

**FRAMEWORK FOR DEVELOPING A PROFESSIONAL
DEVELOPMENT PROGRAMME FOR HIGHER
EDUCATION INSTITUTIONS IN INDONESIA**

DEBBY TANAMAL

**UNIVERSITI SAINS MALAYSIA
2016**

**FRAMEWORK IN DEVELOPING
PROFESSIONAL DEVELOPMENT PROGRAM IN
HIGHER EDUCATION INSTITUTIONS IN
INDONESIA**

by

DEBBY TANAMAL

**Thesis submitted in fulfillment of the requirements
for the degree of
Doctor of Philosophy**

SEPTEMBER 2016

ACKNOWLEDGEMENT

Writing a doctoral thesis is a long and exhausting journey. At the surface, it is like a work of myself alone. Beneath it, however, many people have directly and indirectly supported me in getting this work finished. It would not have been possible to write this thesis without the participation, support and understanding of family, friends and colleagues who have generously contributed time, energy and companionship throughout this journey.

My greatest appreciation goes to my main supervisor, Associate Professor Dr. Khairiah Salwa Mokhtar for her continuous great support, attention and inspiration. I am grateful for her constant patience, consistency and cooperation in advising me to achieve excellence in the undertaking of this academic work and making sure the thesis is completed within time.

I also express my greatest thank you to Prof. Munir, as my independent interpreter, for his continuous support to review, validate all the finding, and give continuous support for this dissertation. My thanks also go to the support staff and my fellow Phd friends for their continuous support for me throughout this journey.

It would not have been possible either to collect abundant first hand data without the availability and cooperation of my elite interviewees who are experts in professional development and e-learning in Indonesia. I also appreciate the continuous support and encouragement of Ms. Yennah Mulia (as a CEO of E-Cognition), and Prof. John Meeweela. I also want to express my gratitude for my staff and team during my work at Corporate Learning Directorate at BINUS Group and my staff at Indonesia International Institute of Life Science (i3L) for their support and help during my study leave for this thesis preparation and writing.

I express my thank you to my husband, Eddy Santosa Jaya. His understanding and support helped during this thesis preparation and writing. I am also indebted to my daughter, Prinvia Prichariel, who never complained about my inadequate attention on her as more time, effort, and concentration were allocated to working on this project and whom always inspire me. I also thank my mother, Ang Giok Eng Nio who provided me with endless spiritual support.

Lastly, I dedicate this thesis to my beloved father (late) Rachmat Tanamal, who always inspire me to do the extra miles, in every endeavour. My special gratitude for my late beloved guru, Mr. Once Kurniawan, as my mentor and supervisor, who had given me trust and opportunity to lead the faculty development program in entire BINUS University lecturers & teaching assistant from 2002. This dissertation wouldn't be completed and finished without the support from my research assistant Renaldi Hirawady & Rachma Sartika, special thanks to them.

TABLE OF CONTENTS

ACKNOWLEDGEMENT.....	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	ix
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS	xii
ABSTRAK	xiii
ABSTRACT	xvi
CHAPTER 1 - INTRODUCTION	
1.1 Background.....	1
1.2 Problem Statement.....	7
1.3 Research Questions.....	11
1.4 Research Objectives	11
1.5 The Significance and Benefit of Research	12
1.5.1 Benefits to Staff and Lecturer	13
1.5.2 Training Provider	13
1.5.3 Higher Education Institutions.....	14
1.5.4 Policymakers	14
1.5.5 Future Researchers	14
1.6 Definitions of Terms.....	15
1.7 The Organization	17
CHAPTER 2 – LITERATURE REVIEW	
2.1 Introduction	18

2.2	Professional Development (PD) : The Definition	19
2.3	Professional Development World Wide	21
	2.3.1 Professional Development in Malaysia.....	26
	2.3.2 Professional Development in Indonesia.....	31
2.4	Models of PD	36
	2.4.1 The Traditional Model.....	37
	2.4.2 Job-Embedded Model.....	39
	2.4.3 PD Program Model Based on Teachers' Needs.....	41
	2.4.4 Peer Coaching.....	43
2.5	Characteristics of Effective Professional Development	48
	2.5.1 Skills Development.....	51
	2.5.2 Fostering Coherence.....	52
	2.5.3 Contextual.....	52
	2.5.4 PD Activities.....	53
	2.5.5 Collaboration.....	53
	2.5.6 Sustainability.....	53
2.6	The Design and Development of PD Programme.....	54
2.7	Blended Learning Approach & Its benefits	55
	2.7.1 The Benefits of Blended Learning	56
2.8	The Components of Blended Learning.....	59
2.9	Blended Learning Approaches.....	60
	2.9.1 The “Delivery Mode” Approach.....	61
	2.9.2 The “Learner-Centered” Approach.....	62
	2.9.3 The Anchored Model vs Bookend Model vs Field Blend Model....	64
	2.9.4 The Flipped Classroom.....	65

2.10 Community of Inquiry (COI).....	67
2.10.1 Elements in the Community of Inquiry Framework	71
2.11 The Evaluation of PD Programme.....	74

CHAPTER 3 – DATA METHODOLOGY

3.1 The Approach	80
3.2 Research Design	82
3.3 Overview of the Research.....	85
3.4 Data Collection	87
3.5 Data Analysis.....	93
3.5.1 Transcribing.....	95
3.5.2 Data Reduction	96
3.5.3 Data Validation (Expert Cross Check).....	97
3.5.4 Data Display	99
3.6 Establishing Validity	100
3.6.1 Member Checks.....	101
3.6.2 Theoretical Triangulation.....	101
3.6.3 Theoretical Cross Check.....	102
3.6.4 Expert Cross Check.....	102

CHAPTER 4 - FINDINGS AND ANALYSIS

4.1 Professional Development Models.....	104
4.2 The Key Characteristics of Successful PD Programme	113
4.3 Process in Designing Professional Development Programme	118
4.3.1 The Analysis Phase	118

4.3.2	The Design Phase	121
4.3.3	The Development Phase	122
4.3.4	The Implementation Phase	124
4.3.5	The Evaluation Phase	124
4.4	The Assessment/Evaluation of Current Professional Development.....	126
4.5	Blended Learning Models	129
4.6	The Criteria of Successful Blended Learning Implementation	133
4.7	The Foundation/Concepts that drive Blended Learning Models.....	136
4.8	Feedback on the Community of Inquiry Framework	138
4.8.1	Local Presence/Contextualizing	138
4.8.2	Instructional Presence vs Teaching Pres.....	139
4.8.3	Independent Learning Habits.....	139
4.8.4	Social Constructivism.....	140
4.8.5	Infrastructure and Technology	140
4.9	The Main Components in Blended Learning Model	141
4.10	The Discussion	150
4.10.1	Framework for Developing a PD Programme in the Context of Indonesian Higher Education Sector	150
4.10.2	Selecting Appropriate Professional Development Models	151
4.10.3	Critical Factors for a Successful PD Programme.....	160
4.10.4	Designing a PD Programme.....	164
4.10.5	Evaluating a Professional Development Programme	168
4.10.6	Application of E-learning in Blended Learning Model.	173
4.10.6(a)	Defining Blended Learning from the Perspectives of Indonesian Educators.....	173

4.10.6(b) Critical Factors for Successful Implementation of Blended Learning.....	175
4.10.6(c) Theoretical Foundation of Blended Learning in Indonesia.....	177
4.10.6(d) Main Components in a Blended Learning Model	178
4.10.6(e) Findings That Support the Use of Blended Learning ..	181

CHAPTER 5 - SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction.....	183
5.2 Theoretical Contribution.....	190
5.3 Policy Contribution.....	191
5.4 Recommendations.....	192
5.5 Limitations of the Study.....	194
5.6 The Summary.....	194

REFERENCES	196
-------------------------	-----

APPENDICES

APPENDIX A : Letter to interview	209
APPENDIX B : Surat Pengantar Resmi dai University Sains Malaysia	210
APPENDIX C : Interview Questions	211
APPENDIX D : Glossary	212
APPENDIX E : Interview Transcribing	213

LIST OF TABLES

		Page
Table 2.1	Details of the Four Levels of PD Effort	22
Table 2.2	AKEPT Programme.....	30
Table 2.3	Summary of Traditional PD	38
Table 2.4	Summary of Job-Embedded PD Model.....	40
Table 2.5	PD and Its Effective Characteristics (1)	50
Table 2.6	PD and its effective characteristics (2)	50
Table 2.7	Summary of Characteristics of Effective PD.....	51
Table 2.8	The Categories and Indicators in the “Social Presence”	72
Table 2.9	The Categories and Indicators in the “Cognitive Presence”	73
Table 3.1	The Overview of the Research	86
Table 3.2	The Interview Questions.....	87
Table 3.3	The Selected The Selected Informants/Interviewees & Their Organizations/Institutions.....	88
Table 3.4	Short Biographies of Respondents	89
Table 3.5	Interview Schedules.....	91
Table 3.6	Interview Protocols.....	92
Table 3.7	Snapshot of Transcribing.....	95
Table 3.8	Snapshot of Keywords in Transcribing	96
Table 3.9	Snapshot of Summarizing of Keywords in Transcribing	96
Table 3.10	Short Biography of Independent Interpreter.....	97
Table 3.11	Snapshot of Independent Interpreter Comments.....	98
Table 3.12	Snapshot of Final Mapping	98

Table 3.13	Snapshot of Coding	99
Table 3.14	Snapshot of Categorization.....	100
Table 4.1	Three-Cycle Training Model.....	110
Table 4.2	Verbatim of Evaluation Levels.....	128
Table 4.3	Unfostered vs. Fostered Bottom-up vs. Top-down Model	154
Table 4.4	Face-to-face vs. Blended Learning Model	156
Table 4.5	Review of Three-cycle Training Model	158
Table 4.6	Seminar vs. Workshop Model	159
Table 4.7	Government-based PD Programmes Likely Benefits and Disadvantages.....	160
Table 4.8	Levels of Evaluation of a PD Programme and Their Pervasiveness in Practice	170

LIST OF FIGURES

	Page
Figure 1.1 The Four Levels of Effort in PD.....	2
Figure 1.2 The Beneficiaries of the Study	13
Figure 2.1 The Four Levels of Effort in PD.....	21
Figure 2.2 The Five Areas of Professional Development Activity.....	24
Figure 2.3 Basic Teaching Methodology Course (BTMC).....	27
Figure 2.4 Content of BMTC.....	28
Figure 2.5 The periods of PEKERTI/AA	33
Figure 2.6 Four Competencies Required in Faculty PD	34
Figure 2.7 Four Important Elements of Peer Coaching	45
Figure 2.8 Benefits of Peer Coaching	46
Figure 2.9 Peer Coaching Stages	48
Figure 2.10 Four Components of Blended Learning.....	60
Figure 2.11 The Delivery-Mode Model.....	61
Figure 2.12 Learner-Centered Model	63
Figure 2.13 Community of Inquiry Framework	71
Figure 5.1 An Overview of Framework for Dev a PD Programme for Indonesian Higher Education Sector	187
Figure 5.2 An Overview of the Framework for the Application of E-learning in Blended Learning Model.....	190

LIST OF ABBREVIATIONS

PD	Professional Development
ICT	Information & Communication Technology
ADDIE	Analysis-Design-Development-Implementation- Evaluation
MOE	Ministry of Education
SEAMOLEC	South East Asian Minister of Education Organizational Regional Open Learning Center
EdPro	Education Professionals
ISD	Instructional System Design
COI	Community of Inquiry
UI	Universitas Indonesia
UGM	Universitas Gadjah Mada
NCIHE	National Committee of Inquiry into Higher Education
ILTHE	Institute for Learning and Teaching in Higher Education
ALTC	Australian Learning and Teaching Council
MOHE	Minister of Higher Education
BMTC	Basic Teaching Methodology Course
PEKERTI	Pengembangan Ketrampilan Dasar Teknik Instruksional
AA	Applied Approach
AMA	American Management Association
TNA	Training Need Assessment

KERANGKA DALAM MEMBANGUNKAN PROGRAM PEMBANGUNAN PROFESIONAL DI INSTITUSI PENDIDIKAN TINGGI DI INDONESIA

ABSTRAK

Pembangunan profesional (PP), pembangunan fakulti, pembangunan staf, pembelajaran profesional dan pembelajaran berterusan merupakan konsep-konsep yang merujuk maksud yang sama iaitu ilmu dan kemahiran yang diperolehi untuk pembangunan personal dan kemajuan karier. Kekangan dalam profesion akademik di Indonesia yang merangkumi tanggungjawab pengajaran yang tinggi, kekangan masa, kepadatan penduduk dan kekurangan latihan pendidikan telah mendesak insitisi pengajian tinggi untuk menyediakan PP yang lestari dan berkesan melalui penggunaan teknologi yang sesuai. Demi cabaran ke arah akreditasi antarabangsa, *National Legislation on Teachers and Faculty as Professionals* seperti yang termaktud di dalam Akta Indonesia Nombor 20, 2003, Akta Nombor 4, 2005 dan Peraturan Kerajaan Nombor 19, 2005 menyediakan anjakan paradigma dengan mengadakan program PP yang bermanfaat dan berkualiti untuk fakulti di Indonesia. Matlamat utama kajian ini ialah untuk mengusulkan satu kerangka dalam membangunkan program PP dalam konteks institusi pengajian tinggi di Indonesia. Matlamat ini boleh dicapai dengan mengkaji amalan PP sedia ada di institusi pengajian tinggi Indonesia, menyiasat model pendekatan PT sedia ada dan mengenalpasti peluang untuk memperkasakan inisiatif PP. Kajian ini menggunakan kaedah penyelidikan kualitatif dengan menjalankan temubual separa berstruktur bersama 12 orang pakar di peringkat nasional dalam bidang PP dan pembelajaran teradun (PT) sebagai informan. Semua temubual dirakam, ditranskripsi dan dianalisis melalui reduksi data, pameran data dan kesimpulan. Empat alat digunakan untuk tujuan pengesahan data iaitu *member checks*, *theoretical triangulation*, *theoretical*

cross-check dan *expert cross-check*. Kajian mengenal pasti lima pendekatan utama kerangka PP berikut; Pemilihan model PP yang sesuai; Pengenalpastian faktor-faktor kritikal untuk program PP yang berjaya; Pengetahuan untuk merekabentuk program PP; Pengetahuan untuk menilai program PP; dan Pengetahuan untuk mengaplikasi pembelajaran elektronik dalam PT. Kajian juga mengenalpasti lima model PP iaitu; *Bottom-up* (longgar/terkawal) vs *Top-Down* (sistematik); Bersemuka vs e-pembelajaran; model latihan tiga pusingan; seminar/bengkel; dan program PP berasaskan kerajaan. Kajian menunjukkan lapan kriteria berikut yang berlandaskan konsep ADDIE (Analisis, Rekabentuk, Pembangunan, Pelaksanaan, Penilaian) untuk memastikan pelaksanaan program PP yang berjaya; Penilaian keperluan yang terperinci dan kejelasan objektif PP; Keselarasan PP dengan perancangan sumber manusia atau keperluan institusi; Rekabentuk instruksional PP yang jitu dan senario pembelajaran terutama melalui pembelajaran individu; Pengenalpastian demografi pelajar termasuk ciri-ciri peribadi, latar belakang dan tabiat pembelajaran; Pemastian kemahiran fasilitator dalam bidang kepakaran dan pedagogi, inovasi dan adaptasi penyampaian PP dan kandungan; Pengenalpastian tabiat pelajar; dan akses kepada prasarana dan teknologi. Tiga pendekatan PT juga muncul iaitu PT berasaskan mod penyampaian, PT berasaskan proposi penggunaan ICT dan PT berasaskan pengukuhan kandungan. Dari segi komponen PT, kajian mengenalpasti beberapa perkara yang perlu diberi perhatian iaitu rekabentuk aliran arahan dan senario pembelajaran yang jitu, fasilitator, akses kepada teknologi dan prasarana, sistem dan proses, kandungan, dan pelajar. Kajian ini mengemukakan cadangan untuk penambahbaikan amalan PP di institusi pengajian tinggi Indonesia. Pelaksanaan PP perlu dikaitkan dengan dimensi dan aspek sistem dan perubahan institusi. PP perlu diintegrasikan sebagai sebahagian daripada keseluruhan amalan di tempat kerja.

Pendekatan PP yang selanjutnya perlu diterokai untuk memberi peluang kepada refleksi diri, pertanyaan dan sistem mentor berbanding cara tradisional satu hala penyampaian PP. Usaha ke arah memaksimumkan penggunaan *Open Educational Resources* (OER) dan pengalaman pembelajaran tidak formal fakulti serta merekabentuk pembelajaran personal fakulti melalui PT boleh diamalkan untuk meningkatkan keberkesanan PP. Pembentukan pusat-pusat yang berfokus sebagai penyokong utama PP adalah penting untuk mewujudkan komuniti pembelajaran dan menyediakan ruang untuk pembelajaran berterusan dan refleksi fakulti. Penilaian bertaraf tinggi perlu diwujudkan untuk mengukur prestasi dan keberkesanan PP. Kajian ini mengenal pasti beberapa kekangan. Fokus kajian ialah sektor pendidikan tinggi, bukan pengajian peringkat sekolah rendah atau menengah. Fokus kajian juga kepada aspek-aspek konseptual PP dan bukan teknikal seperti sistem pengurusan pembelajaran atau sistem pengurusan kandungan. Bilangan informan yang dipilih untuk kajian ini dihadkan kepada 12 disebabkan oleh faktor-faktor geografi, kelapangan dan masa.

**FRAMEWORK FOR DEVELOPING A PROFESSIONAL DEVELOPMENT
PROGRAMME FOR HIGHER EDUCATION INSTITUTIONS IN
INDONESIA**

ABSTRACT

Professional development (PD), faculty development, staff development, professional learning and continuous learning are all similar concepts which refer to acquirement of skills and knowledge for personal development and career advancement. The main constraints in Indonesian academic profession include heavy teaching responsibilities, strict bureaucracy, poor scientific publication, low human development index and insufficient education training that urged higher education institutions to provide sustainable and effective PD by leveraging the use of feasible technology. Due to challenges towards international accreditation, the National Legislation on Teachers and Faculty as professionals as stipulated in the Indonesian Act Number 20, 2003, Act Number 14, 2005 and Government Regulation Number 19, 2005, provides an important paradigm shift to foster quality and meaningful PD programme for faculty in Indonesia. The ultimate goal of the study is to provide a framework for developing a PD programme in the context of the Indonesian higher education sector. This goal can specifically be reached by examining existing PD practices in Indonesia's higher education institutions, investigating current models of blended learning (BL) approach and recommending improvements to current PD practices in the country. The study is qualitative in nature. Semi-structured interviewed were carried out with 12 national experts in the fields of PD and BL as informants. All interviews were recorded, transcribed and analysed using data reduction, data display and conclusion. Four tools were employed for data verification purposes; member checks, theoretical triangulation, theoretical cross-

check and expert cross-check. The study identified five main components of the PD framework; Selection of Appropriate PD Models; Identification of Critical Factors for a Successful PD Programme; Knowledge on Designing a PD Programme; Knowledge on Evaluating a PD Programme; and Knowledge on Application of E-learning in BL Model. The study also identified five PD Models namely; Bottom-Up (loose/unfostered and fostered) vs Systematic (Top-Down); Face-to-Face Model vs E-Learning; Three Cycle Training Model; Seminar/Workshop Model; and Government-based PD Programmes. The study highlighted the following eight factors, based on ADDIE Concept (Analysis, Design, Development, Implementation, Evaluation), to ensure successful implementation of a PD Programme; Thorough need assessment and clarity of PD objectives; Coherency of PD with human resource plan or institutional needs; Thoughtful instructional design of PD and learning scenario especially by enabling personalised learning or individual learning path; Identification of learners' demographics which include personal characteristics, backgrounds and learning habits; Ensuring adequate proficiency of facilitators in subject matter and adequate pedagogical skills in delivering PD programme, innovation and adaptation in PD delivery and contextualization of content; Identification of learners' habits; and finally Accessibility to infrastructure and technology. There are three approaches that emerge from the findings on blended learning approach, namely blended learning based on delivery modes; blended learning based on ICT usage proportion; and blended learning based on content enrichment. In terms of blended learning components, the study identified several areas that need attention namely thoughtful design of flow of instructions and learning scenario, the facilitators, accessibility to technology and infrastructure; the system and process, the content, and the learners. This study provided six

recommendations to improve PD practice in Indonesia. It is crucial to connect a PD programme itself with other dimensions of institutional system and change as well as to link PD content with on-the-job or workplace practices. More opportunity should be provided for self-reflection, inquiry and coaching or mentoring as opposed to the traditional one-way delivery mode of PD. Improvement to the implementation of blended learning in PD setting can be done through maximizing the use of OER, increasing informal learning experience of faculty to maximise learning and designing personalised learning for faculty through blended learning. It is important to provide on-going support for PD including specific dedicated centres and learning communities to provide the setting for continuous learning and reflective practices for faculty. Finally, evaluation of PD should be leveraged to higher levels of measurement as opposed to mere participation and satisfaction of participants to measurement of actual learning, application and impact of a PD programme.

CHAPTER 1

INTRODUCTION

1.1 Background

Education has been a topic of international debate during the past two decades (Lucilio, 2009). For example, all schools in the United States have gone through massive reform in educational practices for improving student learning. One of the essential components in the university plan was the development of lecturer professional development (PD) programme. As Guskey (2005) noted, PD has been the emphasis as a primary vehicle in the efforts to bring about needed change. Higher education institutions have experienced similar trend. PD has surfaced to become an important pushing factor in order to enhance students' outcome and performance (Abrami & Barret, 2005).

Professional development (PD), faculty development, staff development, professional learning and continuous learning are all similar concepts which refer to acquired skills and knowledge for personal development as well as career advancement. All of them share a common purpose of enhancing staff ability to do their work. PD/faculty development can be referred to as acquired skills and knowledge to enhance a person's level of competency and professionalism for personal and career advancement. Many educational institutions have been struggling to design and develop effective PD that suits their lecturers' needs. To ensure the effectiveness of the educational reform plan, especially regarding PD for lecturers or faculty, there is a major emphasis to involve the lecturer/faculty in the earliest phase of development of PD programme itself. The lecturer, learning environment, and activities in the classroom that help facilitate learning are

important elements that affect student's achievement.

Studies on PD are varied and extensive, especially in developed countries. However, in developing countries, research concerning PD especially in relation to higher education institutions is still lagging behind. According to Fink (2013), there are four levels of effort in PD. These four levels have spread to different regions and countries throughout the world. The first level is the identification of a very small number or close to no faculty development activity. The second level is a substantial minority of institutions that have had faculty development activity with no compulsory faculty participation. The third level experiences faculty development activity as being nearly a universal activity with a mandate for new faculty members. The final level is characterized by a sustainable or continuous faculty development especially for all post-secondary instructors.

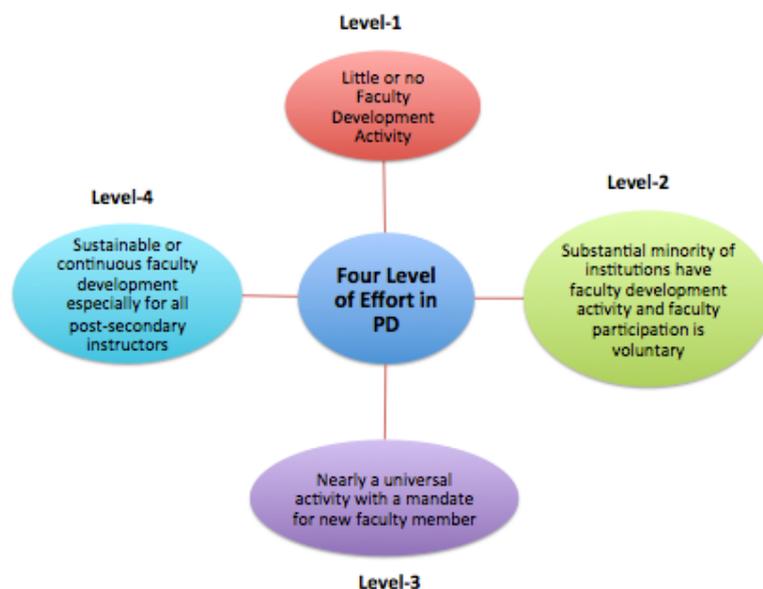


Figure 1.1: The Four Levels of Effort in PD (adapted from Fink, 2013)

According to Fink (2013) level-1 effort is the current situation in most parts of the world, but especially in Latin America, Africa, the Middle East, Asia and most

of southern and eastern Europe. In these regions, some institutions have started such programmes, but the percentage of all institutions doing this is very low. Looking at Fink's (2013) categorization of effort in PD from a macro perspective, Indonesia is still largely clustered in level-1 where there is little to no faculty development activity.

According to Othman and Dahari (2011), PD is very important because there is a need for new types of educational expertise at all levels. This is due to the exponential growth of knowledge in every subject area and academic discipline. Continuous growth and transformation of new roles and responsibilities assumed by academic staff and school administrators also require constant learning and upgrading in the way educators go about their jobs, and the changing structure of their work ecology. Continuous PD for teaching and learning is essential for ensuring continuous quality improvement and professional competency of educators. Welsh and Woodward (1989) as cited in Othman and Dahari (2011) described continuous professional development (CPD) as the activity that helps to maintain and improve professional competence.

The following legislations has been instated in Indonesia since 2005 aiming to improve the professionalism of lecturers: (1) Indonesian Act No. 20 Year 2003 on National Education System; (2) Act No. 14 Year 2005 on Teachers and Lecturers; and (3) Government Regulation No. 19 Year 2005 on National Education Standards. Through these Acts and Regulation, all teachers and lecturers are recognized as professional educators by the State. In addition, all lecturers will be assessed through portfolio-based assessment according to the guidelines from the Directorate of Higher Education. The guidelines state that the assessment components ought to include academic qualifications, education and training, teaching experiences, the

quality of pedagogical planning and implementation, assessments by superiors and supervisors, academic achievements, PD activity, participation in scientific forums, organizational experience in the field of community service and awards relevant to the field of education (Setiawan, 2012).

In addition, Act No. 14/2005 Article 69 states four competencies required to be developed for lecturers which include pedagogical, personal, community service and professional competencies (Syam, 2006). All the evidence of these competencies will form the basis for certification by national bodies selected by the Directorate General of Higher Education. The aim of this certification is to decide the feasibility of the teachers in conducting their duties as teachers, to develop pedagogical process and student learning outcomes, and to improve the welfare of the teachers. However, lecturer qualification assessment in Indonesia mainly focuses on the collection of paper-based evidence without assessing the real competencies of lecturers. The current assessment relies on measuring teaching load per semester, conference attendance and active participation as facilitator or speaker in a workshop or seminar.

Based on such legislation, there are several programmes that have been established. Basic Skills Improvement Programme on Instructional Techniques (PEKERTI) is a professional programme for beginner lecturers to help master basic concepts in pedagogy and to acquire adequate and proper teaching ability. Applied Approach (AA) is a PD programme for senior faculty to enable them to acquire the necessary knowledge and ability to develop and implement quality pedagogy experience and, thus, improve student performance. Basic Academic Competency Test Programme for English Language (Programme Tes Kompetensi Dasar Akademik-TKDA Bahasa Inggris) is meant to improve English language

competencies of lecturers especially those who will be pursuing their studies overseas. Finally, Research and Community Service Programmes through multi/varied schemes (Program penelitian dan pengabdian kepada masyarakat through multi/varied schemes).

In general, these programmes are unstructured which means that they are conducted in one off sessions with the aim to achieve certain goals. For example, PEKERTI and AA are mainly used for lecturers prior to their acceptance to tenured positions in state universities while TKDA is used for lecturer certification and to support lecturers in getting scholarships overseas.

According to Huang et al. (2008), there are three reasons why an educational institution or organization chooses to use blended learning in its programme; the size of the learner group; time or duration of learning; and for developing professional skills. Many educational institutions choose blended learning approach with the aim to ensure effectiveness and efficiency of instructional strategies as well as instructional quality. In the corporate world, there has been a positive inclination to use blended learning as a form of delivery mode for PD.

In Indonesia, there are several good reasons to take advantage of blended learning. First reason is due to lecturers' heavy load and broad scope of work. Geographical nature of Indonesia being an archipelagic state with coastal and mountainous areas pose challenges in developing education infrastructure that may lead to an uneven distribution of information. In addition, congestion and dense traffic especially in several big cities such as Jakarta, Surabaya, Makassar, Bandung and Medan with increasing populations who yearn for flexibility in accessing education provide reasonable reason to entertain e-learning. Blended learning offers the opportunity to increase the accessibility and flexibility of educational resources

and for participants that include both instructors and learners (Graham et al., 2006). To foster independent habits for learning, a lecturer is given the freedom to choose his own time to learn and is able to repeat parts of the programme at his own pace. It is hoped that through blended learning, the e-learning component would enrich the experience of face-to-face learning. It is proven that blended learning has managed to improve pedagogy to become better and interesting (Graham et al., 2006). Teng et al. (2009) also agreed and added that instructors who use blended learning provide effective pedagogy. There is a variety of learning strategy and experiences offered by blended learning. According to Reid-Young (2003), the use of blended learning techniques takes advantages of the variety of learning experiences that can be offered by the use of a mix of learning environments. Similarly, Ausburn (2004) stated that blended learning provides a possibility to adopt a variety of learning strategies to combine guided and self-directed learning process.

In 2012, 18 Malaysian Academic Leaders (Dean, Deputy Dean and Deputy Vice Chancellor) under AKEPT (Akademi Kepemimpinan Pengajian Tinggi) Programme from 13 different universities met in Malacca to develop vision and strategies for the future of Malaysian Higher Education (Inayatullah, 2012). After considerable deliberation, all four groups developed a shared vision of the Malaysian University in 2025, with the following characteristics:

- i. University must be sustainable in terms of financing and energy use.
- ii. It is student-centred, focusing on the “café” in the library. There ought to be blended learning-student flexibility, and, indeed, students are expected to play an important role in pedagogy design.
- iii. Lecturers having far more autonomy and are freed from administrative tasks so they could innovate in pedagogy.

iv. Measurements for success are ought to be balanced and are to include quality research, student satisfaction, industry relevance, and sustainability.

Based on their recommendations, especially pertaining to blended learning, there is a need to address the digital gap between senior professors and younger digital natives (both lectures and students), hence the Malaysian University System needs to develop new learning platforms that place the needs of students first. While adapting to new technological platforms is pivotal, face-to-face interaction is still required--blended learning (Inayatullah, 2012). Another reason, for future learning, especially for middle of the road and bottom level students (the majority), blended learning approach with close guidance is more appropriate

1.2 Problem Statement

In 2009, there were 2,975 institutions of higher education and more than 4.2 million student's in Indonesia. By 2015, the number of Tertiary Education Institutions in Indonesia had grown to 4,384 of which 91.5% is private while 8.5% is public (Indonesia's Higher Education Act 2012, 2013). In comparison, Malaysia only had twenty public universities, fifty-three private universities and six foreign university branch campuses; 403 active private colleges, thirty polytechnics and seventy-three public community colleges in 2011 totalling 585 institutions of higher education (StudyMalaysia, 14 March 2015). Yet despite the vast numerical advantage, in 2011, Indonesia only managed to have five of its scientific journals (out of 18,854 published) that are accepted by international standards according to Scientific Journal Rankings (SJR) while Malaysia managed to have 43 of its scientific journals accepted by international standards. Overall, Indonesia only published 1/7th of scientific publications in comparison to Malaysia in 2012, bearing

in mind that Malaysia's higher education institutions are about 1/6th in number to Indonesia's (Hidayat, A. A., 5 February 2012). This picture gets worse when only take into account the number of international publications. In terms of international scientific publications, Indonesia only manages 1/9th of what Malaysia is capable of (Hidayat, A. A., 5 February 2012). This bleak portrayal could somewhat be explained by the United Nation Development Program (UNDP) report in 2011 that ranked Indonesia 124th out of 187th countries for human development index (Tanang and Abu, 2014).

To elevate this dismal state of human development, special attention needs to be given to quality education and by extension, to the quality of teachers. Thus, the government of Indonesia needs to foster Continuous Professional Development (CPD) to cope with ongoing changes effectively to advance the quality of teachers (Tanang and Abu, 2014). This is so since teachers play an important role in teaching and learning process to improve student outcomes although many factors contribute to their success (Rivkin, Hanushek, & Kain, 2000; Sanders & Horn, 1994; Sanders & Rivers, 1996, Boyd et al, 2006 as cited in Tanang and Abu, 2014).

Sudarminta (2000) as cited in Tanang and Abu (2014) had exposed the weaknesses of some teachers in the class room such as: (i) lack of mastery of the material being taught, (ii) mismatch between teachers' subject areas studied and taught, (iii) lack of effective ways of teaching and authority in front of students, (iv) low motivation and dedication to become a real educator, (v) lack of emotional maturity, independence of thought, and attitude determination of being educators as most teachers are merely focused on being a teacher instead of an educator; (vi) relatively low intellectual level of students entering teacher candidates LPTKs (Lembaga Pendidikan Tenaga Keguruan) compared to those entering universities.

In addition, Tanang and Abu (2014) also states that Indonesian teachers lack autonomy due to strict bureaucracy control; suffer from limited time and financial support to participate in professional development activities; receive a minimum reward as appreciation to their great work; work under a lack of facilities and supporting resources such as technology and good learning environment to facilitate teaching, access teaching sources, and related information. All these facts point to the need of improving PD practice in Indonesia in order to leverage the competitiveness of Indonesian society in facing global challenges both through effort by the state and private sector.

Furthermore, with the challenges towards international accreditation, the National Legislation on Teachers and Faculty as professionals as stipulated in the Indonesian Act Number 20, 2003, Act Number 14, 2005, and Government Regulation Number 19, 2005, provides an important paradigm shift to foster quality and meaningful PD programme for faculty and teachers in Indonesia.

In higher education institutions, there is general lack of faculty competencies especially in pedagogical areas. Many faculty members in universities and institutions are entering the education profession without proper training on how to teach undergraduates. They receive no proper induction or training which equips them in mastering not just subject matter but also facilitating and delivering a meaningful session in their teachings. Most of lecturers build on their expertise in teaching from autodidact teaching experience. Only a few institutions in Indonesia really pay attention to providing appropriate PD for their faculty members. This situation has become prevalent due to factors such as the lack of human resources in providing training, the limitations on budget or cost and finally time constraints to attend PD programmes.

Combined with Indonesia's limited infrastructure, geographical challenges, density and traffic jam in metropolitan areas, there is a need to integrate and leverage technology in implementing PD. Today, Indonesian teachers are challenged to adopt technology information in improving their professionalism. The development of information technology will change the pattern of teacher-pupil relationship, models of learning, and the educational system as a whole. Information and Communication Technology (ICT) should be used in education to achieve the goal rather than as a barrier. The role of the teacher will not be the only source of learning because many learning resources and sources of information can facilitate a person to learn. Schools are no longer going to be the only centre of learning because learning activities are no longer limited by space and time (Tanang & Abu, 2014).

Based on the background stated above this study attempts to help in improving PD initiative in Indonesia by providing a framework as guidelines to developing a successful PD programme and by exploring the use of ICT for a PD programme when it is viable by taking into account factors that perhaps are peculiar to the context of Indonesia.

In correlation to that main problem, there are three issues that need to be analysed:

1. How are current PD programmes in Indonesian Higher Education Institutions being developed?
2. How pervasive is the use of ICT to facilitate PD programmes for faculty in Indonesia?
3. What current weaknesses are plaguing the implementation of PD Programmes in Indonesia?

1.3 Research Questions

With the problem statement above, this thesis seeks to address the main research issue of providing a framework for developing a professional development programme in the context of Indonesian higher education sector.

There are three corresponding main research questions:

1. What are the existing professional development practices in Indonesian Higher Education Institutions (HEIs)?
2. What are the current models of blended learning approaches within the context of Indonesian Higher Education Institutions (HEIs) and their components?
3. What viable and meaningful improvements that could be implemented for PD initiative in Indonesian Higher Education sector?

1.4 Research Objectives

The ultimate goal of this study is to provide a framework for developing a professional development programme in the context of Indonesian higher education sector. Thus, the goal and the accompanying research questions can be met by addressing the following five research objectives:

1. To provide an overview of widely-used and suitable models in developing a PD programme for Indonesian higher education institutions.
2. To identify critical key elements in ensuring successful development and organisation of a PD Programme specifically for Indonesian higher education institutions.
3. To investigate stages employed in developing a PD programme.
4. To examine all evaluation levels pertaining to assessment of a PD programme.

5. To examine the use of blended learning approach in PD programme initiative in Indonesian higher education institutions.

1.5 The Significance and Benefits of Research

To date, very little is known about PD practices in Indonesia, especially those that are delivered via a blended learning approach as it is considered a new area of research. However, rapid awareness and research in PD in many developed countries such as the US, the UK, Australia, and Singapore, have provided ample evidence and lessons learned towards the importance of a PD programme to leverage teaching quality, student achievement and learning process.

The benefits of this study definitely will impact academics (lecturers and teachers), training providers and centres inside and outside institutions, higher education institutions, policymakers and future researchers. Parties that would benefit from the findings of this thesis are illustrated in the following figure and are elaborated further in the following sections.



Figure 1.2: The Beneficiaries of the Study

1.5.1 Benefits to Staff and Lecturers

Staff and lecturers will benefit from the research in several ways, such as (1)

enhancement of their knowledge and skills, especially in relation to their professional life, (2) improvement of staff performance, (3) ease of access or flexibility in the professional development programme, and (4) improvement on the quality of professional development programme. The benefits gained, in turn, would encourage and leverage the quality of teaching and lecturer performance toward improving educational institutions and community and performance toward educational institutions and community.

1.5.2 Training Providers

For training providers, this study provides a framework of reference and summary for developing an effective and successful PD programme specifically in the context of Indonesian higher education sector. The findings can be used as guidelines to improve current PD practices.

1.5.3 Higher Education Institutions

This study helps higher education institutions to select and adopt appropriate models of PD for their institutions. The study also provides alternative delivery, by utilizing ICT in PD programme. This study will also indirectly improve the performance of lecturers (academics), by providing a framework for developing a PD programme tailored for the context of Indonesian Higher Education sector based on qualitative research done in this thesis. Improvement of lecturer' performance has a direct, positive impact on improving student learning outcomes.

1.5.4 Policymakers

This study offers some insights and information with regard to developing a

successful PD Programme for Indonesian higher education institutions. The policymakers of the Indonesian Ministry of Education (MOE), in particular the Teacher Education Division/Lecturer Development/Human Resources Development which is directly responsible and involved with matter pertaining to training and PD programmes, would stand to benefit from the evidence and findings of this study. Although the benchmarks and literature review originate in Western countries, this study will be of valuable help to policymakers to review, restructure and refine PD models by taking into account specific peculiar factors relevant to the context of Indonesian higher education sector.

1.5.5 Future Researchers

For future researchers, this study may act as a stub reference to further explore some of its findings in greater resolution. This study may benefit future researchers by providing direction to explore other areas that are yet covered in this research, such as the content management system of blended PD programmes and other aspects that can be further explored in correlation to the technical aspects of blended learning PD programmes and to investigate the exact causes and viable solutions of issues pertaining to development and organisation of a PD programme as uncovered in the qualitative research that weren't pursued in greater detail in this research.

1.6 Definitions of Terms

The definition of professional development, staff development or faculty development is a continuous learning programme to enhance the competencies and professionalism of staff, teachers and lecturers. The blended learning model is

defined as a (1) combination of face-to-face and distance learning systems, and (2) leveraging technology for content enrichment. The selection of the term PD (professional development) in this thesis is due to a wider scope of development that's covered in this study that includes both academic and non-academic staff in higher education institutions. The definition of framework consist of models of professional development, key characteristics that underpinning of successful implementation of PD Programme, stages in developing PD programme, evaluation of PD Programme, and blended learning approach in delivery the PD Programme

1.7 The Organisation

The thesis consists of five chapters. The first chapter writes about the introduction of the thesis which describes the background, issues and problems, purpose of study, research objectives and questions, the importance of research, scope of study, research organisations, and definitions of key terms.

The second chapter presents the literature review on PD practices which covers the definition of PD, history of PD, PD practices worldwide, models of PD, characteristics of effective PD, the process of designing and developing PD, and a definition of blended learning, benefits of blended learning, the characteristics and components of blended learning, blended learning models and the Community of Inquiry Framework (COI).

The third chapters cover the research methodology explaining the research design, the context of participants, instrument, data collection, data analysis, limitation of analysis, credibility and trustworthiness of the data.

The fourth chapter presents the findings and analyses of Research Objective 1, 2, 3, 4, and 5.

The final chapter is the conclusion chapter that describes the empirical findings, theoretical implication, policy implication, recommendation for future research, limitation of the study and summary.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In more than a decade, most educational institutions, ranging from primary to tertiary levels, have been focusing on improving their lecturers' performance, with the ultimate aim of improving students' academic achievement. Since teachers have the most direct contact with students as well as a considerable control over what is taught and how it is taught, it is reasonably assumed that enhancing teachers' knowledge, skills and attitudes is a critical step in improving learners' performance (King and Newman, 2001). Effort to improve performance of lecturers is related to many facets within institutional/organisational context, such as organisational culture, leadership, systems and procedures, human resource, and other interrelated factors.

Lewis (1996) pointed out that the sabbatical leave instituted at Harvard University in 1810 is probably the oldest form of faculty development. The main aim of this early programme was to enhance the competence of the faculty members as scholars in their own fields (Gillespie and Robertson, 2010). Since Harvard's sabbatical leave had been implemented in 1810, numerous American universities followed suit. Examples of other institutions that jumped into the same band wagon were Oxford and Cambridge that have established the same practice in the 1920s (Lewis, 1996).

Quality Professional Development (PD) is a central component in nearly every modern initiative for improving education (Guskey, 2002). In the US, higher education especially colleges and universities have a long history of commitment to

the development and success of PD they have developed for their Faculty Members (Gillespie and Robertson, 2010).

This chapter will explore the definition for PD and examine professional development practice world-wide that also include Malaysia and Indonesia. There are four models of professional development to be examined. The chapter also identifies several key characteristics of effective professional development, and elaborates on the process of design and development of PD itself. The chapter also explores Blended Learning approach in several PD programmes, the components of blended learning, the notion of Community of Inquiry (COI), and the evaluation of PD itself.

2.2 Professional Development (PD): The Definition

Professional development (PD), faculty development, staff development, professional learning and continuous learning are all similar concepts which refer to acquired skill and knowledge for personal development as well as career advancement. All of them share a common purpose of enhancing staff ability to do their work. Toth and Mc. Key (2010), defined professional development/faculty development as a programme that is considered specifically for its role in helping faculty to improve both of their teaching skills and student learning outcomes while according to Steinert (2000) faculty development is any type of activity that is aimed at renewing or assisting faculty in their roles.

Joyce and Calhoun (2010) stated that a PD is seen as an official plan supported by the institution or organization in developing a better workplace and to enhance participants' knowledge and competence in their assigned roles.

Faculty development programmes can be defined as organizationally supported

initiatives designed to improve faculty performance or enhance the quality of faculty work life (Dee and Daly, 2009)

The aim of PD programme according to Guskey (2002) is to leverage the competencies of teachers and to bring a positive change in teachers' attitudes and beliefs that correlates positively with learners' achievement.

PD is also seen as a vital component in supporting positive change in the educational system and environment (Ling and Mackenzie, 2001). To support this change, school leaders need to empower their teachers and staff, by providing appropriate learning path and qualification to support their learning.

Professional development/Faculty Development according to Fink (2013) is "a set of activities that engages all members of the teaching faculty in the kind of continuous professional development that enhances their ability to construct curricula and modes of instruction that more effectively fulfil the educational mission of the institution and the educational needs of students and society".

PD is an important aspect to ensure the effectiveness of schools, and achievements of students (Rhodes and Houghton-Hill, 2000); (Wood and Millichamp, 2000); (Birman, Desimone, Porter and Garet, 2000). PD for teachers is not only enhancing teachers' knowledge, practices and attitude, but is also seen as an important stage in developing learners' achievement (King and Newman, 2001; Ribisch, 1999).

To be effective, a PD programme should follow four principles which consist of learner engagement, relevancy to context, presence of challenges, and practice involvement (Boud and Prosser, 2002). PD is not only applicable to people in business or management, but is also important for professionals such as teachers/lecturers.

The ultimate aim of PD is to increase better student performance, but individual student outcomes and teachers' use of instructional strategies are profoundly affected by the school's culture in which teachers work (King and Newman, 2001). This study is focusing on PD as one of the important factors in improving faculty members' performance and career, that also has an impact on student learning.

As mentioned by previous studies, one of the key factors in raising students' performance and ensuring effective institutional development is by designing and providing appropriate learning experience for faculty. PD for teachers is seen as an essential ingredient for creating effective schools and raising students' performance (Rhodes and Houghton-Hill, 2000); (Wood and Millichamp, 2000); (Birman, Desimone, Porter and Garet, 2000).

2.3 Professional Development World Wide

According to Fink (2013), there are four levels of effort in PD. These four levels have spread to different regions and countries throughout the world. The first level is the identification of a very small number or close to no faculty development activity. The second level is a substantial minority of institutions that have had faculty development activity with no compulsory faculty participation. The third level experiences faculty development activity as being nearly a universal activity with a mandate for new faculty members. The final level is characterized by a sustained or continuous faculty development especially for all post-secondary instructors.

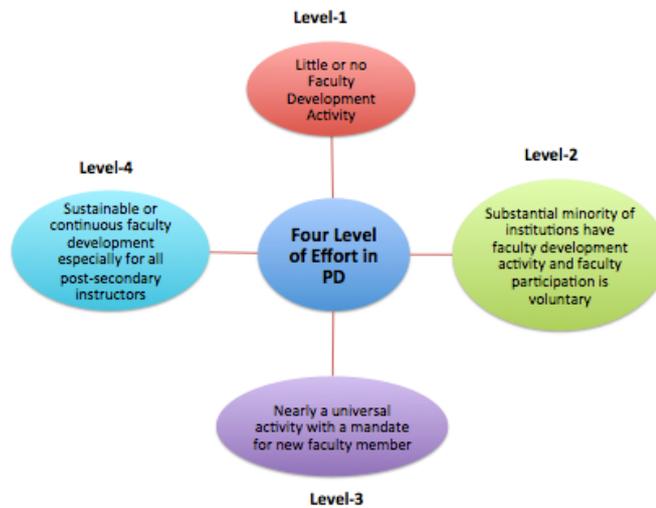


Figure 2.1: The Four Levels of Effort in PD (adapted from Fink, 2013)

Looking at Fink’s (2013) categorization of effort in PD from a macro perspective, Indonesia is still clustered in the lower level. Although several well-known and prominent public and private institutions such as University of Indonesia (UI), University of Gadjah Mada (UGM), and others private institution have focused and carried out PD programmes, the number is still very small. The following figure provides details of PD effort.

Table.2.1: Details of the Four Levels of PD Effort (adapted from Fink, 2013)

Level-1	Level-2	Level-3	Level-4
<ul style="list-style-type: none"> • Some institutions have started such programs, but the percentage of all institutions doing this is very low • Current situation in most of the world • Latin America, Middle East, Asia, Southern & Eastern Europe 	<ul style="list-style-type: none"> • Current situation in the United States, Germany and Thailand • USA : 30-40% of all two year & four year institutions have an active faculty development program and voluntary-based • Germany : most of the 100 or so universities now have teaching & learning centers, but only small proportion to participate in this • Thailand : Since 2006, Ministry of Higher Education set up a consensus that faculty development was important 	<ul style="list-style-type: none"> • At least 12 countries, nearly all universities have faculty development program & some of these, the participation is mandated for new faculty members • Six British Commonwealth (Canada, England, South Africa, Sri Lanka, Australia, New Zealand) • England & Five Nordic Countries (Denmark, Finland, Norway, Sweden, and the Netherlands) • Ministry of HE in Japan issue a mandate in 2008, that all universities must establish a faculty development program 	<ul style="list-style-type: none"> • Sweden : Lund University → since 1990, Pro Vice Chancellor made evidence of pedagogical competence a requirement for becoming full professor & at 2000, institution decision to allocate financial resources in relation to the Pedagogical Academy

Faculty or lecturer development had been advocated in the United Kingdom (UK) in the early 1960s (Robbins, 1963; Hale, 1964) with the emphasis on highlighting the need for training higher education staff. However, the work and its recommendations had little effect (Bamber, 2002). Thus, the lack of focused PD programme in teaching and learning of higher education faculty continued to be discussed during the 1980s and 1990s.

In 1997 through Dearing Report (National Committee of Inquiry into Higher Education (NCIHE)), the British government took the lead with a number of key policies aimed at enforcing PD in higher education. One of these policies was that university lecturers should receive PD in order to improve teaching quality and student learning: “It should become the norm for all permanent staff with teaching responsibilities to be trained on an accredited course” (NCIHE, 1997, para. 70) .

The Dearing Committee has specified not only the requirements for training but also the system for accrediting the training which should be the responsibility of the Institute for Learning and Teaching in Higher Education (ILTHe). The aim of the establishment of ILTHE is the promotion of enhancing teaching and learning, its integration with research as well as the support towards the development of professionalisation of university teaching. According to Evans (2002), the establishment of the ILTHE initiated the launch of a massive staff development programme within the higher education sector in the UK.

Bamber et al (2006) identified five areas in PD activity under ILTHE; namely (a) teaching and learning support in higher education sector; (b) contribution to the design and planning of learning activities and/or programmes of study; (c) provision of feedback and assessment of student learning; (d) development of effective learning environment and student support systems; (e) and reflection on personal

practice in teaching and learning and work to improve the teaching process.

Faculty development in the UK is largely driven by quality assurance (QA) from the licensing and funding bodies as well as staff and students (Schofield et al, 2010). The Higher Education Academy (HEA) is moving towards accreditation of all university lecturers. The Higher Education Academy (HEA) is a British professional institution promoting excellence in higher education. It is jointly owned by Universities UK and GuildHE and is publicly funded. Universities UK is an advocacy organisation for universities in the United Kingdom. Universities UK's task is to support the work of universities and promote their interests. It works to deliver its mission by promoting a thriving and diverse higher education sector which creates benefits for all; providing and disseminating essential information and bringing people together to share knowledge and good practice. GuildHE, formerly the Standing Conference of Principals (SCOP), is a British membership organisation representing the heads of higher education institutions - from some of the most recently designated universities and university colleges, specialist colleges and other bodies providing higher education programmes. The following figure illustrates Bamber et al (2006) The five areas of PD activity.

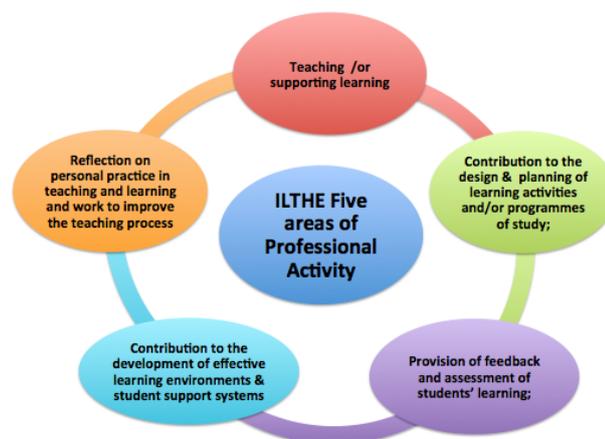


Figure 2.2: The Five Areas of Professional Development Activity (adapted from Bamber et al., 2006)

In the Australian context, PD programme is defined as the in-service teacher training which is applied to both practising and experienced teachers. It is distinguished from pre-service teacher training. PD changes in Australia are affected by the following; (a) the pace of change and restructure of education and the roles of teachers in classroom and administrators; (b) the pace of technological change; and (c) the change and values/ structure in society

PD of academics or faculty as teachers in Australia started in the 1960s. An extensive literature has been blooming since 2003 with the establishment of Carrick Institute for Learning and Teaching in Higher Education which was renamed to Australian Learning and Teaching Council (ALTC) in 2008. The objective of ALTC is to support the improvement in student learning experience by supporting the backbone of quality teaching and practice of the faculty. The ALTC programme works with higher education institutions, disciplinary groups and individuals as collaborative and supportive partners in change, providing access to a network of knowledge, ideas, and people (<http://www.altc.edu.au/who-we-are>).

Conference and seminar which are the most popular forms of PD activity in Australia are organized either to address specific topic areas or to bring together professional groups of people. Conference and seminar serve as a platform for the academics who are also encouraged to do research to publish their findings in the forms of conference paper presentations and receive valuable feedback from colleagues. Research findings can be presented in a seminar as well as being published in journal articles.