INVESTIGATION OF GRADUATE DEGREE PROGRAM IN DIGITAL LEADERSHIP

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ABSTRACT

The purpose of this study was to investigate graduate degree program in digital leadership around the world. This study analyzed key elements of graduate program in digital leadership using recommendations of previous research including name of institution, name of degree program, focus and credits for completion, tuition fees, admission requirements, and program strengths (benefits). Key words such as "digital leadership program", "graduate program in digital leadership", and "master's degree in digital leadership" were utilized for the search through Google search engine. Results found that nine institutions had delivered graduate degree program in digital leadership. Interestingly, among these institutes, six of them were from European countries while two universities were from Asian countries, and only one was from the U.S. Five universities designed their program as a part-time program while the other five universities delivered a full-time graduate program in Digital Leadership. Among these institutes, GISMA Business School from Germany offered both part-time and full-time programs. For admission requirements relating to work experience, National University of Singaporeand The Hong Kong Polytechnic University equally required a minimum of 5 years work experience while ESCP Europe Business School needed at least 18-month of work experience.Findings also revealed that most of digital leadership programs offered by these nine institutions had placed an emphasis on the combination of coursework and project-based learning activities.This study recommended potential universities around the world to employ these findings to develop curriculum for graduate degree program in digital leadership.

Key Words: Digital leadership, Graduate degree in digital leadership, Graduate program.

INTRODUCTION

Digital transformation cannot be successful without an effective leader (Sow & Aborbie, 2018).A recent report indicated that senior leaders in businesses with annual revenues between $15 and $200 million failed to describe the term "digital transformation" (Rayome, 2019). To become an effective leader in the age of digital transformation, leadership development is the most essential challenge for individuals and companies around the world. As the digital technology requires leaders to have distinctive skills and expertise than the past decade, leaders need to understand the evolving business environment and have sufficient technical knowledge

and practical experience to encounter the world of disruption and transformation(Abbatiello, Knight, Philot, & Roy, 2017).

Digital leadership is perceived as a key factor for a successful digital transformation in a real business world. Digital leadership has increasingly become an imperative component for transforming businesses and organizations in a digital age. Digital leaders require various skills not only expertise in digital technology, but also critical thinking skill and people management skill (Euler, 2015). To understand concept of digital leadership linking to digital transformation, leaders need to continue their practice and development through both short-course and long-course education programs. Hundreds of digital leadership program are available on the Internet, which aimed at developing knowledge, skills, and capabilities of leaders to become a digital leader. However, learning short-course program might provide leaders only the concepts and principles of how to be a digital leader, but not necessarily concentrate on the principles application in a real life business. Thus, taking a graduate degree program in digital leadership can minimize this limitation and allow learners to gain practical experience based on project-based learning activities and challenges.

Since the digital leadership program has been widely recognized and needed in the past decade as a new emerging concept that support digital transformation success, various institutions have designed and developed graduate program curriculums in digital leadership to fulfill the need of leaders in today's business world. However, an investigation of graduate program in digital leadership has been overlooked. Even related websites of graduate study have still ignored to compile the information about graduate degree program in digital leadership. Hence, this study attempted to fill the gap in the literature by examining graduate degree program in digital leadership around the world.

LITERATURE REVIEWS

Although graduate degree programs in leadership and management have become more interesting for those who seek to pursue a master or a doctorate degree level, an investigation of graduate degree program in leadership and management has still been limited. Digital leadership program is somewhat new and no investigation has previously been placed an emphasis on this area, according to the literature review. Thus, an analysis of graduate program in digital leadership is needed as this kind of program has been emerged in the past few years since the business world has been awakened by the term "digital disruption." Past research attempted to examine and analyze the graduate program in leadership and management was reviewed and proposed as follows:

Crawford, Brungardt, Scott, and Gould (2002) investigated graduate programs in organizational leadership offered by the U.S. universities. They collected data from the Internet and found 38 programs from 37 institutions delivered graduate program in both master and doctorate degree levels at that time. This study used key factors for data analysis encompassing characteristics and focus, number of faculty, tuition fees, and delivery method. This study was noteworthy to be the first study that provided key elements for analyzing graduate programs.

Promsri (2019a) analyzed information about doctoral degree programs in leadership delivered by Thai universities. This study found only three universities that still offered the active program in leadership. Strengths and weaknesses of these doctoral degree programs in leadership were analyzed and compared through the four major components including characteristics and focus, numbers of faculty, tuition fees, and program benefits. This study recommends these universities deliver their program information via other platforms rather than websites. Additionally, Promsri (2019b) explored the comparison of seven institutions' Doctor of Management (DM) program in the U.S. This study applied key concepts of data analysis based on the previous study of Crawford, Brungardt, Scott, and Gould (2002) and Promsri (2019a). This study indicated that only seven universities in the U.S. delivered a curriculum in Doctor of Management (DM).

METHODOLOGY

This study was a documentary analysis. Key words such as "digital leadership program", "graduate program in digital leadership", and "master's degree in digital leadership" were utilized for the search through Google search engine. This study was conducted in the last week of September 2019. The scope of this study focused on graduate program in digital leadership or relevant only. Graduate diploma or certificate program was excluded from the search. Once the information was found, the researcher would check each website with judgment using recommendations of Crawford, Brungardt, Scott, and Gould (2002) and Promsri (2019a) to analyze elements of each program encompassing name of institution, name of degree program, focus and credits for completion, tuition fees, admission requirements, and program strengths (benefits). These components were to be analyzed and presented in a tabular matrix for graduate degree program in digital leadership.In addition, four universities were found to grant Master of Science (MSc) degree including of ESCP Europe Business School,University of Gothenburg,GISMA Business School, Burgundy School of Business. The rest of them used the different names of granted degrees.

RESULTS

Using a key word "graduate program in digital leadership", this study found that 9 institutions around the world had offered relevant graduate program in digital leadership. Among these universities, six of them were European universities while the rest of them were Asian universities (f=2), and an American university (f=1), respectively. Universities from France (f=2)and Spain (f=2)had delivered this kind of program more than other countries (Singapore, Republic of China, Sweden, Germany, and the U.S.). Five universities designed their program as a part-time program for professional employees who wanted to gain knowledge and practical experiences in digital transformation and technology. These universities included National University of Singapore, The Hong Kong Polytechnic University, Seattle Pacific University, GISMA Business School, and IE School of Human Sciences and Technology. On the other hand, five universities delivered a full-time graduate program in Digital Leadership including ESCP Europe Business School,University of Gothenburg,GISMA Business School, Burgundy School of Business, Barcelona Technology School.Only GISMA Business School from Germany offered both part-time and full-time programs.

For the name of the granted degree, four universities that awarded Master of Science (MSc) degree consisted of ESCP Europe Business School,University of Gothenburg,GISMA Business School, Burgundy School of Business. Two institutions granted Executive Master in Digital Leadership encompassed The Hong Kong Polytechnic University and IE School of Human Sciences and Technology. In addition, National University of Singapore offered a Master of Technology degree while Seattle Pacific University granted a Master of Education degree.

For the tuition fees, since graduate program in digital leadership had been designed by distinctive institutions around the world, they charged the tuition fees based on their own currency. However, if compared only 4 European institutes excluding ESCP Europe Business School and University of Gothenburg, which Euro currency was used for tuition fees payment, this study demonstrated that GISMA Business School had the highest tuition cost of €18,600 per course whereas Burgundy School of Business charged the lowest cost of €14,400 for the entire program.

For admission requirements, all institutions required a bachelor's degree for application. Most of them asked for curriculum vitae (CV), personal statement, and interview. However, three institutions encompassing National University of Singapore, ESCP Europe Business School, and The Hong Kong Polytechnic University required work experience in management level. Amongst these institutions, National University of Singaporeand The Hong Kong Polytechnic University equally required a minimum of 5 years work experience while ESCP Europe Business School needed at least 18-month of work experience.

Findings also showed that most of digital leadership programs offered by these nine institutions had placed an emphasis on the combination of coursework and project-based learning activities. Almost all of them delivered course instruction in a traditional classroom format except IE School of Human Sciences and Technology that had a combination of traditional classroom format, which students needed to attend classes in Madrid and Shanghai and online format, and Seattle Pacific University where all classes were taught through online format.

. Results indicated that only ESCP Europe Business School had triple accreditations including AACSB, EQUIS,and AMBA, which made this program more attractive and interesting when compared with other institutions. Most of these programs were designed and delivered by business school excluding program offered by IE School of Human Sciences and Technology and Seattle Pacific University.

Table 1:A Tabular Matrix of Graduate Degree Program in Digital Leadership around the World

Institutions/ Country	Name of Graduate Degree Program	Focus and Credits for Degree Completion	Tuition Fees	Admission Requirements	Program Strengths	Websites
National University of Singapore (Singapore)	Master of Technology in Digital Leadership	- Digital strategy and leadership - Students are required to complete 44 modular credit of courses based on four major areas: Practice of digital business, Digital transformation, Digital leadership and people, and Digital leadership capstone - Two years part-time program	S$12,632.90 per semester	- At least 5 years of full time work experience in management level - Good English proficiency with the minimum requirement of TOEFL score of 580 and IELTS score of 6.0	- Experienced faculty in digital business and information technology - A 9-month digital leadership capstone project in which students will integrate all knowledge and disciplines learned in the program and apply them to real businesses and organizations	https://www.iss.nus.edu.sg/graduate-programmes/programme/detail/master-of-technology-in-digital-leadership
ESCP Europe Business School (France)	MSc in Digital Transformation and Leadership with two tracks: Financial service and Industry automation	This program focuses on 4 key areas: Cognitive skills & leadership, Digital technologies, Transformation management, and Professional development - One year full-time program (12 months plus 4-6 months for digital placement completion)	£20,700 for the entire program	- A minimum of 18 months of professional experience - Excellent English proficiency (required Advanced English Level: C1) TOEFL score of 600 or IELT score of 7.0	- The world's first business school - Triple accreditations: AACSB, EQUIS,and AMBA - Strong alliance with 130 organizations worldwide - 6 campuses in Europe - This program requires internship and field experiences for degree completion including digital placement (4 months), industry research report, and consultancy project (12 weeks)	https://www.escpeurope.eu/programmes/specialised-masters-MScs/MSc-in-digital-transformation-management-and-leadership
University of Gothenburg (Sweden)	MSc in Digital Leadership	- Two-year full-time program - On campus program - 120 credits for completion - This program focuses on 5 main areas: technological change, value creation, organizing, market logic, and strategy	- 36,900 SEK per year and student from outside EU/EEA countries. Free of charge for citizens within EU and the EEA.	Good English proficiency. TOEFL or IELT is required for international students	- A main focus of coursework is on informatics - Independent project must be taken in the final semester	https://utbildning.gu.se/education/courses-and-programmes/program_detail?programid=N2DIG
The Hong Kong Polytechnic University (Republic of China)	Executive Master in Digital Leadership	- 18 months program - This program emphasizes 4 arenas: Live business learners (International digital leadership forum (option) and capstone project), Innovation management, Disruptive technology, and Digital strategies	HK$240,000 for the entire program	- A minimum of 5 years work experience in management position - Good English proficiency (TOEFL at least 550 or IELT at least 6.0)	- All courses are taught by expertise - Innovative teaching and learning - Strong personal mentorship - Non-degree holders can enter to this program with special admission offer in which applicants must have at least 12 years work experience in managerial level	https://www.polyu.edu.hk/iaee/en-us/programmes/detail/digital-leadership/overview
Seattle Pacific University (The U.S.)	Master of Education (Med) in Digital Education Leadership	- 20 months to complete - 45 credit hours	$580 per credit	- a GPA of at least 3.0 for undergraduate degree for application eligibility or GRE or MAT submission for those who have GPA less than 3.0	Courses are designed for working professionals; all courses in this program are online, with weekly real-time web conferences; cohort model	https://spu.edu/academics/school-of-education/graduate-programs/masters-programs/digital-education
GISMA Business School (Germany)	MSc in Leadership for Digital Transformation	- Full-time and part-time program - 18-36 months for completion depending on program format	€18,600 per course	- IELT score of at least 6.5 or equivalent	- This program has FIBBA accreditation - This program offers both full-time and part-time	https://www.gisma.com/course/digital-transformation

Burgundy School of Business (France)	MSc in Digital Leadership	1-year program	€ 14,400for an entire program	- IELT score of at least 6.5 for non-native speaker - Holding a non-French Bachelor degree or a French Master 1 in a business related subject	- This program is sponsored by French Tech (a governmental organization that promotes digital and technological entrepreneurship) and the Digital League (governmental organization that coordinates digital innovation activities for private and public partners) - Contents designed with authoritative experts and digital companies - Highly interactive program with a combination of learning-and-doing activities and challenges	https://www.bsb-education.com/en/programmes/msc/msc-digital-leadership.html
IE School of Human Sciences and Technology (Spain)	Executive Master in Digital Transformation and Innovation Leadership	- A 13-month part-time program - This program focuses on three modules: Digital Tech & Innovation, Digital Strategy & Business Innovation, and Leading Transformation & Innovation	€ 35,200for an entire program	Excellent English proficiency is required	- Class must be taken in Madrid, Shanghai, and Online format - Practical classes with real world business cases - First-class faculty	https://www.ie.edu/school-human-sciences-technology/masters/executive-master-digital-transformation-innovation-leadership/program/
Barcelona Technology School (BTS) (Spain)	Master in Digital Transformation Leadership	- A 9-month full-time program	€ 17,000 for an entire program	N/A	- Degree is awarded by Awarded by BTS and the University of Barcelona - Project-based learning program	https://barcelonatechnologyschool.com/master/master-in-digital-transformation-leadership/

CONCLUSION, DISCUSSIONS, AND RECOMMENDATIONS

The purpose of this study was to investigate graduate degree program in digital leadership around the world. This study analyzed key elements of graduate program in digital leadership using recommendations of Crawford, Brungardt, Scott, and Gould (2002) and Promsri (2019a). Results demonstrated that nine institutions had delivered graduate degree program in digital leadership. Interestingly, among these institutes, six of them were from European countries while two universities were from Asian countries, and only one was from the U.S.

Although today's businesses and organizations need leaders who understand digital agility and change necessities for competitive advantage, the program in digital leadership has been still scarce especially a graduate degree program. According to the search on the Internet, this study found numerous programs in digital leadership, but many of them were a certificate or diploma program. In particular, the U.S. universities failed to offer the graduate degree program in digital leadership. The only university that delivered this type of program found in this study was Seattle Pacific University, which mainly focused its curriculum on digital education leadership instead of business. In addition, no universities in the U.K. had delivered graduate degree in digital leadership, according to findings of the search. Thus, both the U.S. and the U.K. colleges and universities need to pay more attention on developing curriculum in graduate degree in digital leadership. Also, potential universities around the world should be awakened with the fact found in this study. The opportunities to design and develop graduate program in digital leadership are still open for many universities as this program is trendy, fresh, and advantageous for professionals who have worked in a real business world. To gain practical knowledge and experience in studying digital leadership, a future graduate degree program should be designed and developed based on the integration of coursework and project-based learning activities, and should be delivered in both traditional classroom and online format for students' learning benefits.

Recommendations for a future research are to extend its analysis from graduate degree program to certificate programs or training programs in digital leadership to find the basic elements of those programs and differences.

Acknowledgement

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