



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

VALIDATION OF TEACHING AND LEARNING GUIDING PRINCIPLES
ELEMENTS FOR MALAYSIAN TEACHER EDUCATION
PROGRAMME

AZWANI BINTI MASUWAI



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENT FOR THE
DEGREE OF MASTER OF EDUCATION (PEDAGOGY)
(MASTER BY RESEARCH)

FAKULTI PENDIDIKAN DAN PEMBANGUNAN MANUSIA
UNIVERSITI PENDIDIKAN SULTAN IDRIS
2017



05-4506832



pustaka.upsi.edu.my



Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah



PustakaTBainun



ptbupsi

ABSTRACT

This study aimed to validate the elements of Teaching and learning Guiding Principles. The descriptive survey research design was employed using instrument named Teaching and learning Guiding Principles Instrument (TLGPI) which composed of six construct with a total of 67 items. The constructs were Intellectual Excitement, Quality Learning, Constructive Alignment, International Cultural, Climate of Inquiry and Good Values. A total of 350 teacher educators from ten Malaysian higher teacher education institutions were selected using cluster sampling technique involved in this study. The values of Cohen's Kappa Index (CKI), Content Validity Index (CVI) and analysis of Structural Equation Modeling (SEM) were used to determine face validity, content validity, convergent validity and discriminant validity of TLGPI. The results revealed that the value of CKI yielded 70% inter-rater agreement for face validity and 0.950 of total proportion favorable in CVI for content validity involving five experts. The result also showed that all six models of TLGPI had approached acceptable fits with final total item of 30. In addition, all CFA models achieved convergent validity with Average Variance Extracted above 0.50 and the value of construct reliability exceeded 0.70. These indicated that all constructs could measure the same traits. For Overall Measurement Model, the discriminant validity showed that all correlation coefficient values were less than 0.90 which indicated that all constructs were different. In conclusion, six constructs with 30 items symbolized the valid and reliable six principles of teaching and learning in which each of them is unique. The implication of the study is that the TLGPI provides a valid and reliable instrument based on theoretical and empirical evidence as well as a useful instrument in providing guidance to educators in delivering effective teaching and learning.



PENGESAHAN ELEMEN PRINSIP PANDUAN PENGAJARAN DAN PEMBELAJARAN UNTUK PROGRAM PENDIDIKAN GURU MALAYSIA

ABSTRAK

Kajian ini bertujuan mengesahkan elemen Prinsip Panduan Pengajaran dan Pembelajaran (PPPP). Reka bentuk kajian tinjauan ini menggunakan soal selidik Instrumen Prinsip Panduan Pengajaran dan Pembelajaran (IPPPP) yang mengandungi enam konstruk iaitu Keseronokan Intelektual, Kualiti Pembelajaran, Penjajaran Konstruktif, Pengantarabangsaan Budaya, Suasana Inkuiri dan Nilai Murni dengan 67 item secara keseluruhannya. Seramai 350 pendidik dari sepuluh institusi pengajian tinggi pendidikan guru di seluruh Malaysia dipilih secara teknik persampelan berkelompok terlibat dalam kajian ini. Nilai Indeks Cohen Kappa (ICK), Indeks Kandungan Kesahan (IKK) dan analisis Model Persamaan Berstruktur (MPB) digunakan untuk menentukan kesahan muka, kesahan kandungan, kesahan memusat dan kesahan pendiskriminan bagi IPPPP. Dapatan kajian menunjukkan bahawa nilai bagi ICK mencapai 70% persetujuan antara pakar yang melibatkan seramai lima orang dengan IKK ialah 0.950 menunjukkan kesemua item adalah relevan dengan tema bidang yang dikemukakan. Hasil kajian juga menunjukkan kesemua enam model IPPPP dengan jumlah item akhirnya sebanyak 30 dan mencapai kebagusuaian padanan model yang boleh diterima. Tambahan pula, semua model APF mencapai kesahan memusat dan mencapai kebolehppercayaan konstruk yang memuaskan dengan nilai Purata Variance Dipetik melebihi 0.50 dan nilai kebolehppercayaan komposit melebihi 0.70. Ini menunjukkan kesemua item bagi setiap konstruk mengukur ciri yang sama. Bagi Model Pengukuran Keseluruhan, kesahan pendiskriminan menunjukkan pekali korelasi kurang daripada 0.90 menunjukkan setiap konstruk adalah berbeza. Kesimpulannya, enam konstruk dengan jumlah 30 item ini melambangkan enam prinsip panduan pengajaran dan pembelajaran yang sah dan boleh dipercayai dengan setiap satu prinsip adalah unik. Implikasinya, PPPP merupakan prinsip panduan yang sah dan boleh dipercayai berdasarkan bukti secara teori dan empirikal, sekaligus ianya berguna dalam memberi panduan kepada pendidik dalam menyampaikan pengajaran dan pembelajaran yang berkesan.



TABLE OF CONTENT

	Page
DECLARATION OF ORIGINAL WORK	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
ABSTRAK	v
TABLE OF CONTENT	vi
LIST OF TABLES	xv
LIST OF FIGURES	xix
LIST OF ABBREVIATIONS	xxi
LIST OF APPENDICES	xxvii
 CHAPTER 1 INTRODUCTION	 1
1.1 Background of the Study	1
1.1.1 Niche Research Grant Scheme	9
1.2 Problem Statement	14
1.3 Research Purposes	21
1.4 Objectives of the Study	21
1.5 Research Questions	22
1.6 Conceptual Framework of the Study	23
1.7 Significance of the Study	26
1.7.1 Teacher Education Programmes	27

1.7.2 Teacher Educators	28
1.7.3 Student Teachers	28
1.8 Limitations of the Study	29
1.9 Operational Definition	30
1.9.1 Student Teacher	30
1.9.2 Teacher Educator	31
1.9.3 Teacher Education Programmes	31
1.9.4 Malaysian Higher Education Institution	31
1.9.5 Teaching and Learning	32
1.9.6 Guiding Principles	32
1.10 Conclusion	32

2.1 Introduction	34
2.2 Teaching and Learning Guiding Principles	35
2.3 Principles of Teaching and Learning from Various Teacher Education Institutions	36
2.3.1 Carroll University, USA	38
2.3.2 Wichita State University, USA	40
2.3.3 Melbourne University, Australia	43
2.3.4 Griffith University, Australia	44
2.3.5 Nottingham University, UK	46
2.3.6 Taylors' University, Malaysia	47
2.3.7 National Institute of Education, Singapore	49
2.3.8 University of Tampere, Finland	50

2.3.9 University of Cambridge, UK 51

2.3.10 University of Hong Kong, Hong Kong 51

2.4 Critical Analysis of Existing Principles of Teaching and Learning from the Perspectives of Theory, Model and Concept from Various Teacher Education Institutions 52

2.4.1 Constructivism 54

2.4.2 Reflective Model 54

2.4.3 International and Culturally Diverse Learning Environment 55

2.4.4 Technology Integration 56

2.5 Principles of Teaching and Learning from the Perspectives of Policy Documents 57

2.5.1 Malaysian National Philosophy of Education 57

2.5.2 Malaysia Education Blueprint 2013-2025 Higher Education 60

2.5.3 National Higher Education Strategic Plan: Laying the Foundation Beyond 2020 62

2.5.4 Government Transformation Programme 64

2.5.5 No Child Left Behind 65

2.5.6 Teach Less Learn More 67

2.5.7 Finland's Education and Research Development Plan 69

2.6 Critical Analysis of Existing Principles of Teaching and Learning from the Perspective of Policy Documents 72

2.7 Researches Related to Teaching and Learning Guiding Principles 73

2.8 Themes of Teaching and Learning Guiding Principles 84

2.8.1 Nurture Good Values, Attitude and Behaviour 87

2.8.2 Intellectual Excitement 88

2.8.3 Quality Learning Spaces 89

2.8.4 International and Cultural Diversity	91
--	----

2.8.5 Climate of Inquiry and Critical Reflection	91
--	----

2.8.6 Constructive Alignment	93
------------------------------	----

2.9 Generating Teaching and Learning Guiding Principles Instrument	93
--	----

2.9.1 Conducting Content Analysis	95
-----------------------------------	----

2.9.1.1 Research Design	95
-------------------------	----

2.9.1.2 Data Collection	95
-------------------------	----

2.9.1.3 Data Analysis	96
-----------------------	----

2.9.1.4 Presentation of Results	97
---------------------------------	----

2.10 Reliability and Validity of Teaching and Learning Guiding Principles Instrument	98
--	----

2.11 Studies in Evaluation of Teaching Instruments' Validation	101
--	-----

2.12 Instruments for Education Evaluation	104
---	-----

2.13 Conclusion	105
-----------------	-----

CHAPTER 3 METHODOLOGY	107
------------------------------	-----

3.1 Introduction	107
------------------	-----

3.2 Research Design	108
---------------------	-----

3.3 Population	109
----------------	-----

3.4 Sample Size	114
-----------------	-----

3.5 Sampling Technique	116
------------------------	-----

3.6 Instrumentation	118
---------------------	-----

3.6.1 Teaching and Learning Guiding Principles Instrument	119
---	-----

3.6.1.1 Section A: Demographic Information	122
3.6.1.2 Section B: Themes of Teaching and Learning Guiding Principles	122
3.6.1.3 Language Translation	123
3.6.1.4 Certified Language Translation Process	124
a. Application of Authority of the Instrument from Commisioner for Oaths	124
b. Application of Certificate of the Translation from Institut Terjemahan Buku Malaysia	124
3.6.2 Expert Face Validation Form	125
3.6.3 Expert Content Validation Form	126
3.7 Validity and Reliability	126
3.7.1 Validity	127
3.7.1.1 Face Validity	127
3.7.1.2 Content Validity	128
3.7.1.3 Construct Validity	129
3.7.2 Reliability	130
3.8 Research Procedure	132
3.9 Data Analysis	135
3.9.1 Cohen's Kappa Index	136
3.9.2 Content Validity Index	137
3.9.3 Structural Equation Modeling	138
3.9.4 Confirmatory Factor Analysis	139
3.9.5 Overall Measurement Model	143
3.9.6 Stages in Structural Equation Modelling	143

3.10 Pilot Study	144
3.10.1 Administration Procedure for Face and Content Validity	145
3.10.2 Results for Face Validity and Content Validity	146
3.10.3 Discussion for Face Validity and Content Validity Process	147
3.10.4 Exploratory Factor Analysis	148
3.10.4.1 Sample for Pilot Study (Exploratory Factor Analysis)	150
3.10.4.2 Data Analysis for Exploratory Factor Analysis	151
3.10.4.3 Results of Exploratory Factor Analysis	153
a. Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy Test	153
b. Eigenvalues and Variances Extracted Percentage	153
c. Rotation Strategy	156
d. Factor Loading Value	156
e. Deleting (Crossloaded) Items	158
3.10.4.4 Conclusion of Exploratory Factor Analysis Process	160
3.10.5 Comments and Suggestions from the Pilot Study	162
3.10.6 Analysing Final Items of the Instrument for Actual Study	163
3.10.7 Summary of Pilot Study	172
3.11 Conclusion	173

CHAPTER 4 RESULTS AND FINDINGS

CHAPTER 4 RESULTS AND FINDINGS	174
4.1 Introduction	174
4.2 Face Validity and Content Validity	175
4.2.1 Results of Face Validity and Content Validity	176
4.2.2 Discussion for Face Validity and Content Validity	178
4.3 Data Examination	180
4.3.1 Missing Data	181
4.3.2 Test for Normality	182
4.3.3 Test for Outliers	184
4.3.4 Multicollinearity	185
4.4 Summary of Data	185
4.5 Demographic Information	186
4.5.1 Distribution of respondents	187
4.6 Descriptive Analysis of the Constructs	189
4.7 Structural Equation Modeling	190
4.7.1 Defining Individual Constructs (Stage 1)	191
4.7.2 Developing the Measurement Model (Stage 2)	191
4.7.3 Designing a Study to Produce Empirical Result (Stage 3)	196
4.7.4 Assessing the Measurement Model Validity (Stage 4)	197
4.7.4.1 Intellectual Excitement	197
4.7.4.2 Quality Learning Spaces	199
4.7.4.3 Constructive Alignment	203
4.7.4.4 International Cultural	206
4.7.4.5 Climate of Inquiry	209

4.7.4.6 Good Values, Attitudes and Behaviours	211
4.8 Results of Overall Confirmatory Factor Analysis	214
4.8.1 Test for Model Fit	214
4.8.2 Test for Convergent Validity	215
4.8.3 Test for Construct Reliability	217
4.9 Overall Measurement Model	218
4.10 Results of Overall Measurement Model	222
4.10.1 Test for Model Fit	222
4.10.2 Test for Discriminant Validity	222
4.10.3 Final Items in Overall Measurement Model	223
4.11 Conclusion	225

CHAPTER 5 SUMMARY, DISCUSSION, CONCLUSION, 226

IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

5.1 Introduction	226
5.2 Summary of Study	227
5.3 Discussion	228
5.4 Conclusion	232
5.4.2 The Face Validity of Teaching and Learning Guiding Principles Instrument	232
5.4.2 The Content Validity of Teaching and Learning Guiding Principles Instrument	233
5.4.3 The Evaluation of Goodness of Fit of the Teaching and Learning Guiding Principles Instrument constructs in Confirmatory Factor Analysis	234

5.4.4 The Convergent Validity and Construct Reliability of Teaching and Learning Guiding Principles Instrument constructs in Confirmatory Factor Analysis	234
---	-----

5.4.5 The Evaluation of Goodness of Fit of the Teaching and Learning Guiding Principles Instrument constructs in Overall Measurement Model	234
--	-----

5.4.6 The Discriminant Validity and Construct Reliability of Teaching and Learning Guiding Principles Instrument constructs in Overall Measurement Model	235
--	-----

5.5 Implication and Contribution	235
----------------------------------	-----

5.5.1 Theoretical Implication	236
-------------------------------	-----

5.5.2 Practical Implications	239
------------------------------	-----

5.6 Recommendations for Future Research	241
---	-----

5.7 Conclusion	244
----------------	-----

REFERENCES	245
-------------------	-----

APPENDICES	269
-------------------	-----

LIST OF PUBLICATIONS	399
-----------------------------	-----

LIST OF TABLES

Table	Page Number
2.1 Final Set of Themes of Teaching and Learning	84
2.2 The Result of Classifying Process of Theme	85
3.1 Distribution of Teacher Educators in Public University	110
3.2 Distribution of Teacher Educators in Teacher Training Institutions	111
3.3 Distributions of States in Each Zone	113
3.4 The Distribution of Teacher Educators in Each Zone of Malaysia	114
3.5 Stratified Cluster Sampling	117
3.6 List of Institutions Selected with Number of respondents	118
3.7 Number of Items in Each Theme	121
3.8 The Objectives of the Study and Data Analysis Used	135
3.9 Interpretation of Cohen's Kappa Index (CKI)	136
3.10 Interpretation of Content Validity Index (CVI)	137
3.11 The Criteria for Fit Indices	141
3.12 Number of Panel, Expertise and Years of Experiences of Experts	145
3.13 Panel Comments for Face Validity	146
3.14 Content Validity Indices (CVI) for Content Validity	147
3.15 Set of Items in Teaching and Learning Guiding Principles Instrument (TLGPI) after Face Validity and Content Validity Process	148
3.16 Mean, Standard Deviation and Reliability of Each Construct	152
3.17 Summary of Total Varianced Explained in Exploratory Factor Analysis (EFA)	155

Table**Page Number**

3.18	Final Items for Generate Teaching and Learning Guiding Principles (TLGP) with Factor Loading	157
3.19	Final Items of Teaching and Learning Guiding Principles Instrument (TLGPI) with Factor Loading	159
3.20	The Different between Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) in this Study	161
3.21	Factor Analyses of the Study	162
3.22	Items Pool for Each Factor After Exploratory Factor Analysis (EFA)	163
3.23	Name of Constructs for each Factor After Exploratory Factor Analysis (EFA)	165
3.24	Deleted and Reinstate Items for the Instrument	167
3.25	The Different Number of Pooled Item for Each Construct after Exploratory Factor Analysis	170
3.26	The Description of Analysis for Pilot Study and Number of Item Involved for Each Analysis	173
4.1	Expertise and Years of Experiences of Experts	175
4.2	Experts Comments for Face Validity	177
4.3	Content Validity Indices (CVI) for Content Validity	177
4.4	Set of Items in Teaching and Learning Guiding Principles Instrument (TLGPI) after Face Validity and Content Validity Processes	178
4.5	The Institutions Selected and Number of Instruments Collected	180
4.6	Assumption of Normality	183
4.7	Results of Mahalanobis d.squared/degree of freedom	184
4.8	Correlation between Constructs	185
4.9	List of Tests and Number of Data	186
4.10	Demographic Information	188
4.11	Overall Mean and Standard Deviation of the Study	190

Table		Page Number
4.12	Fit Indices of the Initial Confirmatory Factor Analysis (CFA) for Intellectual Excitement (IE)	198
4.13	Factor Loading, Average Variance Extracted (AVE) and Construct Reliability of Initial Confirmatory Factor Analysis (CFA) of Intellectual Excitement (IE)	199
4.14	Fit Indices of the Revised Confirmatory Factor Analysis (CFA) for Quality Learning (QL)	202
4.15	Factor Loading, Average Variance Extracted (AVE) and Construct Reliability of Initial CFA of	203
4.16	Fit Indices of the Initial Confirmatory Factor Analysis (CFA) for Quality Learning (QL)	205
4.17	Factor Loading, Average Variance Extracted (AVE) and Construct Reliability of Revised Confirmatory Factor Analysis (CFA) for Quality Learning (QL)	206
4.18	Fit Indices of the Initial Confirmatory Factor Analysis (CFA) for International Cultural (IC)	208
4.19	Factor Loading, Average Variance Extracted (AVE) and Construct Reliability of Initial Confirmatory Factor Analysis (CFA) of International Cultural (IC)	209
4.20	Fit Indices of the Initial Confirmatory Factor Analysis (CFA) for Climate of Inquiry (CI)	210
4.21	Factor Loading, Average Variance Extracted (AVE) and construct Reliability of Initial Confirmatory Factor Analysis (CFA) of Climate of Inquiry (CI)	211
4.22	Fit Indices of the Initial Confirmatory Factor Analysis (CFA) for Good Values (GV)	213
4.23	Factor Loading, Average Variance Extracted (AVE) and Construct Reliability of Initial Confirmatory Factor Analysis (CFA) of Good Values (GV)	214

**Table****Page Number**

4.24	Fit Indices for All Constructs	215
4.25	Factor Loading, Average Variance Extracted (AVE) and Construct Reliability of Each Item in Confirmatory Factor Analysis (CFA) for All Constructs	216
4.26	Parameter Summary for Initial Overall Measurement Model (OMM)	220
4.27	Regression Weights and Standard Regression Weights for Initial Overall Measurement Model (OMM)	221
4.28	Fit Indices of the Initial Overall Measurement Model (OMM)	222
4.29	Discriminant validity for the Initial Overall Measurement Model (OMM) Based on the Correlation Coefficients Values	223
4.30	Factor Loading, Average Variance Extracted (AVE) and Construct Reliability of Initial Overall Measurement Model (OMM)	224



LIST OF FIGURES

Figure		Page Number
1.1	Conceptual Framework of the Study	25
2.1	Selected Institutions of Existing Principles of Teaching and Learning in Reviewing Process	37
2.2	Key Theory, Model and Concept Underlying Teaching and Learning	53
2.3	Teaching and Learning Guiding Principles Themes	87
2.4	Step of analyses in Generating Teaching and Learning Guiding Principles (TLGP)	94
2.5	Survey Research Process	98
3.1	Process in Generating Teaching and Learning Guiding Principles Instrument (TLGPI)	120
3.2	A Flow Chart Depicting the Process Used to Test Reliability and Validity of Teaching and Learning Guiding Principles Instrument (TLGPI)	131
3.3	Research Procedure of the Study	134
3.4	Process in Structural Equation Modelling	144
4.1	Overall Measurement Model	192
4.2 (a)	Measurement Model for Intellectual Excitement (IE)	193
4.2 (b)	Measurement Model for Quality Learning (QL)	194
4.2 (c)	Measurement Model for Constructive Alignment (CA)	194
4.2 (d)	Measurement Model for International Cultural (IC)	195
4.2 (e)	Measurement Model for Climate of Inquiry (CI)	195
4.2 (f)	Measurement Model for Good Value (GV)	196
4.3	The Initial Confirmatory Factor Analysis (CFA) for Intellectual Excitement (IE)	198
4.4	The Initial Confirmatory Factor Analysis (CFA) for Quality Learning (QL)	201

**Figure****Page Number**

4.5	The Revised Confirmatory Factor Analysis (CFA) for Quality Learning (QL)	202
4.6	The Initial Confirmatory Factor Analysis (CFA) for Constructive Alignment (CA)	204
4.7	The Revised Confirmatory Factor Analysis (CFA) for Constructive Alignment (CA)	205
4.8	The Initial Confirmatory Factor Analysis (CFA) for International Cultural (IC)	207
4.9	The Revised Confirmatory Factor Analysis (CFA) for International Cultural (IC)	208
4.10	The Initial Confirmatory Factor Analysis (CFA) for Climate of Inquiry (CI)	210
4.11	The Initial Confirmatory Factor Analysis (CFA) for Good Value (GV)	212
4.12	The Revised Confirmatory Factor Analysis (CFA) for Good Value (GV)	213
4.13	The Initial Overall Measurement Model (OMM) of the Study	219
5.1	A Flow Chart Depicting the Process Used to Test Reliability and Validity of Teaching and Learning Guiding Principles Instrument (TLGPI) in this Study	237



LIST OF ABBREVIATIONS

11MP	Eleventh Malaysia Plan
21st	Twenty First
AKEPT	Akademi Kepimpinan Pengajian Tinggi
AIC	Akaike Information Criterion
AMOS	Analysis of Moment Structure
AVE	Average Variance Axtracted
B. Ed.	Bachelor of Education
CAP	Critical Agenda Project
CEQ	Course Experience Questionnaire
CFA	Confirmatory factor Analysis
CFI	Comparative Fit Indices
Chisq/df	Relative chi-square
CKI	Cohen's Kappa Index
CR	Construct Reliability
CT	Category Terms
CTT	Classical Test Theory
CU	Comprehensive University
CVI	Content Validity Index
df	Degree of Freedom
ECU	Edith Cowan University
EDMP	Education Development Master Plan



EDU	Education
EFA	Exploratory Factor Analysis
EPRD	Educational Planning and Research Division
FU	Focused University
F+	Favourable
F-	Unfavourable
GFI	Goodness-of-Fit Index
GTP	Government Transformation Programme
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technology
IFI	Incremental Fit Index
IHEs	Institutions of Higher Education



IPBA	IPG Kampus Bahasa Antarabangsa
IPBL	IPG Kampus Batu Lintang
IPBMM	IPG Kampus Bahasa Melayu Malaysia
IPDA	IPG Kampus Darul Aman
IPG	Institut Pendidikan Guru
IPGAYA	IPG Kampus Gaya
IPIPOH	IPG Kampus Ipoh
IPIK	IPG Kampus Ilmu Khas
IPISLAM	IPG Kampus Pendidikan Islam
IPPERLIS	IPG Kampus Perlis
IPPPP	IPG Kampus Pulau Pinang
IPKB	IPG Kampus Kota Bharu





05-4506832



pustaka.upsi.edu.my

Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah

PustakaTBainun



ptbupsi

IPKENINGAU

IPG Kampus Keningau

IPKENT

IPG Kampus Kent

IPKT

IPG Kampus Tun Abdul Razak

IPPM

IPG Kampus Perempuan Melayu

IPRAJANG

IPG Kampus Rajang

IPRM

IPG Kampus Raja Melewar

IPSAH

IPG Kampus Sultan Abdul Halim

IPSMB

IPG Kampus Sultan Mizan

IPSMIRI

IPG Kampus Sarawak

IPTAA

IPG Kampus Tengku Ampuan Afzan

IPTAR

IPG Kampus Tun Abdul Razak

IPTAWAU

IPG Kampus Tawau



05-4506832



pustaka.upsi.edu.my

Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah

PustakaTBainun



ptbupsi

IPTB

IPG Kampus Tuanku Bainun

IPTEKNIK

IPG Kampus Pendidikan Teknik

IPTHO

IPG Kampus Tun Hussein Onn

IPTI

IPG Kampus Temenggong Ibrahim

ITBM

Institut Terjemahan Buku Malaysia

IRT

Item Response Theory

JPN

Jabatan Pelajaran Negeri

KMO

Kaiser-Meyer-Olkin Measure Sampling Adequacy Test

KPM

Kementerian Pendidikan Malaysia

LINUS

Literacy and Numeracy Screening Programme

MBMMBI

Memartabatkan Bahasa Malaysia dan Memperkukuhkan
Bahasa Inggeris

05-4506832



pustaka.upsi.edu.my

Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah

PustakaTBainun



ptbupsi



MEB-HE	Malaysia Education Blueprint (Higher Education) 2015 – 2025
MHEI	Malaysian Higher Education Institutions
MI	Modification Indices
MKRA	Ministerial Key Result Areas
MM	Measurement Model
MP	Malaysia Plan
MoE	Ministry of Education
MoEC	Ministry of Education and Culture
MoHE	Ministry of Higher Education
MTEP	Malaysian Teacher Education Programme
MTS	Malaysian Teacher Standard
NCLB	No Child Left Behind Act
NEP	National Education Philosophy
NFI	Normal Fit Index
NHESP	National Higher Education Strategic Plan
NIE	National Institute of Education
NKRA	National Key Result Areas
NRGS-MOE	Niche Research Grant Scheme-Ministry of Education
PA	Parallel Analysis
PCA	Principal Component Analysis
PCK	Pedagogical Content Knowledge
PBL	Problem Based Learning
PEMANDU	The Performance Management and Delivery Unit





PhD	Doctor of Philosophy
PNFI	Parsimonious Normed Fit Index
PPD	Pejabat Pelajaran Daerah
PU	Public Universities
QAA	Quality Assurance Accreditation
R&D	Research and Development
RFI	Relative Fit Index
RMK	Rancangan Malaysia Ke-
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modeling
SET	Student Teaching Evaluation
SPSS	Statistical Procedure of Social Science
SRMR	Standardize Root Mean Square Residual
SRS	Scientific Reasoning Skills
T&L	Teaching and Learning
TE ²¹	Teacher Education for 21 st Century
TED	Teacher Education Division
TEM	Teacher Education Model
TESL	Teaching English as Second Language
THEQM	The Teaching in Higher Education Quality Model
TLGP	Teaching and Learning Guiding Principles
TLGPI	Teaching and Learning Guiding Principles Instrument
TLI	Tucker-Lewis Index
TLLM	Teach Less Learn More





05-4506832



pustaka.upsi.edu.my

Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah

PustakaTBainun



ptbupsi

TLRP	Teaching and Learning Research Programme
TSS	Teaching Support Service
TTI	Teacher Training Institutions
UERL	University Education Research Laboratory
UIAM	Universiti Islam Antarabangsa Malaysia
UiTM	Universiti Teknologi Mara
UK	United Kingdom
UKM	Universiti Kebangsaan Malaysia
UM	Universiti Malaya
UMS	Universiti Malaysia Sabah
UNESCO	United Nations Educational Science and Culture Organization
UPM	Universiti Putra Malaysia
UPSI	Universiti Pendidikan Sultan Idris
USA	United State of America
USIM	Universiti Sains Islam Malaysia
USM	Universiti Sains Malaysia
UTHM	Universiti Tun Hussein Onn Malaysia
UTM	Universiti Teknologi Malaysia
UUM	Universiti Utara Malaysia
VIF	Variance Inflation Factors
WSU	Wichita State University



05-4506832



pustaka.upsi.edu.my

Perpustakaan Tuanku Bainun
Kampus Sultan Abdul Jalil Shah

PustakaTBainun



ptbupsi