

**DEVELOPMENT AND VALIDATION OF  
TEACHER CURRICULUM PARADIGM AND ACTUAL CURRICULUM  
DEVELOPMENT PRACTICE INSTRUMENTS FOR MALAYSIAN TEACHER  
CURRICULUM PARADIGM MODEL**

**By**

**LIEW YON FOI**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in  
Fulfilment of Requirement for the Degree of Doctor of Philosophy**

**November 2012**

## *Dedication*

*To my dearest mum, Wong Nyon Moy and my four children, Lik Ren, Wen Xin, Zhao Tian and Jitty, thanks for their gifts of love, acceptance and humour. I hope they will be able to take pride in the results, which were partly contributed by their sacrifices. This work is a token of my love and my pleasure for all that they have given me.*

*My deepest gratitude I save for my beloved husband, William Lee Yew Chiew. His love and company are the germs of power, which have supported me to go through this journey. He witnessed and shared all my anxieties and struggles by being there for every high and low without fail. William, words cannot express the love and appreciation I hold in my heart for you. You are truly amazing. You are everything to me.*

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in  
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**Chairperson: Professor Kamariah Abu Bakar, PhD**

**Faculty: Institute for Mathematics Research**

The success of the educational reform for a nation is strongly dependent on teachers' actual curriculum development practice, which they enact in the real teacher-student interaction context. Therefore, the teachers' enactment of the actual curriculum development practice is crucial to determine the success or the failure of the education because it gives the direct impact towards student learning. Consequently, the growing educational interest in identifying and assessing the variable that can govern teachers' actual curriculum development practice and the variable of actual curriculum development practice are significant and compelling. Correspondingly, the endeavours to develop and validate the two instruments to measure the teacher curriculum paradigm (TCP) and the actual curriculum development practice (ACDP) were aspired by this

study. Sequentially, the positive impact of TCP to ACDP was hypothesised and tested empirically through the teacher curriculum paradigm model (TCP-Mo).

This study was divided into three phases. Phase one included the systematic instrument development processes and the attaining of the content validity and reliability of the instruments. The content validity was acquired while the full agreement of the three subject experts had been granted. Both instruments met the item discriminant criteria (the corrected item-total correlation values more than .30) and high reliability index across the three times instrument testing ( $\alpha > .93$ ). The adequacy of the dual scale format in developing the Scale A and Scale B by employing a single table of content specification was identified by the bivariate correlation testing ( $r < .70$ ) and the paired-samples t-test.

Phase two involved the single-group analysis with Structural Equation Modelling approach to test for the factorial validity of the measurement models and the structural model for the TCP-Mo. The theoretical structure of the latent variables: TB, TV, ACDP and TCP was identified with the Confirmatory Factor Analysis. The first-order factors: TB, TV and ACDP had been identified were unidimensional construct while the TCP was a second-order factor significantly comprised by two first-order factors: TB and TV. Both instruments had attained the construct validity and reliability to denote that they are the valid and practical instruments. Sequentially, the full structural modelling testing was executed and the findings have signified the validity of the causal structure of TCP-Mo to support the TCP concept.

Eventually, the equivalence testing of the TCP-Mo across three groups of teacher, who embraced the different types of paradigm, was examined through the multiple-group analysis in phase three. The TCP-Mo achieved the fifth degree of cross validation testing to denote that the TCP-Mo was invariant across teachers of three different types of paradigm. Besides, the six research hypotheses were tested to support the validity of the instruments and the structural model. The validity and the stability of the instruments and the generalisability of TCP-Mo have been cogently justified by the findings of this study. Assertively, the outcomes of this study have significantly added insights into psychometric field of the instruments in measuring TCP and ACDP, and the body of knowledge regarding the TCP concept, which can govern teachers' ACDP to improve student leaning and uphold the success of the educational vision for a nation.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia  
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**PEMBINAAN DAN PENGESAHAN INSTRUMEN PARADIGMA  
KURIKULUM GURU DAN AMALAN PERKEMBANGAN KURIKULUM  
SEBENAR UNTUK MODEL PARADIGMA KURIKULUM GURU MALAYSIA**

Oleh

**LIEW YON FOI**

**November 2012**

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Kejayaan reformasi pendidikan negara amat bergantung kepada amalan perkembangan kurikulum sebenar yang dilaksanakan oleh guru dalam konteks interaksi guru-pelajar yang berlatarbelakangkan sekolah. Pelaksanaan guru dalam amalan perkembangan kurikulum yang sebenar akan memberi impak secara langsung terhadap pembelajaran pelajar. Justeru pelaksanaan guru dalam amalan perkembangan kurikulum yang sebenar adalah penting dalam menentukan kejayaan atau kegagalan pendidikan. Seajar dengan itu, minat dalam mengenal pasti dan menilai pemboleh ubah yang boleh mengawal amalan perkembangan kurikulum sebenar guru dan pemboleh ubah amalan perkembangan kurikulum sebenar guru adalah semakin penting dan kian mendapat perhatian daripada para pendidik dan penyelidik. Sehubungan itu, usaha untuk membangun dan mengesahkan dua buah instrumen yang boleh mengukur paradigma

kurikulum guru (TCP) dan amalan perkembangan kurikulum sebenar (ACDP) menjadi matlamat utama bagi kajian ini. Sejajar dengan itu, impak positif antara TCP dengan ACDP telah dihipotesis dan diuji secara empirik melalui model paradigma kurikulum guru (TCP-Mo).

Kajian ini dibahagi kepada tiga fasa. Fasa pertama merangkumkan proses pembangunan instrumen secara sistematik dan perolehan kesahan kandungan dan kebolehpercayaan bagi kedua-dua instrumen. Pencapaian persetujuan sebulat suara terhadap kandungan instrumen oleh ketiga-tiga pakar subjek sebagai penanda aras kesahan kandungan bagi instrumen yang dibangunkan. Kebolehpercayaan bagi kedua-dua instrumen dikenal pasti melalui keputusan kriteria diskriminasi item (nilai korelasi keseluruhan item yang melebihi .30) dan indeks kebolehpercayaan yang baik merentasi ketiga-tiga ujian instrumen ( $\alpha > .93$ ). Nilai korelasi yang rendah ( $r < .70$ ) dan keputusan ujian- $t$  yang signifikan telah membuktikan bahawa format dual-skala adalah sesuai untuk mengukur kepercayaan guru (TB) dan nilai guru (TV) melalui Skala A dan Skala B yang menggunakan jadual kandungan spesifikasi yang sama.

Fasa kedua melibatkan analisis kumpulan-tunggal dengan pendekatan SEM (Structural Equation Modelling) untuk memperoleh aras kesahan instrumen yang lebih tinggi dan ujian model struktural terhadap TCP-Mo. Teori struktural bagi pemboleh ubah pendam: TB, TV, ACDP dan TCP dikenal pasti melalui ujian model pengukuran CFA (Confirmatory Factor Analysis). Keputusan CFA menunjukkan pemboleh ubah pendam, TB, TV dan ACDP merupakan faktor darjah-pertama yang berstruktur unidimensi,

manakala pemboleh ubah pendam TCP merupakan faktor darjah-kedua yang secara signifikan terdiri daripada dua faktor darjah-pertama: TB dan TV. Kedua-dua instrumen telah mencapai penanda aras kesahan kontruk dan kebolehpercayaan yang membuktikan bahawa kedua-dua instrumen merupakan instrumen yang sah dan praktis. Selanjutnya, ujian model persamaan struktural penuh telah dilaksanakan dan kesahan struktural TCP-Mo telah dikenal pasti dan turut menyokong konsep TCP.

Akhirnya, ujian kesetaraan TCP-Mo merentas tiga kumpulan guru yang memiliki jenis paradigma yang berlainan telah dilaksanakan dengan analisis pelbagai kumpulan dalam fasa ketiga. Dalam ujian ini, TCP-Mo telah mencapai kesahan-lintasan darjah kelima yang menunjukkan bahawa TCP-Mo adalah sepadan merentas guru yang memiliki tiga jenis paradigma yang berlainan. Tambahan pula, enam hipotesis kajian telah diuji untuk menyokong kesahan bagi instrumen dan model struktural. Kesahan dan kestabilan bagi instrumen serta kebolehan generalisasi bagi konsep TCP turut dijustifikasikan oleh dapatan kajian ini. Dengan tegasnya, hasil kajian ini telah menambahkan wawasan bagi bidang psikometrik terhadap instrumen yang mengukur TCP dan ACDP serta bidang ilmu mengenai konsep TCP yang mengawal amalan perkembangan kurikulum sebenar guru yang boleh meningkatkan pembelajaran pelajar dan mendukung kejayaan visi pendidikan bagi sesebuah negara.



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I certify that a Thesis Examination Committee has met on 07<sup>th</sup> November 2012 to conduct the final examination of **Liew Yon Foi** on her thesis entitled “**Development and Validation Teacher Curriculum Paradigm and Actual Curriculum Development Practice Instruments for Malaysian Teacher Curriculum Paradigm Model**” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The committee recommends that the student be awarded the Degree of Doctor of Philosophy.

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Date: 14 February 2013

## **DECLARATION**

I declare that the thesis is my original work except for quotation and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Univeristi Putra Malaysia or at any other institution.

---

**LIEW YON FOI**

Date: 7 November 2012

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## LIST OF ABBREVIATIONS

<b>ACDP</b>	Actual curriculum development practice
<b>ACDP-I</b>	Actual curriculum development practice Instrument
<b>AD</b>	Designing and Planning
<b>AE</b>	Evaluating
<b>AIC</b>	Akaike's Information Criterion
<b>AO</b>	Organising
<b>AT</b>	Teaching
<b>BCC</b>	Browne-Cudeck Criterion
<b>BG</b>	Belief of Educational Goals
<b>BJ</b>	Belief of Criteria for Judgment
<b>BP</b>	Belief of Student Performances
<b>CBP</b>	Constructivist Best Practices
<b>CDD</b>	Confirmatory Factor Analysis
<b>CFA</b>	Curriculum Development Division
<b>CFI</b>	Comparative Fit Index
<b>CR</b>	Construct Reliability
<b>CW</b>	Curriculum Wisdom
<b>CVR</b>	Content Validity Ratio
<b>DF</b>	Degree of Freedom
<b>EFA</b>	Exploratory Factor Analysis
<b>EPC</b>	Expected Parameter Change
<b>GFI</b>	Goodness-of-fit Index
<b>GOF</b>	Goodness of Fit
<b>MI</b> s	Modification Indices
<b>ML-estimation</b>	Maximum Likelihood Estimation
<b>NFI</b>	Normed Fit Index
<b>PA</b>	Path Analysis
<b>RFI</b>	Relative Noncentrality Index
<b>PGFI</b>	Parsimony Goodness-of-Fit Index
<b>RMSEA</b>	Root Mean Square Error of Approximation
<b>PNFI</b>	Parsimony Normed Fit Index
<b>SE</b>	Standardised Error
<b>SEM</b>	Structural Equation Modelling
<b>SM</b>	Standardised Management
<b>SRMR</b>	Standard Root Means Square Residual
<b>TB</b>	Teacher Belief
<b>TCP</b>	Teacher Curriculum Paradigm
<b>TCP-I</b>	Teacher Curriculum Paradigm Instrument
<b>TCP-Mo</b>	Teacher Curriculum Paradigm Model
<b>TLI</b>	Tucker-Lewis Index
<b>TV</b>	Teacher Value
<b>T&amp;L</b>	Teaching and Learning
<b>VE</b>	Variance Extracted

<b>VG</b>	Value of Educational Goals
<b>VJ</b>	Value of Criteria for Judgment
<b>VP</b>	Value of Student Performances
$\chi^2$	Chi-square
$\chi^2/\text{df}$	Chi-square Divided by Degree of Freedom