



# Ph.D. Examiners: The Group Learning Argument

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## ABSTRACT

*In many Universities there is either no requirement for an oral examination or for examiners to guide Ph.D. candidates prior to submission of their thesis. This policy is usually the result of the 'tyranny of distance' and/or the positivism philosophy of 'impartial observer'. This paper argues for the Interpretivist approach of enriching the learning experience of examiner, candidate, supervisor and University by requiring the advantages of complex sustained interaction. Extensive evidence has shown that group learning is far more productive than individualistic learning. While individual Universities need to make the resources argument for a more collaborative Ph.D. process, this paper presents the management learning literature. It provides this literature in support of the argument that examiners need to be inter-actively involved with supervisors and examiners, especially in IS which changes rapidly and is experiencing a move from positive to interpretive methodologies.*

## INTRODUCTION

Many Information Systems (IS) schools are under pressure to change their Ph.D. supervision and examination practices. This has been discussed elsewhere with respect to the design of appropriate semi-structured first year programs (Wood Harper et al, 1999; Wood Harper et al 1993; Metcalfe and Kiley, 2000; Lowry, 1997). This paper looks at the examination process. As the writers are most familiar with the Australian system this will be used as the focus of this discussion. Many Australian Universities use the 'tyranny of distance' or the positivism 'impartial observer' arguments to encourage no interaction between candidate and examiners. An interpretive perspective concentrate's less on bias being a negative thing, rather it sees actor interaction bring about a deeper appreciation of a situation. Therefore, this paper argues that interaction between supervisors, examiners and candidates is important for effective learning of all parties, including the respective Universities. Of course, 'fair' grading is essential, the issue is how to ensure the grading process become a learning system. Supporters of interpretivist knowledge gathering believe that the examination process will be considerably enriched if the examiners can appreciate the 'richer' research picture by being involved in dialogue and collective thinking. This is especially true in a discipline like IS which changes rapidly and is experiencing a move from positive to interpretive methodologies. While there is a resources argument to be made this paper only address the 'learning' literature.

### Reasons for Change

One of main drivers for these arrangements to be re-considered is the enormous change in the demographics of students over the last two decades. For example, the number of students doing Ph.D.'s has increased dramatically. Schools, who in the past may have only had one or two Ph.D.'s, now, may have 10 or 20. The average age of a student has risen, with mature aged, experienced, managers returning to study. More students are enrolling in a Ph.D. that is very different from their initial studies, generally because the material they learnt as undergraduates is out of date. This is particularly true in IS where even the research methodologies suitable to their old studies may no longer be appropriate. There are more international students with a range of different skills derived from the undergraduate course structure of their first degree. More students are coming from industry, or doing their Ph.D. in conjunction with their industrial experience, where they are accustomed to producing brief reports with very different criteria to that required from academia. Furthermore, the motivations for doing

a Ph.D. can be seen to be changing. For more and more IS workers the attraction of a Ph.D. is that it may help them move into international consulting. Fewer want it solely as a ticket for a tenured lecturer's job, or for some kind of life changing social experience. This changing environment combined with the Australian Federal Government's support for mass tertiary education means that the old, quaint if indulgent, academic style of voluntarily supervising 'one or two' Ph.D.'s needs re-thinking.

Other drivers for change come from the globalisation of business and from the 'humanisation' of business studies. International recruitment companies are demanding more standardised qualifications. With the dominance of American multinationals, it is their methods that are being seen as the norm. In addition to this, the more frequent meeting of international colleagues means more consultants are provided the opportunity to compare different educational, and examination styles. This highlights the newness of the Australian Universities arrangements, which were largely designed around the concept of 'boating scripts back to the home country to be marked'. Moreover, the contrasting effects of a monarchy versus republican perspective on students' rights become apparent. These issues can be considered cultural or ethical, and are typical of some of the problems raised by globalisation. A related one is that of dominant epistemology.

### Epistemological Differences

Many people would acknowledge that the history of the United States has led it down a technological path supported by a positivist epistemology. In contrast, the socially turbulent history of Europe has made it more interested in the Critical Perspective and the social impacts of technology. This has given social enquiry more dominance along with its associated interpretive epistemology. Given the development of technology as an international effort, Ph.D. students in Information Systems are increasingly under moral pressure to be true to their personal preferred epistemology relative to the enquiry at hand. The days of being confined to a supervisor's, or a discipline's preferred epistemology are ending in IS. Indeed, considerable time and effort needs to be taken by students in identifying what knowledge gathering methods are convincing to them and seeking to align those with the demands of their research question. For an increasing number, maybe reflecting the learning from the discipline itself, the epistemological basis of the 'variables' measurement approach is questioned. The limits of enquiry that result from the statistical analysis of slight variations in variables while purposely-ignoring ex-

perience and context have been reached and exceeded. The complexity of organisations and the human issues that are involved in their functioning necessitate enquiry approaches that build new and revealing perspectives. Galliers (1991) lists fourteen research approaches, including laboratory experiments, field experiments, surveys, case studies, and action research, presently in use in Information Systems inquiries. Action (case) Research for example, as defined in IS involves researchers being involved in significant organisational changes, and having to deal with a range of very different stakeholders. Finding impartial, international examiners, who are aligned with the students preferred epistemology, is becoming increasingly hard.

### LEARNING TO LEARN

Love and Street (1998) suggested that supervision be reframed as a “collaborative problem solving process... drawing on theories of counselling and conflict resolution”. It is suggested here that we need to go further and include the examiner to become part of a strategic organisational learning system for Universities. This paper suggests that these issues, the need for greater openness and examiners’ responsibility in education and the shortage of skilled supervisors, mean that it is time to re-examine the supervisor and examiner’s role. Moreover, a new system is required that uses what has been learnt from Argyris and Schon’s (1996) reflective **group** learning ideas to ensure that the supervision and examination process provides learning not only to the student but also to the wider academic community. This means more than just individual supervisors and, examiners, but their employers, their Universities, and their peers. Group consensus is required to ensure the examiners are learning something useful not just deluding themselves they are learning from personal reflection.

The message in Argyris and Schon’s (1996) work on “Organisational Learning” is that organisations have to design an organisational system that allows staff to learn to learn. This also applies to postgraduate supervisors and examiners. But learning not only needs to be made about the research topic itself (e.g. Information Technology) but also in the process of enquiry adopted by the student. This is not an ‘administrative efficiency’ issue but one very relevant to the research topic. The way we enquire determines what we find. Supervisors and examiners need to learn how to direct enquiry. Managers, or examiners, working in isolation, unaccountable for their actions, getting no feedback from peers, are not functioning in a good learning environment. From Aristotle to Habermas through Hegel and Popper, the message has been that individuals need to have their personal impressions tested against a universal audience before it can be assumed to be useful knowledge.

Argyris and Schon (1996) are also supporters of the Action Research methodology. This term is used very differently across disciplines. In the Information Systems literature, it assumes the researcher is a full participant in a specific change project that includes a process of reflection. The argument (thesis, theory) and practice form a complementarity (see Baskerville and Wood-Harper, 1998); action (or practice) generates new/revised argument which in turn generates more practice. It is about learning from doing. The Ph.D. process itself can be seen as an Action Research project, with the supervisor and examiner as the researcher-consultants. The Ph.D. study is the action. Learning occurs because the researchers, and other stakeholders, reflect together both during and after the project. The absence of any reflection by all those involved would negate the learning. This supports the need for group learning as a continuous process.

### Small Group Learning

Working in small groups provides an effective learning system preferable to working alone. This has been supported by numerous sources. Examples from a wide management literature include, for example, empirical research from tank crews performance to forecasting accuracy has found a good learning environment requires working in small groups, made up of one’s peers in an equi-power relationship. This literature confirms, despite the rhetoric about committees, that small groups outperform individuals in both the generation and application of ideas. The Hollywood image of charismatic, lonely, inventors is not supported by history nor experimentation (Metcalfe, 1995). The argumentation literature in management also shows those decisions, problem solving and purpose setting only make sense through an explicit, human interactive, argumentative process, rather than by people working in isolation. Further support for group learning comes from the philosophy literature, simple examples coming from Butler (2000) and Aristotle (in *Rhetoric*) who argue that enquiry needs to be a social process, where knowledge has to be tested and constructed from interaction with a universal audience.

There is a range of possible interactive models for Ph.D. examination. At one extreme the supervisors and examiners could make up a small group, which oversees the recruitment, preparation, empirics and write up of a Ph.D.. Examiners should work closely with the supervisors and candidates throughout the candidature, so that all are equally responsible when candidate and committee make themselves available at a public viva (oral examination). This committee, which the literature on small groups suggests should not exceed 5 persons, may include supervisors able to help with technical, political and organisational issues. It may have people from other disciplines to ensure cross discipline learning. Given the increasing numbers of IS Ph.D. students, and the increasing use of small Doctoral Schools, this committee may be responsible for several candidates. The committee will need to meet at regular intervals and allocate tasks to members. Their main purpose is to learn about supervising and examining research, so some method of reflective learning is appropriate including a post-mortem of candidate’s work. The public viva (oral) provides an important opportunity for one form of such reflection, very much in the Aristotelian tradition. This process has the added advantage of not only extending learning across disciplines but also makes the examiners, and supervisors more accountable for their advice. It is an important, if perhaps socially difficult, learning device.

At the other end of the spectrum of interactive models for Ph.D. examination is to only introduce the oral examination. This is common in most Universities around the world. Australia is an exception, but this is changing aided by developments in conferencing technology.

### Replacing the Lone Scholar

The usual form of Ph.D. supervision and examination in Australia still involves Phillips and Pugh’s (1987) lonely apprentice approach. This applies to the students, supervisors and the examiners. Phillips and Pugh (1987) found that difficulties with supervisory skills were a real problem, one that constituted a considerable obstacle for many students. Supervisors will sometimes complain that students expect too much of them, yet the student often has few alternative sources of support. Moreover, it is unreasonable to expect one person to play the roles of academic expert, teacher, ‘hands-off’ research manager, confidante and counsellor to a variety of personalities, some of which they might not always agree with or feel sympathetic towards. Sadly, some supervisors use the apprentice metaphor as an argument to justify

their own unreasonable or sloppy behaviour towards students in their care. Students with two supervisors can sometimes fare better. However, if these two are not working closely together students can be placed in a tenable position where they cannot satisfy the conflicting demands of their supervisors.

A number of semi-structured programs for research students have appeared in some Australian universities in recent years. These do at least offer the opportunity for alternative sources of support for students, and an excuse for supervisors to talk to colleagues about the enquiry process. But many of these programs do not emphasise the social aspects of learning by group sharing of core competencies, found so essential for innovation (Lawson, 1999). This lack of group learning for students mirrors the lonely scholar, or individual assessment mind set which blocks experimentation with group learning. This is particularly unfortunate in the IS discipline in which group learning and teamwork are highly valued. While more and more supervisors are learning from students in seminar programs, it is unusual for examiners to be involved. Yet without this sort of social interaction it is hard for tacit knowledge about enquiry processes to be developed.

### Objectivity

At the centre of the traditional Ph.D. examination system is an epistemology that assumes objective knowledge, including observer independence. A thesis becomes a 'object', which can be impartially observed, and classified, by the impartial judge-examiner. In management enquiry and in IS enquiry in particular this perception is being questioned. For example, see Landry's (1995) definition of "the problem" which constructs the objective, subjective and constructionist view of 'problems'. In the constructionist view of a Ph.D., pretence of impartiality of the observer on what is observed is either naive or dangerous (see Broad and Wane, 1982). Examiners are not impartial, they are carefully selected to either be compliant, sympathetic or of one perspective. The clever candidate finds ways to informally engage possible examiners during candidature. So, rather than turn a blind eye to failures in the assumption of impartiality, it is preferable to be explicit about the examiner's obvious influence in the research process.

External examiners in Australia are often modelled on the Lords High Court approach. There is no oral examination, the examiners are not involved until 'its finished' making it difficult for them to participate constructively in the process. In many cases the rationale for their decision can be totally confidential. Not only does this make them unaccountable, but also it excludes them from the students', the supervisors' and their own learning process. It is understandable how Australian universities came to have this system given that they did not award Ph.D.'s until the 1950's. There are many professors in Australia whose career has benefited from having to go overseas to get a Ph.D. because none were available in Australia. Maybe as part of the 50 years celebration of Australian Universities awarding and examining their own Ph.D.'s, consideration could be given to using the systems adopted in more experienced countries. In the UK external examiners are only brought in at the end, but the oral examination at least provides some attempt for group learning and accountability. The US, which prides itself on its sense of equity and open contracts has been issuing Ph.D.'s for about 100 years longer than the UK and are the architects of the 'every lecturer should have a Ph.D.' culture. Much more use is made of the Ph.D. committees in the US, which includes the supervisors, the examiners (internal or external) and peers, from other disciplines. This guides the student from the start of candidature, and ends with a public (literally) defence of their thesis.

The purpose of gaining a Ph.D. includes more than merely producing 'a book' or the confirming of the conclusions of one student's piece of research. Given the changing demographics mentioned earlier, especially the background of the candidates, the Ph.D. is starting to be seen more and more as 'training' in research. In this role the candidate should receive supportive, directed, continuous feedback as an exemplar of how to learn. Again, given the constructionist view of research, and the subjective aspects of problems, Ph.D. candidates should be as concerned with becoming useful members of a research community and in that way influence what is considered a worthy future research problem.

### An Open Learning System

Demands for a more democratic, group learning experience also come from the expectations of today's 'students'. Increasingly the students have several years of management experience of learning to design innovative and complex Information Systems in an organisational setting. These commercial settings can be comparable, if not better, learning experiences than some University departments. The practitioner coming to start a Ph.D. can have a lot more experience than the supervisors or examiners, both in large project management and publishing reports. Further, in a professional discipline, that is attempting to better inform practice, there is little sense in drawing people from their place of practice to attend the University. The work place is where the phenomena to be observed reside. Asking managers to break their career in order to fit in with Universities' traditional science laboratory perceptions of education may result in a very bias sample. Rather, it may be more sensible to engage 'consultant-candidates' in their work place and ask them if they wish to 'reflect' on their work for their Ph.D. (Action Research). There will be exceptions; especially where the research is critical of organisational behaviour, but in most cases the research is not controversial to the organisations being studied.

So different is the modern IS Ph.D. from the historic hard science Ph.D. that even the traditional University language and selection criteria are irrelevant. The term's 'student' and 'supervisor' are inappropriate; they actually dissuade candidates from starting. Something like 'candidate' and 'academic mentor' may be better. The authors suspect the term 'examiner' is less offensive as many practitioners fully understand the concept of having to come up to a client's requirements. The term examiner does describe the role well. However, the examiners have to be identified, be accountable for their decisions, and be required to defend (legally if necessary) their position. This is already being reflected in a change in the journal referee process for some journals. They publish submitted articles for public review on the Internet. The comments and names of referees, after the double blind review, are also published. This makes the authors and reviewers more accountable.

Despite their interest (or maybe as a result of it) in Critical Studies, in the UK vivas are common but usually behind closed doors. A more open contract system is at least advocated in the US. The literature on argumentation, from education (Crosswhite, 1996), from psychology, from research methodology, from philosophy (Walton, 1998), from decision-making (Myer and Seinbold, 1989) and from the problem solving domain (Neierman and Desantis, 1995), suggests that public debate is most likely the best and fairest approach to learning. While a universal audience may not be achieved, it should be sought. Metcalfe (2000) presents the case for corporations using public debate or a 'mock courtroom' when making major organisational changes. The same image can be used with the oral defence of research findings but maybe in this case the Royal Commission or European court sys-

tem would be preferable. The candidate, having previously submitted the thesis for reading by the examiners (judges) starts by making a short summary of the thesis, which is then cross-examined by the judges. The academic supervisor assists the candidate but the student must independently present the viva. Last, the public can ask questions through the judges. To conclude, the judges confer and pronounce a verdict. This layout makes the examiners and the examination public. It also allows the candidate to present in two forms, so if there is some weakness in their written style they get a further chance with the oral.

## CONCLUSION

It has been argued that examining a Ph.D. should be a learning experience for the candidate, supervisor and the examiner. Not just on the Ph.D. topic but also with respect to the process of enquiry, which is so important in determining what is learnt. Learning, in an organisational setting has been found to benefit from small group interaction, some would say it defines knowledge. It therefore seems logical to suggest that supervisors and examiners work more closely as a group. The United States often use a committee system that includes the examiners throughout the candidature. The arguments against this usually draw on an objectivity epistemology. This view of how knowledge is created which is most likely wrong, has caused numerous cases of fraud in the sciences, and is increasingly being dropped in social enquiry methodologies. The pretence of objectivity in examiners needs to be set aside. Examiners should be more involved through the whole Ph.D., so they can learn, not by un-validated self-reflection but rather by interaction with a universal audience. If this is not possible then at the very least oral examination should be used. It is about interactive learning. This is a much more reliable method of knowledge creation. What is good for student learning should also be good for academic learning. A public viva or oral examination, conducted under the rules of evidence used in Royal Commissions (in Australia) nicely contributes to this while also adding a touch of accountability. Overall the system should reflect a more open environment for both the students and the supervisors and examiners. Providing a collaborative learning process.

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