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A Critical Review of the Doctor of Philosophy and a Few Doctoral Programs

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Abstract: In today's society, academic qualifications can open up more employment opportunities for learners, and give more social recognition for individuals. These can help individuals establish extensive interpersonal relationships and have a positive impact on future career development. Therefore, the importance of academic qualifications can be seen in this article. During the doctoral stage, learners will face various challenges and constantly learn a lot of new knowledge. For example, they will have a deep understanding of existing research results and identify research gaps in order to lay the foundation for their own research. At the same time, they will master the research methods suitable for their own research topics, including quantitative, qualitative or mixed research methods. Amidst escalating academic competition, the imperative to augment educational qualifications to bolster professional acumen and enhance job market competitiveness has become increasingly evident. This research critically examines the disparities and parallels between doctoral programs and the Doctor of Philosophy degree, focusing on the disciplines of education, business, and engineering. The paper concludes by offering valuable insights and recommendations that could benefit future educators and learners seeking to enhance their academic pursuits.

Keywords: Doctor of Philosophy; Doctor of Business Administration; Doctor of Education; Doctor of Engineer

1. Introduction

Within the evolving dynamics of knowledge-driven economies, the gravitas of elevated academic qualifications, namely the professional degree and Doctor of Philosophy (Ph.D.), has become increasingly pivotal. These scholastic accolades are not merely tokens of educational attainment but signify a profound depth of expertise and dedication within a specific academic realm. A professional degree typically embodies practical and industry-specific knowledge, priming students for immediate immersion in their respective professional fields. Conversely, a Ph.D. is fundamentally anchored in research, fostering innovative thinking and contributing novel intellectual capital to a distinct discipline. The essence of this research lies in decoding the intricate framework and significance of these higher degrees. In an era marked by heightened competition across diverse sectors, a nuanced comprehension of these programs can provide aspirants with a coherent career blueprint and concurrently guide academia in designing and delivering more efficacious and pertinent curricula [1].

Maximizing research productivity is a key focus for universities around the world [2]. Research and study at the doctoral level is to cultivate independent thinking and problem-solving abilities through in-depth research training, while using advanced research methods to promote the development of scientific research. Education should advocate a renewed focus on process and outcomes, and the ultimate goal of learning should be to empower and transform learners[3]. Learning in education is not only about acquiring knowledge, but its ultimate goal is to improve one's own abilities and lay a solid foundation for lifelong learning. The study period for a Doctor of Philosophy is conducive to the development of innovative thinking[4]. Therefore, it is also very important to conduct in-depth analysis of traditional concepts and theories and enhance the ability to question and criticize existing knowledge. It can be seen that PhDs are better at planning education[5]. Interdisciplinary collaboration in the academic field is also an integral part of self-education

planning, and clarifying one's own research goals can also promote research progress. In the process of training a PhD in philosophy, critical thinking is the focus. Critical thinking improves decision-making and enhances problem-solving skills. Doctor of Education is more application-oriented. Therefore, there will be more practical courses in the learning process. At the same time, the doctoral degree in education emphasizes the combination of theory and practice, which can make learners more adaptable to apply the knowledge they have learned in the real educational environment and promote educational reform and innovation.The Doctor of Engineering is designed not only to develop academic capabilities, but also to focus on developing industrial and administrative capabilities. Therefore, a PhD in Engineering places more emphasis on developing learners' knowledge in specific fields and encourages technological innovation and application [6-8].

The implications of this study are manifold. Primarily, it seeks to delineate the distinctions and commonalities between professional degrees and a Ph.D. This comparative analysis aims to demystify these programs' structure, objectives, and outcomes. Secondly, this research, through the rigorous examination of scholarly texts, strives to pinpoint strategies to enhance the impact of academic knowledge within these programs. Finally, the study offers meaningful insights and pragmatic suggestions to future educators and learners, thereby shaping the future trajectory of higher education [9].

2. Overview of Doctor of Business Administration Program Research

The Doctor of Business Administration (D.B.A.) holds a rich historical lineage within the sphere of American graduate business education, having been a component of the academic landscape for a significant duration . Tracing its origins back to 1953, Harvard Business School introduced the D.B.A. program, although initial enrollment was modest. Simultaneously, on a global level, Australia saw the advent of the Doctor of Philosophy (Ph.D.) program, an initiative spurred by an exhaustive review conducted by the Australian Government Department of Education, Science and Training (DEST) on research training in doctoral programs.

As one transition toward the Asian market, the recognition and acceptance of the D.B.A. degree remain in the embryonic stages. Specifically, within China, a clear distinction exists between degree certificates procured via online learning and those attained through conventional offline education, particularly regarding societal recognition. Consequently, the Ministry of Education of China has initiated significant efforts to streamline and enhance online education. This transformation, however, has been relatively slow, with only a handful of universities in regions such as Hong Kong offering predominantly online or part-time education.

The purpose of this essay is to seek answers to the following questions: What is the main difference between a D.B.A. and a Ph.D.? What is the difference in program learning outcome between a D.B.A. and a Ph.D.? Based on career development, which is more inclined to practical ability training, and which is more inclined to research ability training?

2.1 Search Strategy

The relevant literature selected followed Systematic Reviews and meta-analyses. The following databases were searched: (1) D.B.A., (2) Ph.D. in business, (3) Ph.D. in business management, (4) D.B.A. & Ph.D., (5) D.B.A. in Hong Kong (6) D.B.A. in the U.S.

2.2 Findings

2.2.1 Programs

The purposes of personnel training in the D.B.A. and Ph.D. programs vary. The Ph.D. in Business Administration is designed to meet the professional needs of academia [1]. In other words, doctorates focus more on basic research. Students will become scholars with research abilities in the continuous training of completing experimental tasks and writing academic articles. Moreover, the D.B.A. is more of an applied degree, in which students take the results of existing research and apply them to a field of study, which means that the Ph.D. is a producer of research, while the D.B.A. is the user of research results. In short, the Ph.D. is focused on training qualified professional researchers, and the D.B.A. is aimed at practicing managers.

Regarding the courses of the two programs, the total credit requirements are similar. For example, in Australia, candidates will study four research courses in the first year, such as quantitative and qualitative research methods and research proposals. The goal of these

courses is to train a qualified researcher.

Table 1. An overview of reviewed schools of D.B.A. and Ph.D.

Schools	Course	Time	Mode of Study	Area
1. the City University of H.K.	57 credits	3-4yr	Part-time	Hong Kong
2. The H.K. Polytechnic University	51 credits	3yr	Part-time	Hong Kong
3. H.K. University Science and Technology	53 credits	4 yr.	Part-time	Hong Kong
4. H.K. University Business School	120 credits	4yr	Part-time	Hong Kong
5. University of Harvard	Ph.D./ Doctoral	More than two years	Full-time	United States
6. University of Florida	Doctoral	Three years	Full-time	United States
7. Washington University in St Louis	Doctoral 72 credits	Five years	Full-time	United States
8. University of Scranton	Doctoral 87-93credits	Three years	Full-time	United States
9. The University of Western Australia	Doctoral	Three years	Full-time/ Part-time	Australia
10. The University of Notre Dame Australia	Doctoral	Three years	Full-time/ Part-time	Australia

2.2.2 Location differences

As shown in Table 1, Hong Kong universities offer many part-time courses, while American universities mainly offer full-time courses. Australian schools are more flexible in both part-time and full-time. All doctoral programs emphasize the number of credits or courses students should take in their first year. Considering that many students applying are employed, some universities in Hong Kong offer many part-time courses. For those who apply for a doctorate, obtaining a doctorate is to cultivate a wealth of professional knowledge that can be applied to their work. Based on each of the D.B.A. program handbooks, D.B.A. is designed for working professionals such as management practitioners and focuses on solving real-life business problems. Their courses are designed to equip students with critical thinking, communication, and research skills. Their future career goals focus on practical managers, such as D.B.A. professors, logistics analysts, entrepreneurs, business consultants, and organizational development managers.

2.3 Addressing the Research Questions

Research Question 1 (RQ1):In examining the contributions of the Doctor of Business Administration (D.B.A.) and the Doctor of Philosophy (Ph.D.), it is discernible that both degrees significantly contribute to their respective areas. The D.B.A., for instance, plays a crucial role in enhancing the corpus of research directed toward improving practice and policy within business administration. On the other hand, Ph.D. holders have significantly advanced the frontiers of knowledge within their chosen field of study. When considering the structure of the programs, the D.B.A. curriculum is predicated on key learning points, with the prerequisite being the establishment of a master's level foundation. This includes acquiring the requisite skills for effective job performance [10,11].

Research Question 2 (RQ2): The D.B.A. degree predominantly targets practicing managers, with a limited number of academic institutions accentuating the value of the D.B.A. for individuals aspiring to further their careers in management and possibly academia. Contrarily, the Ph.D. program is primarily designed to cultivate professional research capabilities [12].

Research Question 3 (RQ3): The recognition and status of the D.B.A. degree have yet to reach maturity. Its equivalency with the Ph.D. remains contested within university circles. Despite this, limited research affirms the D.B.A. not only as a conduit for degree holders to amplify their career prospects and personal fulfillment but also as a critical factor within the expansive domain of professional and lifelong learning. The significance of these attributes underscores the value of the D.B.A. as an instrument not only for professional growth but also for individual development and societal improvement.

3. Overview of Doctor of Education Program

Research

The full name of E.D.D. is The Doctor of Education. It is a course specially designed for experienced teachers and education professionals. It is a course that focuses on practice. The Ph.D. degree is typically said to be more research-oriented, whereas the EdD is aimed more at the educational practitioner. The EdD is different from a pure educational doctorate, as opposed to a Ph.D. that focuses on academic research investigation and research of data. We found that the learning direction of E.D.D. pays more attention to the relationship between teaching theory and practice and also pays more attention to the practical activities of education. For those who want to take a senior leadership or policy position in the field of education, E.D.D. is an ideal course to help this group further improve their abilities and literacy. The EdD was initially conceptualized as a program of study for individuals who intended to be practitioners in education rather than avid postdoctoral researchers. This article also discusses program structure, admission requirements, fees, and the relationship between E.D.D. and Ph.D., which is explained in detail in terms of funds and so on. The study duration in an E.D.D. is approximately three to five years of full-time and five to eight years of part-time education. It is primarily designed for experienced professionals who wish to pursue an E.D.D. degree to improve their abilities in education. It is also very flexible in terms of course structure settings. For example, online learning can be selected as a distance learning model. Now, thanks to the rapid development of technology, online education is prevalent because of its flexible and effective model. Online teaching can break through the limitation of space and learn by watching recorded courses, so learners will not have too much learning pressure and will be relatively relaxed during the entire learning process. For example, the epidemic that has lasted for several years has affected air traffic worldwide. Online courses can save learners time and transportation costs. More importantly, it can improve learning efficiency and protect students' health.

At the same time, learners can visit the school in person to discuss academic knowledge and exchange opinions with professors face-to-face. Therefore, the course study of E.D.D. is very flexible, and the teaching mode can also be selected. Studying E.D.D. costs about 2,500 pounds per year as a study fee. E.D.D. is relatively tiny compared to a Ph.D., with more project funding and financial allocation. For future employment directions, E.D.D.s primarily seek to engage in new roles related to education policy, such as government or university think tanks, as well as administrative and senior management positions in universities. After graduating with the E.D.D., you can use your experience to contribute to the study of teaching theory or professional educational practice.

The full name of P.H.D. is Doctor of Philosophy. Ph.D. is an academic doctorate obtained through independent research. Usually, independent study is the primary learner. Students hope to enhance their academic knowledge through study and enter the university to teach after graduation. The Doctor of Education (EdD) has existed for over 90 years, establishing the first EdD degree at Harvard in 1920. Today's educational practitioners are expected to know how to gather, analyze, and report on data for accountability purposes and to use that information to improve student outcomes. Ph.D. spends most of its time collecting data for SPSS data analysis to create new knowledge. The so-called knowledge must be communicated and understood. Writing, speaking, and discussing during the doctoral period are all to accumulate experience for better publishing articles in the future and train learners to make logic from detailed information and data. Ph.D. is an academic degree that requires students to conduct original research to contribute to the accumulation of human knowledge, and Ph.D. does not make strict requirements on whether students have work experience or specific teaching experience.

The curriculum requires a more substantial structure and definition and a strong focus on developing and improving practical skills, which differs significantly from E.D.D. Regarding graduation thesis requirements, P.H.D. papers are usually derived from theory and literature, studying a relatively narrow topic, requiring original research results and new contributions to the human knowledge system. In contrast, E.D.D. papers are derived from practical problems and require using existing theories to analyze and improve reality, focusing on practical significance [13,14].

4. Overview of Doctor of Engineering Program Research

Colleges and enterprises jointly cultivate engineering doctors, and colleges and universities award the degree. The lack of high-level engineering and technical leaders is an important factor restricting the improvement of enterprises' innovation ability and international market competitiveness [15]. Establishing a professional doctorate in engineering is an essential institutional innovation and institutional support for realizing school-enterprise integration, domestic and international cooperation, and promoting high-level engineering and technical personnel training with a high starting point and high quality. It also plays an active role in enriching the types of professional degrees and steadily developing professional degree education at the doctoral level.

In a traditional engineering education field, an engineer's highest achievement is usually a doctorate. A graduate of this degree does not have the skills of a professional engineer or the expertise of a high-level engineer. The development of on-the-job doctoral education makes it possible for more and more people to get doctoral degrees. Many potential candidates could not pursue doctoral studies before due to the pressures of life. Engineering majors currently hold the preference of most incumbents and have also become popular. In addition, on-the-job training to pursue a Ph.D. in engineering has become accessible to related majors.

A professional doctorate differs from a research-oriented Ph.D. because it emphasizes students' practical application abilities and flexible knowledge use. Engineers are confronted with real-life problems and work, not just research results. Doctoral students in engineering must demonstrate the ability to investigate significant issues in the engineering field and complete their investigations. In reaching a competency stage and an academic standard parallel to academic requirements, the degree represents a broad mastery of topics and techniques in his major engineering field.

Second, it is beneficial for on-the-job students to learn without delaying work or learning. For those who study on-the-job doctorates, the most important thing is that the study should not affect the job but learn to apply their knowledge to the workplace in their spare time and use the knowledge they have learned proficiently. This way of learning increases understanding and improves workability, truly applying what you have learned. Incumbents like to study part-time doctoral programs by way of part-time doctorates [16].

There are a variety of industries offering Ph.D. programs in Engineering. Their goals are unique and can be broadly categorized as early- and late-career stages. Early-career candidates are graduating undergraduates with outstanding academics looking to accelerate their careers. Those late in their careers are seeking further professional recognition. These candidates typically have five to ten years of engineering experience. They should have a master's degree before applying to Eng.D. programs to seek promotion to more senior technical leadership positions[17]. These higher-level positions require solving engineering-related business problems. These students aim to understand engineering principles better and learn operational business practices.

5. Graduation Requirements

The university requires students to present their books to demonstrate their engineering doctoral competence and their work in methods usually used to demonstrate a student's research accomplishments, such as portfolio defenses and internships.

Eng.D students may submit portfolios that include videos, System Design, Subsystem Development, computer simulations, working models, user manuals, inventions, and conference/journal articles, among other things [18]. An Eng.D student and their advisor faculty member must review the proposed research proposal during the process and develop a syllabus for the new graduate-level material that students will study in their first semester for an advisory committee to examine and defend the degree. The Advisory Committee consists of a group of consultant faculty to assess the student's mastery of the materials required to execute the research program. The students must complete their research programs and defend their portfolios when they complete their programs [19].

Some engineering doctorate assessment programs will include internships, where students continue to work as engineers while pursuing a doctorate in engineering, with academic goals and career goals set by the current employer's program director in close cooperation with the University Advisory

Committee. Internship programs are defined jointly by the internship employer, the student, and the University Advisory Committee for internship credit approved by their committee and employer. Before beginning an internship, students must submit an Internship Proposal that the Advisory Committee, the Program Director, and the Advisor Faculty will review. All coursework must be completed before the training, and students must remain continuously enrolled. The engineering doctoral internship program at Ball Aerospace Systems Division requires students to develop professionally in Spacecraft System Design; Stars can Attitude Control, and Subsystem Development, using spacecraft development business contributions to evaluate student performance [20-23].

6. Attitudes on Graduation Outlook

Research engineers and Industry perceive the EngD program as fruitful and beneficial - often describing it as a win-win for all. Regarding EngD candidates, academia, research engineers, and Industry agree that the program fits their needs. Almost 80% of respondents agree that EngD graduates develop innovative thinking while tackling industry problems. However, industry participants expressed a lesser "full" agreement than other stakeholders, and a more significant percentage said a partial understanding. As a result of a lack of understanding of what an EngD means, concerns have been expressed that the EngD is considered "second-best" compared to a Ph.D.

Nevertheless, most respondents think EngDs produce a quality output equivalent to or higher than a Ph.D. The professional doctoral course students want to participate in is not separate but collated with engineering experts. Even after graduation, candidates are required to learn and communicate with each other. They can gradually expand their network of contacts, which also has advantages for future work and employment.

7. Conclusion

The investigation into the Doctor of Business Administration (D.B.A.), Doctor of Philosophy (Ph.D.), Doctor of Education (Ed.D.), and Doctor of Engineering reveals distinct training methodologies and objectives tailored to each degree. Regarding course emphasis, Ph.D. programs primarily focus on quantitative research courses, necessitating an understanding of statistics to facilitate the kind of research crucial to this degree. This approach prepares students to apply their knowledge to related fields across various regions.

Conversely, the D.B.A. degree emphasizes the development of implementation plans based on current theories to address practical issues in the field. The Ph.D. prioritizes research capabilities among these advanced degrees, while the D.B.A. leans more toward practical abilities.

When comparing the Ed.D. and the Ph.D., a detailed examination of curriculum, tuition fees, and prospective employment arrangements is warranted. The primary objective of any doctoral program is to cultivate intellectual leaders who possess high proficiency in objective, critical inquiry and recognize its importance.

In this context, the Ed.D. and the Ph.D. programs aim to elevate and refine their learners' academic knowledge and ability levels through sustained effort and diligence. Despite their differences, each degree contributes to society in a distinct yet meaningful way.

Similarly, with its specific curriculum and focus, the Doctor of Engineering contributes to a different, more technical, and application-oriented aspect of society. As students navigate these advanced degrees, they contribute to their respective fields and broader societal progress and innovation. Equipped with the rigorous training and specialized knowledge these programs provide, graduates are well-positioned to effect meaningful change in their professional spheres and beyond.

In their respective ways, these advanced degrees foster critical thinking, innovative problem-solving, and a deep understanding of their disciplines, be it in business administration, education, engineering, or research-focused fields. This not only amplifies the individual competencies of the degree holders but also enriches their respective professional landscapes, catalyzing growth and advancing knowledge frontiers.

Therefore, the value of the D.B.A., Ph.D., Ed.D., and Doctor of Engineering extends beyond personal academic achievement. They represent an integral part of our continuous journey toward societal advancement, enabling a more nuanced understanding of complex problems and facilitating the development of innovative solutions in an increasingly interconnected and dynamic world.

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