AN EVALUATION OF CURRICULUM IMPLEMENTATION OF OUTCOME-BASED EDUCATION IN A POLYTECHNIC IN SABAH

JOAN WANG YEE JUEN

FACULTY OF PSYCHOLOGY AND EDUCATION
UNIVERSITI MALAYSIA SABAH
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JOAN WANG YEE JUEN

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FACULTY OF PSYCHOLOGY AND EDUCATION
UNIVERSITI MALAYSIA SABAH
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DECLARATION

I hereby declare that the material in this thesis is my own except for quotations, excerpts, equations, summaries and references, which have been duly acknowledged.

16 Oct 2014

Joan Wang Yee Juen
PT 20078424

CERTIFICATION

NAME	:	**JOAN WANG YEE JUEN**
MATRIC NO	:	**PT 20078424**
TITLE	:	**AN EVALUATION OF CURRICULUM IMPLEMENTATION OF OUTCOME BASED EDUCATION IN A POLYTECHNIC IN SABAH**
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VIVA DATE	:	**16 OCTOBER 2014**

DECLARED BY;

1. Main Supervisor

Prof. Dr. Vincent Pang Signature

_____

2. Co - Supervisor

Dr. Lee Kean Wah

_____

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ABSTRACT

This study was conducted to evaluate the implementation of Outcome-based Education in a Polytechnic in Sabah. The Stake Countenance Evaluation Model was chosen to (1) identify the antecedents of the curriculum implementation, (2) gain insight into the experience and understanding of the implementation process, and (3) ascertain the outcomes of the curriculum implementation. A qualitative case study was seen as a relevant methodology to be adopted to allow in-depth investigation on the issue being studied. The main data elicitation tools were interviews, classroom observations, and reviews of related documents. Three lecturers and three students of each lecturer were chosen as research participants of this study. Collected data that were thematically coded and categorized were compared and assessed to identify the congruency and contingency of the intended with the implemented antecedents, transactions, and outcomes of the curriculum. Analyses of data were done in two phases (1) within-case and (2) cross-case analyses. The findings of this study revealed that the OBE curriculum was not fully implemented as intended in the organisation. The congruency analysis findings showed in-congruencies in four constructs of the antecedent component, namely curriculum, management, lecturer, and student characteristics. These in-congruencies appear to have affected the lecturers' capability in interpreting and translating the OBE curriculum into their T&L practices, and subsequently the outcomes of the curriculum implementation as well. The contingency analysis, on the other hand, showed that the observed transaction analyses were empirically contingent to the antecedent components but not to the observed outcomes of the programme. The main findings of this study were(1) the lecturers knew very little about OBE premises and principles. In addition, the lecturers were also confused on what and how to implement the OBE curriculum, while (2) the students were unable to apply self-learning and (3) the assessment activities recommended in the curriculum was too examination-oriented therefore unable to measure students real performance. Lecturers asserted that (1) the constant change in the OBE curriculum, (2) inadequate physical resources, (3) time constraints, and (4) burdensome side duties as factors that affected their ability to implement the change. Nevertheless, these constrictions can be ameliorated by (1) providing authentic assessment that focuses on ascertaining the individual student's accumulative understanding of the learning process (2) the provision of proper training to lecturers on what and how to implement the change, and (3) putting in place adequate resources to support the curriculum implementation.

ABSTRAK

PENILAIAN PELAKSANAAN KURIKULUM PENDIDIKAN BERASASKAN OBJEKTIF DI SALAH SEBUAH POLITEKNIK DI SABAH

Kajian ini adalah bertujuan untuk menilaipelaksanaan kurikulum pendidikan berasaskan objektif (OBE) di salah sebuah politeknik di Sabah. Model Penilaian Stake telah digunakan untuk (1) mengenal pasti antecedents bagi pelaksanaan kurikulum, (2) meninjau pengalaman dan kefahaman sebenar proses pelaksanaan kurikulum OBE, dan (3) meneliti hasil pelaksanaan kurikulum tersebut. Kajian kualitatif berbentuk kajian kes digunakan kerana kaedah ini dianggap paling sesuai untuk melaksanakan siasatan terperinci terhadap isu-isu tertentu. Tiga pensyarah dan tiga pelajar (di bawah setiap pensyarah) telah dipilih sebagai peserta kajian. Data kajian dikutip dari persekitaran sebenar PM melalui temubual, pemerhatian bilik darjah, dan penelitian dokumen berkaitan untuk mendapat gambaran sebenar pelaksanaan kurikulum di institusi ini. Data kemudiannya dikod dan dikategorikan mengikut tema–tema tertentu. Data yang diperolehi kemudiannya dibanding beza dan dinilai untuk mengenalpasti keselarasan dan kontigensi aspek-aspek antecedents, transactions dan outcomes yang dinyatakan pada tahap awal pelaksanaan. Data ini kemudiannya dianalisis dalam dua fasa iaitu (1) analisis dalam kes dan (2) analisis merentasi kes. Dapatan kajian menunjukkan kurikulum OBE tidak berjaya dilaksanakan dengan sepenuhnya sepertimana yang dihasratkan. Analisis keselarasan menunjukkan ketidakselarasan bagi keempat-empat komponen (kurikulum, pengurusan, pensyarah dan pelajar) dalam antecedents, transactions dan outcomes telah memberi kesan kepada keupayaan pensyarah menterjemah dan melaksanakan kurikulum OBE dalam amalan pengajaran dan pembelajaran mereka, justru menyumbang kepada ketidakselarasan hasil pelaksanaan kurikululum tersebut, manakala analisis kontingensi pula menunjukkan bahawa transactions yang diperhatikan mempunyai kaitandengan komponen antecedents yang diperhatikan tetapi tidak kepada komponen outcomes yang diperhatikan. Dapatan utama kajian menunjukkan (1) pensyarah mempunyai pengetahuan yang minimum tentang premis-premis dan prinsip-prinsip OBE, dalam masa yang sama para pensyarah turut keliru tentang apa dan bagaimana untuk melaksanakan kurikulum OBE (2) para pelajar tidak mampu mempamerkan sikap pembelajaran kendiri, manakala (3) aktiviti-aktiviti penilaian yang dicadangkan dalam kurikulum menjurus kepada peperiksaan semata-mata dan tidak mampu untuk menilai keupayaan sebenar pelajar. Pensyarah menyenaraikan kekangan-kekangan seperti (1) kekerapan perubahan kurikulum OBE, (2) sumber fizikal yang tidak mencukupi, (3) kesuntukan masa dan (4) lambakan kerja sampingan antara punca mereka tidak mampu melaksanakan perubahan kurikulum tersebut. Walau bagaimanapun, kekangan- kekangan ini boleh diatasi melalui (1) pendekatan penilaian yang berasaskan pengumpulan kefahaman individu setiap pelajar (melalui penggunaan portfolio), (2) pelaksanaan kursus untuk melatih pensyarah dari segi apa dan bagaimana untuk melaksanakan perubahan kurikulum, dan (3) penyediaan sumber-sumber yang mencukupi untuk menyokong pelaksanaan kurikulum OBE.

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AST	-	Assessment Specification Table
CA	-	Continuous Assessment
CC	-	Curriculum Characteristics
CGPA	-	Cumulative Grade Point Average
CLO	-	Course Learning Outcomes
COPPA	-	Code of Practice for Programme Accreditation
CORR	-	Course Outcomes Report Review
CP	-	Classroom Practices
CS	-	Chelsea's Student
CORR	-	Course Outcomes Review Report
CQI	-	Continuous Quality Improvement
DPE	-	Department of Polytechnic Education
DS	-	Darren's Student
EAC	-	Engineering Accreditation Council
FE	-	Final Examination
GO	-	General Outcomes
GSA	-	Generic Skill Attribute
ILO	-	Intended Learning Outcome
IP	-	Instructional Planning
JSI	-	Jadual Spesifikasi Item
KSP	-	Kajian Semula Pengurusan
LC	-	Lecturer Characteristics
LD	-	Learning Domain
LS	-	Lisa's Student
MC	-	Management Characteristics
MoHE	-	Malaysian Ministry of Higher Education
MQA	-	Malaysian Qualifications Agency
MQF	-	Malaysian Qualification Framework
OBA	-	Outcome-Based Assessment
OBE	-	Outcome-Based Education
PAI	-	Programme Aims

PLO	-	Programme Learning Outcomes
PM	-	Politeknik Maju
POTM	-	Polytechnics OBE Training Manual
RTA	-	Recommended Time Allocation
SC	-	Student Characteristics
SLT	-	Student Learning Time
SO	-	Specific Outcomes
STP	-	Semester Teaching Plan
SYL	-	Syllabus
TLA	-	Teaching and Learning Activity
TT	-	Timetable
T&L	-	Teaching and Learning
WA	-	Washington Accord

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CHAPTER 1

INTRODUCTION

1.1 Overview

This study reports on an in-depth investigation of the implementation of the Outcome-Based Education Curriculum in a polytechnic in Malaysia and seeks to add to the existing knowledge in three areas namely: (1) curriculum evaluation (Stake, 1967), (2) curriculum implementation (Vespoor, 1989; Porter, 1980; Rogan and Grayson, 2003; Altinyelken, 2010; Jansen, 1998; Harley and Wedekind, 2002), and (3) OBE characteristics (Spady, 1994; Brandt, 1994; Spady and Marshall 1991; Spady and Schlebusch, 1999; Van der Horst and McDonald, 1997). The aim is to provide greater understanding of curriculum reforms and implementation in higher learning institutions and the provision of a viable evaluation plan that can be utilised by the Department of Polytechnic Education (DPE) to assess the Implementation of Outcome-Based Education (OBE) Curriculum in other polytechnics in Malaysia.

1.2 Background of the Study

Curriculum reform has become a priority in development initiatives in many countries including Malaysia where such reforms are influenced and exemplified by nations such as the United States of America (USA), the United Kingdom (UK) and Australia (Keys, 2003; Kennedy, 1991). Within the global reform agenda the literature seems to indicate three main influences that had major impact on education: OBE, Integration and Constructivism (Keys, 2003). The USA especially has played a key role in curriculum reform towards OBE and constructivism (Spady and Marshall, 1991, Yager 1991). This is followed by UK and Australia which are both advocates of the OBE educational approach (Donnelly, Stephens, Redman, and Hempenstall, 2005; Donnelly, 2000). To facilitate the implementation of OBE T&L approach, integration has often been used as a teaching strategy or an

approach to achieve the desire outcomes statement of the curriculum (Hargreaves and Moore, 2000).

In the context of Malaysia, curriculum reform in institutions of higher learning is part of the Government Transformation Programme (2009) where transformation, development and change initiatives in the curriculum of higher learning institutions are initiated and driven by the Quality Assurance authority known as the Malaysian Qualifications Agency (MQA). For any course or programme to receive validation or accreditation, MQA requires the institution to revise and produce a curriculum design that is in line with OBE approach. Apart from the MQA, one of the contributory factors for curriculum reform in higher institutions especially in engineering programmes is the formation of the Malaysian Engineering Accreditation Council (EAC). Since 2004, EAC has made it mandatory that all engineering programmes in Malaysia adopt the OBE curriculum as part of the requirements for Board of Engineer Malaysia (BEM) to be a full member of the Washington Accord (WA) by 2007. This is to ensure that engineering degrees awarded by Malaysian universities are recognised by fellow WA members, such as the USA, UK, Australia, South Africa, etc. (Shahrir, Riza Atiq, Azami, Norhamidi, Baba, Noorhisham, Mardina, Mazlan, Andanastuti and Che Husna, 2009; Siti Aminah, Mohd Zaidi, Kamaruzaman, Norhisham, Mohd Nizam and Zuhairusse, 2009). In line with this focus, the Polytechnic Transformation Strategic Direction was launched by the Deputy Prime Minister Tan Sri Muhyiddin Yassin on 25th February 2010 to oversee the transformational agenda of providing quality education in Malaysian polytechnics (Jabatan Pengajian Politeknik, 2009).

1.2.1 Background of Polytechnics in Malaysia

The development of technical and vocational education in Malaysia can be traced back to the early 2000s with the establishment of Teacher Technical School in 1906. In 1969, the first Malaysia polytechnic, Ungku Omar Polytechnic was established by the Malaysian Ministry of Education aided by the United Nations Educational Scientific and Cultural Organization (UNESCO) and United Nations Development Programme (UNDP). Ever since the establishment of the Ungku Omar Polytechnic in Ipoh, technical and vocational education in Malaysia has experienced

tremendous development and improvement with respect to its educational system as well as the number of such establishments. In 2009, there were 27 polytechnics throughout Malaysia with more than 305,900 graduates at diploma and certificate level in fields of engineering, technology, trade and services programmes (Jabatan Pengajian Politeknik, 2009). Despite the increasing numbers of students and polytechnic institutions in the country, feedback from industries however indicated that polytechnic graduates barely met the level of competency and work attitude expected by these businesses (Jabatan Pengajian Politeknik, 2009). Similarly, the majority of polytechnic graduates who pursued further studies at first degree level in public universities were found to be barely able to perform academically (Hafizah, Norbahinan, Salina, Aini and Siti Salasiah, 2008). The Student Performance Monitoring System developed by Department of Electronic System, Universiti Kebangsaan Malaysia (UKM) indicated that many polytechnic graduates faced various difficulties in their studies especially in areas related to the theoretical aspects of learning (Hafizah et al., 2008). The study concluded that this was due to the learning philosophy at university level requiring more critical thinking skills rather than the hands-on skills orientation practised in the polytechnic system. Mazudi (2007) noted that even with the entry point of 3.0 CGPA and above by polytechnic graduates, they still often lagged far behind their coursemates who had graduated from other institutions. A report by a Polytechnic Tracer Study highlighting the decreasing level of employability and further study rate of polytechnic graduates from 2001 to 2008 (Jabatan Pengajian Politeknik, 2009) seemed to confirm that the quality of education in these institutions did not meet the expectations of both industry and university level. The negative feedback was a prime trigger that led to the reformation of polytechnic education throughout the country.

1.2.2 Transformation of Polytechnic Education towards OBE

The transformation of polytechnic education towards OBE began in 2007 with initiatives to adopt new quality assurance principles and practices within the system. The aim of the transformation was to produce a body of knowledgeable, highly-skilled and competent human capital in order to drive the nation towards a knowledge-based economy. Curriculum development processes templates were