Examining the Pedagogical Knowledge Base of EFL Teachers and its Relation to Teacher Reflection and Student Achievement

Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy (PhD) in Teaching English as a Foreign Language

Department of English Language Teaching,
Faculty of Humanities, Tarbiat Modares University

By:
Babak Dadvand

Supervisor:
Dr. Ramin Akbari

May 2013

In the Name of God

بسمه تعالي

تاييديه اعضاي هيات داوران حاضر در جلسه دفاع از رساله دكتري

آقاي بابك دادوند رساله دكتري واحدي خود را با عنوان: بررسي دانش تدريس معلمـان زبان انگليسـي،
تاثير آن بر پيشرفت تحصيلي دانش آموزان و ارتباط اين دانش با تدريس متفكرانـه در تـاريخ ۱۳۹۲/۲/۱۶
ارائه كردند.

اعضاي هيات داوران نسخه نهايي اين رساله را از نظر فرم و محتوا تاييد كرده است و پذيرش آنرا براي
تكميل درجه دكتري پيشنهاد ميكنند.

امضاء	رتبه علمي	نام و نام خانوادگي	اعضاي هيات داوران
	استاديار	دكتر رامين اكبري	۱. استاد راهنماي اصلي
	-	-	۲. استاد راهنماي دوم
	دانشيار	دكتر رضا غفارثمر	۳. استاد مشاور اول
	دانشيار	دكتر غلامرضا كيانى	۴. استاد مشاور دوم
	دانشيار	دكتر سيد محمد علوى	۵. استاد ناظر
	استاديار	دكتر محمد رضا عنائى سراب	۶. استاد ناظر
	استاديار	دكتر محمد نبى كريمى	۷. استاد ناظر
	استاديار	دكتر ابراهيم طلايى	۸. استاد ناظر
	دانشيار	دكتر رضا غفارثمر	۹. نماينده شوراي تحصيلات تكميلي

آیین‌نامه حق مالکیت مادی و معنوی در مورد نتایج پژوهشهای علمی دانشگاه تربیت مدرس

مقدمه: با عنایت به سیاست‌های پژوهشی و فناوری دانشگاه در راستای تحقق عدالت و کرامت انسانها که لازمه شکوفایی علمی و فنی است و رعایت حقوق مادی و معنوی دانشگاه و پژوهشگران، لازم است اعضای هیأت علمی، دانشجویان، دانش‌آموختگان و دیگر همکاران طرح، در مورد نتایج پژوهشهای علمی که تحت عناوین پایان‌نامه، رساله و طرحهای تحقیقاتی با هماهنگی دانشگاه انجام شده است، موارد زیر را رعایت نمایند:

ماده 1- حق نشر و تکثیر رساله و درآمدهای حاصل از آنها متعلق به دانشگاه می باشد ولی حقوق معنوی پدید آورندگان محفوظ خواهد بود.

ماده 2- انتشار مقاله یا مقالات مستخرج از پایان‌نامه/ رساله به صورت چاپ در نشریات علمی و یا ارائه در مجامع علمی باید به نام دانشگاه بوده و با تایید استاد راهنمای اصلی، یکی از اساتید راهنما، مشاور و یا دانشجو مسئول مکاتبات مقاله باشد. ولی مسئولیت علمی مقاله مستخرج از پایان نامه و رساله به عهده اساتید راهنما و دانشجو می باشد.

تبصره: در مقالاتی که پس از دانش‌آموختگی بصورت ترکیبی از اطلاعات جدید و نتایج حاصل از رساله نیز منتشر می‌شود نیز باید نام دانشگاه درج شود.

ماده 3- انتشار کتاب، نرم افزار و یا آثار ویژه (اثری هنری مانند فیلم، عکس، نقاشی و نمایشنامه) حاصل از نتایج پایان‌نامه/ رساله و تمامی طرحهای تحقیقاتی کلیه واحدهای دانشگاه اعم از دانشکده ها، مراکز تحقیقاتی، پژوهشکده ها، پارک علم و فناوری و دیگر واحدها باید با مجوز کتبی صادره از معاونت پژوهشی دانشگاه و براساس آئین نامه های مصوب انجام شود.

ماده 4- ثبت اختراع و تدوین دانش فنی و یا ارائه یافته ها در جشنواره‌های ملی، منطقه‌ای و بین‌المللی که حاصل نتایج مستخرج از پایان‌نامه/ رساله و تمامی طرح‌های تحقیقاتی دانشگاه باید با هماهنگی استاد راهنما یا مجری طرح از طریق معاونت پژوهشی دانشگاه انجام گیرد.

ماده 5- این آیین‌نامه در 5 ماده و یک تبصره در تاریخ 87/4/1 در شورای پژوهشی و در تاریخ 87/4/23 در هیأت رئیسه دانشگاه به تایید رسید و در جلسه مورخ 87/7/15 شورای دانشگاه به تصویب رسیده و از تاریخ تصویب در شورای دانشگاه لازم‌الاجرا است.

«اینجانب **بابک دادوند** دانشجوی رشته **آموزش زبان انگلیسی** ورودی سال تحصیلی **1386** مقطع **دکتری** دانشکده **علوم انسانی** متعهد می شوم کلیه نکات مندرج در آئین نامه حق مالکیت مادی و معنوی در مورد نتایج پژوهش های علمی دانشگاه تربیت مدرس را در انتشار یافته های علمی مستخرج از رساله تحصیلی خود رعایت نمایم. در صورت تخلف از مفاد آئین نامه فوق الاشعار به دانشگاه وکالت و نمایندگی می دهم که از طرف اینجانب نسبت به لغو امتیاز اختراع بنام بنده و یا هر گونه امتیاز دیگر و تغییر آن به نام دانشگاه اقدام نماید. ضمناً نسبت به جبران فوری ضرر و زیان حاصله بر اساس برآورد دانشگاه اقدام خواهم نمود و بدینوسیله حق هر گونه اعتراض را از خود سلب نمودم»

امضا:

تاریخ:

آيين نامه چاپ پايان‌نامه (رساله)هاي دانشجويان دانشگاه تربيت مدرس

نظر به اينكه چاپ و انتشار پايان نامه (رساله)هاي تحصيلي دانشجويان دانشگاه تربيت مدرس، مبين بخشي از فعاليتهاي علمي - پژوهشي دانشگاه است بنابراين به منظور آگاهي و رعايت حقوق دانشگاه،دانش آموختگان اين دانشگاه نسبت به رعايت موارد ذيل متعهد مي‌شوند:

ماده 1: در صورت اقدام به چاپ پايان نامه (رساله)ي خود، مراتب را قبلاً به طور كتبي به «دفتر نشر آثارعلمي» دانشگاه اطلاع دهد.

ماده 2: در صفحه سوم كتاب (پس از برگ شناسنامه) عبارت ذيل را چاپ كند:
«كتاب حاضر، حاصل رساله دكتري نگارنده در رشته **آموزش زبان انگليسی** است كه در سال **1392** در دانشكده **علوم انسانی** دانشگاه تربيت مدرس به راهنمايي **جناب آقاي دكتر رامين اكبری** مشاوره **جناب آقاي دكتر رضا غفارثمر و جناب آقاي دكتر غلامرضا كيانی** از آن دفاع شده است.»

ماده 3: به منظور جبران بخشي از هزينه‌هاي انتشارات دانشگاه، تعداد يك درصد شمارگان كتاب (در هر نوبت‌چاپ) را به «دفتر نشر آثارعلمي» دانشگاه اهدا كند. دانشگاه مي‌تواند مازاد نياز خود را به نفع مركز نشر درمعرض فروش قرار دهد.

ماده 4: در صورت عدم رعايت ماده 3، 50% بهاي شمارگان چاپ شده را به عنوان خسارت به دانشگاه تربيت مدرس، تأديه كند.

ماده 5: دانشجو تعهد و قبول مي كند در صورت خودداري از پرداخت بهاي خسارت، دانشگاه مي‌تواند خسارت مذكور را از طريق مراجع قضايي مطالبه و وصول كند؛ به علاوه به دانشگاه حق مي دهد به منظور استيفاي حقوق خود، از طريق دادگاه، معادل وجه مذكور در ماده 4 را از محل توقيف كتابهاي عرضه شده نگارنده براي فروش، تامين نمايد.

ماده 6: اينجانب **بابک دادوند** دانشجوي رشته **آموزش زبان انگليسی** مقطع **دكتری** تعهد فوق وضمانت اجرايي آن را قبول كرده، به آن ملتزم مي شوم.

نام و نام خانوادگي: بابک دادوند

تاريخ و امضا:

Examining the Pedagogical Knowledge Base of EFL Teachers and its Relation to Teacher Reflection and Student Achievement

Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy (PhD) in Teaching English as a Foreign Language

Department of English Language Teaching,
Faculty of Humanities, Tarbiat Modares University

By:
Babak Dadvand

Supervisor:
Dr. Ramin Akbari

Advisor (1):
Dr. Reza Ghafar Samar

Advisor (2):
Dr. Gholam Reza Kiany

May 2013

I dedicate this dissertation to

my mother who has been a great source of encouragement and support to me throughout my life

ACKNOWLEDGEMENTS

ABSTRACT

The main purpose of this study was to develop a measurement instrument for pedagogical knowledge in English Language Teaching (ELT). Using the developed instrument of pedagogical knowledge, this study also aimed to examine the relationship of teachers' knowledge with reflective teaching and student learning. In the first phase of the study, the findings of a comprehensive review of the literature, along with empirical data from English teachers and Subject Matter Experts, gave way to a ten-component model of pedagogical knowledge. Then, Mulaik and Millsap's (2000) validation framework consisting of Exploratory Factor Analysis, Confirmatory Factor Analysis and Model Evaluation was used on the data from 336 filled out and returned instruments of pedagogical knowledge. Overall, a nine-factor model with 50 items emerged from the model validation analyses. The nine components of the validated instrument included: knowledge of subject matter, knowledge of learners, knowledge of second language learning, knowledge of second language teaching, knowledge of assessment/testing, knowledge of classroom management, knowledge of educational context, knowledge of equity and diversity, and knowledge of (professional) self. Further analysis of the relationship between pedagogical knowledge and reflection using Akbari et al.'s (2010) validated reflective teaching instrument showed a meaningful, though weak, correlation between knowledge and reflection in ELT. In addition, Multi-Level Modeling Analysis of the achievement data from 15 intact English classes showed the positive impact of teachers' pedagogical knowledge on their students' achievement. The implication of these findings for teacher education research/policy are discussed at the end.

Key Words: *Confirmatory Factor Analysis, Exploratory Factor Analysis, Model Evaluation, Pedagogical Knowledge, Reflective Teaching*

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

TABLES

FIGURES

LIST OF ABBREVIATIONS

CDA ....Confirmatory Data Analysis

CFA .... Confirmatory Factor Analysis

EDA .... Exploratory Data Analysis

EFA .... Exploratory Factor Analysis

ELT .... English Language Teaching

NNFI .... Non-Normed Fit Index

PCA .... Principal Axis Factoring

PGFI .... Parsimony Goodness-of-Fit Index

PNFI .... Parsimonious Normed Fit Index

RMR .... Root Mean Square Residual

RMSEA .... Root Mean Square Error of Approximation

SMEs .... Subject Matter Experts

SPSS .... Statistical Package for Social Sciences

Chapter One

Introduction

1.1. Introduction

A relatively recent development in studying language teachers' knowledge started with examining teacher cognition. Teacher cognition is a term which refers to "the unobservable cognitive dimension of teaching - what teachers know, believe and think" (Borg, 2003, p. 81). As such, teacher cognition research aims to examine all the aspects that are related to 'the mental lives' of teachers (Walberg, 1977), elements which affect teachers' conceptions of teaching. Teacher cognition research, in fact, contextualizes teaching and considers it as a complicated activity in which "teachers are active, thinking decision-makers who make instructional choices by drawing on complex, practically-oriented, personalized, and context-sensitive networks of knowledge, thoughts, and beliefs" (Borg, 2003, p. 81).

Interest in examining teacher cognition started with the study of teachers' classroom decision-making (Shavelson & Stern, 1981). Reducing the complexity of teachers' mental lives to decision making was part of the continuation of behaviorist conceptions of teaching. Within the behaviorist tradition of teacher education research, defining teaching in terms of pedagogical decisions helped researchers to create "an easy, almost quasi-behavioral, unit of analysis that could be applied across multiple classroom settings, content areas, and levels of teacher expertise" (Freeman, 2002, p. 5). In this context, teachers' agency and mentality were totally ignored since teachers were supposed to enter the teaching profession with a tabula rasa and through a training program the required teaching skills and habits were to be mastered.

Unlike the socio-cognitive view, the behaviorist interpretation of teaching left little, if any, room for teachers' mentality and thought processes. The common perception in the behaviorist tradition of thinking was that teachers' internal mental world was

"minimally sophisticated" (Freeman, 2002, p. 5). In fact, as Meijer, Verloop and Beijaard (2001) have argued, in the context of behavioral thinking about teaching, and learning to teach, teachers were mostly seen as:

> … the executor and implementer of innovations that were devised by others. Teachers were supposed to implement these innovations in accordance with the intentions of the developers as much as possible, and, if there was additional time and money available, it was spent on training the teachers to acquire the skills needed in order to demonstrate the required behavior. The vast majority of the educational innovations did not materialize at all or failed after some time because the teachers, after a period of change, abandoned the new behavior and returned to the old routines with which they were comfortable. There is a growing consensus that educational innovations are doomed to fail if the emphasis remains on developing specific skills, without taking into account the teachers' cognitions, including their beliefs, intentions, and attitudes. (p. 453)

During the past couple of decades, however, socio-cognitive conceptions of teaching have gradually replaced the behaviorist views in teacher education. With the re-orientation towards a socio-cognitive interpretation of teaching, more hermeneutic and exploratory studies have started to emerge in the teacher education literature. As a result, the research agenda has changed from studying pedagogical actions to examining "how the teacher's mental processes might shape her actions in teaching" (Freeman, 2002, p. 2). That is, the focus of research has shifted from teaching behaviors, to teaching beliefs, knowledge, and reasoning. More qualitative methods of research have also been employed to tap into the hidden and cognitive dimension of teaching. All these developments within the past couple of decades have led to a more realistic understanding of teaching and moved our understanding of teaching and learning to teach into a more mature direction.

1.2. Statement of the Problem

Today teacher education has outgrown the often-simplistic behaviorist views of the past decades. Acknowledging the dynamic and situated nature of teaching and teaching knowledge, teacher education research is now focused on the beliefs, reasoning, and knowledge base of teachers. The introduction of various terms and concepts to describe teacher cognition, along with the use of more hermeneutic and exploratory research methods to capture this cognition, marks a re-orientation from the process-product studies of teaching. In this context of growing interest in the complexities of teaching, various labels, such as practical knowledge (Elbaz, 1983), personal practical knowledge (Clandinin, 1986), pedagogical content knowledge (Shulman, 1986, 1987), pedagogical maxims (Richards, 1996), and pedagogical knowledge base (Gatbonton, 2000, 2008; Mullock, 2006; Akbari & Dadvand, 2011), are used to describe different dimensions of teachers' knowledge of pedagogy.

Despite all the theoretical developments that teacher education research has witnessed during the past couple of decades, some of the educational policies adopted by current programs of teacher education worldwide are not inspired by solid and research-based understanding of the teaching process. Rather, teacher education policy domain is largely animated by popular perceptions and beliefs about *how teachers go about teaching* (Freeman, 2002). Still, the theory-practice schism exists in the field of teacher education and old-established perceptions are the driving force behind many teacher education initiatives. According to Schulz (2000):

> Our progress (i.e., any documented, measurable impact on quality, quantity or
> both) in the area of teacher development has been disappointingly small. We are
> still discussing many of the same issues that were discussed more than 80 years

ago, and we still have not found solutions to many of the problems that plagued the development of FL [Foreign Language] teachers. FL teacher preparation is still long on rhetoric, opinions, and traditional dogma and short on empirical research that attempts to verify or test those opinions or traditional practices. (pp. 516-517)

An area within teacher education research which is in need of empirical examination is that of language teachers' pedagogical knowledge. Despite numerous recent studies that have examined knowledge base in teaching, the concept of pedagogical knowledge in English Language Teaching (ELT) has not yet been treated comprehensively. Various terms and labels are used to describe teacher cognition and numerous taxonomies exist as to what constitutes knowledge base in ELT (Borg, 2003). Yet, no study has thus far operationalized pedagogical knowledge in ELT from a holistic point of view. For this reason, defining what makes up knowledge base in ELT and operationalizing the constructs/components that underlie English language teachers' pedagogical knowledge marks an important area of research in applied linguistics.

Another related area in teacher education that needs further empirical examination is reflective practice/teaching and its intersection with knowledge base of teachers. There is no study or research evidence, to the best of my knowledge, which has looked into the relationship between pedagogical knowledge and reflection in ELT. In the absence of empirical evidence on how knowledge and reflection inter-relate in teaching, the question remains as to the effectiveness of reflection as a professional development tool for English language teachers. In other words, there is not any published piece of research in applied linguistics to indicate that teacher reflection will have any positive (or negative) effect on Second Language (L2) teachers' thinking, knowledge and performance (Griffiths, 2000; Akbari, 2007).

At the same time, there is no documented research in teacher education literature that has focused on the relationship between teacher cognition, practices, and student learning outcomes. This lack of attention to learning, in connection with teacher cognition and mental lives, has probably been a reaction to the behaviourist models of teaching and teaching research, which have over-emphasized outcomes and ignored cognition. In these models, which dominated teacher education literature for many decades, "learning outcomes were all that mattered, and the teachers' active role in shaping what happened in the classroom was ignored" (Borg, 2003, p. 98). However, now that teacher cognition research has emerged as an established field of academic inquiry within teacher education, it is essential to study how teachers' pedagogical knowledge may influence students' learning.

1.3. Research Objectives and Research Questions

The present dissertation follows three main objectives. The first objective is to develop and validate a measurement instrument for pedagogical knowledge in ELT. The second objective is to examine whether pedagogical knowledge and reflection correlate in ELT. The third and final objective of this dissertation is to examine if teachers' pedagogical knowledge can act as a predictor of their students' achievement. The following research questions were formulated to address each of these objectives:

1. What are the components that constitute English language teachers' pedagogical knowledge base?

2. Is there any relationship between the pedagogical knowledge base of English teachers and their reflection in teaching?