Entry

Supporting Doctoral Candidates through Completion and Final Examination

Kirsten Riches-Suman

Scholarship of Teaching and Learning (SoTL) Group, School of Chemistry and Biosciences, University of Bradford, Richmond Road, Bradford BD7 1DP, UK; k.riches@bradford.ac.uk; Tel.: +44-1274-232145

Definition: Completion and final examination comprise the final stages of a doctoral program and represent the culmination of the doctoral candidates' years of research. In this entry, completion is defined as the writing and submission of a doctoral thesis, and final examination is defined as the viva voce. Over the years, the format and scope of doctoral degrees has expanded and a variety of formats are now offered. In addition to the traditional research-only doctoral degree, professional, practice-based, and new route programs also contain a taught element alongside research. However, the creation of a substantive thesis or practice-based alternative addressing a novel research question is common to all. In contrast, processes and formats of viva voces vary across the globe. These range from private, closed-door defenses to assessed or ritualistic public defense presentations. For both completion and final examination, there are many practical and psychological hurdles that need to be navigated in order for the candidate to attain their doctoral degree. This entry will highlight these aspects as well as provide evidence-based guidance for supervisors in supporting their doctoral candidates through these daunting final stages.

Keywords: doctoral; thesis; viva voce; completion; supervisor; supervisory support

1. History

Doctoral degrees have a rich history stretching back centuries. The first doctorates were professional doctorates (for example, Doctor of Law, Doctor of Medicine) and were conferred from the 13th century onwards, representing the pinnacle of academic achievement in particular fields [1,2]. The concept of the Doctor of Philosophy (PhD, or DPhil) gained prominence in Germany in the 1800s [1] and has now spread to all parts of the world. It represents the highest level of academic achievement in diverse fields including science, technology, engineering, mathematics, and medicine (STEMM), education, arts and humanities, social sciences, and more; these are all under the umbrella term of 'Philosophy'. This is due to the following central requirements of doctoral study: the creation of new knowledge, critical thinking and debate, and development of research that satisfies the advanced standards of an international doctoral peer network (e.g., publishable in reputable international journals).

Just as the recognition of the importance and value of a PhD to professional development has evolved over recent years, so has the number, type, and route of doctoral programs that are available. This more diverse approach to doctoral study is designed to address the perceived lack of provision of transferrable skills development in the traditional PhD, which has been criticized for not preparing its graduates for the wide variety of postdoctoral employment opportunities that are available. These doctoral routes now include:

- Traditional PhD—a substantive body of research addressing a specific research question that is novel, robust, and generates new understanding or knowledge
- Professional doctorate—undertaken by individuals who are already established within a profession and designed to enhance their professional development, including a taught element

- Practice-based doctorates—typically offered within the Arts and creative fields where assessment is not constrained to a written thesis and includes a taught element
- New route (or integrated) doctorates—these offer a one-year masters level (taught) qualification before progressing onto a standard three-year traditional PhD

This entry forms part of a collection on 'Doctoral Supervision' which covers the length and breadth of the doctoral supervisory journey from recruitment through to completion, and how doctoral candidates can be supported throughout. This specific entry will focus on the final aspects of the doctoral program. It will summarize the literature regarding the different aspects of PhD completion (submission of the thesis) and final examination (the viva voce or defense) followed by an assessment of the different factors that can affect each of these, and how doctoral candidates can be supported to maximize their chances of success and attain their doctoral degree.

2. Completion

In essence, doctoral completion means when the degree is completed and the award conferred onto the postgraduate researchers. In practical terms it is more complex and involves two main steps: the production and submission of a thesis (or creative alternative), and the examination of the material within the thesis by oral examination. This may then be followed by a period of time for corrections to the thesis before the doctoral candidate is passed via an exam board and the award conferred. This section will focus on completion as the production and submission of the thesis (or creative alternative) for the different doctoral degree routes, and the aspects that can influence success.

2.1. Traditional Thesis

The traditional thesis has changed remarkably little since the inception of doctoral degrees. It is defined as a scholarly essay around a central research question and is typically 80–100,000 words in length [2,3]. It was conceived to demonstrate the doctoral candidate's ability to join and contribute to a 'community of peers' [4]. Prior restrictions on page length (usually up to 300 pages) were based on practical capacities of thesis book-binding machines, and the newer advent of completely online submission and review of theses has now rendered these limits obsolete and removed the exceptional need for long theses to be submitted in two volumes. However, emphasis is still placed on the importance of conciseness, and it would be rare for a thesis to exceed 300 pages. Given the ever-increasing academic workloads [5,6], this can be appreciated by doctoral examiners who examine the texts.

Most theses follow the 'IMRD' model—an introduction to the subject, the methods employed to conduct the research, the results generated from the research, and the discussion placing the research in the context of the wider literature. In some subjects such as the humanities, the structure is more flexible and instead comprises an introduction followed by a series of chapters that summarize subsets of the research with context-dependent titles, followed by an overall discussion [7].

2.2. Thesis by Publication

The PhD thesis by publication emerged in the UK in the 1960s and has since gained wider uptake across the globe, particularly in Australia. It involves the submission of a series of published works on a particular research topic, including a narrative that provides the overarching introduction and conclusions. It is often completed retrospectively when an individual has published sufficient research papers around a central theme and so can be more accessible to older individuals or those who are already employed in a particular field [8].

One of the benefits to a PhD by publication is that the work is assessed by a much broader number of peers [9]. For example, research manuscripts are typically reviewed by two to three peers and revised prior to publication. If a thesis by publication contains five published manuscripts, then the robustness, validity, and contribution of the thesis

will have been assessed by up to 15 peers prior to submission. Compared to a traditional thesis which will typically only have been peer-reviewed by the supervisor(s) prior to submission, candidates completing the PhD by publication can have more confidence going into submission that they have produced a work that contributes original novel knowledge. However, the counter argument to this is that published manuscripts will often have more than one author. Being able to demonstrate that the work is therefore substantively the candidates' own, can be much more complex. There is also an issue with lack of international (and oftentimes even national) consistency on what the accompanying text must contain—its length, and depth of placement within the literature [8].

2.3. Professional, Practice-Based, and New Route Doctorates

The traditional thesis and thesis by publication described above are purely research-based. In contrast, professional, practice-based, and new route doctorates all contain a taught element, alongside the research-based element. These include subject-specific modules, and modules designed around professional and transferable skills that are designed to increase the employability of doctoral graduates [3,10]. These taught modules are assessed in traditional ways through coursework or exams, and need to be passed before the candidate can complete and submit their thesis.

For professional doctorates, a thesis submission and viva voce are still required [2]. However, the research element of the degree is completed over a shorter timeframe than the traditional route (to allow time for the taught modules), and as such the thesis is normally shorter than that which is expected for a traditional PhD [1].

Practice-based doctorates are more common in arts and creative fields. Alongside the taught element, candidates must submit a creative body of work or portfolio (often referred to as an 'artefact') that demonstrates the inception of an idea, the iterative development process of it and its subsequent finalization (for example, the design and development of an artistic performance or piece of music). This means that the traditional written thesis is not submitted, but instead the portfolio of creative work is considered with an accompanying, shorter text that highlights its novelty, creative process and critique, and importance [2]. One of the prolonged problems with practice-based doctorates is in their administration; there is as yet little consistency over what format the final artefact can take and a lack of standardized guidelines for what constitutes novelty, importance, and value can make the creation of this work very difficult for both students and supervisors to navigate [11].

New route doctorates (also called integrated doctorates) were created in the UK at the turn of the millennium to improve the internationalization of doctoral study and have since been adopted by a number of other countries. They include taught elements on both subject-specific knowledge and transferrable skills, and integrate masters and doctoral level study [12]. Similar to professional doctorates, the taught element assessments need to be passed, as well as completing a traditional thesis for viva voce final examination. Notably, this draws parallels with the American route to a PhD, where there are up to two years of taught elements that must be passed before a PhD candidate can proceed on to their research program. The research program in America however is longer than that in the UK and can last for many years before submission of the thesis and examination; it also has a higher rate of attrition [3].

3. Barriers to Completion

There are many barriers to completing a thesis, which will be individual to each doctoral candidate and would be impossible to fully capture in this entry. However, there are a number of studies that have examined this issue. Practically writing and submitting the thesis has been identified as one of the key sources of stress in doctoral candidates [13]. It is inarguably a gargantuan task, and the magnitude of the task itself can trigger debilitating feelings of anxiety [14]. As such, the factors impacting on submission and completion can be split into two aspects: psychological influences on the doctoral candidate and practical aspects affecting the creation of the thesis.

Perfectionism in academia is not a new concept. Academia is a performance- and metric-driven career path [15] that attracts people who have perfectionistic traits. This is equally true of doctoral candidates [14,16]. It can often arise as a misconception or unrealistic belief that 'successful' academics write perfectly the first time and when a candidate struggles to achieve this, it results in writing procrastination. This can be particularly evident in international students who are writing their thesis in a second language, who can spend more time focusing on making sure that their language sounds natural rather than focusing on the content itself [14].

Impostor syndrome is the feeling that one does not belong, that one is inept and their ineptitude will be imminently 'found out'. It is a common trait in academia [17] and in doctoral candidates [18,19], and is intimately linked with perfectionistic traits [16]. This can manifest during the production of the thesis (and also viva voce examination) where candidates can feel that they are academically inferior to the vast body of work to which they are referencing, and the exposure of their thesis to external peer critique can be a very discomforting prospect [20] resulting in demotivation for completing the writing stage.

Perfectionism, impostor syndrome, and writing anxiety can all result in catastrophic issues with procrastination. This inevitably leads to issues with time management and threatens the ability of the candidate to complete and submit the thesis [13,14]. Doctoral candidates are prone to procrastination and can struggle when the organization of thesis writing is largely left to be driven by themselves without definitive deadlines for drafts [13]. In these cases, supportive and structured intervention from supervisors and mentors in encouraging writing little but often is advised to help the doctoral candidate focus and be confident in the writing of their thesis [21].

In addition to the psychological factors regarding writing and submitting a thesis, practical aspects can also be a hindrance. One such issue is related to the supervisory relationship, which is complex enough to warrant a manuscript within itself. In brief, the support provided by supervisors at all stages of the writing process is key. Issues can arise when there is a mismatch of expectation between supervisors and doctoral candidates with regards to the quantity and quality of feedback that will be provided on drafts, and the timeliness with which these are provided [13]. On the other hand, conflict can arise when the candidate wishes to submit but the supervisor does not approve (for example, if they think the work is not ready, or if they have another reason for prolonging the time to completion). In these instances it is worth noting that the choice to submit resides with the doctoral candidate themselves and not with the supervisor, and they can submit and complete their thesis without supervisory approval if they so choose [2].

An aspect that can help supplement the writing support given by supervisors is the adoption of different academic mentors and writing support groups. Whilst academic mentoring is not a new concept, thesis mentors exist specifically to guide doctoral candidates through the barriers that they encounter during the writing process. They are independent of the supervisory team and focus on supporting doctoral candidates as people with their own individual challenges, barriers, and ways of working, to write in a productive way [22]. Theses are huge pieces of work and during doctoral study there is no formal guidance on learning how to write; the expectation is to learn-by-doing. Over the past few decades, the benefits of peer review of doctoral theses by doctoral candidates has been recognized [23] and this has now paved the way for doctoral thesis writing communities [24]. This widens the perspectives of doctoral candidates on the communicative style of a thesis, from peer learning and also provides supportive environments as everyone is at a similar stage [24]. This has led to the widespread adoption of 'Shut Up and Write!' communities which are either in person or online, to provide doctoral candidates with the dedicated space to write without feeling isolated and alone. Indeed, peer group mentoring has proved effective in helping professional doctoral candidates to write [25] and engaging with mentoring and peer networks for all aspects of doctoral study is important for reducing isolation and attrition [26]. Altogether, by expanding the pool of writing support outside of the

traditional supervisor–candidate relationship, there is a move towards a community of practice that can facilitate success throughout the final stages of the degree program [27].

Internationalization amongst doctoral candidates is becoming increasingly common, with many international students attending universities distant from their home countries. Often, these candidates will be sponsored by their home nations with an expectation that they will return to their home country and bring with them the advanced skillset and knowledge that they have developed during their study. This can provide practical barriers to completion when candidates return to their home countries prior to completion. Simple issues such as stable internet access, a lack of access to libraries or databases, or the speed of computers can be a hindrance to progress, as can being in a different time zone to the supervisory team when feedback meetings need to be virtually held. Furthermore, candidates often hold positions within their home country institutions that require them to take on extensive teaching loads upon their return, which does not provide the necessary time needed to write and complete the thesis in a timely manner [14]. Finally, some doctoral learners experience 'reverse culture shock' when returning to their home countries, after being exposed to a differing way of life in their host country for at least three formative years, returning to a different culture in their home country can take some adapting to, which again hinders progress if completion has not been achieved [28]. Writing whilst working can also be a problem when staff/faculty members are undertaking doctoral study part-time whilst maintaining their employment within the university. Making time to write alongside work can be incredibly challenging and close line management is required to facilitate this.

Family life can impact on the ability to have clear headspace to be able to write the thesis. Whilst family support can be a motivator [29] and help in forcing candidates to purposefully and efficiently manage their own time [30], having caring responsibilities whilst writing can be incredibly demanding and the proportion of mature students who are more likely to have caring responsibilities is increasing [31]. These challenges were thrown into sharp focus by the pandemic, when the lack of societal support systems including childcare meant that doctoral candidates who were parents were focused on helping their children maintain their (remote) education, rather than being able to focus on completing their thesis [32]. Even in the absence of a pandemic, the challenges of balancing caring responsibilities with the time, determination, and focus needed to complete a thesis should not be underestimated.

In some UK universities timely completion (that is, submission of the thesis within four years of commencing study) is a requirement for at least 70% of doctoral candidates [3]. This can cause alarm and exigent pressure on supervisors that could lead to the submission of substandard work. Similarly, in China PhDs can be completed between three and six years, however funding is only offered for the first three which can force doctoral candidates to submit substandard work due to financial demands [33]. Often, financial support is only available during the data collection/creation part of doctoral study and is not sufficient during the writing up phase [34], which means further time constraints due to having to take part-time work. Altogether, this enhances the pressure and subsequent susceptibility to excess stress and issues with writing the thesis. Furthermore, in some countries, doctoral degrees will only be conferred once the candidate has passed their thesis and viva, and has also published a number of peer-reviewed articles in the field [33]. This adds an extra stress on the candidate of having to write, often simultaneously, in two different styles (publication and thesis) [35], which can result in both being substandard and protracted in terms of time to completion.

4. Final Examination—The Viva Voce

The final examination of doctoral degrees is the viva voce, by its very definition, an examination 'by word of mouth'. It follows the completion and assessment of the thesis, and has three main formats: closed door, hybrid, and ritualized examination [36]. It is important to note the relative importance of the viva voce and the thesis in different parts

of the world. In the UK, the relative weight of importance between the viva voce and the thesis is blurred, with candidates who excel in the viva voce but have a substandard thesis still being able to pass, and similarly those with an exceptional thesis but a substandard viva voce performance also able to pass [37]. In the case of ritualized viva voces, the importance lies with the thesis and not the viva [38]. In rare instances where countries are physically isolated, the viva may be foregone completely with the conferment of the doctorate being given solely on the basis of the written submission. In general, the thesis carries more weight than the viva voce [39], presumably because the completed thesis is a definitive piece of research that can be evaluated by anyone who so chooses after it is published, whereas the viva voce is much more subjective and assesses more the ability of the candidate to 'perform under pressure'. This section will focus on the different formats that the final examination can take in different contexts, and the aspects that can influence success.

4.1. Closed-Door Viva Voce (Private Defense)

The closed-door examination (or private defense) is designed to assess novelty, that the work was completed by the student, and that it is of publishable quality. It is conducted by a panel of at least two research-active academic peers who are independent of the supervisory team; one is internal to the university that the candidate is studying at (the internal examiner) and one that is from a different national or international university (the external examiner) [3]. If the candidate is a member of staff undertaking their doctorate part-time, there are often two external examiners. The external examiner provides a level of national (or international) consistency in assessing that the quality of work is deemed suitable for doctoral level research, and will often lead the examination process. It is also becoming more common for independent chairs to be present at the viva voce; their purpose is to ensure that the process of the viva voce is conducted in accordance with national guidelines and that the candidate is treated fairly, regardless of the robustness of their questioning [36].

This method of final examination predominates in the UK and South Africa [36]. Whilst it is held in high esteem on the international landscape and remains consistent with the historical process of conferring doctorates [39], concerns have been raised about variations in standards, fairness, and the psychological impact on the candidate of the closed-door viva voce [40,41]. By its very nature of being held behind closed doors, there can be no external scrutiny on the performance of the candidate (or indeed the skill of the examiners) [42]. It is possible to fail the doctoral degree on the basis of the viva voce, and hence on the opinions of the two examiners; the potential impact of what could be argued is a subjective opinion has led to debate on its robustness and fairness [40]. The length of the viva voce also varies greatly across institutions. More modern guidance states that the viva voce should take no longer than 3 h, and indeed most fall within this time limit [43] though this is not definitive and viva voces can on occasion last for much longer.

4.2. Hybrid Viva Voce (Public Defense)

The hybrid viva voce is typified in America and Europe, and is a public defense of the thesis [36]. Here, candidates will commonly give a public presentation summarizing their work followed by a debate between themselves and one or more members of the doctoral examining committee which, in many cases, will comprise academics from the same institution [36]. In some countries, the questioning can take place behind closed doors, whilst the presentation and bestowing of the award remain public, hence its description as hybrid. In other countries, the questioning is entirely public and members of the audience are invited to join in with the questioning (although this rarely happens) [39]. Furthermore, the length of the public defense is often shorter than the possible length of a closed door viva voce, commonly taking less than two hours in American universities [44].

4.3. Ritualised Viva Voce

The ritualized viva voce is held after the publication and acceptance of the thesis and as such is a ceremonial formality, rather than a critical aspect of assessment [39]. It is common in some European countries such as the Netherlands [38] and is considered a ceremonial public debate [36]. This is enhanced by the inclusion of ritualistic elements such as the presence on the university mace and the wearing of formal gowns. In general, it is viewed more as a 'performance' of the work contained within the thesis, rather than a robust line of interrogation that plays an important role in the conferment of the academic qualification. As such it plays more of a role in building the academic reputation of the candidate, rather than in the conferment of the degree [38].

4.4. Corrections

Following the viva voce, it is common for theses to undergo final corrections before the doctorate is conferred [43]. These corrections can range from minor typographical errors to major rewrites and the inclusion of new sections, with timelines for submission of agreed corrections ranging between a matter of weeks and over a year dependent of the extent of revisions required. In some instances, the recommendation from the final examination can either be to fail the PhD process, or to resubmit for a lesser masters-level degree award [45].

5. Barriers to Final Examination

Similarly to the barriers on completion, there are any number of barriers that can affect how a candidate approaches, experiences, and ultimately performs in the viva voce examination. What follows is a discussion of barriers that have been identified in the literature on the psychological and practical barriers that may present themselves.

Psychological aspects inevitably impact on the final examination. Similar to thesis completion, issues with impostor syndrome and perfectionism abound; these are also joined by performance anxiety. Almost all candidates report at least some level of anxiety, ranging from mild nervousness to petrification, and emotional fluctuations that could not be predicted. In particular, 'the unknown' aspect of the viva voce, that is what the examiners were going to ask, was a major source of stress, as was which aspects of the study the examiners liked or disliked (or agreed and disagreed with). Finally, the extreme pressure to not fall at the final hurdle can play a major role in determining the level of anxiety that candidates experience [40,41]. Fears can be even greater when candidates are performing the viva voce in their second language [46]. In all instances, this can manifest as preparing rehearsed questions in advance to theoretical questions that may never be asked [33]. It has become much more commonplace now for candidates to be offered mock viva voces to help them prepare for the unknown and provide a formative version ahead of the summative final examination [37,47]. Whilst these are widely well-received by candidates, they can be burdensome and time consuming for academic supervisors to conduct. Given the ever-increasing academic workloads, there has even been the development of 'virtual viva simulators' to help candidates feel more prepared [48].

The choice of examiner plays a critical role in determining the psychological comfort of the candidate. They are in an undeniable position of power, particularly in the closed-door viva voce, and so must be chosen carefully. In cases where the examiner is seen as particularly dominant the inherent power dynamic in the viva voce can become unbearable, with candidates feeling a complete lack of power and thus an inability to 'defend' their work [40]. There can also be instances where examiners experienced a difficult doctoral viva voce during their own final examination, and so seek to revisit this in the viva voces they examine [49], the so-called 'I suffered, so you must suffer' school of approach [50], which is to be strongly discouraged. The inclusion of independent chairs can help to prevent this issue from arising as they are offered training to intervene when the line of questioning could be perceived as bullying [36].

The performative aspect of viva voces does not fit particularly well with growing awareness of neurodivergence and known gender, ethnicity, and age biases [51–53]. In

very hierarchical academic cultures, doctoral candidates can be extremely unwilling to challenge or debate with an examiner they perceive as being of higher standing, which can have negative outcomes and seen as a lack of interest or ability when in fact it is a culturally-ingrained deference to respect and is not indicative of the candidates skill, knowledge, or ability [49].

Practical aspects can also influence the experience of candidates in the final examination. Simple things, such as the layout of the room, can have a profound impact on the comfort of the candidate. For example, small windowless rooms are oppressive, whereas those with windows or seating near a door are more welcoming and can mitigate some of the psychological discomfort. Rooms with glass walls are too exposing with candidates feeling they are being observed by people outside the examination team [41,43].

Prior to the global pandemic, remote viva voces were often reserved just for those instances where external examiners could not attend campus either due to cost restrictions on travel, or the remoteness of the campus. However, during COVID-19 there was a necessary switch to almost exclusively online viva voces. Whilst practice has since reverted back to a preference for face-to-face viva voces after the lifting of travel and social mixing restrictions, the online viva voce has experienced an increase in popularity. Conducting the final examination online can be beneficial in giving candidates some control over their physical environment during the viva, however they also bring with them inherent anxieties around the robustness of the technology, and the increased difficulty in reading both candidate and examiners body language in gaining informal indication of how the viva voce is progressing [54].

6. Concluding Guidance for Supporting Doctoral Candidates through Completion and Final Examination

In this entry, completion has been considered as the creation, completion, and submission of the thesis. Supervisory support throughout this intensive and daunting part of the PhD progress is critical, and below follow some practical suggestions for supervisors in supporting their candidates throughout the writing process. These are predominantly based on the evidence presented above on practices that have supported doctoral students, with the addition of some personal experiential guidance.

Supervisory support for writing: Encourage writing little but often, with regular deadlines for drafts. Have clear communication regarding the quantity and quality of draft feedback that will be provided, and explain the complex time demands of an academic so that the candidate has realistic expectations on timelines for feedback. Establish at the beginning of the degree whether international candidates' home institutions require publications in addition to the thesis, to be able to prepare for this throughout the doctoral program. Strongly encourage the candidate to complete their thesis before taking up paid employment or returning to teaching-intensive faculty positions in home countries through structured deadlines; this will impact on their time management during the latter stages of the degree. Awareness of work-life balance challenges e.g., part-time working, caring responsibilities, are critical for putting structures in place to ensure continual writing progress.

Practical guidance for writing a thesis: Sign-post candidates to institutional or sector-wide training courses on managing long documents, time management, and avoiding procrastination. Be aware of institutional guidelines regarding thesis completion so that you can sign-post and support the candidate in fulfilling institutional formatting requirements as the thesis is being written, rather than having to reformat everything right at the end which causes undue stress. Encourage candidates to join writing communities and put the case forward for your institution to adopt such communities and thesis mentors if they do not already exist.

Final examination refers to the viva voce which can either take place behind closed doors with just the candidate, examiners, and chair in attendance, or in public through a presentation and debate that may, or may not (in the case of ritualized viva voces), have

a large role to play in the conferment of the degree. There are a number of activities that supervisors can conduct to enhance the doctoral candidate in preparing for this final milestone.

Choice of examiner: Discuss the careful choice of examiners with the candidate to ensure they have the required expertise but are also a person that the candidate will be comfortable with during the viva voce. This can help to address some of the perceived power imbalance between candidate and examiner if the candidate has felt empowered to contribute towards the examiner appointment. Related to this, it is important to encourage the candidate to contribute to conferences and publications throughout their program; this can help to reassure them that they do 'belong' in their field, increase their confidence in verbal reasoning and reduce impostor syndrome, as well as introduce them to potential examiners in a lower-stake environment.

Final examination preparation: Conduct mock viva voces to help the candidate prepare for the final viva voce, keeping to the same format that your institution dictates to give a genuine formative experience. Consider the physical space that the viva voce is being performed in and ensure it is fit-for-purpose, and encourage the candidate to view the room in advance of the viva voce so that there is one less 'unknown' for them.

In summary, this entry has discussed the process of completing the doctoral thesis and undergoing the final viva voce examination, as well as post-viva voce corrections. It has described the many psychological and practical barriers that can influence candidate success throughout the final stages of the doctoral degree. Through providing structured suggestions for practical actions that supervisors can take to support the doctoral candidate, it is hoped that this entry provides a useful starting point for supervisors to understand the challenges doctoral candidates face in completing the closing stages of their degree program.

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