Strategic Cooperation to Enhance Quality in Doctoral Supervision

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Abstract

Having a doctoral degree is a must for those pursuing an academic career. Students pursue a doctoral degree to improve their career opportunities, promotion, social status and self development. Universities compete with each other in increasing the number of doctoral graduates to improve ranking, increase amount of research grants and publications derived from all the research work completed. Despite this clear objective, the number of doctoral students completing their studies on time is not improving even with the significant advancements in technology. Established Universities with prominent professors should cooperate with the newly established universities to meet the requirement for experienced supervisors.

In this paper we first present to the reader a brief background of the doctoral program and its supervision. In the introduction, we describe briefly the different systems of doctoral programs in some countries, types of supervision, the importance of effective supervision and some statistics on the rate of completion for doctoral programs.

Next we highlight the problem of finding suitable supervisor/s effective supervision. This is followed by a proposal for a web-based system to build a database of supervisors. The following section highlights issues related to the idea of the proposed collaborative strategy to enhance the quality of doctoral supervision. Finally, we conclude with a list of recommendations that universities, supervisors and students can adopt to achieve their objectives and ambitions.

Keywords: Supervision, quality, doctoral program, web-based system,
Introduction

The Doctor of Philosophy (PhD), as a research degree award, was first conferred in Germany by the Friedrich Wilhelm University, Berlin during the early nineteenth century. In the US, the PhD was first conferred by Yale University in 1861. The PhD degree soon spread to Canada in 1910 and other English-speaking countries like Australia in 1948 (Park, 2005).

The PhD program is different for each country. For example, in Germany and some European countries, a PhD candidate has to take on a teaching assignment while at the same time conduct research and produce a thesis. In the USA, a PhD candidate has to sit for an entrance examination, register for advance classes related to the research area. In the UK, a PhD student need not sit for any entrance exam and pass advance courses. In fact, the student can straight away proceed with the research work. In Japan, a PhD student needs to publish at least 2 papers in an international journal before he or she can submit her thesis for examination. Now, many universities have changed their PhD programs to have both taught courses with exams incorporated with the individual research component. This is in line with the US model of PhD program. A PhD student is usually supervised by one or a team of supervisors if the research requires the expertise of more than one area. Close supervision is imposed to ensure timely completion and success. The university is aware that students need to meet regularly with their supervisors and they have established procedures to monitor the progress of both supervisor and student.

The decision to embark on a PhD program is a serious and important decision (Abdelhafez, 2007). A candidate usually has his/her own reasons to enrol in a PhD program. Some do it for a better career opportunity, promotion, the prestige and fulfilment. Many will agree that doing a PhD is expensive, and it requires a long-term commitment. It may take between three to ten years of a person’s life (Bourke et al, 2004). Undoubtedly, it is also very hard work. It can be difficult if the candidate does not have the support needed to complete the research. The doctoral study will require sacrifices involving time, finances, and sometimes, emotional availability. This means that your children, partner, spouse, family and friends will also be making sacrifices (Bowen and Rudenstine, 1992).

PhD students are important to an academic simply because they find teaching graduate level courses more intellectually stimulating than
teaching undergraduates. The doctoral students that they supervise are important to their own research success. They can help in the collection and analysis of data, and co-authored papers are a staple of the professor’s own publications list (Down et al, 2000).

The PhD program is important to a university. The PhD community is vibrant and bring prestige to the institution. The success of a PhD program will help to strengthen the University’s international reputation and will attract students from across the globe. Through the research completed by students of the PhD program many publications in international journal and conferences will be produced. These publications can then be used to churn out future research work. Bring opportunities to the University through their networks The PhD graduates can contribute towards the development of the university’s workforce. For many universities additional research funding is awarded by the Government based on its PhD recruitment and completion. Additional funding from Government is often related to the number of PhD students (home students). The PhD completion statistics is a metric in most international league tables and it can be used to attract additional funding from other Research Councils (Latona, and Browne, 2001)

For a developing country like Taiwan for example, PhD holders are important to its economic survival. Every year, the country welcomes its returning expatriate PhD holders from the USA to work in their technology parks. These returning expatriates produce new inventions which were later patented. The country then manufactures these new inventions and exports them to the global market.

2.0 The Problem

The PhD program is attractive to many students but a small percentage is able to pursue it due to various reasons. By the time they are able to qualify for it, they are married and already working in the industry. Enrolling in a PhD program will mean leaving their jobs and sometimes leaving their family and country too. It can be a disruptive change to the students and their families. The tuition fee and living expenses required for the whole three to five years can be very high if it is done in the UK, USA or any developed country. Special funding is needed to see the student through and this can be a huge obstacle as scholarships and study loans are difficult to get and sometimes the amount given are inadequate. Another crucial problem is to find a supervisor that matches the students' topics of research. The 'ideal' supervisor may already have too many students to supervise and therefore, no longer willing to take another student. The 'ideal' supervisor may be located in another country and university which the student is
unable to enrol in. The university in which a student is able to register for a PhD program may be too young and therefore do not have experienced supervisors in the required area. The question is, how can universities help students to cope with the requirements of a doctoral program with respect to funding, relocation and personal sacrifices. What can be done to overcome the problem of having inadequate number of experienced supervisors and supervisors with matching expertise and interest with that of the students? The following section will describe the proposed solution.

3.0 Proposed Web -Based System

Universities will need to collaborate on doctoral supervision and doctoral programs. They should be willing to share resources and expertise. The sharing of supervisors and expertise need to be well supported and monitored. We need a web-based system to make this effort a success. In search of an optimal solution to address the problem of finding the ideal supervisor and at the same time ensuring the quality of supervision and doctoral thesis is uncompromised, we would like to propose the development of a web-based system which we will call e-Mentor Network. The system can be developed using a open source software or simply HTML, PHP and Java. It can reside in the server of the host university. It is a system with a repository of candidate supervisors and a collection of digital resources on PhD guide. Diagrammatically we can represent the idea as in Figure 1.

![Figure 1: My Mentor System](image)

The design of the homepage of the system will be as in Figure 2. The system will have four main databases linked to it. The first database
will contain information on supervisors participating in the program. The information gathered will help students to decide whether he/she is suitable to be considered as a candidate supervisor. The supervisor profile will contain his/her contact information, qualification, teaching and research experience, his main research areas, publications, supervision history, role as examiners and characteristics of preferred students.

The second database will be a collection of guides for doctoral students. This repository will consist of literature to guide and motivate students throughout their stint as doctoral students. For example; the research process, guide to thesis writing, special interest groups and forums, guide to publishing research papers and PhD survival skills.

The third database will be a database of PhD theses. The main purpose of providing this resource is to enable students to have an idea of how long, detailed and organised a thesis should be written. These theses will give doctoral students an idea of the standard of writing and what is expected from them.

The fourth database will be a collection of guidelines and monitoring forms for supervisors (Ferman, 2002). Supervisors that agree to join in this program must be willing to submit regular information on the progress made and problems faced when supervising a student. Feedback from the supervisors will be used by the university to evaluate the students progress and for the university to take necessary measures if a problem is detected.

![Figure 2: The Main Page for the System](image)
4.0 Discussion

This system is not difficult to design and develop. However the concept and the will to have inter-university collaboration and supporting policies to turn it to a reality is most challenging. There are many issues that needs to be addressed and solutions to be agreed upon. Amongst the pertinent issues will be as follows:

- The student will be supervised by a supervisor or a team of supervisors from one or two other universities. When the student successfully completes the program and fulfills the requirement of a PhD, which university will award the degree?
- A typical research program will require a certain amount of funding and resources. How will these funding requirements be attained?
- Students will pay tuition fees to the University in which they are registered. What about the supervisors? Will they get any form of remuneration from their efforts in supervising PhD students which are registered in another university? If they are paid some honorarium, how much will it be?
- Doctoral students usually write papers and submit them to conferences and journals to get feedback from other scholars and researchers. They are encouraged to publish their findings to get recognition of their work. Credits due to these publications will have to be shared between the supervisors and their respective universities.
- When there is a research outcome and these research outputs get patented or published, who will own the Copyrights to these research outputs?
- When the supervisors take on students, their progress needs to be monitored. Will there be a monitoring procedure and standard quality format that is agreed upon by participating supervisors and universities? Which university will monitor students’ progress and supervisors’ commitment?
- Supervisors spend many hours discussing with their students, going through their draft thesis, sometimes doing part of the research together with the students. The question next is what due recognition will these supervisors get from the universities for all their efforts?
- There are many styles of supervision and many supervisors supervise students almost in the same manner as they were supervised. One of the major problems according to the PhD-
students is the supervision (too little, too occasional, too low priority, too much pressures, not structured, or even, too much) (Edwards, 2002). The supervisors and the PhD-students’ expectations on the PhD-education are not always coherent (Manathunga, 2005). A training or orientation for supervisors will be appropriate so that all participating supervisors are on the same wavelength (Murphy, 2004). The question the will be; who will conduct the training, when and how.

The system has several benefits which are indirectly achieved. The research community can use it in their activities. Supervisors can use it to look for suitable external examiners for their students who are submitting their theses. Journal editors and conference organisers can look for reviewers. Researchers can look for potential collaborators. The industry can look for experts and advisors for their R&D units and students can use it to build their network with fellow students and supervisors.

5.0 Conclusion

In this paper, a web-based system has been proposed to build a repository of supervisors that students can choose from to be their mentor and guide during their doctoral program. The system is built to support the strategic corporation between universities in trying to overcome the problem of finding the perfect match between supervisors and students. The system is relatively simple and inexpensive to build. In fact, it can even be a final year student project. It is the philosophy and the spirit of cooperation between participating universities that will be the main success factor. The member universities must be committed to make this arrangement a success and support the effort in whatever way that is possible.
References: