

## DESIGNS OF OPEN AND DISTANCE LEARNING (ODL) EDUCATION: CASE OF MALAYSIA INDUSTRY-FOCUSED DOCTORAL STUDIES

Kok Yaw Wong  
kokyaw.wong@qiup.edu.my

### ABSTRACT

The innovation of higher education is assuming a larger role in national economic development which has significant contributions to private and public sectors. Open and distance learning education (ODL) is receiving good feedback from many people who aim to pursue postgraduate studies. However, many graduates are found to have difficulty in fulfilling the industry expectation and societies are concerned about marketability of industry-focused doctoral studies. There is an educational dissonance whereby the quality of graduates is getting lower and they have no industrial needed knowledge to enhance business and organization performance. Data is collected from 100 employers based at Kuala Lumpur, Malaysia. Findings from this study are important to provide guideline and vision for education provider to design a better industry focused educational system.

**Keywords:** doctoral studies, industry-focused, marketability

### INTRODUCTION

Industry driven doctoral education curriculum is becoming important in today society which brings research to new era. Research done by Finish Metals and Engineering Competence Cluster (FMECC) has proven that this curriculum is capable to create new solutions and implementing results effectively to diverse industries. It can help to develop better opportunity for innovation (FIMECC, 2014). Besides, industry driven education can target the needs of organization as the Malaysia economy has grown significantly. Open and distance learning (ODL) has provided great opportunity for adult learners to pursue higher education especially in postgraduate studies (Carlsen, Holmberg, Neghina & Owusu-Boampong, 2016). Many busy working adults are preferred to enroll in ODL study to balance their work-and-study life.

The innovation of higher education is assuming a larger role in national economic development which has significant contributions to private and public sectors (Shaffer, 2015). Malaysia's economy has grown in fast pace since year 2010. It is one of the 13 countries identified by the Commission on Growth and Development that recorded the strong expanding in average growth rate. Its economy grew by 6 percent last year and continues to post solid growth rates (World Bank, 2015). The growth in economic development has boosted job opportunities in societies. Organization is looking for talents and professional for better job-fit. According to Department of Statistic Malaysia (2015), the labor force participation rate was increased by 0.3 percentages for March 2015 and 0.8 percentages higher when compared to year 2014. Higher education institutions play role as agent of transformation in Malaysia to face local and global challenges (UNESCO, 2012).

However, many graduates are experienced difficulties in getting better job. Besides, many of them are holding the jobs that are not correspond to their qualification and discipline. Minister of Higher Education (2015) figures out there are more than 500 institutions which including universities, college universities, college, and others with a total number of more than 748,797 students enrolled in higher education since year 2010. Many countries are on the track to knowledge based economies where incorporate the research and innovation into the organization to produce better outcome (Peters, 2011). Doctoral is seen as one of the factors for competitive advantage which is not only for academic but also widely applies in multi-industries. University of British Columbia has viewed the important of graduate students as a trend for global job market. It is important to transfer technical skills to industry which 60%-70% of Canadians with doctorate qualification do not pursue academic careers (Statistic Canada, 2011). There is educational dissonance whereby the quality of graduates is getting lower and they have no industrial needed knowledge especially for business and organization performance.

### ISSUES FOUND IN ODL DOCTORAL CURRICULUM

Market demand for industry doctoral (e.g. Doctor of Business Administration, DBA) is getting important in the process of national and organizational development. In this competitive environment, employers are strived to survive by putting more effort on innovation. Knowledge is the key to enhance the performance and keep the organization competitive in fast changing market conditions. Besides, employers need to produce value added capabilities in human capital in order to strengthen the market position (Chang, Ahmad, Ibrahim & Kho, 2012). Therefore, a well-designed industry doctoral education is very important to transform more knowledgeable and skillful human resource.

Previous studies have shown that the demand for industry doctoral is growing in current market. According to the research done by Association of Universities and College of Canada (2011), the number of graduate students has grown significantly faster and the number of doctoral students is getting increase sharply globally. However, the educational development has been questioned by many employers due to the inability of graduates to apply the knowledge into their work. Employers prefer practical knowledge which can solve the business problems but not just the fundamental theories that learn from school. It can lead to graduate unemployment issue in Malaysia (UNESCO, 2012). Most of the graduates with little or no industrial or commercial experience have difficulties to apply the knowledge. National Graduate Employability Blueprint (2012-2017) prepared by Ministry of Higher Education of Malaysia has mentioned the challenges identified by employers relation to their employees which “mismatch of skills” consisted of 30.2%, “inability to solve problems” 25.9% , “insufficient dept of skill knowledge” 23.8%. The concerns about the ability of graduates to work in organization has raised significantly in recent years due to some factors such as the competitive environment, rapid changing marketplace, production cost and resources scarcity. Therefore, it is the needs to design and develop industry driven education to meet the employer’s expectations.

Besides, the educational developers and academics need to understand the factors contribute to the marketability of industry driven education and their implication for institutions, organizations and academic practice in order to develop better qualified graduates (Mills, 2009). The expansion of higher education is affecting the labor market especially the concerns about level of graduate unemployment (Ismail, 2011). The design of doctoral study in ODL education is very important to address this issue since more people are pursuing doctoral studies. Employers are preferring industry driven doctoral graduates and DBA has becoming trend for many working adult especially senior executives and managerial personnel. This kind of doctoral education is aim to produce graduates who are prepared for challenges of real word by applying industry knowledge.

#### **OBJECTIVE AND SIGNIFICANT OF THIS STUDY**

This study is important to address the significant factors of industry driven doctoral education to its marketability. It has been proven that higher education can lead to better national transformation. It also can improve the economic performance to enhance the global competitiveness. Employers are looking better talents by expecting graduates are able to apply industry knowledge. Therefore, the DBA graduates are becoming the good human resource for any organization. By understanding the factors that contribute to the marketability of doctoral graduates, it will be able to produce sustainable DBA graduates through the design of an innovative industry driven doctoral education curriculum. Gradually, the findings from the study can provide fundamental information and hopes to lay the groundwork for future research while also offering practical recommendations to educators and academics on how to deal with better curriculum design.

#### **LITERATURE REVIEW**

##### **Industry Driven Doctoral Education Curriculum**

Industry driven doctoral gives opportunity for researcher to resolve work related issues. This kind of postgraduate studies has brought the positive result to organization by addressing the problems and come out the solutions for real situation. It also provides movement for sustainable growth of economy by contributing doctoral knowledge in problem solving. Besides, it is more application oriented to current industry and more inclined to knowledge enhancement. Industry driven doctoral may result in better organization performance, effectiveness, efficiency and long term competitiveness (UUM, 2013). This doctoral education also focuses the studies and research on industrial issues. Education development toward industry driven is getting intention of most employers. Employers are looking at the graduates’ contribution to concrete business problems and generate model that explain and apply into the specific problem (Graf, 2015).

##### **Doctor of Business Administration (DBA) and its Marketability for Graduates**

University of Liverpool (2015) stated that DBA is a professional doctorate and equivalent to PhD where it is more to advance professional practice. This doctoral program is addressing practical business problem which is more preferable by employers. DBA has a very good career outlook in diverse sectors no matter private, public, organizations, higher education, research institutions and others. Graduates can involve in senior managerial positions, academics, consultants and practitioners. According to the United States Department of Labor, Bureau of Labor Statistic (2015), DBA employment is expected to grow 11 percent from year 2012 to year 2022 in global market. This phenomena is also applies in Malaysia employment (UNESCO, 2012). Besides, when looking into salary expectation, DBA graduates salaries are very depending on the industry and duties but generally can earn higher income. This survey is done by PayScale.com who focuses at global marketplace.

DBA graduates are in high demand due to the leadership skills, business theories and decision making ability (Cadiz, 2015). Graduates also have wide job opportunities and better career improvement by applying the knowledge acquired from course.

#### **Independent Variable (IV<sub>1</sub>): Program Structure**

H1<sub>1</sub>: Program structure is significantly influenced the marketability of doctoral graduates.

Education providers have to apply product development strategy by modifying the product to meet with the expectations of industry. This modification is refers to the design of program structure. Program structure always will affect the quality of a particular course or study. The design of the program will determine the standard and level of knowledge graduates have learnt. It will decide the graduate's ability to apply the knowledge into real industry. Therefore, the program structure is related to the marketability of DBA graduates. Industry driven education is also the road to success for all industries including manufacturing which has been a priority for the National Asphalt Pavement Association (Slater, 2013).

Employers believe that graduates can help the organization to change and enhance innovation to keep competitive. Some well known multinational corporations even sponsor their senior managerial personnel to pursue DBA or other industrial doctorate program (Bureau of Labor Statistic, 2015). They agree that DBA can help the organization to solve business issues and the solutions can lead to long term benefits. However, employers are looking for those graduates who can apply the industry knowledge but not just theoretical knowledge when deal with business matters. It is also about the demand driven education and training for employability which graduates are needed to have strong knowledge to develop industry issue solutions to enhance their marketability (UNIDO, 2011).

Program structure of industry driven education has strong relationship with marketability of graduates. There is a shift to develop industry based curriculum which can fulfill the requirements of business stakeholders at all levels in many advanced countries such as United States (Baumann, Harfst, Swanger, Saganski, Alwerfalli & Cell, 2014). It is also refers to the developing of competency based education from providers to help DBA graduates to be employed. Besides, in order to increase the marketability of graduates, many employers will engage in curriculum development to help educators design better program structure that meet the industry requirements (United States Department of Education, 2012).

#### **Independent Variable (IV<sub>2</sub>): Employer Readiness**

H2<sub>1</sub>: Employer readiness is significantly influenced the and marketability of doctoral graduates.

Employer readiness in hiring has strong relationship with marketability of DBA graduates. Employers will decide the graduates' employment by looking into several important factors. A survey done by University of Washington (2012) regarding the graduate level employments on global firms has shown that around 20% employers will likely to consider doctoral degree candidates. Besides, business most of the employers are looking for the doctoral graduates with business major. In other words, DBA graduates are most likely to be chosen by global employers compared to other doctoral majors. It has proven that the marketability of DBA graduates is very depending on employer readiness on the quality and industry knowledge learnt by graduates. When comparing to other majors, business administration seems to have largest contribution to employers due to its abilities to solve business and organization issues.

Besides, the graduates marketability also influence by employers' perception on return on investment (ROI) (Alton & Van Fleet, 2009). Graduates employment has viewed as high cost for employers in term of high salary compensation. Therefore, employers will make careful selection on doctoral graduates and it can affect their readiness. Many employers have the experience of selected graduates are not capable to match their expectation. It has created a strong impact on graduates' marketability.

According to report prepared by St. John's University (2013), employee engagement in student career readiness is useful to enhance employer's readiness to hire graduates. Employees are encouraged to assist graduates in becoming more career ready during internship. It will increase their career readiness and better meet with the employers' expectation. DBA is designed for organization senior executives by focusing industry driven knowledge and skill. Research done by DBA graduates is useful to address industry issues and the solutions developed are useful to enhance organization performance. Therefore, this curriculum is preferred by employer. The higher readiness of employer will lead to better marketability of DBA.

**Independent Variable (IV<sub>3</sub>): Academic Performance**

H3<sub>1</sub>: Academic performance is significantly influenced the marketability of doctoral graduates.

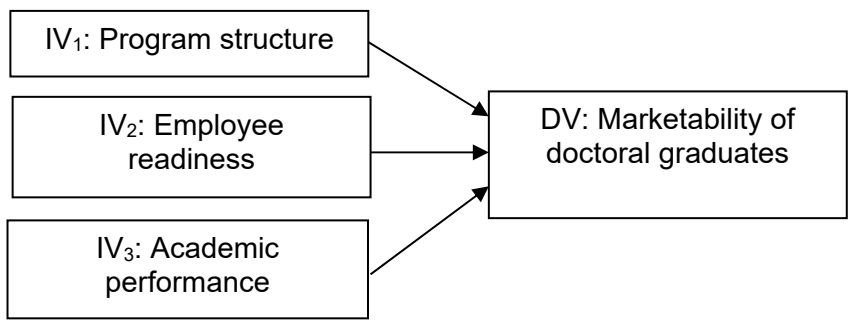
Academic performance can affect the marketability of DBA graduates by looking at the graduates’ knowledge and applied skill requirements for employees’ readiness (Conference Board, 2006). The increase in educational level in labor force has lead to higher requirement and expectation from employers. Employers have viewed professionalism, critical thinking, problem solving and applied skills as the criteria for employment.

Graduates academic performance can link to their analytical skills. DBA is a mix mode doctorate study whereby students are needed to go through some business related subjects and conduct a research that address the industry issues. It is a design of an innovative industry driven doctoral education curriculum. Therefore, all the subjects and research project are designed to understand and solve business problems. Graduates need to have strong problem solving skills to go through the assignment and research. If the graduates can achieve good academic performance, it can be concluded that they are exercising excellent problem solving skills in answering the assignments (Poropat, 2011). In other words, graduates with outstanding academic performance will show good analytical skills in contributing to develop solutions for business issues (Keister & Hall, 2010). Employers will perceive that graduates can meet with their expectations by applying knowledge to enhance organization performance.

Besides, DBA graduates with good academic performance will show good self discipline. They need to go through some tough projects and research in order to complete the whole study. This hardship has provided an opportunity to train their ability skills on problem solving, critical thinking, time management and other soft skills. It can enhance their marketability because employers might perceive these kinds of graduates are talents and beneficial to organization Wenz and Yu (2010) found that graduates with higher academic performance are better for career specific skills. They are employers’ choice by having stronger marketability compare to those with lower academic performance when lack of industry experience.

**PROPOSED CONCEPTUAL FRAMEWORK**

This framework identifies the relationship between the Independent Variables (IV) [IV<sub>1</sub>: Program Structure, IV<sub>2</sub>: Employer Readiness, IV<sub>3</sub>: Academic Performance] and Dependent Variable (DV) [DV: Marketability of DBA graduates].



**RESEARCH METHODOLOGY**

Quantitative research will be conducted in this study as it is often used to collect and analyze based on numerical data, and generalize the results from large samples (Lodico, Spaulding & Voegtle, 2010). The target population for the study was employers that hiring DBA graduates to fill up managerial positions. 100 companies from Kuala Lumpur, Malaysia are selected as the primary setting for this study due to higher concentration of companies in Kuala Lumpur. By using these relevant sampling locations, more accurate information could be generated from this survey. Questionnaires are given to the targeted respondents. Probability sampling will be applied for this research and multiple regression analysis is adopted to test the relationship between the independent variables and dependent variable by using SPSS.

## DISCUSSION AND CONCLUSION

Figure 1: Multiple Regression Analysis: Model summary

Regression Statistics	
Multiple R	0.776
R Square	0.602
Adjusted R Square	0.597
Standard Error	0.4633
Observations	100

The value of correlation coefficient (R value) for this study is 0.776 which fall under range of  $\pm 0.71$  to  $\pm 0.90$ . Therefore, the relationship between independents variables and dependent variable is high. Besides, independents variables can explain 59.7% of the variations in dependent variable.

Findings have agreed that program structure, employer readiness and academic performance have significant relationship with the marketability of DBA graduates. Therefore, ODL education providers have to consider those mentioned variables when designing their doctoral programs. Previous research found that the learning system is important to affect the ODL students' qualities (Musingafi, Mapuranga, Chiwanza & Zebron, 2015). Therefore, in order to enhance the competitiveness of industry-focused doctoral studies, education providers can improve the learning environments such as ICT infrastructures, online supporting learning materials and getting more corporates' feedbacks from various industries.

## REFERENCES

- Altman, D. G., & Bland, J. M. (2010). Statistical methods for assessing agreement between two methods of clinical measurement. *International Journal of Nursing Studies*, 47(8), 937- 938.
- Alton, I., & Van Fleet, J. D. (2009). Globalization of business schools: The case of China. *International Journal of Business Education*, 4, 103-118.
- Association of Universities and College of Canada. (2011). Trends in higher education. Retrieved from <http://www.univcan.ca/wp-content/uploads/2011/05/trends-2011-vol1-enrolment-e.pdf>
- Austin, E. W., & Pinkleton, B. E. (2006). *Strategic public relations management: Planning and managing effective communication programs*. USA: Lawrence Erlbaum Associates.
- Baumann, T., Harfst, S., Swanger, A., Saganski, G., Alwerfalli, D., & Cell, A. (2014). Developing competency based , industry driven manufacturing education in the USA: bringing together industry, government and education sectors. *Social and Behavioral Sciences*, 119, 30-39.
- Bureau of Labor Statistic. (2015). *Occupational outlook handbook*. Retrieved from <http://www.bls.gov/ooh/>
- Cadiz, M. O. (2015). Why get a doctorate in business administration? Retrieved from <http://education.seattlepi.com/doctorate-business-administration-2680.html>
- Carlsen, A., Holmberg, C., Neghina, C., & Owusu-Boampong, A. (2016). Closing the gap. Opportunities for distance education to benefit adult learners in higher education. Retrieved from <http://unesdoc.unesco.org/images/0024/002432/243264e.pdf>
- Chang, P. K., Ahmad, F., Ibrahim, F., & Kho, S. N. (2012). Correlating graduate marketability dimensions with the measurements of university student relationship. *Asian Social Science*, 8(6), 63-73.
- Department of Statistical Malaysia. (2015). *Labor market in Malaysia, March 2015*. Retrieved from [https://www.statistics.gov.my/index.php?r=column/cthemByCat&cat=124&bul\\_id=U0VEWjV5dWlVQmh5aVJncEFrNVJBUT09&menu\\_id=U3VPMldoYUxzVzFaYmNkWXZteGduZz09](https://www.statistics.gov.my/index.php?r=column/cthemByCat&cat=124&bul_id=U0VEWjV5dWlVQmh5aVJncEFrNVJBUT09&menu_id=U3VPMldoYUxzVzFaYmNkWXZteGduZz09)
- FIMECC. (2014). FIMECC's industry driven doctoral school brings materials research to new era. Retrieved from <http://www.spinverse.com/fimeccs-industry-driven-doctoral-school-brings-materials-research-to-new-era/>
- Gob, R., McCollin, C., & Ramalhoto, M. F. (2007). Ordinal methodology in the analysis of Likert scales. *Journal of Quality and Quantity*, 41(5), 601- 626.



- Conference Board. (2006). Are they really ready to work? Employer's perspectives on the basic knowledge and applied skills of new entrants to the 21<sup>st</sup> century US workforce. Retrieved from [http://www.p21.org/storage/documents/FINAL\\_REPORT\\_PDF09-29-06.pdf](http://www.p21.org/storage/documents/FINAL_REPORT_PDF09-29-06.pdf)
- Graf, T. (2015). DBA vs PhD differences: Executive doctorate of business administration programs. Retrieved from <http://www.dba-compass.com/Knowledge/Differences-1PhD-in-Management-DBA-Doctor-of-Business-Administration>
- Ismail, N. A. (2011). Graduates' characteristics and unemployment: A study among Malaysian graduates. *International Journal of Business and Social Science*, 2(16), 94-102.
- Keister, M., & Hall, J. (2010). High school employment and academic achievement: A note for educators. *Contemporary Issues in Education Research*, 3(1), 77-81.
- Lodico, M. G., Spaulding, D. T., & Voegtle, K. H. (2010). *Methods in educational research: From theory to practice*. United States: John Wiley and Sons.
- Mills, D. (2009). Making sense of doctoral training reforms in the social sciences: Educational development by other means? *International Journal for Research Development*, 1(1), 71-83. of Higher Education. (2015).
- National education statistic: Higher education sector. Retrieved from [http://www.mohe.gov.my/web\\_statistik/Perangkaan-2013.pdf](http://www.mohe.gov.my/web_statistik/Perangkaan-2013.pdf)
- Musingafi, M. C. C., Mapuranga, B., Chiwanza, K., & Zebron, S. (2015). Challenges for open and distance learning (ODL) students: Experiences from students of the Zimbabwe Open University. *Journal of Education and Practice*, 6(18), 59-66.
- Peters, M. A. (2011). Greening the knowledge economy: Ecosophy, ecology and economy. *Reviews of Economics, Management and Financial Markets*, 6(2), 11-38.
- Poropat, A. E. (2011). The role of citizenship performance in academic achievement and graduate employability. *Journal of Education & Training*, 53(6), 449-514.
- Shaffer, D. F. (2015). Higher education systems are assuming a larger role in the economic development efforts of their states. *Review of Economics, Management and Financial Market*, 10(1), 54-79.
- Slater, D. (2013). Industry driven education, programs paving the road to success for 2013 world of asphalt, AGG1. Retrieved from <http://www.aem.org/News/Advisors/AEM/?A=979>
- St. John's University. (2013). Employee engagement in student career readiness. Preparing students for full time employment. Retrieved from <http://www.stjohns.edu/sites/default/files/documents/hr/showcase-employee-engagement-student-careerreadiness2013.pdf>
- Statistic Canada. (2011). Expectation and labour market outcomes of doctoral graduates from Canadian Universities. Retrieved from <http://www.statcan.gc.ca/pub/81-595-m/81-595-m2011089-eng.pdf>
- UNESCO. (2012). Graduate employability in Asia. Retrieved from <http://unesdoc.unesco.org/images/0021/002157/215706e.pdf>
- UNIDO. (2011). Demand driven education and training for employability and productivity in agro industries. Retrieved from <http://www.unescap.org/sites/default/files/Promoting-industrial-skills.pdf>
- United States Department of Education. (2012). Integrating industry driven competencies in education and training through employer engagement. Retrieved from <https://www2.ed.gov/about/offices/list/ovae/pi/cclo/brief-4-employer-engagement.pdf>
- University of Liverpool. (2015). Doctor of Business Administration (DBA). Retrieved from <http://www.university-liverpool-online.com/programmes/doctorates/dba/dba-vs-phd>
- University of Washington. (2012). Beyond academia. Employer opinions of grad students. Retrieved from [https://careers.washington.edu/ifiles/all/files/docs/gradstudents/pdfs/Beyond\\_Academia-EmployerOpinions-08-08.pdf](https://careers.washington.edu/ifiles/all/files/docs/gradstudents/pdfs/Beyond_Academia-EmployerOpinions-08-08.pdf)
- UUM. (2013). What is industrial PhD programme? Retrieved from <http://cuic.uum.edu.my/index.php/phd-industry/industrial-phd-programme>
- Wenz, M., & Yu, W. C. (2010). Term time employment and the academic performance of undergraduates. *Journal of Education Finance*, 35(4), 358-373.
- World Bank. (2015). Malaysia Overview. Retrieved from <http://www.worldbank.org/en/country/malaysia/overview>