly tried to pass on what I learned and knew to my clinical and research trainees so that they learnt it at an earlier stage and with less pain and hassle. Each skill I learnt in each project was applied to the next, and so it was research skill that I was learning. That is why an epistemology of colorectal surgery seems such an apt title. To me it is an active and growing thing that needs clear determination and dissemination.

There are three common reasons for doing research, which may occur all simultaneously or in combination. One is the flag-waving exercise, look at me, look at me, look at me! Two is the need for advancement in career and getting selected for a training scheme, a promotion or position. Three is because you are interested in the area and want to research it, understand and improve outcomes or techniques. Reason one reveals the reality of competition in surgery and the desire of many people to get ahead. Reason two dovetails with reason one and is often the only objective criteria interview panels can assess in terms of publications and higher degrees, apart from references and interviews. Reason three is where pragmatism meets reason and desire, and a pure interest may be more likely to find a valuable and productive result.

One day in 1993, I went to a colorectal surgical conference in Sydney, and saw Dr Mark Killingback present two clinical talks. He gave one talk on every anterior resection he had ever performed and his outcomes. Then he gave a talk on all the anal fistulas he had operated on, and the outcomes. I was so impressed with the usefulness of his data and presentation, and its application to everyday surgery, that I said there and then that I would prospectively record the data of every patient that I ever operated on, so that after periods of time I would be able to write and present like Dr Killingback. The obsession with clinical work was part of being and becoming a good, effective, responsive and respectful clinician, but there was an immediate adjunct to that, to produce useful and careful clinical research and learn from careful observations. The concept of joy from research rather than necessity was first initiated from this observation of Dr Killingback.

Planning many years ahead in research and continuing this approach for 10, 15, 20 or more years with a single focus can be very effective, achieving understandings that short term goals cannot hope to equal. The aggregation of data sets, information, knowledge and wisdom by such planning and implementation can often gather insights that snapshots in time can never reveal. The PhD by Prior Publication is a mode of doctorate that enables a professional and research career to be clustered, captured and disseminated to verify meaning, originality and significance.

Performing randomized trials in surgery is difficult, but possible. Different modes of evidence can also allow for greater understandings, or pave the way for subsequent trials to be developed after new evidence is accrued at that lower level. Throughout my PPP thesis, methodological, ontological and epistemological theorizations converge recognizing that greater understanding comes from a long-term focus on collecting evidence and constantly studying what you do for the benefit of patients and the community at large served by colorectal surgeons.

Beyond the Deficit Doctorate (Tara Brabazon)

Christopher's pathway into a doctorate was distinctive and unusual, but provocative and powerful. It captures many of the trajectories of lifelong learning. But as shown in Christopher's story, the doctorate is changing. As doctoral modes have diversified, and the student cohort has diversified, supervisors are under-prepared for this new, highly qualified and highly motivated group of candidates. Instead, deficit models of teaching, learning and supervision remain, maintaining a particular power structure between a student and supervisor. Noting that most university academics do not hold teaching qualifications, there is no expertise in andragogy, backward mapping, curricula design or assessment design, beyond personal experience. Instead of recognizing that a PhD does not teach a supervisor how to supervise, hyper-confidence and personal experience constructs an educational culture of self-absorption and insularity. When confronted by the expertise of Christopher, an apprenticeship model of education is not only inappropriate, but also farcical. Gorski confirmed that the function of a deficit ideology is, "to manipulate popular consciousness in order to deflect attention from the systemic conditions and socio-political context that underlie or exacerbate inequities, such as systematic racism or economic injustice" (2010, 6). The research literature locates two modes of deficit in teaching and learning: deficit theory and deficit ideologies. Deficit theory arises from progressive political movements and is carried through phrases such as 'minority education' and 'multicultural education,' with attention to multiple languages in a classroom (Collins, 1998; Dudley-Marling, 2007; Gorski, 2009). The deficit ideology is witnessed in educational policy. 'Context-blind' standards are valued as part of quality assurance (Sleeter, 2004). Such policies align with questions of 'access' to education (Ford and Grantham, 2003; Yosso, 2005). When a PhD student has their experience and expertise demeaned, ignored and marginalized, then that is part of wider cultural movements that may be colonial, patriarchal or ageist. Stigma can be imposed on any identity characteristic that is distinct from the supervisor (Goffman, 1963). Those characteristics include age.

The structural injustices in universities are perpetuated by blaming an individual rather than addressing why some groups are more heavily represented in specific disciplines and positions of leaders. While this deficit model literature in higher education studies focuses on first year undergraduate students, these theories and ideologies exist in PhD programmes. They are masked by the very high attrition rates. While an array of orientation and induction programmes attempt to create a normative pathway into a doctoral degree, they frequently fail because supervision is individualized. While policies and procedures may attempt to regulate this relationship – through mandatory supervisory training or supervisory charters (Flinders University, 2018) – this governance fails to manage the complex and constant interactions in this complex andragogical setting. Instead, individual experience outweighs research into supervision. This practice is what Paul Gorski described as "recycling its own misperceptions, all of which justify inequalities" (2010, 6). The earlier injustices in higher education are replicated through doctoral supervision. Correctives are available through mandated professional development. Institutional interventions are necessary to ensure that prior practices that failed through many measures, including reducing attrition, can be corrected. Regulation, accountability and transparency are required.

In the atomized space in which supervision is located, abuse, bullying, harassment and neglect can emerge. Too often – for the "neoliberal subject" (Chandler and Reid, 2016), resilience becomes a solution, a strategy for the "governance of complexity" (Chandler, 2014). Actually, relying on a student to change in response to an individual supervisor's assumptions and experience is not only inefficient and problematic, but inhibiting the capacity of a university infrastructure to improve and transform. The neoliberal university activates an operating principle that assumes that 'the market' and competitiveness will improve a course, teacher or supervisor. This simple mode of organization does not hold relevance for doctoral programmes as myriad factors about fees, governmental policy, institutional policy, employability ideologies, and national research metrics all twist and corrode a simple application of competitiveness and the market over discussions of quality and quality assurance (Brabazon, 2016a; Brabazon, 2016b).

Indeed, when imposing a neoliberal lens on a university, it must be recognized that this is not an individual matter. Attrition is expensive. Public funding is lost when a student attrits. When an individual leaves a programme, it may be a deep personal tragedy, noting McCormack's research on non-completing students and alternative perspectives (2005). But attrition is invisible. Exit surveys and interviews are important because they capture the hot, terrifying desolation of this moment of individual loss. But these exit interviews are rarely shared beyond the institution, because they impact on the 'brand' of the university (Norton, 2011). That is why Christopher's pathway into – and out of – a programme is so important. This is not doctoral education – or supervision – 'as normal.'

Janice Lombardi's analysis of the deficit model of teaching and learning (2016) demonstrated that teaching expectations are more important to progress and educational success than student motivation. When teachers – or in a doctoral context, supervisors - have low expectations of particular students on the basis of age, race, sexuality or gender, then they were less likely to graduate. Lombardi provided five medications to the deficit model: confirm with confidence that students they can reach the high expectations, configure intermediate goals to accelerate success, assist students in the management of the fear of failure, create data-led short term successes and produce scaffolded instruction (2016). Specific strategies, such as the use of backward mapping and milestones each year, engaged and agile professional development, and peer-based relationships (Boud and Lee, 2005), such as reading or writing groups (Brabazon et al, 2021a Brabazon et al, 2021b), are clear and precise interventions.

Through these collective professional developments and andragogical interventions, the connection and collaboration with the principal supervisor remains a determinant for success (Bourke, Holbrook, Lovat and Farley, 2004). McCormack particularly studied the role of supervision, showing that the frequency of meetings, relationships with supervisors and uninterrupted patterns of support are crucial. Within this study, institutional and environmental issues were also key, with belonging structures and clear guidelines for progression and success required (McCormack, 2005).

These wide-ranging and international studies are also verified at an institutional level. The University of Melbourne research was precise in presenting the reasons for doctoral student attrition. These factors include a lack of student understanding about expectations of the degree and supervisor, inappropriate choice of topic, poor match of supervisor and student project, insufficient contact or feedback from the supervisor, no clear guidelines about access to research facilities and authorship, intellectual and social isolation and differential treatment of male and female research students (University of Melbourne, 2009). Reeve and Partridge extended on this report by the University of Melbourne, confirming four types of research isolation: "physical isolation, research topic, diversity, and the supervisory relationship" (Reeve and Partridge, 2017, 449; Partridge, 2017). This is important research, demonstrating the importance of connectivity, and the value of digital disintermediation and deterritorialization in building connections, community and communication. Significantly, none of these challenges in doctoral supervision isolated or located issues relating to the intellectual ability of the student.

Without this commitment to professional development and the resultant expertise in teaching and learning – and recognizing that doctoral supervision is teaching – assumptions, bias, discrimination and disrespect emerge when homology does not create a successful candidature. Supervising as 'we' were supervised is not appropriate as the modes of doctorates increase, the sociological profiles of students widen, and the motivation and rationale for completing a degree expand beyond a postdoctoral position or an early career researcher role. As older students enter and increasingly dominate PhD programmes, the andragogical theories must also transform and widen. As Christopher's story has shown, students now hold more qualifications than their supervisors.

Diversifying the sociological cohort of doctoral students is not reducing the quality of our degrees. Academic standards do not require andragogical standardization. Standards and standardization are not synonymous. There are numerous pathways to reach standards, if the student and supervisors have expertise, motivation and competence. All students bring abilities and life experience and skills into a doctoral programme. If a deficit model of teaching and learning is in place, then this diversity is ignored, marginalized and ridiculed. Those who have not had a life experience aligned with what is seen to be a normal education or pathway into a PhD are marked as different – in deficient - and require remedial training, teaching and preparation.

International doctoral programmes have a greater diversity of students today than at any point in history. The impact of widening participation initiatives in undergraduate degrees has had an impact (Lipka, Baruch and Meer, 2018). There is research to manage this diversity as an institution, and via the supervisory relationship. Still, instead of creating a more intricate andragogy, it is easier to enact what Biggs describes as "blame the student" (1999). Sometimes – most of the time - the reasons for failure in a PhD is not poor motivation or low level of ability. The transmission model of education does not function at an undergraduate level. It has even less relevance in doctoral education. The consequence of this model is that all the knowledge a human brings to education is rendered irrelevant, unimportant, counter-productive and problematic. The supervisor / master fills the student / apprentice with knowledge. This model is problematic and indeed destructive. It blocks the capacity for a diversity of students to learn. It is time, as Harry and Klingner (2007) have confirmed, to "discard" the deficit mode (2007).

I maintain a singular teaching rule: start where the students are, rather than where I want them to be. The most effective learning strategies recognizes and understands the expertise already held by the student and then aligns andragogical strategies to disciplinary knowledges. For some scholars, such as Rebecca Alber, this methodology is described as the abundance model of teaching and learning. It has four characteristics.

Every student possesses skills and abilities

A bespoke and customized model of instruction

Recognize standards are different from standardization
Confirm that all learning builds on already existing strengths and interests (Alber, 2013).

While so much attention is placed on recruiting international students, their experience and satisfaction once enrolled is marginalized and ignored (Cotterall, 2011). Instead, the 'hard work' involved in supervising international PhD students has been logged in the literature (Goode, 2007), rather than the specific expertise they hold.

The ignorance and marginalization of student knowledge is disastrous for groups that suffer and manage discrimination in the rest of their lives, including Indigenous students, students of colour, international students, students with a disability (Barnes, 2007), women, gay, lesbian, bisexual and transgender students, and students of differing ages. Those assumptions of learning – those assumptions of supervision - can result in a heteronormative, procreative, colonial, white, English speaking, ageist, ablest and misogynistic ideologies not only squeezing out alternative views, but most of the population. This ideology not only hurts individual students, but the entire doctoral system. Barbara Lovitts in *Leaving the ivory tower: the causes and consequences of departure from doctoral study* showed that 50% of those who start a doctoral programme do not gain a degree. Yet this structural and systematic issue, which Lovitts describes as "the invisible problem," is marginalized and ignored through blaming individual students (2001). Her analysis is also reinforced by Johnson, Green and Kleuver (2000). This invisible problem is a verification that a deficit model of doctoral education is in place because the attrition rate of women and racial minorities is higher than white men (Lovitts, 2000). Research shows that the completers and non-completers are equally academically able. The reasons they leave are very different (Lovitts, 2000).

It is clear who – under the deficit model of teaching and learning – are finishing their theses quickly. The Science-based disciplines have a higher completion rate than research students in the social sciences, arts and humanities (Council of Graduate Schools, 2009). Men in the sciences, located within a structured lab environment, have the highest completion rates (Lantona and Browne, 2001). Jonathan Norton confirmed that the higher the level of autonomy in supervision, the more likely the student is to attrit. Successful doctoral supervision has particular characteristics: quality supervision, timely feedback, regular meetings, connection to a wider academic environment, caring relationships between students and supervisors with clear parameters, continuity of topic and continuity in supervision (Lantona and Browne, 2001). This research is confirmed by Norton, with a strong overlap with Latona and Browne's outcomes. A strong doctoral programme features the following characteristics:

Good supervisory relationship
Clear boundaries

Explicit Teaching
Feedback rich environment
Access and effective use of technology
Supervisory Responsibility for employability
Career development
Student to student engagement
Discussions of expectations
Overt discussion of publishing policies (Norton, 2011).

When these precise initiatives and commitments are not supplied, supervisors leave the relationship, and rescue supervisors are necessary (Brabazon and Redhead, 2017). The maintenance of the deficit model places the attritions, suspensions, show cause proceedings, long candidatures and failures because it is easier to place blame on an individual, rather than the system. Within the framework of a deficit model, students blame themselves for their failure, with all the proxies of anxiety, stress, feelings of inadequacy, imposter syndrome, and health concerns and particularly mental health concerns (Levecque Ansell, De Beuckelaer, Van der Heyden, Gisle, 2017). Concurrently, though, the research is clear, verified and available to manage these concerns. Solutions have been investigated and offered. Nicola Reavly, Anna Ross, Anthony Jorma and Eoin Killackey confirmed that students managing mental health problems require five clear initiatives to enable success: clear policy, the promotion of services, accessibility of support service, a clear presentation of student rights and responsibilities, and plans to manage moments of crisis (Reavly, Ross, Jorma and Killackey, 2011).

Ageism in particular must be fought. To provide one of hundreds of examples of this bias, a supervisor once stated to me – when I was Dean of Graduate Research – that "Professional development for PhD students is irrelevant because they are all going to end up with a postdoc." The first answer to why a supervisor – or indeed anyone - needs to do professional development is that we do not know what we do not know. Experience is not expertise. The experience expressed by this supervisor was taken from an earlier time in the history of higher education. None of my hundreds of graduate students have ended up in postdoctoral positions. Christopher did not require, need or consider a postdoc. He is an experienced surgeon, enabling his career through lifelong learning.

Therefore, where is this 'everyone ends up in a postdoc' narrative derived? Firstly, an article in *Nature* described postdocs as 'permadocs' (Powell, 2015). What is going on here? There are two answers. The first is that supervisors assume that their reality – or perceptions of reality when they were PhD students – continues to this day. The second is ageism. The presumption is that all PhD students are young, without family commitments, dedicated to their studies as a singular priority, and male. Reading Cardinal Newman's *The idea of the university* (1992) reveals this ideology with clarity. Any notion or conceptualization of a 'normal' student must be critiqued. Students enter a doctoral programme as an adult with experiences, expertise and knowledge. Significantly, these students have lived different lives from a supervisor and these differences matter. Will a 39-year-old with a partner, children, and a mortgage accept a one-year postdoc in another state or country? The answer is self-evident. Therefore, the assumptions about doctoral education and the identity of our doctoral students are causing real problems to under-theorized andragogy. The lifecycle mode of education and then work and then retirement is gone.

Greater clarity is required to understand who is doing a PhD, why they enrolled in the degree, and the options that are available to them post-candidature. The reasons supervisors must do professional development is to prepare them for the diversity of student pathways into – and out of – a degree. Different disciplines are managing the diverse ages of students more effectively, with law and medical PhDs being welcoming of older students. There is a history of being a lawyer, or being a doctor, and then deciding to do a PhD, sometimes by prior publication. That respect is granted to professions logged as 'elite.' It is rarely granted to nurses, social workers or midwives.

I realized when recording a podcast on rescue supervisions (Brabazon and Redhead, 2017), where a supervisor must take over supervision after being 'dropped' by an earlier adviser, that all the supervisions I had taken on under those circumstances, were for students over the age of 60. In all cases, the supervisors had described the student as lacking intelligence and not being able to work at doctoral level. Actually, all the students were very gifted, and when I took over their supervision, they all finished in between three and six months.

This diversity of students is a gift. It enhances our university, and our research. It creates incredible research, and also shows the plurality of careers after a PhD, whatever the age of the student. Ageism corrodes doctoral programmes. It also inhibits the development of workers and the workforce, and citizenship. It is time to critique these supervisory operating principles. Christopher's story captures the precise alignment between life and learning, PhD and possibilities. Indeed, he had supervised PhD students before his enrolment. At this time of Peak PhDs, a commitment to deploying the Scholarship of Supervision and transcending the data set of one is required. These students reveal to us a different and defiant future for higher degrees, and higher education. Supervisors require the courage and commitment that are already embodied by our students.

References

Acker, S. and Haque, E. (2015). The struggle to make sense of doctoral study. *Higher Education Research and Development*. 34(2), pp. 229-241

Alber, T. (2013). Tools for teaching: ditching the deficit model. *Edutopia*, April 2: https://www.edutopia.org/blog/teaching-tool-ditching-deficit-model-rebecca-alber

Arum, R., & Roksa, J. (2011). *Academically adrift: Limited learning on college campuses*. University of Chicago Press.

Barnes, C. (2007). Disability, higher education and the inclusive society. *British Journal of Sociology of Education*, 28(1): 135-145

Boud, D. and Lee, A. (2005). Peer learning' as pedagogic discourse for research education. *Studies in Higher Education*, 30(5): 501-16

Bourke, S., Holbrook, A., Lovat, T. and Farley, P. (2004). Attrition, completion and completion times in PhD candidates. *Paper presented at the AARE Annual Conference*, Melbourne: https://www.aare.edu.au/data/publications/2004/bou04849.pdf

Boyadjieva, P., & Ilieva-Trichkova, P. (2021). *Adult education as empowerment*. Springer International Publishing.

Boyer, S. L., Edmondson, D. R., Artis, A. B., & Fleming, D. (2014). Self-directed learning: A tool for lifelong learning. *Journal of marketing education*, *36*(1), 20-32.

Brabazon, T. (2008). *The University of Google: Education in the (post) information age*. Ashgate.

Brabazon, T. (2016a). Don't fear the reaper? The Zombie University and eating braaaaains. *KOME*, 4(2): pp. 1-16, http://komejournal.com/files/KOME_TB%20ZombieU.pdf

Brabazon, T. (2016b). Winter is coming: doctoral supervision in the Neoliberal University. *International Journal of Social Sciences & Educational Studies*. 3(1): 14-34, http://ijsses.org/wp-content/uploads/2016/09/Volume-3-Issue-1.pdf

Brabazon, T, Redhead, S. (2017). The Rescue Doctorate. Liberated Syndication. December 30. https://tarabrabazon.libsyn.com/the-rescue-doctorate

Brabazon, T., Armstrong, E., Baker, N., Batchelor, S., Brose, J., Charlton, S., & Witt, S. (2021). Deeply digital in shallow times: Writing communities in the shadow of the pandemic. *International Journal of Social Sciences & Educational Studies*, *8*(4), 230-253.

Brabazon, T., Cornelius-Bell, A., & Armstrong, E. (2021). The Pandemic PhD programme Reading and thinking about the Celebrity Intellectual (and Covid-19). *International Journal of Social Sciences & Educational Studies*, *8*(2), 165-188.

Buchan, J. and Wilcox, T. (2012). Preparing doctoral students in social sciences for a future in academe: perspectives on publishing during candidature. SSRN: https://ssrn.com/abstract=2402560 and http://dx.doi.org/10.2139/ssrn.2402560

Casanova, G., Weil, J., & Cerqueira, M. (2024). The evolution of universities of the third age around the world: A historical review. *Gerontology & Geriatrics Education*, 45(3), 483-498.

CDU. (2024). *Christopher Young and the PhD by prior publication*. [Video]. YouTube. https://www.youtube.com/watch?v=Esj4l3Tjsqs&t=1360s

Chandler, D. and Reid, J. (2016). *The neoliberal subject: resilience, adaptation and vulnerability*. London: Rowman and Littlefield.

Chandler, D. (2014). *Resilience: the governance of complexity*. London: Routledge.

Chen, L. A., Mewburn, I., & Suominen, H. (2024). Australian doctoral employability: A systematic review of challenges and opportunities. *Higher Education Research & Development*, *43*(2), 298-314.

Collins, J. (1998). Language and class in minority education. *Anthropology and Education Quarterly*, 19(4): 299-326.

Collins, J. (2009). Lifelong learning in the 21st century and beyond. *Radiographics*, *29*(2), 613-622.

Cotterall, S. (2011). *Stories within stories: a narrative study of six international PhD researchers' experiences of doctoral learning in Australia*. Doctor of Philosophy Thesis. Sydney: Macquarie University

Council of Graduate Schools. (2009). *PhD completion and attrition, Findings from exit surveys of PhD completers*: http://www.phdcompletion.org/information/Executive_Summary_Exit_Surveys_Book_III.pdf

Dudley-Marling, C. (2007). Return of the deficit. *Journal of Educational Controversy*, 2(1): https://cedar.wwu.edu/cgi/viewcontent.cgi?referer=https://www.google.com.au/&httpsredir=1&article=1028&context=jec

Eliot, T. S. (1917). *The love song of J. Alfred Prufrock*. Poetry Foundation. https://www.poetryfoundation.org/poetrymagazine/poems/44212/the-love-song-of-j-alfred-prufrock

Flinders University. (2018). *Flinders University Charter between students and supervisors*: https://www.flinders.edu.au/content/dam/documents/staff/policies/academic-students/hdr-charter.pdf

Ford, D. and Grantham, T. (2003). Providing access for culturally diverse gifted students: from deficit to dynamic thinking. *Theory into Practice*, 42(3): 217-225

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*, New York: Prentice-Hall.

Goode, J. (2007). Empowering or disempowering the international PhD student? Constructions of the dependent and independent learner. *British Journal of*

Sociology of Education, 28(5): 589-603

Gorski, P. (2009). What we're teaching teachers: an analysis of multicultural teacher education coursework syllabi. *Teaching and Teacher Education*, 25(2): 309-318

Gorski, P. (2010). *Unlearning deficit ideology and the scornful gaze: thoughts on authenticating the class discourse in education*, *Education Change*: http://www.edchange.org/publications/deficit-ideology-scornful-gaze.pdf

Grainger, A. (2019). Lifelong learning, personal growth and resilience. *British Journal of Healthcare Assistants*, *13*(2), 90-93.

Harry, B. and Klingner, J. (2007). Discarding the deficit mode. *Educational Leadership*, 64(5): http://www.ascd.org/publications/educational-leadership/feb07/vol64/num05/Discarding-the-Deficit-Model.aspx

Horta, H., Li, H., & Chan, S. J. (2024). Why do students pursue a doctorate in the era of the 'PhD crisis'? Evidence from Taiwan. *Higher Education Quarterly*, *78*(2), 505-522.

Johnson, E., Green, K., and Kleuver, R. (2000). Psychometric characteristics of the revised procrastination inventory. *Research in Higher Education*, 41(2): 269-279

Kallio, T., Siekkinen, T., Pekkola, E., Kivistö, J., Nokkala, T., & Kuoppakangas, P. (2024). Push and pull factors affecting in leaving academia. *Tertiary Education and Management*, *30*(1), 65-80.

Knapper, C. (2012). Technology and lifelong learning. In *Developing student autonomy in learning* (pp. 91-106). Routledge.

Lantona, K. and Browne, M. (2001). Factors associated with completion of research higher degrees," *Higher Education Series*, Report 37, Higher Education Division, Department of Education, Training and Youth Affairs, Canberra: http://www.dest.gov.au/archive/highered/hes/hes37/hes37.pdf

Lee, A. and Williams, C. (1999). Forged in Fire: Narratives of trauma in PhD supervision pedagogy. *Southern Review*, 32(1): 6-26.

Levecque, K., Anseel, F., De Beuckelaer, A., Van der Heyden, J., Gisle, L. (2017). Work organization and mental health problems in PhD students. *Research Policy*, 46(4): 868-879

Lock, J., Lakhal, S., Cleveland-Innes, M., Arancibia, P., Dell, D., & De Silva, N. (2021). Creating technology-enabled lifelong learning: A heutagogical approach. *British Journal of Educational Technology*, *52*(4), 1646-1662.

Lombardi, J. (2016). The deficit model is harming your students. *Edutopia*: https://www.edutopia.org/blog/deficit-model-is-harming-students-janice-lombardi

London, M. (2011). Lifelong learning: introduction. *The Oxford handbook of lifelong learning*, 3-11.

Lovitts, B. (2001). *Leaving the ivory tower: the causes and consequences of departure* *from doctoral study*, Lanham: Rowman and Littlefield.

Martin, C. (2003). Learning in retirement institutes: The impact on the lives of older adults. *The Journal of Continuing Higher Education*, *51*(1), 2-11.

Mathew, J. J., & Nair, S. (2025). Enhancing Adult Lifelong Learning: A Study of Social-Emotional Learning Theory. In *Utilizing Emotional Experience for Best Learning Design Practices* (pp. 205-222). IGI Global.

McCormack, C. (2005). Is non-completion a failure or a new beginning? Research non-completion from a student's perspective. *Higher Education Research and Development*, 24(3): 233-247

Mulders, A. M., Hofstra, B., & Tolsma, J. (2024). A matter of time? Gender and ethnic inequality in the academic publishing careers of Dutch PhDs. *Quantitative Science Studies*, 1-29.

Newman, J. H. C. (1992). *Idea of a University, The*. University of Notre Dame Press.

Norton, J. (2011). Getting to the end: Psychological factors influencing research higher degree completion. *Journal of the Australia and New Zealand Student Services Association*, 38 (October).

Partridge, M. (2017). The use of social media to combat research-isolation. *Annals of the Entomological Society of America*, 110(5): 449–456

Powell, K. (2015). The future of the postdoc. *Nature*, *520*(7546), 144-148.

Reeve, M. and Partridge, M. (2017). The use of social media to combat research isolation. *Annals of the Entomological Society of America*, 110(5): 60-71

Sleeter, C. (2004). Context-conscious portraits and context-blind policy. *Anthropology and Education Quarterly*, 35(1): 132-136

Szuster, J., & Watt, P. (2024). The Practice-Led PhD in Music: Where Is it Headed?. In *Cultures of Work, the Neoliberal Environment and Music in Higher Education* (pp. 183-202). Cham: Springer Nature Switzerland.

University of Melbourne. (2009). *The PhD Handbook, Appendix A: Guidelines on PhD candidature for departments, supervisors and candidates*. Melbourne: University of Melbourne: http://msgr.unimelb.edu.au/current/phdhbk/appendixa.html

Ward, M. and West, S. (2008). Blogging PhD candidature: revealing the pedagogy. *International Journal of Emerging Technologies and Society*, 6(1): 60-71

Western, M., Kubler, M., Western, J., Clague, D., Boreham, P., Laffan, W., Lawson, A. (2007). *PhD Graduates 5 to 7 years out: employment outcomes, job attributes and the quality of research training*, University of Queensland Social Research Centre.

World Population Review (2024). *PhD by Percentage by Country*: https://worldpopulationreview.com/country-rankings/phd-percentage-by-country

Yosso, T. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth, *Race, Ethnicity and Education*, 8(1): 69-91

Biography

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