

# Best Practice PhD Supervision: Tasks and Time. A Time and Motion Study of PhD Supervision

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## Abstract

This paper reports empirical research identifying the tasks and time commitments necessary for best practice PhD supervision for long thesis PhDs in English speaking countries. The best practices are those defined as providing the necessary support to ensure completion within 3.5 years for suitably qualified PhD candidates. The period of candidacy is defined as the time between approval of the application to join the PhD program and the date on which the award of the candidate's PhD is approved. The research analyses give emphasis to PhD candidates may be educationally disadvantaged by language and cultural differences, for example, overseas PhD candidates from non-English speaking cultures. In addition, they also include the necessary supervision processes to address the problems associated with PhD candidates who have undertaken Design or Art undergraduate degrees. These latter PhD candidates typically have the compound disadvantage of a lack of undergraduate foundation in research methods and an overemphasis on associative thinking at the expense of rational and logical thinking, compounded by a preference for, and high skill levels in, rhetorical manipulation rather than reasoning and avoidance of fallacies.

There are many educational structures used for PhD research training in different institutions and different countries, broadly they divide into two:

- Coursework plus research leading to thesis (e.g. PhDs in the US) – course-work based PhD
- Research leading to long thesis of up to 100,000 words (e.g. UK, Australia) – long thesis PhD

Differences in PhD educational structure lead to differences in PhD supervision practices and differences across countries. The androgogical education model used for PhD research training affects a wide variety of supervision activities such as face to face contact, when and how much supervisors reading candidates' theses and how and when they review literature in relation to the candidate's research topic. Supervision practices also depend on the characteristics of the PhD candidate, the discipline area and the topic of research. Regardless, in any one context, there are a wide variety of PhD supervision practices depending on the attitudes and preferences of the supervisors. Across the field, however, supervision practices have been typically dominated by laissez-faire approaches that minimize the work and time commitments of PhD supervisors with the justification that PhD candidates are grown up' and should be able to self-manage their work and only need support from supervisors on difficult theoretical issues.

For many years, universities managed their PhD programs relatively autonomously and independently of government intervention, regardless of the fact that much PhD funding was from taxpayers and the public purse. In addition, many involved in PhD education overlooked the fact that outcomes of PhD

programs were significant to countries' socio-economic and technological development. Over the last 15 or so years, this position has changed and governments in most countries are now concerned to maximize the benefits, and reduce the costs, of PhD-based research training and knowledge development.

The dynamics and constraints acting on Doctoral Education in Design programs follow this international transition. Typically, governments are concerned about three issues in relationship to PhDs:

- PhDs should provide significant benefits to society. The personal gains to the individuals obtaining their PhD are incidental to this. There are two main areas of gain for society: access by society to the high level research skills and knowledge gained by the PhD candidate over the course of the candidate's life; and access to the new knowledge generated by the PhD candidate in the course of their PhD research.
- Delayed PhD completions. Each PhD candidate tackles a real and significant research problem whose resolution is intended to result in significant and useful benefits to society. Currently, each PhD costs society around half a million dollars. For society to benefit from the government investment of taxpayer's funds in resourcing a PhD necessitates the significance and importance of the knowledge resulting from each PhD being worth at least this amount.
- Completion rates. Each PhD that is not completed results in costs to society: in resources used in supporting the PhD candidate through their incomplete study; in opportunity costs in that the resources could have resulted in benefits to society from someone else using those resources to complete a PhD and make available their skills and knowledge to society; and in the loss of knowledge and intellectual property from the incomplete PhD.

In Australia, there has been extensive research into improving long-thesis PhD outcomes. Research investigations aimed at improving PhD outcomes have focused on a large number of dimensions of the PhD process: supervisor skills and attitudes, supervisory processes and practices, examiner skills and attitudes, thesis writing processes and structures, differences between disciplines, student activities; assessment and administration practices and improved research project choices (see for example, refs)

Out of this research into improving PhD outcomes has come guidance on best practices for PhD supervision intended to ensure maximum retention and completion within government agreed time limits (typically between 2 and 4 years). In parallel, doctoral education researchers focusing on facilitating writing and assessing PhD theses have developed models of best practice and structure for the PhD thesis and thesis writing processes. Thesis writing is widely acknowledged as one of the major roadblocks to early completion and retention, i.e. candidates undertake their research satisfactorily yet do not complete their PhD because they do not complete their thesis. The depth of this problem is acknowledged in the US using the suffix ABD (All but Dissertation) as in PhD(ABD) as a result of the large proportion of current and ex PhD candidates who fulfill candidacy yet do not complete their PhD thesis. Research into PhD thesis structure and formal thesis writing approaches provide detailed guidance to PhD students in writing their theses efficiently in ways that help ensure theses get completed.

This paper reports recent research that identifies in detail the supervision time needed to provide best practice supervision. The model of best practice in PhD supervision follows the Newcastle findings of Dr Allyson Holbrook and colleagues (refs) and incorporates the findings of research by Dr Charles Perry into structuring the PhD thesis.

This research reviewed cases drawn from the author's experiences and of observations of PhD supervision experiences of others to identify in detail the complete suite of supervision *tasks* and *activities* in which a supervisor is involved. The timescale covered is the progression from the PhD candidate's first application to the awarding of their doctorate, i.e. the whole of a supervisor's tasks for a given PhD student but not including any post-doctoral mentoring.

Following on this identification of the detail of the task structure, the research also identified typical times for the necessary time commitments for each of those tasks in the best-practice PhD process. In this paper, these timings are moderated and scaled to the supervision of a mid-range PhD candidate from overseas from entry to the PhD program to their completion and award of their PhD in an overall period of 3.5 years, i.e. a 3.5 year PhD completion.

The paper concludes by briefly reviewing the costs and profitability of PhD students under the best practice supervision model using the tasks and timings above; typical fee costs to students and government funding to universities for completions.