

# MyBRAIN15

## IMPLEMENTATION SUCCESS FOR KNOWLEDGE ECONOMY: THE INFLUENTIAL FACTORS



PRESENTED FOR:

**MINISTRY OF HIGHER EDUCATION MALAYSIA**

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**OCTOBER 2010**

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## ACKNOWLEDGEMENT

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## EXECUTIVE SUMMARY

Production of PhD graduates is of vital importance for new knowledge economy in Malaysia. Its core idea is that future economic performance will be closely based on the skill and innovation level of the labor force, underpinned by effective research and R&D capacity. Concern over the potential shortages of doctorates in Malaysian workforce, Malaysia's Action Plan to increase numbers of doctorates within the next 15 years has led to the brainchild of the programme named *MyBrain15*. *MyBrain15* was initiated in the year of 2009 aimed to increase the national competency and capacity for higher level research and innovation by increasing the number of doctorate holders from 8,000 in year 2009 to 60,000 in 2023 (an increment of 8 to 12 percent per year).

After one year of its implementation, our investigation found that many faculty members of the Malaysian Public Universities are still either unaware or ignorant of this agenda. However, despite the lack of information on *MyBrain15*, universities continue to strive for more doctorate holders especially 'Research Universities' (RU) or those that aim to attain RU status. Most of the respondents in the present study when interviewed, agreed that *MyBrain15* can be materialized with the right strategy and action plan. Thus, the current research explored to what extent the objectives of *Mybrain15* has been carried out looking at both demand (application factors) and supply (admission criteria set by the university) as well as factors contributing to completion and enhancement of research and publication. Using both quantitative and qualitative data analysis, the present study found that to increase the number of individuals into the doctorate program, the following factors should be taken into consideration (1) Opportunity/Rewards; (2) Personal- attributes; (3) Working Relevant Knowledge; (4) Financial support; (5) Program structures; and (6) Social Support.

The descriptive analysis indicated that respondents rated admission requirement and resources availability at Malaysian universities as moderately high for all six factors under studied namely competencies, qualification, examination process, supervisor's availability, time perceived to completion and availability of facilities. The respondents on the other hand perceived that individual who wanted to embark into the doctorate programme needed to have high level of maturity and independency followed by good working habits and intellectual capabilities. As for contribution to completion rate four influential factors were found namely Supervisors, Student, Support and the Environment. Supervisors' commitment towards students' research work were found to be the most influential factor. Three factors that influenced the PhD holders to enhance their research work and publication were identified. They were (1) Self-aspiration; (2) Breadth of Research Training; and (3) Supervisors-student relationships and guidance.

# CHAPTER 1

## INTRODUCTION

### 1.0 INTRODUCTION

'What is a PhD' or currently term as doctorate, was previously being defined as a training period for future researchers. For the university, PhD students are 'the army of research 'ants'. According to Mitchell (2002), PhDs helped to keep the research mission moving forward. Pole (2000) viewed the PhD student as a blend of technician and scholar, and Trotter (2003) described her PhD in social work as a mixture of "researching, studying or jumping through hoops". For the student it can be an "academic passport with international reciprocity" (Noble, 1994), a license to teach at post-degree level, and an apprenticeship in "proper" academic research (Armstrong, 1994). Harman (2002) viewed doctorate as a piece of work that changes the course of human knowledge. Quality Assurance Agency (QAA, 2001), stated that "Doctorates are awarded for the creation and interpretation of knowledge, which extends the forefront of a discipline, usually through original research. Holders of doctorates will be able to conceptualize, design and implement projects for the generation of significant new knowledge and/ or understanding. Holders of doctorates will have the qualities needed for employment requiring the ability to make informed judgments on complex issues in specialist fields, and innovation in tackling and solving problems."

Having research degree awarding powers is a major sign of the status and academic credibility of a university, and those research universities which award doctorates situate themselves at the pinnacle of the ladder of academic qualifications (Stauffer, 1990). According to the UK Council for Graduate Education (1997) doctorateness involved "mastery of the subject; mastery of analytical breadth (where methods, techniques, contexts and data are concerned) and mastery of depth (the contribution itself, judged to be competent and original and of high quality)." Mullins and Kiley (2000) insisted that, in the apprenticeship model, "a PhD is a period during which, amongst other things, a student learns the art and the science of research, the ethics of research, the intellectual rigor required of a researcher, how to frame research questions and to pursue them and mould them, and to complete a piece of original research."

Indeed, in the Malaysian Universities, the research carried out by doctoral students is essentially important, because many doctoral students are the professors of the future, and most doctoral research gives rise to new knowledge, new interpretations and new explanations. In this sense, research students act as stewards of a discipline (Jackson, 2003) with a responsibility to keep it not just alive, but intellectually vibrant. For the nation, the obvious benefits of an active community of scholars engaging in doctoral level research include enhancing creativity and