Ph.D. Supervision as a House Divided:
Implications for Policy

Abstract

This article examines the pastoral and academic implications of the inductive and deductive approaches to supervision described in the working paper: ‘Ph.D. supervision, a house divided?’. The observations are based on the writer’s several years’ experience of running a Ph.D. programme of some 40+ students. It concludes that, for a Commerce discipline such as Marketing, the deductive approach offers superior pastoral and academic outcomes. It then makes a series of policy recommendations.

Introduction

The previous short article: ‘Marketing Faculty and Ph.D. supervision: A House Divided’ introduced the concept of an inductive/deductive divide that drove two sharply differing models of supervisory practice. This article concluded that both models had their strengths and weaknesses. Indeed they do in a general sense, but any assessment of their relative benefits for the University of Otago must be placed within the context of the current environment of measured research outputs and profound strategic implications for the institutions that stem from these exercises.

To put it bluntly, the current model of University funding within New Zealand, both directly for Ph.D. completions and indirectly via PBRF outputs, strongly favours the deductive model of supervision. It does so because supervisors who use this model graduate students more quickly and have greatly increased access to material that can generate PBRF eligible publication outputs.

While it is impossible to put an accurate figure on it, my observations suggest that within the Department of Marketing the current ratio of inductively to deductively supervised students is roughly three to one. The ratios in other departments is not known, but given the demographics of the Faculty within the School of Business, the ratio within Marketing is likely to be typical. A significant opportunity therefore exists to increase the outputs of the Department and the School by changing our approach to the highly resource intensive business of supervising Ph.D. students.

In this article, the structure of the five major types of thesis produced under the Deductive and Inductive models are examined in order to relate supervisory practice and milestone events to the final outcome of the exercise. Finally, recommendations are made for changes to the Ph.D. management process to eliminate the less desirable of these thesis types.
Type 1 Ph.D. thesis structure (Deductive - working proposition established at outset)

Figure 1 shows the structure of a typical thesis produced by a student working under this approach. The student will usually be equipped with a working proposition and a tentative narrative/chapter structure within a few weeks of commencing their study and all future effort, review and direction will be related to this ‘roadmap’.

The most obvious characteristic of this type of thesis when submitted is the very tight narrative structure based around the development of a single line of reasoning through a series of discrete chapters. While not all of these early chapters have the potential to be develop into pre-submission research outputs, at least one or two usually do.

The research propositions chapter tends to be a simple continuation of this line of narrative. Typically, the propositions have been signalled for some time by developments within the review. They are usually tightly defined and few in number. The later chapters tend to have a distinctive structure of methodology related to propositions and potential outcomes with a results chapter strongly separated from the discussion. The discussion tends to refer to the propositions only, as the final development of the earlier review sections. The conclusions chapter may refer back to this earlier work when putting the thesis into context. All of these chapters may contribute to a significant post-submission research publication.

Figure 1: Type 1 Ph.D. thesis structure
The introduction chapter does not usually contain a statement of the initial working proposition, and usually does not even hint at the existence of this critical component of the process, even though usually both student and supervisors will usually readily admit to its existence in conversation. This omission has to be considered to be a major weakness of theses that are produced using this approach within this Department. It appears to be associated with a fear that examiners will consider that the candidate has started their literature review with a pre-established position. Given the dominance of the inductive approach within the Faculty who might be called upon to examine this thesis, this may be a justifiable position, as any such pre-judgment would be anathema to an individual who believed that the literature should be the sole source of inspiration!

**Type 2 Ph.D. thesis structure (Inductive - early establishment of research proposition)**

This is a rare type of thesis, and it is usually the work a highly able (and often mature) student, who is in the hands of an inductive type supervisor, but who has realised early on that it is in their interests to establish a roadmap of the process. Often, they do not share this with their supervisor, and they create a literature review that gives the impression of a theory emerging from the literature in the required inductive manner. They will often acknowledge (to third parties) that they actually know from the outset where they were heading, and simply wrote the review up in this form to conform to expectations. As this is essentially a deductive thesis in disguise, many of the positive outcomes remain. The major casualties are the pre-submission publications. To this may be added the opportunity cost of the extra time that is taken, and what the student might have produced in the later stages of the thesis had they not been forced to fudge the issue! Also, while the outputs are generally of high quality, targeting for outputs within the literature can be an issue.

**Type 3 Ph.D. thesis structure (Inductive - early establishment of research theory)**

The Type 3 thesis would be the most common thesis within the Department of Marketing at the present time. This type of thesis is the result of an inexperienced students being launched into the literature with instructions to discover themselves or something that they can write about. The directions given are usually restricted to an ‘area’, and the expectation is that a research theory will somehow reveal itself to the student if they read enough.

Once within the literature, the student rapidly enters what is known as the ‘Hall of Mirrors’ effect. The more articles they read, the less they think they know as further intellectual swamps reveal themselves. It is a fact that the Marketing Literature is poorly organised, contradictory and of highly variable quality. A student lost in the Hall of Mirrors is therefore a miserable object. Little is written by them, sometimes for years, until some form of crisis precipitates action.
The sources of such crises vary. They may be personal, financial, or just simply a loss of faith and patience in the supervisor, the area, the discipline or all three. Whatever exactly precipitates the crisis, the outcome is that a ‘Type 3’ Ph.D. student will suddenly decide to specify a research theory – Usually independently of their supervisor.

When they emerge as the pivotal point of the thesis, such theories betray their muddled origins. They are generally broad, and often incorporate large number of sub-theories and sub-sub theories. The links back into the literature review are weak, for the very good reason that the literature review was usually not in existence when the theories were formulated! A Type 3 literature review is usually written up as one of the very last acts of the thesis preparation process, and normally takes the form of a general account of what was read, with very little synthesis as to what is right or wrong, or what it might mean with regard to the issue that the thesis purports to address.

Within the final thesis, this account meanders on through several chapters before slowing to a halt, leaving the reader stranded. Then the theories emerge unbidden in the first few pages of the following chapter. Not surprisingly, there is usually little of publishable quality within these literature reviews, and as they emerge so late in the process, there is usually little chance of publication pre-submission. The latter parts of a Type 3 thesis are also compromised by these events, and by the weak or non-existent links between the research literature and the thesis theories. As the theories emerge late and with little development, the design of the fieldwork is often driven by methodologies within the literature rather than by conceptual...
development theory ("A Development of Buggin’s & Winkelburger’s 2007 Seven Point Service Dominant Logic Orientation Assessment Model" for example).

Because of these breaks in the line of logic, the results, discussion and conclusions sections usually end up being thoroughly addled, with extensive references back to multiple unrelated issues in the literature rather than to the research theories. The larger number of theories that have to be tested, and their relative lack of development, can also often leads to unpleasant surprises with regard to (un)expected outcomes and patterns of results. Often these are fudged, but a skilled reader can still pick them up! Even if they do not, the narrative structure is degraded and its impact reduced. A publishable output can still be derived from the later stages of these theses, but it is very much a matter of luck rather than direction if this turns out to be the case. However, there is also a significant chance that a Type 3 thesis will provide no basis for publishable outputs.

Some very negative pastoral outcomes can also be added to this failing. Lost time is the least serious of these. An extensive spell in the Hall of Mirrors can do permanent damage to a student, and much of my time as Director of this Programme was officially spent in quietly cleaning up the psychological messes that stem from it, together with extensive and unofficial supervisory inputs before I took on the role – Which is why I know how common this type of thesis is.

**Figure 3 – Type 3 thesis structure**

![Type 3 thesis structure diagram]

**Pre-submission research outputs:**
- Usually none

**Post-submission research outputs:**
- May be one, depending on luck rather than planning.

**Pre-submission research outputs:**
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**Post-submission research outputs:**
- May be one, depending on luck rather than planning.

**Introduction:**
- Does not include the working proposition

**Literature Review:**
- Starts broad and stays that way as it meanders through the literature. No coherent narrative emerges or any sense of focus or direction.

**Theories:**
- Many - Not well defined & not linked strongly if at all to the literature.

**Method:**
- Usually driven by methods reported in the review. Not usually well linked to theories

**Results:**
- Fragmented - Often interspersed with commentary & discussion

**Discussion:**
- Meanders, usually linked back to the review rather than the theories

**Conclusion:**
- Sometimes puts results into the wider context
Type 4 Ph.D. thesis structure (Inductive - late establishment of research theory)

A Type 4 thesis is our second most common type. In a Type 4 situation, the student has been cast adrift within the literature, but does not experience the crisis quite so early in the process. Instead, having failed to find enlightenment in existing research, they hope to do so by conducting some of their own. While it may seem incredible that students go to their major field research without a specific research proposition or theory, it is a fact that they do so – and that they do so often.

Figure 4 – Type 4 thesis structure

As they have no research theory, the design of their field research will obviously be methodologically rather than theoretically driven – usually as a minor development or replication of existing published research. The crisis comes when the results come in, and they approach the stage of writing up. Students in this position are often in the final months of their programme before they put pen to paper – Perhaps they hope that the results will present them with the revelation that they are looking for. Having read a few of these Type 4 theses, I can only say that their results rarely deliver it. Instead they are presented with a tricky job of reverse engineering to fit their (often unexpected) results to their literature review via a set of ‘after the fact’ research theories that they now have to concoct. Such adaptor theories are easy to spot. They usually consist of literally dozens of sub-propositions.
(My record to date is 37) many of which are not well connected to one another, let alone to anything else in the thesis.

The literature review generally follows a Type 3 pattern, and is therefore useless as a source of publishable outputs. The pressure that this process of reverse engineering puts on the latter chapters of the thesis also leads to a progressive degradation of their structure along the lines of the Type 3 thesis. However, this can proceed to the point where the separation between results and comment breaks down completely, and significant and coherent contributions of any type are hard to spot. Obviously this reduces the chances of developing a post submission publication from it.

The pastoral outcomes are along the lines of the Type 3 thesis, but with the addition of a great deal of stress in the latter stages of writing up and submission. It should be noted that these stresses in the latter stages can also be a factor for supervisors, especially if they have been brought in as a result of a breakdown of relationships between the student and their original supervisor – Such fallings out are a common symptom of both Type 3 and Type 4 theses. These theses also often require very extensive amendments as a result of the viva – often amounting to a virtual rewrite of the entire thesis. Much time is usually lost by all parties at all stages for very little benefit.

**Type 5 Ph.D. thesis structure (Inductive - failure to establish research theory)**

This type of thesis is the output of a situations where the student has proceeded to fieldwork and has written up the thesis without having formulated a theory or proposition set that defines its contribution, and therefore its raison d’être. When they are encountered these are extraordinary objects. In the absence of a theory or proposition set, the process of theoretical degradation that can be observed in the early stages of Type 3 and 4 theses extends throughout the document. The later chapters are characterised by a total lack of structure and often by a raving style – usually against the research reported in the literature review. This may be justified, but it is usually ineffective in this particular context.

Writing one of these documents must be a horrible experience, and most students who find themselves in this situation after two or three years of study simply do not bother. Type 5 theses are therefore, thankfully, rare. However, Type 5 situations are not. Only about one in 400 Ph.D. theses that are submitted in Australasia actually fail. However, these figures are deceptive. Failure with a Ph.D. usually takes the form of a failure to submit, even to the supervisor. These failed candidates simply fade away, and represent a total loss to the University. At the point of ‘fading away’ these students vary rarely have anything on paper, or anything that they can articulate in words, to show for their own years of study and the years of resources that the University have devoted to them. I have never encountered a student who could articulate their research proposition at that moment in their lives. Therefore, most would have produced a Type 5 thesis had they been forced to.
Conclusions

The five types defined above can be used to place all these produced within the Department in recent times. As one proceeds from Type 1 to Type 5 the outcomes in all respects become progressively less desirable. The typology is not student or topic dependent, but relies upon the time at which the thesis is defined by its propositions. The supervisor has a significant role to play within this process.

The outcomes of a Ph.D. thesis in this department are therefore largely determined by the time at which the thesis topic is defined by a working research proposition. These should be established as soon as possible. Delay progressively impacts upon the quality of the thesis itself, and on the quality and number of research outputs that can be derived from it. Delay also leads to wasted resources, wasted time and negative pastoral outcomes.

At present, the most common thesis type within the Department is Type 3, probably followed by Type 4, Type 1, Type 5 and Type 2. The Department therefore has considerable scope to improve its performance in terms of graduation speed, graduation rates, student welfare, resource utilisation and PBRF performance by modifying its management of supervision.
Recommendations:

The number of Type 1 theses can be greatly increased, and the number of Types 3 and above more or less eliminated within two years by implementing the following procedures:

1 - Require (as part of a Memorandum of Understanding agreement) that a working proposition be registered within three months of the student commencing their study. As the university’s application process requires a proposed topic to be submitted by the Student, and approved by the Primary Supervisor before enrolment, this is not unreasonable.

2 - Require as part of the first progress report (6 months FTE) that a chapter structure and a tentative set of pre and post submission articles be submitted as part of that review, together with any updates to the working proposition.

3 - Require that as a condition of confirmation process (Second progress report 12 months FTE) that the student has their literature review written up in draft form, and has a final research proposition in hand, together with a well developed methodology proposal. They should be in a position to formally present this material to a group of senior staff nominated by the director of the Ph.D. programme.

4 - Require (As part of a Memorandum of Understanding agreement) that if the student does not meet these requirements for confirmation by the third progress report at the end of second year FTE, that their registration be terminated at that point.

While these measures may seem harsh, they are not unreasonable, especially if they are clearly communicated to both student and supervisor as part of the application and registration process.

R. Hamlin 2009