

A DUAL-PARADIGM ASSESSMENT OF A MODEL TO GUIDE THE
FORMULATION OF NATIONAL HUMAN RESOURCE DEVELOPMENT (NHRD)
POLICY FOR PRACTICE: NATIONAL LEARNING FOR ECONOMIC,
POLITICAL, AND SOCIO-CULTURAL PERFORMANCE
AND WELLBEING

A Dissertation

by

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Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

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May 2015

Major Subject: Educational Human Resource Development

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ABSTRACT

This study conducted a pre-fieldwork assessment of an informed, conceptual, multi-level model developed to represent the elements and their interactions necessary to the formulation of national human resource development (NHRD) policy. The model was conceptualized through integration of existing HRD knowledge and practice around NHRD with concepts drawn from the economic, political, and socio-cultural foundations of human development (HD) for national growth and performance. The sum of these sources was extended by the researcher-theorist's imagination around the possibilities of NHRD, and grounded in her own lived experience of NHRD. The model is comprised of seven constructs for data collection: (a) national background and current characteristics, (b) national resources (including human resources), (c) governance and power structure amongst actors, stakeholders, and potential partners, (d) national economic, political, and socio-cultural environment, and (e) integration at the individual/organizational, community/regional, and national levels, all situated under the (f) national governance structure and within the (g) global megatrends shaping the world community.

Two pre-fieldwork tests were applied to the model to analyze logic and structure, and to assess capacity for conveying rich description and providing for nuanced understanding of human processes. The two tests were: (a) a critical-realist evaluation employing hypothetico-deductive criteria of excellence for development of theory with the addition of newly-derived criteria for assessment of multi-level models, and (b) an

interpretivist assessment applying social constructivist quality criteria for judging theory in the applied disciplines, including HRD.

Comparison of outcomes obtained through evaluation from competing paradigms of inquiry determined the readiness of the model, in its present form, for research operationalization and empirical testing with national data and through naturalistic exploration of human activities and meaning-making around the formulation of NHRD. The capacity of the model, and of multi-level methodology for construction of theory to guide the collection and analysis of data and to support sufficient interpretation required to formulate responsible policy, was affirmed. The model was determined to be worthy of application for maximizing returns on investment in the human resources, as well as for insuring that the experience of NHRD might be equitably extended to people of all nations comprising our global community.

DEDICATION

This work and the learning it represents are dedicated to my parents, J. Howard and Audrey Frank, for their unconditional support throughout the varied roads of my life's journey that have led to the development of this research. I can see your presence infused throughout these pages so that their content represents all of us in thought, beliefs, values, aspirations, imagination, and intent. Thank you for your constant, quiet encouragement and unshakable patience, and especially for showing me in an infinite number of ways that the right choice is always the one of kindness, humility, and care for all people and all creatures, no matter who they might be, from where they come, or where they may ever go. Thank you to my sisters, Susie and Jocie, for their support as I have pursued my studies, even while so far away in Texas.

This work is inspired by:

Elias, Ildefonso, Santiago, Sergio, Adoracion, and Zaid

in all your determination, integrity, resilience, motivation, humor, spirit, hope, and love that you have shared with me during these five years in which we have lived, studied, overcome, shared, grown up, and dared to dream together. Thank you for permitting me to join you along your odyssey which began with me leading you and quickly turned into you teaching me ... we trust that our learning together will never end as long as we continue to support one another. You have given me every confidence and so much pride as I dedicate the future of national development through learning to your most capable minds, hearts, and hands. I am a better person for knowing each of you in friendship.

ACKNOWLEDGEMENTS

First, my sincere appreciation and gratitude go to my Committee Members - each of you has contributed precious time, your wealth of experience, and a mountain of prior scholarship to the evolution of this work, as you have reached out from different perspectives to guide me through the darkness at crucial junctures. I thank you, too, for your dedication to enhancing my development as a researcher through the up's and down's inherent along the course of this production. I have been so very fortunate to have been a member of this group that is truly a community of scholars – each one has selflessly stepped forward to inform all of us at various points during our learning, and, in your doing so, the rest of us have momentarily relinquished all command, equally happy to assume the roles of eager students engrossed in this exceptionally valuable opportunity for discovery and the creation of new knowledge. This work is impossibly improved for having each of you in leadership, conversation, occasional disagreement, and overwhelming commitment. I can only hope that you will take away your personal experiences of this journey as fulfilling as mine have been for me.

Sue Lynham first introduced me to the notion of national-level HRD with her unforgettable assessment in response to my lengthy explanation one day: “Well, I think what you're actually referring to is NHRD...” I don't believe either of us could have had any idea of what that conversation might ignite! I will always rely upon your “what do you know and what don't you know?” exercises to organize my thinking. Thank you!

Fred Nafukho “The Chief” to whom I will never be able to offer sufficient thank you's to fully express my appreciation for our animated conversations about all the

places and the cases, and the quantitative vs. qualitative instances, where we might try to apply and refine the forthcoming model. And words cannot accommodate nor express my gratitude for all your care and unconditional support for our youngest scholars from West Africa. Your guidance and just your presence in their personal and scholarly development will return positive rewards for the next generation, and even beyond ... you have exemplified HRD for “the boys”. Thank you!

Yvonna Lincoln “The Queen” who shaped the methodological course of this study – you couldn’t have proposed a more brilliant or more appropriate challenge for me, and you offered it so casually! during an October lunch meeting at “On the Border”! I will always admire your refusal to accept any less than perfection in the comprehension and the efforts of a beginning researcher-theorist. Thank you!

And Glenn Shinn who contributed his reserved but extremely grounded and steadfast belief in the power of human development, one person, and then one community, and one nation at a time ... I am fully subscribed to your philosophy. We have all been so very fortunate to have you join with us in our journey. Thank you!

My Nephew, Alex Kwasi Titriku – you joined me on this adventure very recently– but you jumped in with both feet and so much enthusiasm and sincerity that you made your influence as large and as lasting as that of all others – with your questions that would not settle without complete and satisfactory replies, and your contributions of incomparable technical expertise to create the figures that immeasurably enhance understanding of the emergent model. Thank you! for your persistent

friendship, and your unbreakable commitment to doing what is right and just. I hope we shall never stop envisioning new projects to undertake!

Carmen Villa, thank you for so much cheerful support, and Elsa Gonzalez, my “office roommate,” thank you for your generous gifts of time in “our library”.

John “Deere” de la Garza, PhD., thank you for consistently walking just steps ahead of me along this dissertation journey to light the way and point out the treacherous places! Thank you to Jerry Parker for his daily shots of energetic inspiration!

Ying Zhu, my “Secret Weapon”, for her thoughtful advice, encouragement, and steadfast support - even from Canada – Thank you. And Luie AlMubarak, the Abu Dhabi Cowboy, for sharing his enthusiasm, ideas, and friendship even when the writing seemed to be going on far too long - Shukran.

Zulema Valdez, for her daily demonstrations that scholarship “doesn’t have to be all creaky and formal”. Thank you for teaching me how to be a productive writer.

From so far away – thank you to Elvira Dewi Sari for always taking care to send her Jelly~love, and to Madina Kenzhegaranova for her endlessly patient friendship.

And although he is never likely to review these words of appreciation, I would like to thank Charlie Rose for informing my imagination with his thought-provoking reflections and fascinating conversations with awe-inspiring guests addressing an endless array of global events and issues on his television program during so many late, late, late evenings that I spent listening ... and writing

NOMENCLATURE

GPS	Global Positioning System: A Conceptual Guide to the Conduct of the Research Study
HD	Human Development
HRD	Human Resource Development
NHRD	National Human Resource Development

TABLE OF CONTENTS

	Page
ABSTRACT	ii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
NOMENCLATURE.....	viii
TABLE OF CONTENTS	ix
LIST OF FIGURES.....	xiii
LIST OF TABLES	xiv
CHAPTER I INTRODUCTION	1
National Learning Systems for Performance and Wellbeing.....	1
Emergence of the Need for National Human Resource Development (NHRD)....	3
Importance of the Research.....	9
An Informed, Conceptual Multi-level Model of the Formulation of NHRD Policy	12
Research Purpose, Assumptions, and Questions Guiding the Study	16
Assumptions Underpinning the Research Effort.....	18
Research Questions	19
Delimitations and Limitations of the Research	22
Delimitations	22
Limitations.....	23
Informing Theoretical Framework	27
Human Capital Theory	27
HRD Cube	29
CHAPTER II REVIEW OF SUPPORTING LITERATURE.....	34
Foundation of Economics Supports HRD.....	34
Economic Factors Influence NHRD Policy	35
Prior HRD Scholarship Informs the Emergence of NHRD	36
HD Literature is Significant for the Present Research Study	45
Foundation of Economic Influences for HD	46
Implications from Review of HD Literature for Emerging Model of the Formulation of NHRD Policy	50

Operational Definitions of Terms Drawn from Human Development Literature to Inform Formulation of NHRD Policy	50
Literature Informing Development of Theory for Use in the Applied Social Sciences	58
Operational Definitions of Terms Drawn from Theory Development Literature	60
CHAPTER III METHODOLOGY AND METHODS.....	64
Methodological Approach to the Research	64
Relationship between the Researcher-Theorist and Development of Models and Theory.....	66
Model Building: Balancing Specificity with Flexibility for Transferability.....	67
Competing Objectives for Models and Theory in the Applied Disciplines	69
Research Design	71
Population Definition and Sample Selection	73
Data Collection Procedures	74
Description of Measures/Instruments.....	75
Dubin’s (1978) Two-Part, Eight-Step Theory Building Methodology	76
Conceptualization of a Model Representing the Formulation of NHRD Policy for Implementation in the Form of Strategic Practice	77
Operationalization of a Model Representing the Formulation of NHRD Policy for Implementation in the Form of Strategic Practice	77
Criteria of Excellence for Theory Building Research as Defined by Dubin’s (1978) Methodology.....	78
Quality Criteria for Four Steps of the Theory Development Side of Dubin’s (1978) Methodology.....	79
Defining and Evaluating Collective Constructs and Levels of a Multi-Level Model	89
Defining Collective Constructs and Levels	89
Criteria of Excellence for Judging Construction of Collective Constructs and Levels.....	93
Lincoln and Lynham’s (2011) Criteria for Assessing HRD Theory from an Interpretivist Perspective	102
Two-Test Assessment of the Balance of Structure and Specificity with Flexibility for Transferability	115
Determining Sufficiency of the Model in Fulfilling Quality Criteria of Excellence Established by Dubin (1978) and Lincoln and Lynham (2011) ..	116
Constant Comparison Method of Analysis.....	117
CHAPTER IV ASSESSMENT 1: A CRITICAL-REALIST TEST OF THEORY	124
Application of Hypothetico-Deductive Criteria to Evaluate a Model of the Formulation of NHRD Policy	124

Quality Criteria for Assessing the Theory Development Phase of Dubin’s (1978) Research Methodology	127
Seven Categories of Conceptualized Units	127
Laws of Interaction.....	134
Boundaries: Bounding the Model.....	138
System States and Their Effects on a Model or Theory	141
Quality Criteria for Assessing Collective Constructs and Levels of Multi-Level Models and Theory	145
Six Collective Constructs	146
Laws of Interaction among Collective Constructs	152
Three Levels (and their Boundaries)	156
Functional Relationships between Constructs among Levels	159
Sources of Variability among Levels	162
Outcomes as Endogenous Variables	166
Analysis of Assessment 1 Outcomes	179
 CHAPTER V ASSESSMENT 2: AN INTERPRETIVIST TEST OF THEORY.....	 182
Application of Interpretivist Criteria to Judge a Model of the Formulation of NHRD Policy	182
Local-level Stakeholder.....	184
Macro-level Stakeholder	185
Meaningfulness and Understandability	185
Thick Description and Insightfulness	189
Narrative Elegance	192
Transferability	194
Mutuality of Concepts and Descriptive Logic.....	196
Empirical Verifiability.....	200
Fruitfulness and Provocativeness	203
Usefulness and Applicability.....	206
Compellingness	209
Saturation.....	212
Prompt to Action	215
Fittingness.....	219
Transferability and Transportability.....	221
Analysis of Assessment 2 Outcomes	230
 CHAPTER VI SUMMARY, FINDINGS, AND IMPLICATIONS OF THE RESEARCH.....	 234
Summary of Research	234
A Model of the Formulation of NHRD Policy.....	234
Pre-Fieldwork Evaluation of the Model of the Formulation of NHRD Policy	235

Research Question 1: Dubin’s (1978) Hypothetico-Deductive Criteria.....	236
Research Question 2: Lincoln and Lynham’s (2011) Social Constructivist Criteria	238
Research Question 3: Aggregating Responses to Research Questions 1 and 2	240
Findings and Preliminary Implications from the Research	246
Findings and Implications for NHRD Policy	246
Findings and Implications for Multi-Level Construction of Models and Theory in HRD	248
Future Research.....	250
Research Agenda for NHRD Policy.....	250
Research Agenda for Multi-Level Construction of Models for Theory in HRD.....	252
REFERENCES.....	254
APPENDIX A	265
APPENDIX B	266

LIST OF FIGURES

	Page
Figure 1: Model of the formulation of National Human Resource Development (NHRD) for use in planning policy and practice: a guide to the collection of data for planning and enhancing national learning for economic, political and socio-cultural performance and wellbeing.	15
Figure 2: A guide to assessment of an informed, conceptual, multi-level model of the formulation of NHRD policy.	33
Figure 3: Another look at the model of the formulation of national human resource development (NHRD) policy for strategic practice.	125
Figure A-1: The HRD cube: a heuristic framework for identifying, locating and selecting HRD theory, research and practice (Lynham, 2007, 2008, Lynham, Lincoln, Hurt, & McLean, 2010).	265
Figure B-1: Micro-view of a model of the formulation of National Human Resource Development (NHRD) for use in planning policy and practice: A guide to the collection of data for planning and enhancing national learning for economic, political, and socio-cultural performance and wellbeing.	267

LIST OF TABLES

	Page
Table 1: Overview of four NHRD policy initiatives drawn from the HRD literature.	39
Table 2: Summary of criteria for evaluating outcomes obtained using Dubin’s (1978) hypothetico-deductive methodology for theory construction.....	87
Table 3: Comparison of two theory construction methodologies: Dubin (1978) vs. Reynolds Fisher (2000).....	92
Table 4: Summary of derived criteria for evaluating outcomes obtained in construction of collective constructs and levels through use of an integrated methodology for multi-level theory (Reynolds Fisher, 2000).....	100
Table 5: Thirteen criteria for assessment of theory in applied disciplines from an interpretive (social/constructivist) perspective (Lincoln & Lynham, 2010, p. 5).....	113
Table 6: Conceptualized units of a model of the formulation of NHRD policy with specified level, unit type, associated properties, and representative examples of units.....	129
Table 7: Summary of laws of interaction between units of a model of the formulation of NHRD policy classified by unit type, levels at which unit interacted, types of laws, and representative examples of interactions.....	135
Table 8: Summary of functions of collective constructs represented in the model at the collective level, and demonstration of subsequent output from collective constructs at lower levels of the model.....	150
Table 9: Summary of the distribution of units comprising the model across the three functional levels of the model.	157
Table 10: Summary of assessment 1: A critical-realist test for models and theory.....	170
Table 11: Summary of assessment 2. An interpretivist test for models and theory.....	224

CHAPTER I

INTRODUCTION

National Learning Systems for Performance and Wellbeing

The future now belongs to societies that organize themselves for learning. What we know and can do holds the key to economic progress just as command of natural resources once did ... The prize will go to those countries that are organized as national learning systems, and where all institutions are organized to learn and to act on what they learn (Marshall & Tucker, 1992, p. xiii).

In our inextricably-interconnected global economy of diminishing resources in the twenty-first century, sustainable survival is within reach of those organizations possessing the ability to maximize their capacity for learning and the innovation of new knowledge – to fulfill the dual purpose of enhancing individual and organizational performance and wellbeing. Such organizations are best-poised to function at levels necessary to compete, and even excel, in our increasingly volatile world community. Superior organizational performance simultaneously relies upon and provides for economic opportunity that, in turn, very often gives rise to the environmental antecedents of political and social stability (Ranis, Stewart, & Ramirez, 2000) within and across organizational boundaries. “Health, wealth, and education all track together – both upward and downward” (Khanna, 2011, p. 10). All are foundational to national learning for economic, political, and socio-cultural performance and wellbeing.

From the perspective that nations can be classified as comprehensive organizations, planning for a sustainable future, then, requires that governments of nation states identify and prioritize those conditions and steps necessary for investment in their most valuable asset: People. Thoughtful planning is required to attain the objective of realizing the national policy necessary to shape and coordinate human resource development in the form of strategic practices implemented at the individual/community, organizational/regional, and national levels. The optimal outcome of this collaborative process is the nurturing of the learning, capacity for innovation, and wellbeing of a nation's citizens, of unleashing untapped knowledge, talent, and energy to enhance national economic, political, and socio-cultural performance for survival, growth and development, and the pursuit of opportunity and life choices for all (UNDP, 2011a).

The coupling of national policy aimed at investment in the human resources, together with the innumerable strategic practices required to implement it, have recently become known as human resource development (HRD) at the national level, or National Human Resource Development (NHRD). Attempts by scholars to define the broad reach and scope of NHRD range from a succinct statement, national policy to address human resource development (Lynham & Cunningham, 2004; McLean, 2004), to an all-encompassing explanation that "NHRD is an undertaking at the top level of government and throughout the country's society that coordinates all activities related to human development (HD) to create greater efficiency, effectiveness, competitiveness, satisfaction, productivity, knowledge, spirituality, and wellbeing. It includes education,

health, safety, training, economic development, culture, science and technology, and any factors influencing HD” (McLean, 2008, A Tentative Definition, para. 1).

Emergence of the Need for National Human Resource Development (NHRD)

Increasingly the result of intensive introspection and forward-thinking analysis on the part of governments, nonpartisan organizations, business corporations, communities, and private individuals, NHRD is becoming a high priority on national and global agendas. Governments are beginning to consider NHRD as a strategy by which to invest in their citizens in order to build the sort of national economic, political, and social environs from which grow prosperity and peace. The government of China released a *Report on the Implementation of the 2013 Plan for National Economic and Social Development and on the 2014 Draft Plan for National Economic and Social Development* (The National People’s Congress of the People’s Republic of China, 2014) while the *Twelfth Five Year Plan 2012-2017* (Planning Commission, Government of India, 2013) put forward by the Indian government focuses on an inclusive and sustainable agenda of rapid poverty reduction, ensuring rural and urban livelihoods, health services and education at all levels, social justice, women’s agency and child rights, and development of infrastructure compatible with environment and climate. Prior to the secession of South Sudan from the north in July 2011, the *National Strategic Plan for Sudan: The Five-Year Plan (2007-2011)* (National Council for Strategic Planning, 2008) expressed the government of Sudan’s attention to attaining sustainable economic development, peace and stability, poverty reduction, good governance and building the capacity of public institutions and civil society.

NHRD is also a means by which nations might begin to make measurable strides toward accomplishing the milestones outlined in the Millennium Development Goals of the United Nations Development Program (UNDP) (McLean, 2006). The Millennium Development Goals (MDGs) consist of eight broad goals measured by 21 quantifiable targets and 60 indicators that, together, represent a commitment made by world leaders in 2000 to work collectively to free a major portion of the world's humanity from extreme poverty, hunger, illiteracy, and disease by 2015 (UNDP, 2011b). While a few nations are achieving progress toward several of the MDGs, significant investments in learning, central to all of the goals, are urgently needed if the fast-approaching target date of 2015 is to be satisfied.

Still an emergent concept, NHRD is beginning to appear within the strategic growth plans and corporate responsibility programs of national and multinational enterprises. For-profit corporations, eager to eclipse their competitors in the race for new knowledge, creativity, and innovative expertise, consistently find, however, that existing educational systems do not seem to produce the requisite skills sets in secondary or tertiary-level graduates. This dilemma is stimulating growing corporate interest in the benefits of investment in the education and the wellbeing of employees. Particularly in the developing world, where the resources, power, and reach of multinational corporations can rival those of national governments, the corporate voice is beginning to shape educational initiatives by means of targeted investment in primary and secondary education (Center for Universal Education at Brookings, 2011), and even to seep into predominant educational thought in terms of entrepreneurship programs for youth and

adolescents and healthcare education programs aspiring to empower women and girls (Center for Universal Education at Brookings, 2011). It is becoming clear that national and state governments, regional and global governmental alliances and third-party organizations, such as NGOs, as well as national and multinational for-profit enterprises are beginning to, individually and collectively, view the possibility of NHRD as an essential strategy for providing competent, productive, innovative, healthy, and responsible workers and citizens - and for ensuring that the future of the world community might trend toward greater economic, political, and social stability.

Of all the resources encountered across our globe, the human resource is the one that, if nurtured, returns not less than limitless possibilities. Investment in the development of national human resources is the singular element around which all national five-year plans, global compacts for human development, and corporate growth strategies necessarily align. NHRD is the determining factor without which these proposals cannot survive, let alone stand to claim success in achieving their stated objectives.

Collaborative alignment and planning is, therefore, required to formulate NHRD policy intended for implementation in the form of strategic practice so as to avoid duplication of efforts amongst participating actors, potential partners, and citizens, and to maximize utilization of community, organizational, regional, and national resources, and their resultant returns on investment. Coordination is essential so that the experience of NHRD and its benefits might be equitably extended to reach the lives of all citizens of nations, particularly those most in need but least able to advocate on their

own behalf. Thus, it is the imperative goal of NHRD to achieve collaborative, coordinated “HRD strategy wherein the objective is to formulate mutually supportive and reinforcing policies, programs and projects that collectively and directly ... aim at generating linkages and multipliers that result in a greater total impact than if efforts were undertaken individually and separately” (Curry & Sura, 2007, p. 87).

How can nations leverage their unique characteristics, convene their national assets, including their human resources, and harness the interests and efforts of all participating actors, potential partners, and stakeholders to formulate strategy designed to create and enhance the national learning required to navigate the pace and complexity of the twenty-first century in the face of fierce competition for diminishing global resources? Developed nations, whose status and power have long reserved their access to the world’s resources, are beginning to examine the sustainability of their traditional economic and political models, as well as the structures of their socio-cultural systems. Developing countries, already occupying dangerously low positions within the world hierarchy and concomitant competition for essential commodities, are struggling more than ever to maintain their precarious holds on the requirements necessary to maintain national stability and provide for the livelihoods of their citizens.

As described by Lynham and Cunningham (2006), some nations are simultaneously facing the strains of increasing global competitiveness together with the undertaking of their own enormous transitions in terms of monumental and fundamental shifts within internal structures and institutions. How can such countries, termed developing, transitioning nations (Lynham & Cunningham, 2006), become successful

at managing seemingly overwhelming multiple transitions at once? Can nations in transition overcome the odds predicting their near-inability to survive? And if they are not successful, what might the ripples of their failure at these ambitious tasks translate to, not only for the citizens of developing nations in transition, but for the entire world community?

How can states and their constituents partner and collaborate with external organizations to produce opportunities for learning and wellbeing by means of the unleashing of untapped knowledge, talent, and ability, in order to enhance the performance of all citizens, particularly for those whose lives do not yet consist of at least the minimum set of choices that represent and result from development? How can developing, transitioning countries begin to actively sponsor the learning and innovation necessary to create viable models and policies for sustainable futures?

And how can nations undertake enormous organizational change efforts to realize human development initiatives, supported in partnership with outside entities, while maintaining national integrity? In reflecting on the lived experience of his tenure as a World Bank representative in Equatorial Guinea, Robert Klitgaard portrayed the delicate task of balancing the quest for human development with respect for the autonomy of nations and their citizens:

How can the outside world help without hurting, apply leverage without trampling sovereignty? ... How can we work for change while respecting what exists? How can we exercise analytical skills and make critical judgments while still

affirming the imperfect people and situations we encounter?

And how can we extend our limits in order to receive from the people to whom we are trying to give? (Woolcock, 1998, p. 181).

Market economics and existing political structures and institutions do not naturally serve to provide the conditions necessary to birth nor to sustain NHRD and its potential benefits. Instead, NHRD must be deliberately created as the combined result of collaborative foresight and strategic planning for active investment in the learning of a nation's citizenry for the purpose of enhancing economic, political, and socio-cultural performance to achieve sustainable growth and development.

As of now, however, few nations have undertaken the intentional steps necessary to embark on the ambitious path toward conceptualizing NHRD grounded in the formulation of NHRD policy for realization in the form of strategic practice. Where isolated instances of NHRD initiatives exist, these are commonly characterized by a lack of coordination and sustainability, and preliminary analyses of results have not yet been performed. Thus, there are many questions and precious few examples of how NHRD policy can be conceived and shaped and about how viable and successful NHRD practices might or should be planned, developed, implemented, evaluated, and sustained. The innumerable questions about what does and does not constitute NHRD, and of how this phenomenon might be coaxed into existence and then maintained for a more viable future, together with current economic, political, and socio-cultural trends exaggerated

by the pace of globalization, suggest that it is imperative now to carefully examine the formulation of HRD policy at the national level.

Importance of the Research

An emergent, conceptual, multi-level model of the formulation of NHRD policy, still under development, proposes to encourage nations and agent organizations to begin to hold the conversations needed to “work for change while respecting what exists” (Woolcock, 1998, p. 181). Construction of the model is informed by the convergence and integration of existing HRD research and literature suggesting essential elements of NHRD policy, and describing instances of NHRD in practice. The model is supported in concepts, knowledge, and understanding drawn from the economic, political, and socio-cultural foundations from the discipline of development in the form of human capacity building aimed at advancing individual wellbeing for national growth and performance. The HRD research which is supported and strengthened with human capacity literature is then further extended by the researcher-theorist’s observations and lived experience of NHRD in the world, and by her “informed imagination – an imagination informed by both existing research and literature and by her own experience of the nature of the phenomenon” (Lynham, 2000a, p. 12) of NHRD.

Use of the model and its component constructs and their interactions, specifically national background and national characteristics, national resources, and the efforts and interests of participating actors, all influenced by the national economic, political, and socio-cultural environment, as well as the governance structure shaping the power distribution amongst all these elements at multiple levels, intends to exercise the

“analytical skills and critical judgments” (Woolcock, 1998, p. 181) required to enable the identification, collection, and examination of the data that must be considered for the formulation of NHRD strategy, policy, and practice. The model, therefore, aims to serve as a flexible fundamental roadmap “affirming the imperfect people and situations we encounter” (Woolcock, 1998, p. 181) to point a way forward as nations begin to move from concept to action in launching individual, practical approaches to NHRD.

Further research and much refinement of the emerging model of the formulation of NHRD policy will be required to provide a deep, nuanced, functional, and transferable understanding of the individual and collective roles of its component elements. Continued application and evaluation of such an evolving body of knowledge will lead to further unraveling of the compound influences on the formulation of NHRD policy, and the potential outcomes that might result from the varied combinations and interrelationships among its constituent elements and their interactions.

In pinpointing the interacting elements integral to the formulation of NHRD, the emergent model might function similarly to the HRD Cube (see Appendix A, Figure A-1) developed by Lynham (2007, 2008; Lynham, Lincoln, Hurt, & McLean, 2010) to serve as a heuristic for identifying, situating, and selecting HRD theory, research and practice. In this capacity, the model of the formulation of NHRD policy proposes to assist in locating specific conversations and analyses of current and future instances of NHRD across a nation’s multiple economic, political, and socio-cultural layers and individual/community, organizational/regional, and national levels in terms of identifying the factors and resources, environment and preconditions, and domains

of performance and outcomes and the potential of their interactions to influence the formulation of NHRD policy. Such analysis enables the pinpointing of missing or even alternative variables, the presence or absence or even the substitution of which, alters real life outcomes – all of which must be considered in the development of NHRD policy for implementation as strategic practice.

For instance, a recent study of the work by NGOs to address the HIV/AIDS epidemic in South Africa and the implications for the role of NHRD in these efforts follows policy established at the national level that is intended to dictate activity occurring at the individual/community and organizational/regional levels, involves NGO and governmental actors as partners, is heavily informed by the national economic, political, and socio-cultural environment, and turns tightly around the resources factor (Johnson, Bartlett, Cunningham, Lynham, & Von der Marwitz, 2010). Alternatively, the contributions of multinational natural energy corporations to NHRD through investment in the education systems of host countries where they operate involve the community and national levels, engage corporate and governmental actor as partners, and, rather than lacking resources, instead, turn very tightly around the respect for and motivation and valuation of the human resources.

Encouraging further exploration, consideration, and adaptation of the policy and practice of NHRD by nations and potential partners, in various forms and by multiple methods, is central to the purpose of the emerging model. Finally, the introduction of the model aims to reignite conversations of NHRD among scholars in the HRD community, and to motivate a renewed and rigorous investigation of NHRD, of its formulation and

efficiency, its potential benefits, deficiencies, and limitations so that we might enhance our theoretical and practical constructions of NHRD policy through a greater, more inclusive, and more accessible understanding of its foundations.

An Informed, Conceptual Multi-level Model of the Formulation of NHRD Policy

A conceptual, multi-level model of the formulation of NHRD was constructed to guide the collection of data that must be analyzed in preparation for formulating NHRD policy to be implemented in the form of strategic practice. The still-emergent model of the formulation of NHRD policy is informed by an earlier model under development, the HRD Cube (Lynham, 2007, 2008; Lynham, Lincoln, Hurt, & McLean, 2010) (see Appendix A, Figure A-1), that “conceptualizes HRD as a multi-level, multi-dimensional and interdependent system of theory, research and practice” (Lynham et al., 2010, p. 3333).

Although the model of the formulation of NHRD policy is subject to further verification, modification, and refinement (Lynham, 2002), it is presently comprised of three sides (represented by X, Y, and Z axes), each of which represents a necessary set of components for consideration in the planning and development of NHRD policy. The X-axis holds the “National Environment and Pre-Conditions,” the Political Continuum, the Economic Continuum, and the Socio-Cultural Continuum that, together, define the unique national environs in which NHRD policy will be planned and practiced. The Y-axis carries the “Domains of Performance and Outcome,” specifically the Individual/Group/Community/ Level, the Community/Organization/Region Level, and the National/International Level for which NHRD policy must be devised and practices

implemented. And the Z-axis bears the “National Requirements, Factors and Resources,” specifically the National Background/Characteristics and Current Level of Development, Actors and Potential Partners, and the National Resources, including Human Resources, that should shape the design of NHRD policy and carrying out of subsequent practices to fit a nation’s particular assets and needs.

The objective outcomes of the model’s representation of the formulation of NHRD policy are a primary endogenous variable, “Learning”, that provides for two secondary endogenous variables, “Performance” and “Wellbeing”. These three endogenous variables, “Learning”, “Performance”, and “Wellbeing” are represented diagonally across the model, cutting through each of the three levels to interface with all of the elements represented along the X, Y, and Z axes.

The model is framed by a set of “Modes of Governance and Power Structure,” first introduced as “Emerging Models of NHRD” by Cho and McLean (2004, p. 383), and consisting of the Centralized Model, Transitional Model, Government Initiated Towards Standardization Model, Decentralized/Free Market Model, and Small Nations Model. An additional mode of governance and power structure, the Post-Conflict Model, is introduced by the researcher-theorist performing this study. The presence of a particular form of governance and power structure influences the mode and manner in which NHRD policy might be developed within a given nation by determining the distribution of power and agency amongst the roles and responsibilities held by actors and potential partners in their collaboration to accommodate national factors and employ resources toward the formulation and implementation of NHRD policy.

Finally, the model is situated within the external global influences and world conditions that necessarily affect a nation's policy and practice of NHRD. Current global conditions expected to figure prominently in the planning and practice of NHRD policy include: (a) erratic supply and cost of energy, (b) food and commodities scarcity, (c) rapid growth of middle class leading to increasing urbanization and environmental damage, (d) influence of accessible, instant communication via public social networks, (e) need for new generation of global leaders, and (f) interconnectivity of the global economy (Rose, 2009).

The analysis sections of this dissertation, Chapter IV and Chapter V, further explicate the informed, conceptual, multi-level model of the formulation of NHRD through consideration and assessment of the organizational and structural roles and responsibilities of each of the elements comprising the model. To further illustrate the analysis that is the focus of this study, a micro-view and detailed description of the units and levels comprising the X, Y, and Z axes, as well as the modes of governance and power structure, of the model are presented in Appendix B of the dissertation. A macro-view of the emergent, informed, conceptual, multi-level model of the formulation of NHRD is provided in Figure 1 of this manuscript.

"Model of the Formulation of National Human Resource Development (NHRD) for Use in Planning Policy for Practice
Intended as a Roadmap to Guide the Collection of Data to Enhance National Learning for
Economic, Political and Socio-Cultural Performance and Wellbeing"

Human Resources + Human Resource Development => Human Development

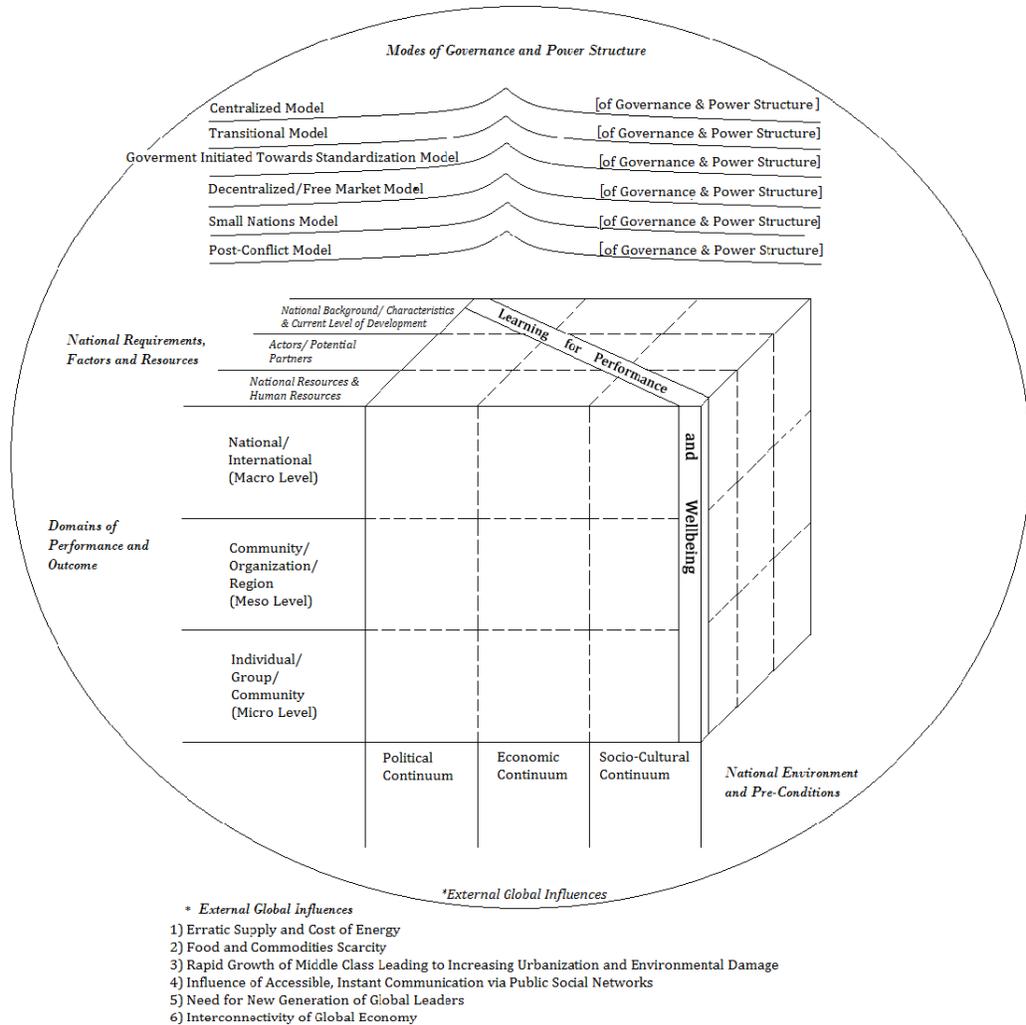


Figure 1: Model of the formulation of National Human Resource Development (NHRD) for use in planning policy and practice: a guide to the collection of data for planning and enhancing national learning for economic, political and socio-cultural performance and wellbeing. (Cubic design of the model was informed by the HRD Cube (Lynham, 2007, 2008; Lynham, Lincoln, Hurt, & McLean, 2010)).

Research Purpose, Assumptions, and Questions Guiding the Study

In preparation for proceeding further with the undertaking of the theory operationalization, verification, revision, and refinement processes, the newly-developed model of the formulation of NHRD policy must undergo formative assessment. Therefore, the task of this research is to conduct a pre-fieldwork study to determine whether and to what extent the emergent model fulfills the multiple goals inherent within its intended organization and structuring of conceptual categories of data for the generation of new knowledge, together with its provision of deeply nuanced explanation of the human behaviors, activities, and meaning-making associated with the formulation of NHRD policy.

Specifically, the trustworthiness, predictive capability, and utility (Denzin, 1970; Dubin, 1978; Goodson, 2009) of the model under development are evaluated while capacity of the model to impart “deep and widely accessible understanding” (Lincoln & Lynham, 2011, p. 9) in its representation of “actual events, behaviours, [and] the meaning making activities of stakeholders and respondents” (p. 12) in planning and executing the formulation of human resource development policy at the national level are judged. Thus, this study employs quantitative and qualitative criteria of excellence for theory building research methodology to assess the proposed conceptual, multi-level model of the formulation of NHRD policy for the purpose of responding to the central question that motivates this study: Is this emergent, conceptualized, multi-level model of the formulation of NHRD policy, in its present form, ready for and worthy of

undertaking the research operationalization and testing phases of the theory building process with direct application of data collected from the field?

The model under development can be held to be sufficiently valid, trustworthy, functional, and predictive once it has mostly satisfied the requisite criteria for excellence established for measurement of the outcomes from theory constructed through use of Dubin's (1978) hypothetico-deductive (critical realist) theory building methodology. Satisfaction of the interpretivist (social constructivist) assessment criteria in terms of capacity to sufficiently describe and represent the complex, fluid social phenomenon that is the formulation of NHRD policy, and to convey understanding of associated human behaviors, and activities (Lincoln & Lynham, 2011), will indicate that the forthcoming model has mostly fulfilled the quality criteria proposed by Lincoln and Lynham (2011) for judging constructivist theory in HRD.

Compliance with the standards imposed by the two tests, the first from the post-positivist paradigm and the second from the interpretivist/constructivist paradigm, for evaluation and assessment of theory will suggest that the emergent model of the formulation of NHRD policy, in its present form, is ready for and worthy of entering the research operationalization and confirmation/ disconfirmation phase of theory building, that is, for testing with application of real data gathered from one or more nations. However, in case analysis of the findings revealed by the two specified tools for theory assessment determines that the model is mostly insufficient in meeting standards of excellence for development of theory, the researcher-theorist will be compelled to revisit steps one through eight, as designated by the GPS guiding the progress of this study (see

GPS presented in Figure 2, page 33 of this manuscript), in order to modify and reverify the model while it is still in the theory development phase of the theory research process.

Assumptions Underpinning the Research Effort

The research effort described within this dissertation rests upon and is guided by a foundation of three assumptions:

1. NHRD policy and strategic practice must be formulated in response to a comprehensive examination of a nation's background, national characteristics and current level of development, national resources including human resources, and the interests and efforts of participating actors, potential partners, and stakeholders, as well as the governance structure influencing the power distribution amongst these elements, the effects of the national political, economic, and socio-economic climate at the individual/group/community level, organization/regional level, and the national/international level, and the intended and unintended manipulation of the entire process by external global conditions;
2. an informed, conceptual, multi-level model representing the organization, logic, and structure of the (above-listed) component elements necessary to the formulation of NHRD policy, and from which NHRD theory(ies) might eventually be drawn, can be developed from the convergence and integration of existing HRD knowledge informing current understanding of NHRD with concepts and understanding drawn from the economic, political, and socio-cultural foundations of the discipline of human

development for growth and wellbeing, and by extending the combined total of this knowledge and understanding with the researcher-theorist's observations of the phenomenon of NHRD in the world and by her "informed imagination" (Lynham, 2000a, p. 12);

and

3. the proposed model will serve as a fundamental, flexible, collaborative roadmap to be individualized by nations to enable their collection and organization of the national data (background, characteristics, resources, actors, potential partners, stakeholders, structure of governance, prevailing national political, economic, and socio-economic climate at the individual/group/community level, organization/regional level, and the national/international level) that must be analyzed to shape NHRD policy for strategic practice as they move from concept to action in launching their unique approaches to NHRD. Additionally, the model situates the data collection and subsequent policy formation processes within the sea of global megatrends (Rose, 2009) that stands to influence NHRD policy, implementation, strategy, and outcomes.

Research Questions

1. How can Dubin's (1978) hypothetico-deductive criteria of excellence for assessing theory construction and outcomes, with the addition of an integrated multi-level theory building method (Reynolds Fisher, 2000), and derived quality criteria for analysis of multiple levels, be applied to

the informed, conceptual, multi-level model of the formulation of NHRD policy such that we can be reasonably certain of the validity, trustworthiness, and utility of the model in pinpointing, explaining, and predicting the elements and interactions necessary to the formulation of NHRD policy?

2. How can the sufficiency of the model be assessed in terms of “provide[ing] deep and widely accessible understanding” (Lincoln & Lynham, 2011, p. 9) in the interpretivist representation of “actual events, behaviors, or the meaningmaking activities” (Lincoln & Lynham, 2011, p. 12) undertaken by stakeholders and respondents in their collaboration for analysis and allocation of the necessary resources from which NHRD policy is formulated for implementation in the form of strategic practice?

Aggregating findings obtained in response to Research Questions 1 and 2 provides for deepened understanding of the relationship between the model’s structural composition and the human experience of engaging in the formulation of NHRD policy.

3. In juxtaposing for analysis the findings revealed by the two tests representative of contrasting paradigms for theory construction and assessment:
 - a. Dubin’s (1978) hypothetico-deductive criteria of excellence for theory building research, with the addition of an integrated multi-level theory building method (Reynolds Fisher, 2000) and a derived set of quality criteria for analysis of multiple levels, and

- b. Lincoln and Lynham's (2011) interpretive/constructivist criteria for judging theory in HRD. What can be learned about the informed, conceptualized, multi-level model of the formulation of NHRD policy?
 - i. What can be understood from the logic, organization, and structure of the model in terms of conveying depth of understanding?
 - ii. What does nuanced, meaningful understanding conveyed by the model offer for comprehension of the logic, structure, and organization of the model?
 - iii. To what extent does the model offer a sufficient or deficient representation, or an overly complex interpretation, of the resources and component elements necessary to the process of formulating NHRD policy, and of the collaborative roles, activities, experiences, and performance of composing NHRD policy for implementation?

- 4. And, ultimately, is the emergent model of the formulation of NHRD, policy, in its present form, ready for and worthy of the next phases of theory development, that is, for research operationalization and for empirical testing by application of data collected in the field from one or more nations?

Delimitations and Limitations of the Research

This research effort is bounded by delimitations that were specified to insure the manageability of the study and to, consequently, enhance the propensity for replicability of this work and the trustworthiness of the findings obtained, as well as any conclusions that might be drawn from them. Two delimitations governed this research. Further, each of the delimitations creates limitations that controlled the conduct of this study and the transferability of findings derived from it. Three limitations were identified for this

Delimitations

The first delimitation of the research was the scope which was extended to include only the evaluation of one informed, conceptual, multi-level model of the formulation of NHRD policy that was constructed and put forward to guide the collection of data necessary to the planning and formulation of NHRD policy for implementation in the form of strategic practice. The second delimitation was that the research employed just two selected methods of theory assessment to perform an evaluation of the informed, conceptual, multi-level model: (a) the criteria of excellence delineated for measuring the outcomes of theory constructed through use of the first step, conceptualization of theory and models, of Dubin's (1978) hypothetico-deductive theory building research methodology, with the addition of an integrated multi-level theory building method (Reynolds Fisher, 2000) and its derived set of quality criteria for analysis of multiple levels, and (b) Lincoln and Lynham's (2011) criteria for judging theory and informing theory building research in HRD and the applied social sciences from an interpretivist (social constructivist) perspective. Further empirical and

qualitative testing of the informed, conceptual, multi-level model with data gathered from the field were beyond the scope of the present study but will be pursued within a future research agenda.

Limitations

The first limitation of the research centered around the lack of a universally recognized or prescribed definition for human resource development at the national level, NHRD. Because the concept of NHRD is relatively recent, there does not exist a commonly used or accepted bounding of the term to explain and identify to scholars and to practitioners precisely what does and what does not constitute NHRD.

After all, just “the process of defining HRD is *frustrated* by the apparent lack of boundaries and parameters, and *elusiveness* is created through the lack of empirical evidence for some conceptual aspects of HRD” (McGoldrick, Stewart & Watson, 2001, p. 344). This state of disparity around the defining of HRD fosters the expectation that a definition for NHRD could not be established so shortly following the introduction of this still-emergent construct – and certainly not in the absence of an official definition for HRD. Although HRD scholars have suggested, and some have espoused, several unique factors and characteristics relevant to NHRD, frequently stemming from described instances and country-specific case analyses of this notion under development, it is a commonly-held belief that, not only is it just impossible, it is not desirable, to unanimously define NHRD (McLean, 2004). While McLean (2008) more recently offered an extensive definition that encompasses a listing of elements thought desirable for inclusion under the umbrella of NHRD, McLean (2004) and colleague HRD scholars

(McLean, Lynham, Azevedo, Lawrence, & Nafukho, 2008) accept that NHRD carries numerous meanings to reflect its applicability across multiple contexts such that a strict defining of the term could only serve to limit the utility and, consequently, the progress and maturation of study and practice around the construct. That the proposed research intends to assess a conceptual, multi-level model of the formulation of NHRD policy without being able to adhere to a commonly-accepted definition of the phenomenon under study might appear presumptuous to some who will review this work.

However, this study was built upon the researcher's belief that active engagement in the discovery and exploration of NHRD, in all of its characteristics and properties, will feed future attempts at theorizing about the construct and serve to advance our understanding of strategic investment in the human resources toward the sustainable political, economic, and social growth and sustainability of people and their nations. This perspective holds it irrelevant whether NHRD is eventually defined or whether a multitude of definitions and versions are determined more appropriate to sufficiently describe this evolving construct. Further, it is this researcher's intention that the work presented within this manuscript will draw forth new conversation and discussion around NHRD and, especially, that the offer of a practical and flexible guide will encourage active collaboration around NHRD among governments, third-party organizations, and national and multinational corporations.

The second limitation of this research lies inherent within any constraints and ambiguities of the evaluative standards imposed by the two methods selected for evaluating and judging the model of the formulation of NHRD policy. Dubin's (1978)

hypothetico-deductive methodology for construction of theory with the addition of an integrated multi-level theory building method (Reynolds Fisher, 2000) and derived quality criteria for analysis of collective constructs and levels of theory, and Lincoln and Lynham's (2011) criteria for judging outcomes obtained through construction of theory for application in the applied disciplines, such as HRD. Dubin's (1978) critical realist theory building methodology establishes evaluative criteria of excellence to insure the parsimonious construction, logical structure, validity, and utility of an emergent theory and to measure the capacity of theory to predict and, therefore, control events. Dubin's (1978) post-positivist assessment standards, however, offer minimal consideration of a theory's address of the human element that is the driving essence of theory intended for use in the social sciences, including HRD.

In contrast, however, Lincoln and Lynham's (2011) social constructivist criteria for judging theory in HRD do not attend to the order or configuration of theory, or to theory's capacity for predictiveness. These interpretivist assessment criteria (Lincoln & Lynham, 2011) consider, instead, the facility of theory in achieving meaningful understanding in its capture and representation of the humanness of activities and processes integral to the behavioral sciences.

Ultimately, the two selected methods for assessing and judging the emergent model of the formulation of NHRD, Dubin's (1978) critical realist criteria of excellence and Lincoln and Lynham's (2011) social constructivist criteria for judging theory, balance one another in that the strengths of each evaluative tool fulfill a prospective void or weaknesses in the other method. Thus, it was the aim of this researcher-theorist to

juxtapose the limitations of each of the two theoretical tests selected from contrasting paradigms, the constraints of each evaluative method against those of the other, in order to uncover and expose as much data as possible to enhance understanding of the forthcoming model of the formulation of NHRD policy while it is still under development. The objective of this strategy of exploiting limitations is to analyze a post-positivist evaluation of the model's organization, structure, consistency and usefulness in providing predictive possibilities against an interpretivist assessment of capacity of the model in representing and extensively conveying rich nuances of the complex, fluid human and social phenomena that comprise the formulation of NHRD policy.

The third limitation of this study was that the evaluation of the forthcoming model of the formulation of NHRD was performed by the same researcher-theorist whose synthesis of existing knowledge of NHRD with concepts and understanding drawn from the economic, political, and socio-cultural foundations of planned human development for the growth and wellbeing of nations, all extended with the researcher-theorist's "informed imagination" (Lynham, 2000a, p. 35) resulted in the construction of the model. It was anticipated, however, that the guidance, grounded in scholarly knowledge and practical experience, of the research committee charged with overseeing and evaluating the work of this beginning researcher-theorist would serve to identify and assist in resolving any partial judgment or bias on the part of the researcher-theorist in carrying out the evaluation.

Informing Theoretical Framework

The proposed research is grounded in and informed and enhanced by Human Capital Theory (Becker, 1993; Schultz, 1961; Smith, 1776/1952), and also by the recently-developed HRD Cube (Lynham, 2007, 2008; Lynham, Lincoln, Hurt, & McLean, 2010). Together, these two frameworks contributed to the conceptual development and organization and structuration required to conceive and shape the informed, conceptual, multi-level model. Subsequently, the two frameworks enable the deconstruction of the same model for purposes of evaluation and analysis.

Human Capital Theory

Human Capital Theory originated in Adam Smith's seminal contribution to modern economics, *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776/1952), and was expanded with Schultz' (1961) explanation that "people are an important part of the wealth of nations" as evidenced by "the productive capacity of human beings [that] is now vastly larger than all other forms of wealth taken together" (p. 2). The contributions of Smith (1776/1952) and Schultz (1961) were further analyzed for application to education by Becker (1993). Human Capital Theory posits that all of society gains economic benefit from deliberate investment in the development of individuals, specifically the knowledge, skills, talent and abilities of people (Becker, 1993; Psacharopoulos & Woodhall, 1985; Schultz, 1961; Smith, 1776/1952).

Critics of the theory, however, uphold Schultz' (1961) caution that "Our values and beliefs inhibit us from looking upon human beings as capital goods, except in slavery, and this we abhor ... and for man to look upon himself as a capital good, even

if it did not impair his freedom, may seem to debase him” (p. 2). Further criticisms are directed at Human Capital Theory’s limited address of the complementarities between education and skill, and the direction of the causal relationship between improvements in education (human capital) and economic growth (Sweetland, 1996). Despite its imperfections, Human Capital Theory provides a foundational framework, a “unified explanation of a wide range of empirical phenomena” (Becker, 1993, p. 30) in economic theory, for use in measuring the ratios between increased investment in learning as evidenced in all forms of education and improved economic gain, together with enhanced overall quality of life choices, opportunity, and wellbeing at the individual, organizational, societal, and national levels (Becker, 1993; Schultz, 1961).

“While the types and means of education are diverse, so too are the benefits derived from education” (Sweetland, 1996, p. 341). In unfolding his findings on the relationship of education to human capital formation, Schultz (1961) enumerated five categories of human investments: (a) all expenditures to enhance the health and life expectancy of people, (b) on-the-job training, (c) formal education, (d) adult education, and (e) migration for employment. The emerging model of the formulation of NHRD policy for implementation as strategic practice, in its intent to develop and implement national learning for economic, political, and socio-cultural performance and wellbeing, encompasses these five categories first suggested by Schultz (1961) and extends them further. In consequence, the proposed work of assessing and judging the model still under development is firmly underpinned and informed by the foundational framework of Human Capital Theory. The present study takes further support from Sweetland’s

(1996) declaration that "... the potential value of the [Human Capital] [T]heory - as a means to inform and support education policy - represents the underlying assumption supporting the importance of this field [education policy] of inquiry" (p. 343).

HRD Cube

Also a model under development, the HRD Cube (Lynham, 2007, 2008; Lynham, Lincoln, Hurt, & McLean, 2010) (see Appendix A, Figure A-1) "conceptualizes HRD as a multi-level, multi-dimensional and interdependent system of theory, research and practice" (Lynham et al., 2010, p. 3333). The HRD Cube represents and "accommodates existing, expanding and emerging frames of HRD inquiry and practice" (p. 3335) in its three axes integrating theory, in the form of theoretical foundations (people, processes, and performance along the X-axis); research, in the form of modes of knowledge and inquiry (metaphysical positions from positivism to indigenous and others along the Z-axis); and practice, in the form of domains of outcome and performance (individual to organization to global along the Y-axis). "The three interacting axes are 'open' in nature, indicating their necessary interdependence for addressing and solving HRD problems, and describing and coming to know HRD-related phenomena" (Lynham et al., 2010, p. 3333).

The HRD Cube is significant to the development of the emerging informed, conceptual multi-level model of the formulation of NHRD policy because the Cube's expanded, inclusive domains of outcome and performance provide space for NHRD within the realm of HRD. Further, the HRD Cube allows for the multi-level and multidimensional conceptualization of NHRD represented by the forthcoming model

of the formulation of NHRD by validating the multifaceted nature of HRD systems and the necessity of models capable of capturing and mirroring these qualities for the purpose of supporting rigorous inquiry and enhancing strategic practice.

Finally, the forthcoming model of the formulation of NHRD policy is situated among the interdependent axes of the HRD Cube. It encompasses all of the informing theoretical foundations (people, processes, and performance) continuously along the X-axis, exists at the national domain of outcome and performance on the Y-axis, and resides in the participatory metaphysical position of the Z-axis. As indicated previously within this manuscript, it is anticipated that scholars and practitioners will be able to locate their research and dialogues around NHRD similarly within the integrated axes of the forthcoming model of the formulation of NHRD policy, itself accommodated within the HRD Cube. Also a model under development, the HRD Cube (Lynham, 2007, 2008; Lynham, Lincoln, Hurt, & McLean, 2010) (see Appendix A, Figure A-1) “conceptualizes HRD as a multi-level, multi-dimensional and interdependent system of theory, research and practice” (Lynham et al., 2010, p. 3333). The HRD Cube represents and “accommodates existing, expanding and emerging frames of HRD inquiry and practice” (p. 3335) in its three axes integrating theory, in the form of theoretical foundations (people, processes, and performance along the X-axis); research, in the form of modes of knowledge and inquiry (metaphysical positions from positivism to indigenous and others along the Z-axis); and practice, in the form of domains of outcome and performance (individual to organization to global along the Y-axis). “The three interacting axes are ‘open’ in nature, indicating their necessary interdependence for

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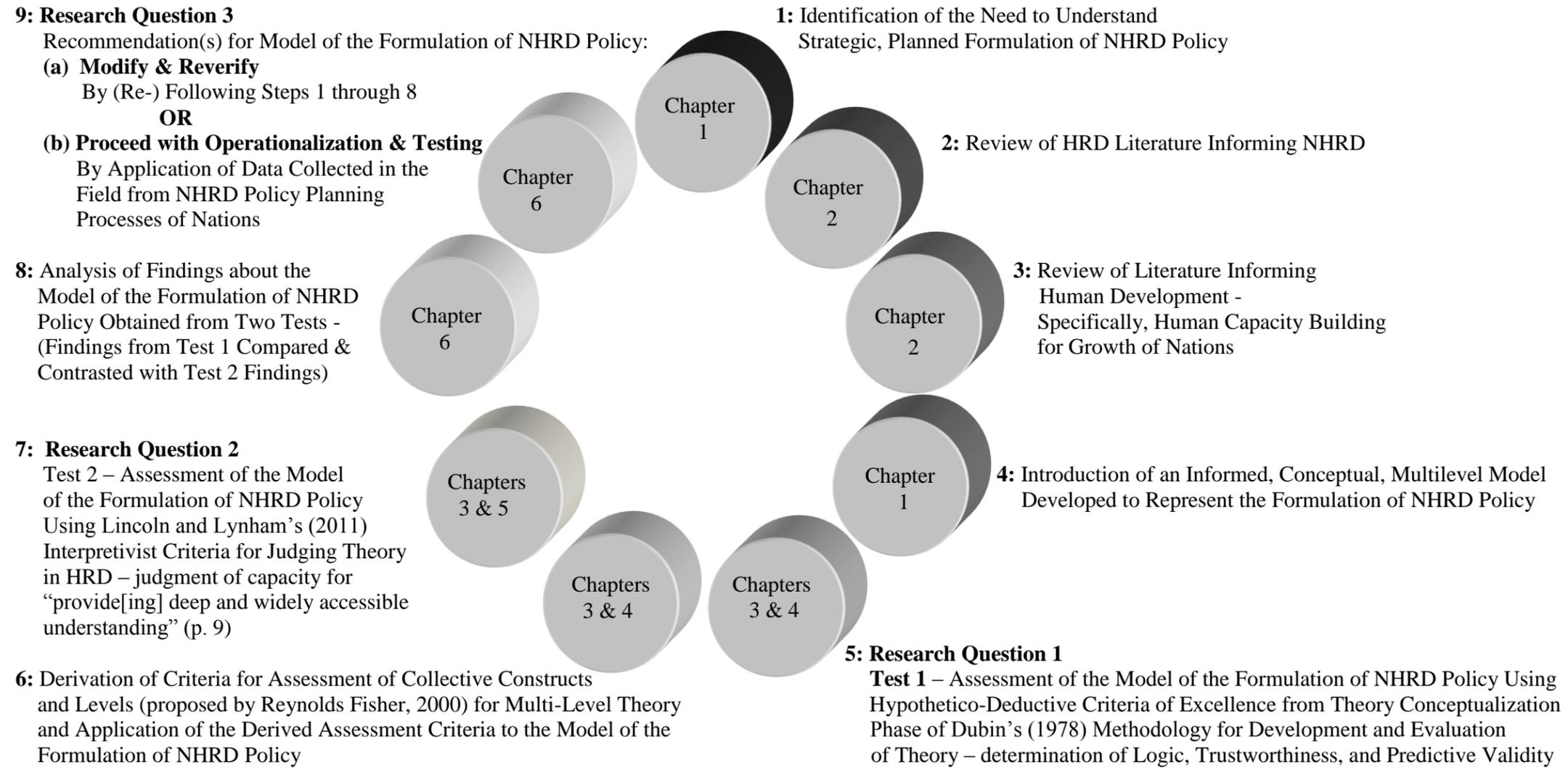
Prior contributions of knowledge to inform our understanding of NHRD, by HRD researchers together with scholars in the disciplines adjacent to HRD, although occasionally controversial and still insufficient, established NHRD policy as worthy

of further examination. Further inquiry will be required to uncover the components and mechanisms by which NHRD is formulated and then functions, as well as indicators of successful NHRD, and the motivators and barriers that might influence and stimulate or hinder its development, implementation, and outcomes. This research study aimed to take up the first phase of this task, uncovering the elements and interactivities by which NHRD is formulated, through its assessment of an emergent model representing the elements and the processes necessary to the formulation of NHRD policy. On the following page, Figure 2: GPS: A Conceptual Guide to the Conduct of Research to Assess a (Model) of the Formulation of NHRD Policy, outlines the steps that the researcher-theorist undertook in the conduct of this study.

Following the presentation of Figure 2, Chapter II of this dissertation undertook a comprehensive review of the supporting literature addressing NHRD and the foundations of human capacity development for nation-building to draw out those knowledge areas and concepts most closely related with HRD, and consequently with NHRD, to inform and support the present research study.

Figure 2: A guide to assessment of an informed, conceptual, multi-level model of the formulation of NHRD policy.

GPS: A Conceptual Guide to the Conduct of Research to Assess a Roadmap (Model) of the Formulation of NHRD Policy



CHAPTER II

REVIEW OF SUPPORTING LITERATURE

Foundation of Economics Supports HRD

Drawing upon the understanding that HRD rests on a three-pronged foundation of economics theory, systems theory, and psychological theory, Swanson (2008) claimed that HRD scholars have yet to embrace and explore the full potential of economic theory for informing HRD research, and practice. Swanson (2008) urged renewed interest and a closer examination of economic theories, specifically Institutional Economics, Human Capital Investment, Development Economics, and Social Capital, all selected for their relevance to HRD. Wang, G.C., Korte, R. F., & Sun, J. Y. (2008) asserted that theories of economics, together with systems theory, are the essential levers for implementing and influencing HRD policy for development.

“Explicitly or implicitly, economics is the primary organizational driver” underpinning the study and application of HRD (Swanson, 2008, p. 882). Although the roles of psychology and systems forces for HRD must be recognized, “economics dominates” (p. 882). Swanson outlined two steps by which he challenged HRD scholars and practitioners to implement economic theory in HRD practice:

1. master the applied economic tools required in making human capital investments decisions around individuals and groups of individuals functioning in organizations, and
2. require financial forecasting and follow-up financial assessments as a part of routine practice (Swanson, 2008, p. 885).

Human Capital Theory, explicated by Adam Smith (1776) and now foundational to economic theory, focuses on the skills and knowledge gained by a worker through the employer's investment in the worker's education and experience. Political Capital Theory (Ocasio & Pozner, 2005) explicates the varied set of resources available to individuals in organizational settings, such as nations, that can be used to influence the actions and ideas of others, despite resistance. Social Capital Theory (Bourdieu, 1972) holds that developing social capital builds effective informal relationships and encourages the practices associated with these to connect people within and to the organization (Burt, 1987; Gabbay & Zuckerman, 1998; Tenkasi & Chesmore, 2003).

Economic Factors Influence NHRD Policy

NHRD, as introduced by McLean (2004), seeks to coordinate strategic initiatives for individual and organizational learning for the purpose of achieving the cumulative benefits of greater national learning. At the national level, enhanced learning, expertise, and capacity for knowledge creation, together with the broader considerations of health and community, are believed to lead to higher levels of national economic performance accompanied by improved political and social stability. McLean (2004) envisioned a holistic scope for NHRD to encompass "health, culture, safety, community and a whole host of other considerations" (p. 269). Close review of the language selected in the construction of nomenclature describing five models for NHRD proposed by Cho and McLean (2004) reference economics: (a) Centralized, (b) Transitional, (c) Government-initiated, (d) Decentralized/Free Market, and (e) Small-nation reveals intimations that economics will surely underpin the forthcoming indicators of successful NHRD.

Lynham and Cunningham (2006) analyzed Cho and McLean's (2004) descriptions of emerging models for NHRD to reveal some comparative findings about the necessary role and nature of NHRD. One finding was that economic, political, and socio-cultural context influences the character of NHRD in any given country. Lynham and Cunningham next proposed that environment and intent shape and inform "what makes for responsible (effective, ethical, and enduring) HRD" (2006, p. 119). They called for the HRD community to synthesize all available studies and opinions that might suggest additional models, as well as attributes, components, and dimensions, useful for informing the future study and practice of NHRD (Lynham & Cunningham, 2006).

Prior HRD Scholarship Informs the Emergence of NHRD

Collective efforts by HRD scholars have shaped the emergent construct of NHRD as the "developing and/or unleashing human expertise" (Swanson, 1995, p. 208) for the advancement and wellbeing of nations. Although not prolific, this nascent compilation of scholarship and documenting of real world experiences and practices has conceptualized the role of NHRD for countries, continents, and the global community as equivalent to the quintessential nature and function of HRD in cultivating the human knowledge and talent crucial to the success of comprehensive organizational systems. Previous research dedicated to the address of human resource development at the national level holds significance for the proposed study of the formulation of NHRD.

Lynham and Cunningham (2006), together with Paprock (2006), traced the origins of NHRD to the foundational work of Harbison and Meyers (1964) who affirmed

that economic growth, development, and competitiveness of modern nations, from the least developed to the most advanced, is dependent upon the improvement of the human resources by means of the strategic and coordinated pairing of education with manpower planning. Harbison and Meyers (1964), in explicating their contention that “Human resource development ... may be a more realistic and reliable indicator of modernization or development than any other single measure” (p. 14), laid the early groundwork that would support the eventual evolution of NHRD.

The goals of modern societies ... are political, cultural, and social as well as economic. Human resource development is a necessary condition for achieving all of them. ... If a country is unable to develop its human resources, it cannot develop much else, whether it be a modern political and social structure, a sense of national unity, or higher standards of material welfare.

... Progress is basically the result of human effort (p. 13).

Subsequently, in early descriptions of NHRD, McLean (2004) drew parallels with application of HRD in open organizational systems and clarified, as did Lynham and Cunningham (2006), the very essence of NHRD as national policy for human resource development. McLean (2004) also posited that one single construct of NHRD may not suffice for all nations. Instead, McLean (2004) positioned NHRD as a holistic perspective on organizational development wherein a nation is viewed as a comprehensive organization such that its individualized mode of development necessarily encompasses “health, culture, safety, community and a whole host of other

considerations” (p. 269).

The elaboration of NHRD was followed quickly by Cho and McLean’s (2004) configuration of five emerging models [depicting the governance and power structure amongst actors and potential partners] of NHRD. The models introduced by Cho and McLean (2004) are all grounded in the portrayals offered by case studies of nations with current implementation of NHRD policy: (a) Centralized NHRD, (b) Transitional NHRD, (c) Government-initiated NHRD, (d) Decentralized/Free Market NHRD, and (e) Small-nation NHRD. Lynham and Cunningham (2006) drew upon Cho and McLean’s (2004) descriptions of governance and power structure for NHRD to advocate for consideration of economic, political, and socio-cultural influences on the necessary nature and role of human resource development in every country-specific instance.

The first issue in the 2006 volume of *Advances in Developing Human Resources* was dedicated to country case studies, including Brazil (Hasler, Thompson, & Schuler, 2006), China (Ke, Chermack, Lee, & Lin, 2006), India (Rao, 2004), and Morocco (Cox, Al Arkoubi, & Estrada, 2006), each of which explores an instance of NHRD policy or versions of national human development initiatives that can be loosely classified as NHRD policy. These country-specific analyses, summarized in Table 1, provided a glimpse at the diversity of NHRD policies in implementation and “highlights the forces working for and against their success” (Paprock, 2006, p. 12). Careful observations of existing instances of NHRD policy and practices must be considered for inclusion in a model intended to represent, describe, and explain the formulation, structure, and utility of NHRD policy to inform strategy and, ultimately, practice.

Table 1: Overview of four NHRD policy initiatives drawn from the HRD literature.

	Current State of NHRD Policy Initiative	Forces Working For/Against Success of National Initiative for HRD Policy
<p style="text-align: center;">Brazil (Hasler, Thompson, & Schuler, 2006)</p>	<p>Brazil, a partially developed country with a history of tumultuous, uneven economic development, is attempting the transition from an agrarian and raw materials-based economy to a more competitive economy driven by manufacturing and technology. Its traditionally unbalanced approach to funding education remains a significant impediment to Brazil's more rapid and effective development.</p> <p>NHRD in Brazil is a four-pronged effort that includes the activities of traditional educational institutions; governmental organizations; corporate entities, including Brazilian-owned and multinational corporations; and nongovernmental organizations, including labor unions and political parties. The combined contributions by these entities provide a national approach to HRD that emphasizes service-related job skills; literacy training; and training for roles in the government sector.</p> <p>A suggested working definition for NHRD in Brazil might be: "National human resource development is the systematic development of human skills, capabilities, and knowledge through multi-level learning processes directed by an organizational, community, and national mission and strategy for the purpose of performance improvement as evidenced in the well-being and growth of individuals and the organizations, communities, and nation of which they are an integral part" (p. 111).</p>	<p>+: Brazil represents the largest country, in terms of land mass and population, in South America +: At the national level, Brazil's political leaders have implemented initiatives to expand access to education and quality health care for individuals of African descent +: Significant HRD takes place in Brazil's various commercial sectors where foreign-owned subsidiaries of multinational companies invest directly -: Brazil's uneven economic development results in competitive participation in the global economy by major economic sectors alongside significant populations in poverty, poor health, and illiteracy -: Gross inequalities exist between race and social classes in terms of educational and employment opportunities, prevail in race-oriented political parties, and result in uneven lifetime probabilities -: Brazil's population is considered to be underemployed with an overall unemployment rate of more than 12% of the working-age population (2004), a statistic that has been worsening -: The HIV crisis, with nearly a million citizens infected, reduces Brazil's workforce and its contribution to national economic growth, as well as having a measurable social effect</p>

Table 1 Continued

	Current State of NHRD Policy Initiative	Forces Working For/Against Success of National Initiative for HRD Policy
<p>China (Ke, Chermack, Lee, & Lin, 2006)</p>	<p>A partially developed country, China is poised to transition from a centrally planned system to a free market economy. The nation is, therefore, in critical need of NHRD policy strategically designed to raise national levels of education and further develop human capacity, particularly in science and technology fields, that will significantly support and sustain this enormous transition. Forthcoming NHRD policy for China must focus on economic growth for all sectors of society by implementing and insuring accessible, quality universal education, the development of employable human resources, and incentives for the allocation of high-level human resources. China's current articulation of the concept of HRD is still in transition with no distinctions between the constructs of personnel, human resources, and HRD. Focusing NHRD policy around education and training for the long-term while maintaining its traditional values of harmony and balance "could place China on the leading edge of global productivity for the indefinite future" (p. 35).</p>	<p>+: Economic reform and an increasingly open-door policy have diversified China's enterprise ownership and highlights the call now for increased attention to HRD policy : The Chinese Communist Party (CCP) has made efforts to decentralize its control and to modernize its internal structure to accommodate national economic growth +: Capitalism exerts increasing influence on younger generations' interests in higher quality-of-life expectations, values that translate into self-initiated education and training being viewed as venues by which to realize individual dreams +: Higher-level knowledge and skills are increasingly valued since the economic reforms of the late 1970s -: China has an excess of unskilled and semiskilled workers, but a significant shortage of professionals and managers -: Although China's higher education system has been expanded since 1978, it cannot keep pace with the nation's rapid economic development -: China faces a potential crisis in the outflow of highly talented human resources</p>

Table 1 Continued

	Current State of NHRD Policy Initiative	Forces Working For/Against Success of National Initiative for HRD Policy
<p>India (Rao, 2004)</p>	<p>India established itself as a leader in NHRD within the Asia Pacific region by setting up a full Ministry of Human Resource Development in 1985. Since then, however, the NHRD concept in India has been largely limited to a focus on education and culture. Policy in education addressed basic HRD needs in terms of structure, systems, internal processes, implementation issues, and internal review mechanisms. HRD must be expanded to include avenues and forums for networking and learning from each other among the various government ministries and institutions, and from the corporate sector to the private sector. Such opening of communications pathways would be significant in effectively evolving and implementing India's NHRD concept and would foster the development of robust policies. Ultimately, NHRD is becoming increasingly necessary as the world's largest democracy faces growing economic pressures, as well as opportunities, within the global community.</p>	<p>+: Largest democracy with population of 1.027 billion +: Large youth population with 40% younger than 15 years old +: Comprehensive education reform provided universal education to children, youth, illiterate adults, out-of-school youth, women, teachers, educational administrators, the handicapped, and all categories needing education and skills development +: HRD holds an accepted and integrated role within India's corporate sector and is defined as a set of systems and processes to promote the development of individuals, teamwork and productivity, organizational culture, and capabilities +: India formed National HRD Network in 1985; Indian Academy of HRD in 1990; and a PhD program in HRD by AHRD India -: The complexity of the country in terms of diversity of religions, caste, and language make it difficult to integrate HRD systems at the national level -: Dissemination of HRD knowledge between corporate and public sectors is poor and mechanisms to facilitate networking for learning are absent</p>

Table 1 Continued

	Current State of NHRD Policy Initiative	Forces Working For/Against Success of National Initiative for HRD Policy
<p>Morocco (Cox, Al Arkoubi, & Estrada, 2006)</p>	<p>Morocco’s transitional model for NHRD requires that communication and cooperation must be facilitated among the country’s various government ministries associated with education, training, and economic restructuring. Goals must be identified and established in order to identify strategic economic sectors that can be strengthened by long-term planning and concurrent development of a sufficiently flexible workforce capable of meeting the dynamic demands of the global market</p>	<p>+: Reform-minded monarch +: Recent implementation of human and social reforms, including legal age for marriage +: Large youth population +: Mostly self-sufficient in high-level manpower needs with a surplus of graduates in the humanities and law -: Gender imbalance in education and lack of universal primary education -: Insufficient capacity in the scientific and technical fields -: Centralized governance -: Ineffective business practices -: Pervasive corruption -: Motivational deficits in marginalized groups -: Traditional patterns of thought and behavior resist some of the newer democratic reforms -: In both the public and private sectors, leadership and organizational culture issues must be examined</p>

Lynham and Cunningham (2006) next proposed that context and intent shape and inform what makes for responsible (effective, ethical, and enduring) HRD (White-Newman, 1992 as cited in Lynham 2000, 2002). They further called for an “integrative and collaborative theoretical and sense-making framework” for NHRD, even while realizing that such an objective poses enormous challenges to the human resource development profession— “challenges that will require fundamental re-perceiving by its professionals” (Lynham & Cunningham, 2006, p. 116).

There exists vigorous discussion, however, around the construct of NHRD among members of the HRD community who do not all agree that NHRD can or should exist as a unique and distinct concept within the field of HRD. Wang and Swanson (2008) were, perhaps, the most prominent critics of NHRD in their statement that “The NHRD literature has attempted to expand the HRD discipline beyond established boundaries” (p. 79), thus “present[ing] challenges and problems to both HRD identity and development methodology” (p. 80). As previously noted within this dissertation, however, the HRD Cube (Lynham, 2007, 2008; Lynham et al., 2010) was developed to represent the “expanding and emerging frames of HRD inquiry and practice” (Lynham et al., 2010, p. 3335), and, therefore, to express the increasing capacity of HRD domains of outcome and performance to conceptualize and provide space for emergent phenomena, such as NHRD.

Wang and Swanson (2008) further contended that scholars advancing the notion of NHRD were simply misinterpreting the historical literature describing the theory and practice of modern international economic development. In response to Wang and

Swanson's critique of NHRD, McLean, Lynham, Azevedo, Lawrence, & Nafukho (2008) advised that the emergent construct of NHRD, similar to any other construct, cannot be stifled within "a single paradigm of truth or reality" (p. 245), particularly when the construct in question is known to take shape in as many forms as there are instances of its discovery. Further, "while still developing an understanding of the units that might constitute NHRD, and how they might interrelate, ad hoc theory development is an epistemically and methodologically responsible choice of approach" (Lynham, 2002; Toracco & Holton, 2002 as cited in McLean et al., 2008, p. 245).

At the highest levels of international, national, state, and corporate governance, criticisms of NHRD notwithstanding, there is growing interest in enhancing the learning and developing expertise toward the strategic promotion of human capacity building for knowledge creation and innovation. Further, there is some acknowledgement that these goals necessarily intersect with broader considerations for human development (HD), such as health and community (UNDP, 2011d) and the wellbeing of people and of their nations. Kuchinke (2010), a noted scholar of international HRD, underscored the conceptual proximity between HD and HRD. In proposing that the range of HD dimensions, with their ethical and moral commitment to human flourishing, "ought to be acknowledged, considered, and debated in HRD theorizing and applications" (p. 583), Kuchinke (2010) advocated "that HRD [including NHRD] can and should be viewed as a special case of the broader concept of HD" (p. 576).

Such thought elicits questions around possibilities of what might be achievable within the nexus of HRD-HD scholarship and practice, and calls for our concerted

investigation of the interrelationships between the nurture of human learning for performance and wellbeing with enhanced economic, political, and social stability at all organizational levels. The present research study upholds and intends to advance Kuchinke's (2010) proposal that HRD strategy in the form of policy implemented at the national level might well hold significant potential for advancing the human condition together with that of the broader global community. While Kuchinke's (2010) proposal necessarily encompasses boundless forms of HRD, together with myriad HD indicators, it might most simply be expressed as follows:

Human Resources + HRD / NHRD -> Human Development -> Global Community

HD Literature is Significant for the Present Research Study

A broad survey of research literature addressing economic, political, and social elements of human development (HD), in general, as these are influenced by HRD informed the present study addressing the formulation of NHRD. As there is not yet a widely-recognized definition for the phenomenon of NHRD, component words of various descriptions of NHRD were extracted for use as key search terms in the literature databases. The descriptions of NHRD included in this process were:

- (a) Human capacity building for national development/nation building and/or human development
- (b) Human capital investment for national development/nation building and/or human development
- (c) Human factor and nation building/development of nations

Databases utilized in the search were. Key search words entered into the EBSCO and SCOPUS databases were “human capacity building” and “national development/nation building”; “human capacity building” and “human development”; “human capital investment” and “national development/nation building”; “human capital investment” and “human development”; “human factor” and “nation building/development of nations”; “learning” and “national economic, social, and political performance”; and “education” and “national economic, social, and political performance”. Also, searches were performed using “human factor” and “national economic, social, and political performance”; “human factor” and “development”; and “human factor” and “economic growth” as key terms. Finally, the key terms “national” and “human resource development” and then “NHRD” were input into the two databases.

Foundation of Economic Influences for HD

Human development is a central facet in the overall process of *development*, which, “despite its various definitions, can almost always be reduced to the idea of change, or to the intended process of change ... as a project of modernization, focusing on economic growth” (Nordtveit, 2009, p. 110). Nordtveit urged development theorists and practitioners to consistently employ a holistic view of development in planning scholarship and strategic interventions (2009). Contributions to be considered within such a holistic view, suggested Nordtveit (2009), include the Millennium Development Goals of the United Nations Development Program (UNDP), Post-Development and Complexity Theories, and New Institutional Economics (NIE). None of these constructs,

alone, contended Nordtveit (2009), is sufficient to serve as a basis for understanding, theorizing, or practicing development.

For example, many education projects target education goals within an Education for All (EFA) perspective, without integrating them into a larger poverty reduction perspective, although such integration may be more efficient to alleviate poverty (Nordtveit, 2009, p. 110).

Sustainable development, explained Hughes and Johnston (2005), is crucial to human development, and is as implicated with social equity for current generations as it is dependent upon economics, the efficient use of resources and their conservation, for future generations. Dependent upon the implementation of a careful combination of policy initiatives, sustainable development turns around applied economics, including investment in research, environmental technology development, and human capital development. If sufficient levels of sustainability are attained in these primary arenas for development, concurrent benefits can be realized for human development, social capital, socio-economic equity, resource-efficiency, and world population (Hughes & Johnston, 2005), and by logical extension, for NHRD policy and practice.

There is a significant two-way association between human development and economic growth such that an increase in one of these outcomes leads to an increase in the other (Ranis, Stewart, & Ramirez, 2000). The magnitude of such an increase depends upon the participation of various nation-specific institutions and their activities.

GNP contributes to HD mainly through household and government activity, civil society, e.g., through community organizations and nongovernmental organizations (NGOs), also plays a role. The same level of GNP can lead to very different performance on HD according to the allocation of GNP among and within these institutions and variations in their behavior (Ranis, Stewart, & Ramirez, 2000, p. 198).

Higher levels of HD, in addition to being a desirable result, themselves, influence the economy by enhancing individual's capabilities and, consequently, their creativity and productivity. Specifically,

1. health, primary and secondary education and nutrition raise the productivity of workers, rural and urban;
2. secondary education, including vocational, facilitates the acquisition of skills and managerial capacity;
3. tertiary education supports the development of basic science, the appropriate selection of technology imports and the domestic adaptation and development of technologies;
4. secondary and tertiary education also represent critical elements in the development of key institutions, of government, the law, the financial system, among others, all essential for economic growth (Ranis, Stewart, & Ramirez, 2000, p. 198).

The value of education to a nation is a key element for consideration in constructing NHRD policy. For developing nations, the fundamental question around the association of economic value with education is: “Can educational expansion reduce income inequality in less-developed countries?” (Ram, 1989, p. 185). Although education, with sufficient support by HRD, is a necessary factor for promoting human development, it appears to be impossible to make predictions with certainty about the effects of schooling level or schooling inequality on income distribution. Caution is urged in applying existing “ambiguous theory” and “inadequate evidence” to support the formulation of educational and distributional policies in less-developed countries (Ram, 1989, p. 187). That there is a significant role for the learning for enhancing performance focus of HRD within educational initiatives for economic development underscores the need for strategic HRD to accelerate the pace of human development.

Implications from Review of HD Literature for Emerging Model of the Formulation of NHRD Policy

As the review of literature unfolded, it became increasingly relevant that an alternate term for NHRD might be: National Learning for Performance and Wellbeing. The emphasis on learning serves to differentiate human resource development from human development while still recognizing important shared influences between HRD and HD. Three attributes stood out as significant to successful NHRD policy formulation, implementation, and evaluation. These factors included (a) a unified holistic perspective on HRD at the national level, and (b) the need to build sustainability into all plans, and (c) the developing of HRD along the course of building plans and implementing policy. Such findings underscored the significance of HRD in supporting nations, particularly developing, transitioning nations, as they undertake crucial strides toward the Millennium Development Goals and point out the need to advance these goals as a unified solution rather than simply pushing for achievement of one or another of the individual goals.

Operational Definitions of Terms Drawn from Human Development Literature to Inform Formulation of NHRD Policy

The following is a listing of terms drawn from the research literature addressing economic, political, and social elements of human development (HD) that held relevance for the present research study. An operational definition, contextualizing application of the term as it was employed throughout the study documented within this dissertation, is provided for each term.

List of Human Development Terms

Corporate Social Responsibility (CSR)

A model of self-regulation integrated into the corporate business model whereby businesses undertake responsibility for the monitoring, reporting, and address of the direct and indirect effects of their profit-oriented activities in public and humanitarian domains, including environmental assessment, human rights assessment, materiality analysis, community engagement, sustainability strategy, and sustainable supply chain management, and strive to insure their adherence to local and international law, ethical standards, and international norms (BSR, 2010).

Development

“... despite its various definitions, [development] can almost always be reduced to the idea of change, or to the intended process of change ... as a project of modernization, focusing on economic growth” (Nordtveit, 2009, p. 110).

“Human resource development [HRD] ... may be a more realistic and reliable indicator of modernization or development than any other single measure” (Harbison & Meyers, 1964, p. 14).

Human Capital

The “resources in people” that can be increased or decreased by “activities [including education and training, the influence of families on knowledge, skills, values, and habits, informal learning and knowledge, medical care, and migration] that influence future monetary and psychic income” (Becker, 1993, p. 11) of individuals and organizations.

Human Capital Theory

A “unified explanation of a wide range of empirical phenomena” (Becker, 1993, p. 30) in economic theory which posits that all of society gains economic benefit from deliberate investment in the educational development of individuals, specifically the knowledge, skills, talent and abilities of people (Becker, 1993; Schultz, 1961; Smith, 1776/1952). Specifically:

1. Earnings typically increase with age at a decreasing rate. Both the rate of increase and the rate of retardation tend to be positively related to the level of skill.
2. Unemployment rates tend to be inversely related to the level of skill.
3. Firms in underdeveloped countries appear to be more ‘paternalistic’ toward employees than those in developed countries.
4. Younger persons change jobs more frequently and receive more schooling and on-the-job training than older persons do.
5. The distribution of earnings is positively skewed, especially among professional and other skilled workers.
6. Able persons receive more education and other kinds of training than others.
7. The division of labor is limited by the extent of the market.
8. The typical investor in human capital is more impetuous and thus more likely to err than is the typical investor in tangible capital (Becker, 1993, p. 30).

Human Development (HD)

A development paradigm that endeavors to create an environment of self-respect, empowerment, and a sense of belonging to a community such that people can participate in political, economic, and social opportunities to develop their full potential and lead productive, creative lives in accord with their needs, values, and interests (UNDP, 2011a).

Human Resource

A definition of the economic value of humans as assets expressed as “the present discounted value of their future contributions less the costs of acquiring, maintaining, and utilizing these resources in the organization” (Pyle as cited in Dierkes & Coppock, 1975, p. 313).

Human Resource Development (HRD)

“Human Resource Development [HRD] is a process of developing and / or unleashing human expertise through organization development and personnel training and development for the purpose of improving performance” (Swanson, 1995, p. 208).

Learning

“A relatively permanent change” (Bates, 2002, p. 229) in individual or organizational system capabilities achieved through formal interventions, such as training and development, as well as informal self-directed activities, for the purpose of enhancing human potential (Swanson & Holton, 2001).

Millennium Development Goals (MDGs)

A set of eight broad goals for human development that represents a commitment made by world leaders in 2000 to work collectively toward concrete milestones (21 quantifiable targets measured by 60 indicators) designed to free the major portion of the world's humanity from extreme poverty, hunger, illiteracy, and disease by 2015: (a) Goal 1: Eradicate extreme poverty and hunger, (b) Goal 2: Achieve universal primary education, (c) Goal 3: Promote gender equality and empower women, (d) Goal 4: Reduce child mortality, (e) Goal 5: Improve maternal health, (f) Goal 6: Combat HIV/AIDS, malaria and other diseases, (g) Goal 7: Ensure environmental sustainability, and (h) Goal 8: Develop a Global Partnership for Development (UNDP, 2011b).

National Human Resource Development (NHRD)

Definitions of NHRD range from a succinct statement, of national policy to address human resource development (Lynham & Cunningham, 2004; McLean, 2004), to McLean's (2008) all-encompassing explanation that "NHRD is an undertaking at the top level of government and throughout the country's society that coordinates all activities related to human development (HD) to create greater efficiency, effectiveness, competitiveness, satisfaction, productivity, knowledge, spirituality, and wellbeing. It includes education, health, safety, training, economic development, culture, science and technology, and any factors influencing HD" (A Tentative Definition, para. 1).

Organization

“A set of interdependent components having a purpose” and constituting a system that “... takes in inputs, acts on them through a transformation process, and releases them into the environment as outputs” (Swanson & Holton, 2001, p. 271).

Performance

The outcomes and achievements that result from the purposeful, goal-directed behavior of individuals and organizational systems (Bates, 2002; Swanson & Holton, 2001).

Policy

Sectoral and cross-sectoral frameworks and reforms designed to accelerate growth with equity for the purpose of promoting long-term human development (UNDP, 2011c).

Practice

Planned interventions and actions designed according to and aligned with policy for the purpose of promoting individual and organizational growth for increased organizational effectiveness (Swanson & Holton, 2001).

Stakeholder: Local-level

The local-level stakeholder was defined for purposes of this study as an entity affiliated with and demonstrating influence at the Individual level, at the locally-situated Organizational level, and/or at the lower Regional level of the emergent model. The Individual level represents the smallest unit characterizing the local-level stakeholder who might fulfill the role of head of household, farmer, activist, professional,

philanthropist, business owner or any other individual position. The Organizational level represents the smallest group (consisting of more than one entity) unit of local-level stakeholders and might be represented as a family, a local business, a local government, a university and surrounding community, or any group of individuals bound by a common purpose. At the lower Regional level, included with the analysis of local level stakeholders in carrying out this pre-fieldwork assessment, an immediate region, such as a portion of a province, or a small state is representative of the local-level stakeholder.

Stakeholder: Macro-level

The macro-level stakeholder is defined for purposes of this study as any stakeholder residing at the upper regional level or at the National or International level of the emergent model to demonstrate significant influence across regions to approach and often encompass the national level, and, frequently, to exert influence within the global community. The macro-level stakeholder might be represented by a regional government, an alliance of two or more regional governments, or a national corporation acting across two or more regions. At the national or international level, the macro-level stakeholder might be represented by a multinational corporation, or a multilateral organization such as the World Bank, the International Monetary Fund (IMF), or the United Nations Development Programme (UNDP).

Sustainable Development

“... the ways in which societies ... manage economic, social, political, and ecological processes to shape their development in ways that preserve the preconditions of development for future generations” (Bates, 2002, p. 230). Sustainable development is

implicated with social equity for current generations and is grounded in economics such that its achievement depends upon the implementation of a combination of policy initiatives, including investment in research, environmental technology development, and human capital development (Hughes & Johnston, 2005).

United Nations Development Programme (UNDP)

The global development network of the United Nations, comprised of partners working in 166 countries, advocates for change and connects countries with knowledge, experience and resources to assist their people in building their own context-specific solutions to global and national development challenges (UNDP, 2011d).

Wellbeing

A multidimensional description of the state of people's life situations that encompasses all aspects of human living (McGillivray, 2007, as cited in Conceicao & Bandura, 2008). Wellbeing is frequently measured in clusters of objective indicators, including GDP, income per capita, poverty, health outcomes, education achievements, empowerment and participation, and environmental degradation (Conceicao & Bandura, 2008). Subjective indicators of wellbeing can be analyzed, either independently or together with objective indicators. Clusters of subjective measures of wellbeing include self-reported happiness, "a balance between positive and negative affect", and life satisfaction, "individuals' perceived distance from their aspirations" (Conceicao & Bandura, 2008, p. 5).

Literature Informing Development of Theory for Use in the Applied Social Sciences

Theory building, particularly when intended for use in the applied disciplines such as HRD, has the important work of “describe[ing] and explain[ing] how things actually work and, in so doing, to help us improve our actions in this world” (Lynham, 2002, p. 221). “Good theory,” advises Van de Ven (1989), a scholar of organization and management theory, “is practical precisely because it advances knowledge in a scientific discipline, guides research toward crucial questions, and enlightens the profession” (p. 486). Goodson (2009), a researcher in health behavior, contends that theory developed for application in the social science disciplines, though defined in many ways, serves the practical purpose of making sense of reality by means of three primary functions: description, explanation, and prediction. Drawing from Denzin (1970), a sociologist and scholar of qualitative inquiry, Goodson (2009) explicates this three-part purpose for theory development. First, the theorist-researcher is called upon to “describe the phenomena [s]he is studying so that others can repeat his [her] descriptions with a high degree of agreement” (Denzin, 1970, p. 31; Goodson, 2009). Second, according to Goodson (2009), theories explain the phenomenon in question by clarifying and deepening understanding of the nature, function, and meaning of the phenomenon. Thus, the theorist-researcher aims to recreate reality through “the construction of a system of interrelated propositions that permits the scientist to ‘make sense’ out of the events observed” (Denzin, 1970, p. 31). And, third, theories predict the events and circumstances, the actions and interactions, of specific variables that create the occurrence of the phenomenon under study (Goodson, 2009).

“If a [researcher-theorist] claims to have explained why a given set of variables occurs together, [s]he must be able to predict the future relationships” (Denzin, 1970, p. 31). Dubin (1978), a behavioral scientist, whose hypothetico-deductive theory-to-research methodology for the conceptualization, operationalization, and testing of theory is well-known and widely-utilized in the applied social sciences contends that theory offers “viable models of the empirical world that can be comprehended by the human mind” (p. 2). Dubin further clarifies that, “These theoretical models are intensely practical, for the predictions derived from them are the grounds on which modern man is increasingly ordering his relationships with the environing universe” (1978, p. 2). The hypothetico-deductive theory building process, then, is undertaken to produce trustworthy and useful knowledge for the purpose of predicting, and thereby controlling, phenomena in the real world.

In recent years, as attempts at theory construction have increased in the applied disciplines, scholars in their respective fields have begun to attend to the need for rigorous evaluative criteria for addressing issues of quality. Bacharach (1989), a management scientist, refers to systems that, to be categorized as true theory, must strive to fulfill two criteria: (a) falsifiability, that is, the theoretical system must be sufficiently coherent and precise so as to support empirical refutation, and (b) utility, that is, the theoretical system must be adequately useful and flexible in bridging research and practice. Van de Ven (1989) urges researcher-theorists to address inconsistencies and flaws impeding the practicality of existing theories through clarification of their micro-meso-macro levels of reference, further consideration of the element of time, and

correction of flaws in logic. Goodson (2009) cautions, however, that definitions, descriptions, explanations, predictions, and evaluative criteria do not, of themselves, constitute theory building nor do they comprise actual theory. “What lends these explanations the status of theory is the manner in which the explanations are connected, derived from, or related to each other” (Goodson, 2009, p. 6).

Operational Definitions of Terms Drawn from Theory Development Literature

The following is a listing of terms drawn from the research literature addressing theory development that hold relevance for the present study. An operational definition, contextualizing application of the term as it is employed throughout the study documented within this dissertation, is provided for each term.

Conceptual, Multi-level Model

A taxonomic framework constructed to capture, organize and make understandable the relationships among multiple concepts (Bates, 2002) and link them at more than one level through specification of their laws of interaction, boundaries, system states, propositions (Dubin, 1978) and collective constructs (Morgeson & Hofmann, 1999).

Multi-level Theory

Theory that “span[s] the levels of organizational behavior and performance ... to bridge the micro-macro divide, integrating the micro domain’s focus on individuals and groups with the macro domain’s focus on organizations, environments, and strategy” to produce “a deeper, richer portrait of organizational life” (Klein, Tosi, & Cannella, 1999, p. 243).

Paradigm

“Accepted examples of actual scientific practice – examples which include law, theory, application, and instrumentation together – provide models from which spring particular coherent traditions of scientific research” (Kuhn, 1996, p. 10).

Theoretical Model

An “intensely practical” representation and explanation of a phenomenon that consists of specified units, laws of interaction, boundaries, system states, and articulated propositions (Dubin, 1978, p. 2). The predictions derived from theoretical models “are the grounds on which modern man is increasingly ordering his relationships with the enviroing universe” (p. 2).

Theory Building

“Theory building is the ongoing process of producing, confirming/disconfirming, applying, and adapting and refining theory” (Lynham, 2002, p. 222), a set of procedures that “is informed and influenced by one’s view or definition of theory” (Lynham, 2000b, p. 161). In the applied disciplines such as HRD, theory building has the important work of “describe[ing] and explain[ing] how things actually work and, in so doing, to help us improve our actions in this world” (Lynham, 2002, p. 221).

Theory Building – Hypothetico-Deductive Method

The hypothetico-deductive method is a theory-then-research strategy for theory development that calls for the formulation of theoretical concepts prior to data collection and analysis. A positivistic/post-positivistic perspective based in the scientific method, this deductive approach rests in the researcher-theorist’s development of a hypothesis

designed to predict a phenomenon, which is then subject to verification, revision and refinement (Lynham, 2002) based on comparison with the actual phenomenon in the world and the capacity of the emergent theory to accurately describe, explain and predict that phenomenon (Denzin, 1970; Goodson, 2009). Rigor and exactness, parsimony, completeness, consistency, conformity, homogeneity, accuracy, and reliability are evaluative criteria for assessment of theory constructed through use of the hypothetico-deductive method (Dubin, 1978).

Theory Building – Interpretive/SocialConstructivist Perspective

The interpretive/constructivist perspective prioritizes “the importance of contextual influences on theory building and the belief that the phenomenon being researched cannot be separated from the process of research” (Lynham, 2000b, p. 166). This naturalistic approach to theory development calls for focused study of social and organizational phenomena through the gathering of data, by observation and interview, about a phenomenon from multiple sources and stakeholders. Interpretive methods, such as code analysis, are applied to collected data for the inductive formulation of theory that “provides deep and widely accessible understanding” (Lincoln & Lynham, 2011, p. 9) in its representation of “actual events, behaviours, or the meaning making activities of stakeholders” (p. 12) associated with the phenomenon under study. Criteria for assessing theory developed from an interpretive/constructivist perspective include meaningfulness and understandability, thick description and insightfulness, narrative elegance, transferability, mutuality of concepts and descriptive logic, empirical verifiability, fruitfulness and provocativeness, usefulness and applicability, compellingness,

saturation, prompt to action, fittingness, and transferability and transportability (Lincoln & Lynham, 2011).

Theory Building – Multi-Level (MLTB)

“The primary goal of the multi-level perspective in [theory building methodology for] organizational science is to identify principles that enable a more integrated understanding of phenomena that unfold across levels in organizations” (Kozlowski & Klein, 2000, p. 5) by “specifying relationships between phenomena at higher and at lower levels of analysis” (p. 9).

CHAPTER III

METHODOLOGY AND METHODS

Methodological Approach to the Research

Initially, it seemed that a theory construction methodology might be employed to develop theory to describe, explain, predict, verify, and, thereby, serve as a tool for improving the interactions between the elements necessary to the formulation of NHRD policy for implementation in the shape of strategic practice. As noted in the dedicated review of HRD literature informing NHRD, presented in Chapter II of this dissertation, Lynham and Cunningham (2006) first called for an “integrative and collaborative theoretical and sense-making framework” for NHRD (p. 116). Later, in responding to Wang and Swanson’s critique of the existence of NHRD, McLean et al. (2008) advised that “while still developing an understanding of the units that might constitute NHRD, and how they might interrelate, ad hoc theory development is an epistemically and methodologically responsible choice of approach” (Lynham, 2002; Toracco & Holton, 2002 as cited in McLean et al., 2008, p. 245).

Theories seem to outgrow their role and purpose, however, when they become overly large and progressively more complex. In carefully considering the formulating of HRD at the national level, a multi-part and multi-level course of action that must occur synchronously on both the micro and macro scales, it eventually became clear that a single theory could not adequately capture both the specificity and the flexibility, let alone attend to the transferability and the sustainability across multiple contexts, of such a grand, yet intricate, process.

Instead, an informed, conceptualized, multi-level model attempting to represent and explain the elements and their interactions necessary to the formulation of NHRD policy was developed to enhance understanding of NHRD and to advance the study of NHRD policy. Whetten (2002) advocated the use of “graphical models” for theory development, as well as for improving explanations underpinning existing theory. As “tools of scholarship”, models provide “systematic frameworks for codifying the constitutive elements” of theoretical explanations (Whetten, 2002, p. 50). Models further serve as “instruments of effective discourse” for both scholarly and practical conversations around a phenomenon under study by enabling “storytellers [to] highlight the main features of their explanations” (p. 50).

Still, it is important to acknowledge that a research methodology for construction of theory does lend necessary structure and logic to the process of capturing, conceptualizing, and assembling the concepts and the elements necessary to the formulation of NHRD and juxtaposing them at multiple organizational levels. Further, as the emergent, multi-level model undergoes further testing, in terms of both theoretical and direct application in the field, it will become refined such that one or more theories might eventually be drawn from the model. Therefore, a multi-level theory building methodology was followed as an approximate guide in the construction of an informed, conceptualized, three-level, flexible model designed to represent and convey understanding of the process by which national background and characteristics, national and human resources, and the efforts and interests and power structure amongst participating actors and potential partners, all infused by influences of the national

economic, political, and socio-cultural environment, might be integrated toward the collaborative formulation of NHRD.

Relationship between the Researcher-Theorist and Development of Models and Theory

A theorist, advises Dubin (1978),

is someone who observes a portion of the world around him[her] and seeks to find order in the booming, bustling confusion that is the realm of experience. The idea of order, and the tools utilized to create the sense of order, [and to evaluate the outcomes resulting from attempts to introduce order] are in the mind of the theorist (p. 5).

The relationship between the researcher-theorist and the theory-to-research process of constructing, evaluating, judging, testing, and refining applied theory, and models from which theory for use in the applied disciplines might subsequently be derived, "... demands that the theorist have expertise of both the phenomenon central to the theory as well as of the theory-building method itself" (Campbell, 1990; Cohen, 1991; Dubin, 1976; Gioia & Pitre, 1990; Hearn, 1958; Patterson, 1986; Reynolds, 1971; Van de Ven, 1989 as cited in Lynham, 2002, p. 228). The researcher-theorist becomes deeply interconnected with the task of constructing and assessing models or theory through the simultaneous operations of reliving the experience of the phenomenon and imparting both the lived and the learned knowledge of the subject area under study. This process occurs through continuous acquisition of expertise in theory research

methodology, and coexistence with the profound reliance on her or his informed imagination, "... an imagination informed by both existing research and literature and by her own experience of the nature of the phenomenon of the theory in the real world" (Lynham, 2000a, p. 12).

Applied theory-building is a process requiring the theorist to interact with and be informed by both the expertise around the phenomenon in practice and her or his acquired mastery of the phenomenon in theory (Lynham, 2002). "In this way, both knowledge of and knowledge about the phenomenon central to the theory are brought together through the theory-building process and are ordered according to the internal logic, or logic-in-use, and informed imagination of the theorist" (Cohen, 1991; Dubin, 1978; Reynolds, 1971; Weick, 1995 as cited in Lynham, 2002, p. 228). A conversation, thus, evolves among the several modes of learning and understanding of the phenomenon under study - experience, learned knowledge, expertise, and imagination - as the researcher-theorist moves recursively between one and another, and then the next one, and then back again, engaging each of these sources of knowing to "facilitate the accumulation of relevant and rigorous theoretical knowledge of the phenomenon in the experienced world" that becomes "the focus of the theory and the theory-building method itself" (Lynham, 2002, p. 229).

Model Building: Balancing Specificity with Flexibility for Transferability

In melding the contributions of existing research and documentation addressing the subject to be theorized with observation and experience of the phenomenon in the world and the addition of theory building ability and informed imagination, the

researcher-theorist attempts to craft a theory, or model, that will be at once specific, flexible, and transferable. “Constructs that are too narrowly conceptualized will lack generalizability, while those that are too broad in scope lack empirical adequacy and cannot be operationalized and tested” (Reynolds Fisher, 2000, p. 23). In its representation of the formulation of NHRD, the model under development strives to observe the parallel goals of specificity and flexibility, so often divergent but, for this purpose, necessarily coordinated so as to insure the transferability and utility of outcomes and results for all invested stakeholders, including individuals, organizations, communities, regions, entire nations, and for the global community at large.

The model under development intends to coordinate stakeholder collection, organization, examination, and evaluation of comprehensive sets of data detailing national background, national characteristics, national resources, and the efforts and interests of participating actors and potential partners, interacting at the individual, organizational, community, and national levels, all individually and collectively integrated with the surrounding economic, political, and socio-cultural environment and influenced by the distribution of power and agency amongst these elements. Additionally, the model situates the extensive data collection process within the regional and global megatrends (Rose, 2009) that intentionally and unintentionally stand to influence NHRD policy and consequences. Use of the forthcoming model as a fundamental roadmap by national governments, together with current and prospective partners such as national and multinational enterprises and NGOs, to engage in dialogue around the collecting and analyzing of requisite data for formulating NHRD policy to

inform strategic practice proposes to yield outcomes that will reliably point a way forward for nations as they move from concept to action in developing and launching individualized NHRD strategies and initiatives. A detailed micro-view and representation of the elements comprising the informed, conceptual, multi-level model of the formulation of NHRD and their structural and operational roles and responsibilities within the model is provided in Appendix B of this dissertation.

Competing Objectives for Models and Theory in the Applied Disciplines

Lincoln and Lynham (2011) affirmed that theories can be constructed from different paradigms of inquiry, and that “having more than one ontological perspective allows for a richer, more complete consideration of the question, and helps to overcome the danger/propensity to *overlook* a whole plethora of useful applied theories and practical implications” (p. 19). “Impeccable micro logic creat[es] macro nonsense!” claimed Van de Ven (1989) such that “a way of seeing is a way of not seeing” (p. 487). The present research effort overlapped one paradigmatic form of inquiry with another, the critical realist paradigm with the social constructivist paradigm, to perform an assessment intended to unveil at least twice as much new knowledge than that which might become visible through the more limiting evaluative lens of a singular paradigmatic form, about the informed, conceptual, multi-level model of the formulation of NHRD.

Use of a dual-paradigm method for assessment urged the researcher-theorist to compare, contrast, accommodate, and evaluate the now-seen from both paradigmatic perspectives, to generate knowledge for deepened, more complete understanding of the

model under development and its capacity for representation of the formulation of NHRD. Such strategy rests on Gioia and Pitre's (1990) explication of triangulation in paradigmatic theorizing. "The intent here is to expand the concept of triangulation beyond the usual connotation of accuracy, or the finding of similarity, to encompass the notion of seeing how paradigmatic theorizing is similar, how it is different, and how it can facilitate a more comprehensive portrayal of organizations (Gioia & Pitre, 1990, p. 596). In constructing theory or models from dissimilar, or even opposing, axioms of inquiry, it is critical that the researcher-theorist insure that obtained results fulfill the quality criteria imposed by all contributing paradigmatic perspectives.

Theories in applied fields can be constructed to achieve multiple, even seemingly contradictory, purposes. "These theories must satisfactorily bridge seemingly disparate demands (e.g., of relevance and rigor, usefulness and validity) to provide adequately for the different kinds of knowledge and outcomes sought by their stakeholders" (Lincoln & Lynham, 2011, p. 9). Throughout the course of the present study, one particular paradigmatic form and its associated evaluative methodology, hypothetico-deductive (critical realist) or interpretivist (social constructivist), appeared prominent or more applicable for a time. However, it was the relationship achieved through the juxtaposition of these two paradigms that was necessary to reveal both the logical structure and profound representation of the emergent model. To enable such a relationship for the purpose of gaining the knowledge that it proposed to uncover required that neither methodology should, at any time, be permitted to completely dominate the other.

Research Design

It was the objective of the proposed research to conduct a pre-fieldwork, theoretical test of the forthcoming model, that may subsequently become theorized, or from which theory might eventually be drawn. This work undertook a formative evaluation of the logic and structure and also judged capacity for enabling rich, narrative explanation bringing about meaningful understanding demonstrated by the newly-emergent informed, multi-level, conceptual model, while it was still under development. The task was two-fold: (a) to evaluate the implicit validity, trustworthiness, and utility of the model in predicting, organizing, and structuring the elements necessary to the formulation of NHRD by measuring the model's adherence to the hypothetico-deductive criteria of excellence for theory building set forth by Dubin (1978) with the addition of a derived set of quality criteria for analysis of multiple levels, and (b) to assess the sufficiency of the model in "provide[ing] deep and widely accessible understanding" (Lincoln & Lynham, 2011, p. 9) in its interpretivist (social constructivist) representation of the "actual events, behaviors, [and] the meaning making activities" (Lincoln & Lynham, 2011, p. 12) undertaken and experienced by stakeholders and respondents in their collaboration, planning, and execution of the resources and actions necessary to formulate NHRD policy to guide the implementation of strategic practice.

While the proposed model is not yet a theoretical model, specification of the units, laws of interaction, levels, system states, boundaries, and collective constructs that comprise the structure and logic for its framework was generally guided by a multi-level theory building methodology. Therefore, it was important that the new model attends, to

the extent possible, to fulfilling the quality criteria for hypothetico-deductive theory building methodology, attributes that will contribute validity, trustworthiness, and utility to the construction of theories that might eventually be drawn from the model as it continues to be developed, refined, and verified. The model under development proposes to observe the criteria of excellence for theory building methodology as defined by Dubin (1978) with the addition of a set of quality criteria for analysis of multiple levels derived from the work of Chan (1998), Dubin (1978), Kozłowski and Klein (2000), Morgeson and Hofmann (1999), Reynolds Fisher (2000), and Rousseau (1985). In its representation of the formulation of NHRD policy, the forthcoming model aims to serve as a trustworthy and flexible, fundamental roadmap that can (and should) be individualized by nations as it guides and motivates their collection and organization of the national data (background, characteristics, resources, participating actors, and governance structure) that must be analyzed in preparation for shaping NHRD policy to inform strategic practice.

Concomitantly, the proposed model aspires to attend to the purpose of enhancing understanding of the activities, processes, and meaning-making associated with the formulation of NHRD, criteria for assessing theory from an interpretivist (social constructivist) perspective as defined by Lincoln and Lynham (2011), as it strives to achieve widespread appeal, applicability and use in its motivation and support for dialogue and collaboration around the development and implementation of NHRD. Ultimately, the emergent model is a tool offered for interpretation, adaptation, and execution by all nations as they begin to move from concept to action in planning their

individualized approaches to the formulating of NHRD policy for practice at the individual/organizational, community/regional and national/global levels.

That the forthcoming model of the formulation of NHRD policy for strategic practice attempts to satisfy these two seemingly contradictory sets of objectives, the criteria of excellence established as the evaluative standard for hypothetico-deductive theory building methodology and assessment criteria for judging the outcomes obtained through use of interpretivist theory building methodology, is representative of the complexity and the intricacy of constructing theory for application to human organizations in the applied social sciences. On one side, the emerging model must be logically and consistently organized and structured of replicable elements while, on the other side, it desires openness and flexibility in the quest to achieve rich, meaningful and accessible understanding in its representation of the unpredictability and disorganization of human behavior, experiences, and performance.

Population Definition and Sample Selection

The population that was examined as the focus of this research consisted of all nations comprising the world community in terms of their individual processes, or potential for planning such a process, for the formulating of NHRD policy for implementation as strategic practice. For the purposes of the evaluation undertaken in the present study, this population was represented by an informed, conceptual multi-level model, a roadmap, that proposes to structure and organize the elements and resources necessary to the process of formulating NHRD policy to guide strategic practice.

A review of the literature informing the policy and practice of human capacity development for the enhanced growth, performance, and wellbeing of individuals and their nations, Chapter 2 of this dissertation, documented case studies of several nations with current NHRD policy initiatives and their associated strategies and practices. This purposive sample of existing approaches to NHRD provided valuable insight into the characteristics of the phenomenon under study. In enabling the present research, these sample instances of observations and lived experience necessarily called for acknowledgement and accommodation by the forthcoming informed, conceptual, multi-level model in its representation of the formulation of NHRD. The research goal for this study, the theoretical evaluation of the proposed model, aimed to assess the integrity of the model in its valid and predictive representation and conveyance of rich, accessible understanding of the selected instances of NHRD. The model's fulfillment of the research goal was essential to its development as a trustworthy and meaningful guide for the nations comprising our global community as they engage in dialogue for the purpose of planning NHRD policy to be implemented in various forms of strategic practice.

Data Collection Procedures

Data was collected in the form of observations of the properties, organization, structure, and capacity for imparting “deep and widely accessible understanding” (Lincoln & Lynham, 2011, p. 9) of the informed, conceptual multi-level model of the formulation of NHRD. This collection of data represented the model's synthesis of existing knowledge informing current understanding of NHRD with concepts and understanding drawn from the economic, political, and socio-cultural foundations of the

discipline of sustainable human development for human growth and wellbeing, all extended with the researcher-theorist's "informed imagination ... of the nature of the phenomenon ... in the real world" (Lynham, 2000a, p. 12).

Description of Measures/Instruments

The instruments that permitted the researcher's measure of the rigor, validity, and trustworthiness of the organization and construction of the emerging model of the formulation of NHRD and its capacity for conveying rich, widely accessible understanding were two sets of quality criteria. The first of criteria was defined by the hypothetico-deductive theory building research methodology established by Dubin (1978) with the addition of an integrated multi-level theory building methodology as proposed by Reynolds Fisher (2000) and its derived set of quality criteria for analysis of multiple levels. The second set of criteria was established by Lincoln and Lynham (2011) for judging theory developed for HRD and the applied disciplines from an interpretivist perspective. The step-by-step process of evaluating the outcomes obtained through use of Dubin's (1978) research methodology for construction of theory are described in Chapter IV of this dissertation: Assessment 1: Evaluation of a Model of the Formulation of NHRD Using Quality Criteria of Excellence from Dubin's (1978) Hypothetico-Deductive Theory Building Methodology. Findings obtained through application of Lincoln and Lynham's (2011) interpretivist (social constructivist) methodology for assessing theory in HRD are described in Chapter V of this dissertation: Assessment 2: Evaluation of a Model of the Formulation of NHRD

Using Lincoln and Lynham's (2011) Criteria for Judging Theory in HRD from an Interpretivist Perspective.

Dubin's (1978) Two-Part, Eight-Step Theory Building Methodology

An invaluable contribution to theory building research methodology was the orderly two-part set of eight precise steps offered by Dubin (1978) as meticulous guidance to be followed in the development of theory. Dubin (1978) advised that good, valid, trustworthy, and useful theory building should result in two types of knowledge: (a) outcome knowledge to explain and predict a phenomenon, and (b) process knowledge to provide understanding of how a phenomenon works and what it suggests about the world.

The two parts of Dubin's hypothetico-deductive analytical research method are the theory development side that "results in an informed, conceptual framework of the theory" and the research operationalization side that "results in an empirically verified and trustworthy theory" (Lynham, 2002, p. 244). Each step insists upon satisfaction of specified criteria of excellence to insure first that the step is necessary and, if necessary, that it is sufficiently fulfilled in order to meet the requisite standards of rigor imposed by the hypothetico-deductive paradigm of theory building research. The criteria also provide the means by which to judge outcomes obtained upon completion of each step in the process, as well as the ultimate outcome, the theory or model that is achieved through satisfaction of all requirements delineated by the process.

*Conceptualization of a Model Representing the Formulation of NHRD Policy for
Implementation in the Form of Strategic Practice*

The conceptualization phase of Dubin's (1978) theory building methodology presents three categories of data, four principles of interaction, system boundaries, and system states, the satisfaction of all of which were necessary to construct the proposed model to guide the formulation of NHRD policy for implementation as practice. Each unit comprising the model was named, defined in terms of its conceptual dimensions, and related to all other units of the emerging theoretical model. Next, the laws of categoric and sequential interaction of the model were specified and then the boundaries of the model were determined. Finally, the system states of the theoretical model were defined. Upon completion of each of these steps, the obtained results were assessed for rigor by their comparison with quality criteria of excellence defined by Dubin (1978).

*Operationalization of a Model Representing the Formulation of NHRD Policy
for Implementation in the Form of Strategic Practice*

The operationalization phase of Dubin's (1978) theory building methodology specifies and describes the initial propositions and key empirical indicators for the proposed model describing the formulation of NHRD policy for strategic practice. As in the conceptualization phase, the outcomes obtained upon completion of each of these steps were assessed for rigor by comparing them with the "Criteria of Excellence" as set forth by Dubin (1978).

The newly-emergent informed, multi-level conceptual model, although still under development, proposed to fulfill the first four steps comprising the theory

conceptualization portion of Dubin's (1978) theory building research methodology (see Table 3 below pg 93). Fulfillment of the research operationalization and empirical testing portions of Dubin's (1978) method by the emergent model of the formulation of NHRD policy for strategic practice were identified as significantly dependent upon the findings of the present study, and should be undertaken within a future research agenda.

**Criteria of Excellence for Theory Building Research as Defined by
Dubin's (1978) Methodology**

The criteria employed as the foundation for the development of each step in the theory building process and as the measures of excellence against which all outcomes and results are to be compared, themselves, are dependent upon the method of theory building employed by the researcher-theorist. While the model under development is not yet a theoretical model, its construction did rely generally upon a multi-level theory building methodology in terms of the development of the units, laws of interaction, levels, boundaries, and system states of the model. Therefore, the capacity of these elements to meet the criteria for excellence established for theory building (Dubin, 1978) did, in turn, support the validity and trustworthiness of the model's description of the formulation of NHRD policy and, further, will contribute to the validity, trustworthiness, and utility of theories that might eventually be drawn from the model as it continues to be developed, refined, and verified.

Quality Criteria for Four Steps of the Theory Development Side of Dubin's (1978)

Methodology

The objective of the first stage of this theoretical research of the emergent model was to measure the results obtained from each of the steps completed toward the conceptualization and the construction of the model. The standard of measurement was the set of quality criteria of excellence defined and described by Dubin (1978) for assessing the rigor and accuracy with which each of the steps was fulfilled.

Step 1: Identification of Units:

The first step in the theory development side of Dubin's (1978) method required identification of the units of the theory, "The things about which the researcher is trying to make sense" (Lynham, 2002, p. 247). Dubin (1978) set forth five Criteria of Excellence, as follows, for evaluating the results obtained through the work of the researcher-theorist in identifying the units of a theory or model:

1. **Rigor and Exactness**

... relate to the use of attribute and/or variable units in the development of the theory. Attribute units are considered to be more primitive and therefore less exact than variable units. Although variable units are preferred to attribute units in a theory, the use of a combination of attribute and variable units is preferred over attribute units only. (Lynham, 2000a, p. 112)

2. **Parsimony**

Parsimony in a theory relates to the degree to which the theory contains a minimum of complexity and assumptions. Therefore, parsimony in the

development of the units of the theory is about the complexity of explanation used by the researcher-theorist in the presentation and discussion of the theory units. (Lynham, 2000a, p. 112)

3. Completeness

“The criterion of completeness is linked only to the use of associative units and the resulting possible zero [or even negative] value of these units” (Lynham, 2002, p. 248). “An associative unit is a property characteristic of a thing in only some of its conditions” such that it is “associated ... with the thing partially and under limited conditions” (Dubin, 1978, p. 60).

4. Logical Consistency

“The notion of logical consistency relates to the logic of the types of units combined in and used to compose the theory. The use of only one type of theory unit confines the results of the theory. ... What units the researcher-theorist decides to use in the theory therefore influences the kinds of studies that can later be used to gather and study data on the theory and, ultimately, be used to verify and refine the theory” (Lynham, 2002, p. 248).

5. Degree of Conformity to Limitations on Employment and Combination of the Units

The researcher-theorist must adhere to three limiting rules governing the combination of types of units in the theory (Lynham, 2000a). These rules are:

- a. “a relational unit is not combined in the same theory with enumerative or associative units that are themselves properties of those relational units” (Dubin, 1978, p. 73).
- b. “where a statistical unit is employed, it is by definition a property of a collective. In the same theory do not combine such a statistical unit with any kind of unit (enumerative, associative, or relational) describing a property of members of the same collective” (p. 74).
- c. “summative units have utility in education of and communication with those who are naive in a field. Summative units are not employed in scientific models” (p. 78).

Step 2: Establishing Laws of Interaction among Units:

The second step in the theory development side of Dubin’s (1978) method is, “an indispensable step in developing a scientific model [which] is to specify the interactions among the units employed in it” (Dubin, 1978, p. 89). Specification of the laws of interaction of a model requires identification of “... a linkage or connection among two or more units” ... “It [a law] is a statement of relationship. It is the relationship that is the lawful part of it and not the definition or identification of units that are related” (Dubin, 1978, p. 90).

Dubin (1978) described three types of laws of interaction: (a) Categorical, (b) Sequential, and (c) Determinant. “A categorical law of interaction is one that states that values of a unit are associated with values of another unit” (Dubin, 1978, p. 98).

However, “It does not matter whether one or the other of the units comes first in the

statement of the [Categoric] law” (Dubin, 1978, p. 100). The categoric law, according to Dubin (1978), is the most common law of interaction in the social and behavioral sciences. “A sequential law of interaction is one always employing a time dimension. The time dimension is used to order the relationship among two or more units” (Dubin, 1978, p. 101). Dubin (1978) cautioned that sequential laws order units, but never create causal sequences and, therefore, must not be confused with causal laws as “A determinant law of interaction is one that associates determinate values of one unit with determinate values of another unit” (p. 106). “The most common expression of this kind of a law of interaction currently in the social sciences is in the form of a correlation for which a best-fitting trend line is calculated to represent the relation between the units being correlated” (p. 107). Dubin (1978) defined one Criteria of Excellence, as follows, for evaluating the results of the work of the researcher-theorist in specifying the laws of interaction of a theory or model:

Parsimony

... relates to the maximum versus the minimum number of laws required to relate the units of a theory at least once with each other. ... A system has a *minimum* of one law of interaction. Failure to contain at least one law means that there is no theory relating at least two units. The *maximum* number of laws of interaction for a system of n units is the number of laws necessary to relate the units two at a time each once with all the other units. (Dubin, 1978, p. 113)

It is important to note that, in specifying the laws of interaction of a theory, “Parsimony does not relate to the complexity of the statement of relationship or to the efficiency level of the law” (Dubin, 1978, p. 113).

Step 3: Determining Boundaries:

The third step in the theory development side of Dubin’s (1978) method was to set the boundaries of the theory “to make clear and explicit the limited portions of the world within which the theory is expected to hold” (Lynham, 2000a, p. 133). Lynham (2000a) further explained the necessity of distinguishing the boundaries of an emergent theory.

It must be remembered that a theory is an attempt by the researcher-theorist to model some theoretical aspect of the real world. ... The boundaries of a theory therefore establish those aspects of the real world that the theory is attempting to model and, in so doing, distinguish the theoretical domain of the theory from those aspects of the real world not addressed by the theory. (Lynham, 2000a, p. 132)

Dubin (1978) posited that a theory may have an open boundary, that is completely porous to the immediate external environment, or a closed boundary, that is not as porous to the external environment. Alternatively, the theory may be completely unlimited and unbounded. In a theory-to-research strategy for theory building, such as was employed to develop a model of the formulation of NHRD policy, the researcher-theorist determined the boundaries of the model using logic (Dubin, 1978).

Dubin (1978) advocated the use of an open boundary “when there is exchange over the boundary between the domains through which the boundary extends” (Torraco, 1994, p. 162) and a closed boundary when “exchange does not take place between the domains through which the boundary extends” (p. 162). Two Criteria of Excellence were established by Dubin (1978), as follows, for evaluating the results of the work of the researcher-theorist in delineating the boundaries of a theory or model:

1. Homogeneity

The criterion of homogeneity requires that “the units employed in the theory and the laws by which they interact satisfy the same boundary-determining criteria” (Dubin, 1978, p. 127).

2. Generalization

“The criterion of generalization of a theory relates to domain size of the theory” (Lynham, 2000a, p. 144) such that the bigger the domain, the more general the theory (Dubin, 1978).

Increasing the number of boundary-determining criteria in the development of a theory serves to decrease the eventual domain of the theory or model.

Step 4: Specification of System States and Their Effects:

The fourth step in the theory development side of Dubin’s (1978) method called for identification of the distinctive features of system states, the “state of the system as a whole” (p. 146), the recurrent or rare (or both) conditions under which a theory or model can be expected to operate.

Dubin (1978)

defined a system state as a condition of the system being modeled in which all the units of the system take on characteristic values that have persistence through time, regardless of the length of the time interval. All units of the system have values that are determinant, meaning they are measurable and distinctive for the state of the system (Lynham, 2000a, p. 146).

Advising that most social science theories have many possible system states, Dubin (1978) established three criteria of excellence for evaluating the results of the work of the researcher-theorist in identifying the system states of a theory or model:

1. Inclusiveness

The criterion of inclusiveness refers to the need for all the units of the system to be included in the system state of the theory (Dubin, 1978).

2. Persistence

The criterion of persistence requires that the system state endure through a meaningful period of time (Dubin, 1978).

3. Distinctiveness

The criterion of distinctiveness requires that all units take on determinant (measurable and distinctive) values for the system state (Dubin, 1978).

In organizing and assembling the emergent model of the formulation of NHRD policy, the researcher-theorist endeavored to fulfill the quality criteria proposed and defined by Dubin (1978) for conceptualization of theory through use of a hypothetico-deductive theory building methodology. The objective of this stage of the research was to measure the rigor and accuracy of outcomes obtained from each of the steps fulfilled toward construction of the model against the requisite quality criteria for theory. By means of such a deliberate process of evaluation, the validity and trustworthiness of the structure and organization of the model could be insured in terms of its capacity to represent the formulation of NHRD policy. A summary of Dubin's (1978) criteria for evaluating outcomes obtained using hypothetico-deductive methodology for theory construction is provided in Table 2. Although Dubin's quality criteria address both the theory conceptualization and research operationalization phases in the theory building process, only the theory conceptualization criteria were employed in construction of the model of the formulation of NHRD policy.

Table 2: Summary of criteria for evaluating outcomes obtained using Dubin’s (1978) hypothetico-deductive methodology for theory construction.

Part One: Conceptualization of a Model of the Formulation of NHRD Policy for Implementation as Strategic Practice	
Steps Comprising Part One	Criteria of Excellence for Part One
Units of the Theory	1.) Rigor and Exactness = use of Variable rather than Attribute units, and preferably combining both unit types 2.) Parsimony = minimization of complexity and assumptions. 3.) Completeness = use of associative units and their resulting possible zero [an absent or even negative] value 4.) Logical Consistency = logic of the types of units combined and used 5.) Degree of Conformity to the Limitations on Employment & Combination of Units = adherence to three limiting rules governing the combination of types of units
Laws of Interaction Among Units	1.) Parsimony = the maximum versus the minimum number of laws required to relate the units of a theory at least once with each other
Boundaries of the Theory	1.) Homogeneity = the units employed in the theory and the laws by which they interact satisfy the same boundary- determining criteria 2.) Generalization = the bigger the domain, the more general the theory
System States and their Effects on the Theory	1.) Inclusiveness = the need for all the units of the system to be included in the system state of the theory 2.) Persistence = requires that the system state endure through a meaningful period of time 3.) Distinctiveness = requires that all units take on determinant (measurable, distinctive) values for the system state

Table 2 Continued

Part Two: Research Operationalization of a Model Representing the Formulation of NHRD Policy for Implementation as Strategic Practice	
Steps Comprising Part Two	Criteria of Excellence for Part Two
Enumerate Propositions	1.) Consistency = truth of propositions must be established by reference to only one system of logic for all propositions 2.) Accuracy = degree to which the proposition follows logically from the theoretical model to which it applies 3.) Parsimony = specification of strategic propositions for testing to determine whether or not the theory accurately models the empirical domain it purports to represent
Initiate the Compilation of Empirical Indicators	1.) Operationism = identification of empirical indicators involves measurement of units that must be specified such that it is duplicable by others 2.) Reliability = results produced by measuring are identifiable such that they must produce equivalent values when measured by others
Compile Hypotheses	1.) Homology = each hypothesis must be homologous with the proposition for which it stands such that a hypothesis is established each time a unique empirical indicator is employed for any one unit designated in a proposition
Test the Theory's Predicted Values and Relationships	1.) Limitations on Research Operations = must be observed in accordance with the researcher-theorist's stance toward testing of the theory such that the purpose of testing (whether to prove or to improve) a theoretical model will determine the researcher-theorist's treatment of data identified as falling outside the predicted range of study

Defining and Evaluating Collective Constructs and Levels of a Multi-Level Model

”By their very nature, organizations are multi-level ... no construct is level free ... to examine organizational phenomena is thus to encounter levels issues” (Klein, Dansereau, & Hall, 1994, p. 109). Multi-level theory building captivates the informed imagination (Lynham, 2000a) and engrosses the mind of the researcher-theorist in its potential for translating the results obtained from the work of constructing theory and models into closer approximations of reality for application throughout the inquiry and practice of the applied disciplines, such as HRD. “The primary goal of the multi-level perspective in organizational science is to identify principles that enable a more integrated understanding of phenomena that unfold across levels in organizations” (Kozlowski & Klein, 2000, p. 7). Rousseau (1985) cautioned that failure by the researcher-theorist to identify or to specify levels during the processes of developing hypotheses, gathering data, analyzing data, and making generalizations threatens the validity of the theory or model under development.

Defining Collective Constructs and Levels

Drawing upon the understanding of nations as complex organizations, a multi-level theory building methodology was used as an approximate guide in conceptualizing the classification, organization, and structure of the elements necessary to fulfill the aim of the model under development in representing the formulation of NHRD policy for implementation in the shape of strategic practice. The model is composed of three levels, individual/organization, community/region, and national/global, that are, independently and collectively, integral to enhancing understanding of the intricate and complex

combination of components and processes by which HRD might be formed for implementation at the national level. As noted previously, the identification of levels enables the locating of specific conversations and investigations of current and future instances of NHRD, and permits the specification of component elements, the presence or absence or substitution of which alters the process of formulating NHRD and, therefore, stands to influence real life outcomes. Further, “multi-level theories may illuminate the steps organizational actors may take, individually and collectively, to yield organizational benefits” (Klein, Tosi, & Cannella, 1999, p. 243) and “creates a foundation for enhancing policy impact for the disciplines that study organizations” (Kozlowski & Klein, 2000, p. 45).

As elaborated within this dissertation, Dubin (1978) defined and described quality criteria of excellence, themselves grounded in the post-positivist perspective of theory development, for measuring the accuracy and rigor with which each step in the hypothetico-deductive theory building process is fulfilled. Dubin (1978), however, did not address the form or process of multi-level theory building beyond the mention of hierarchical positions being “... related only to the *consequences* of interaction when the systems are in active interaction” such that “whatever hierarchy is derived does not relate directly to the systems’ dynamic relationships” (p. 247). Indeed, “no single source exists to cut across differences and to guide the interested researcher in the application of multi-level concepts” (Kozlowski & Klein, 2000, p. 4). In the absence of guidance from Dubin (1978), or another well-regarded source, to mentor the development of the collective constructs and the levels comprising the forthcoming model describing the

formulation of NHRD, the researcher-theorist instead followed a recently-developed, integrated multi-level theory building framework put forward by Reynolds Fisher (2000) for use in HRD research.

A framework for multi-level theory building intended to represent organizations, proposed by Reynolds Fisher (2000), closely mirrors the four steps of the theory development phase together with the first step of the research operationalization phase of Dubin's (1978) theory building methodology. The integrated framework (Reynolds Fisher, 2000), however, incorporated five additional steps necessary to the definition of collective constructs and levels as delineated and described by Chan (1998), Kozlowski and Klein (2000), Morgeson and Hofmann (1999), and Rousseau (1985). In Table 4 (see page 101), the steps in theory building defined by Dubin's (1978) research method were compared with the steps described in Reynolds Fisher's (2000) integrated methodological model for multi-level theory building.

Five steps of Reynolds Fisher's (2000) integrated methodological model of multi-level theory building, designated with bold borders in Table 3, guided the construction of the collective constructs and the levels comprising the emerging model of the formulation of NHRD: 1.) Definition of Collective Constructs, 2.) Specification of Levels Including Boundaries, 3.) Identification of Laws of Interaction among Constructs, 4.) Specification of Functional Relationships among Levels, 5.) Specification of Sources of Variability among Levels. The researcher-theorist added a sixth step, Specification of Outcomes in Terms of Endogenous Variables, to the framework of steps proposed by Reynolds Fisher (2000) for construction of multi-level theory.

Table 3: Comparison of two theory construction methodologies: Dubin (1978) vs. Reynolds Fisher (2000).

Steps Comprising Dubin's (1978) Theory Building Research Methodology	Steps Comprising Reynolds Fisher's (2000) Integrated Methodological Model of Multi-Level Theory Building
Phase I: Theory Conceptualization	
Identify Units of the Theory	Definition of Theoretical Units (<i>Dubin, 1978</i>)
	Definition of Collective Constructs (<i>Morgeson & Hofmann, 1999</i>)
	Specification of Levels, Including Boundaries (<i>Rousseau, 1985</i>)
Establish Laws of Interaction Among Units	
Determine Boundaries of the Theory	Determination of Theoretical Boundaries (<i>Dubin, 1978</i>)
	Identification of Laws of Interaction Among Units (<i>Dubin, 1978</i>)
	Identification of Laws of Interaction Among Constructs (<i>Morgeson & Hofmann, 1999</i>)
	Specification of Functional Relationships Among Levels (<i>Rousseau, 1985; Morgeson & Hofmann, 1999; Chan, 1998</i>)
	Specification of Sources of Variability Among Levels (<i>Klein, Dansereau, & Hall, 1994</i>)
Specify System States and their Effects on the Theory	Definition of System States (<i>Dubin, 1978</i>)
<i>Phase II: Theory Research Operationalization</i>	
Enumerate Propositions	Statement of Propositions (<i>Dubin, 1978</i>)
Initiate Compilation of Empirical Indicators	

These steps represent the integration of elements of multi-level theory building from the work of Rousseau (1985), Chan (1998), Morgeson and Hofmann (1999), and Kozlowski and Klein (2000). The obtained outcomes, the collective constructs and levels of the emerging model, were evaluated by measuring them against the quality criteria of excellence defined by the theory building methodology(ies) that were employed in their construction. The capacity of the collective constructs and levels of the model to meet the specified criteria for excellence would eventually support the rigor, validity and trustworthiness of the forthcoming model, and of those theories which might subsequently be drawn from the model, in describing the formulation of NHRD.

Criteria of Excellence for Judging Construction of Collective Constructs and Levels

Reynolds Fisher (2000) did not define nor describe quality criteria of excellence for measuring the outcomes obtained from the ten steps set forth in the proposed integrated methodological model of multi-level theory building. (Those steps that corresponded directly with Dubin's (1978) theory building methodology could logically rely upon the quality criteria for assessment as previously established by Dubin.) Therefore, the original sources, as cited by Reynolds Fisher (2000), for each of the five steps followed in the construction of the collective constructs and the levels were consulted to determine whether the authors of these works offered formal quality criteria, or narrative or other forms of guidance, intended for assessing the outcomes resulting from use of these research methods. These derived quality criteria of excellence were then employed to evaluate the results of the work of the researcher-theorist in defining the collective constructs, specifying the levels including boundaries, identifying

the laws of interaction among constructs, specifying the functional relationships among levels, and specifying the sources of variability among levels (as indicated in Table 6 below, page 132) for the forthcoming model of the formulation of NHRD policy for implementation as strategic practice.

Step 1: Definition of Collective Constructs

The first step specified by Reynolds Fisher (2000) for construction of the collective constructs and multiple levels that distinguish multi-level models and theory was definition of the collective constructs demonstrated by the model or theory.

Collective constructs are tools, formed through the actions and interactions of individuals and groups comprising an organization, for creating logical and systematic associations among observable phenomena (Morgeson & Hofmann, 1999; Nunnally & Bernstein, 1994). Morgeson and Hofmann detailed the process of evolution and consequent forming of characteristics of collective constructs, a description that proposes three evaluative criteria of excellence for assessment of collective constructs.

1. **Descriptiveness of Contextual Causation** The criterion of descriptiveness of contextual causation requires clarification of the contextual conditions that produce a specified collective construct or set of collective constructs.
2. **Level-Specific Functionality** Level-specific functionality is a criterion necessitating specification of the function of a construct at the collective level and demonstration of subsequent output(s) from the same construct at lower organizational levels.

3. Distinguishing of Level of Existence and Level(s) of Measurement Both the level at which a collective construct resides and the level or levels at which it is measured must be distinguished in order for a model or theory to comply with the criterion, distinguishing of level of existence and level(s) of measurement.

Step 2: Specification of Levels, including boundaries

A model or a theory must be bounded in order to “establish those aspects of the real world that the theory is attempting to model and, in so doing, distinguish the theoretical domain of the theory from those aspects of the real world not addressed by the theory” (Lynham, 2000a, p. 132). So, too, the component levels of multi-level models and theory must be bounded to enumerate the distinct portion of the model or theory in which specified units are thought to reside. The second step identified by Reynolds Fisher (2000) for construction of multiple levels for models and theory, then, was specification of the levels, including boundaries of the levels. In defining two modes by which levels might function to comprise theory, Rousseau (1985) provided a foundation for two quality criteria for assessment of the levels, including their boundaries, of multi-level models and theory.

1. Functionalism/Reductionism

Functionalism/reductionism is a criterion requiring specification of the hierarchical levels of a model or theory in which the levels are functionally interdependent in terms of obtaining inputs or exchanging outputs (Rousseau, 1985), thus enabling determination of the relative positions

of units residing within each level of the model or theory.

2. Inclusion

The criterion of inclusion calls for specification of the levels of a model or theory in terms of their relative position to one another such that a relationship is achieved of levels as integral parts of a whole organization as attention is focused on the distinct types of units comprising the level, and the degree to which the level is contained and influenced by all other levels

Step 3: Identification of Laws of Interaction among Collective Constructs

The third step established by Reynolds Fisher (2000) for construction of multiple levels for models and theory was identification of the laws of interaction among the collective constructs defined during the first step of construction of multiple levels. Laws of interaction among constructs are actions connecting elements that comprise a collective, or connecting two or more distinct collectives that influence each other, and, consequently, influence an entire organizational system (Morgeson & Hofmann, 1999). Morgeson and Hofmann's (1999) research and discussion of interactions among collective constructs supported development of two quality criteria for assessment of laws of interaction among collective constructs.

1. Sufficiency

The criteria of sufficiency addresses the minimum number of interactions required to relate the components of a collective with one another such that a distinct collective is established, or the minimum interactions required to

establish influence from one distinct collective on one or more other distinct collectives to influence the entire collective, organization

2. Persistence

As a criterion, persistence requires that the laws of interaction among collective constructs, either in providing for a given collective construct or influencing, through the interrelating of two or more distinct collectives, the entire organization, must endure through a meaningful period of time

Step 4: Specification of Functional Relationships among Levels

Reynolds Fisher (2000) advised that specification of functional relationships among levels comprised the fourth step in construction of multiple levels for models and theory. Functional relationships among levels map the transformation of concepts across levels to create systematic frameworks of these relational processes (Chan, 1998) that are most often recognized as constructs. A typology of descriptive composition models that define the processes by which concepts might convene across multiple levels of models and theory to form collective constructs (Chan, 1998) provided for two quality criteria for assessment of functional relationships among levels.

1. Specification of Interactivity of Constructs among Levels

Specification of interactivity of constructs among levels is a criterion that calls for identification of the mode by which lower level units interact and convene to compose the concepts that become collective constructs at higher levels of a model or theory.

2. Identification of Composition Model Type

The criterion, identification of composition model type, requires specification of the type of composition model (Chan, 1998) that approximates the operational combination process by which lower level units produce collective constructs at higher levels of a model or theory.

Step 5: Specification of Sources of Variability among Levels

The fifth step identified by Reynolds Fisher (2000) to guide construction of multiple levels for models and theory was specification of sources of variability among levels. Sources of variability among Levels are the homogeneous, independent, or heterogeneous properties, with respect to the constructs represented, as expressed by the individuals or groups to whom the model or theory is intended to apply (Klein, Dansereau, & Hall, 1994). In compiling guidance for researchers seeking to understand the implications for variance that might result from designation of models or theory at one or more organizational levels, Klein, Dansereau, and Hall (1994) laid a foundation for two quality criteria for assessing specification of sources of variability among levels of models and theory.

1. Specification of Theoretical Level

Specification of theoretical level is a criterion necessitating designation of the organizational level or levels at which a model or theory is intended to be applicable. In making the distinction of organizational level, the researcher explicitly or implicitly predicts the sources of variability for the constructs represented in the model or theory under examination.

2. Degree of Explication of Assumptions of Variability

As a criterion, degree of explication of assumptions of variability requires the researcher-theorist to identify and explain the sources of predicted variability, homogeneity, independence, or heterogeneity among levels with respect to the constructs demonstrated in a model or theory.

Step 6: Specification of Outcomes in Terms of Endogenous Variables

A sixth step introduced by the researcher-theorist in performing the present study was specification of outcomes of theory in terms of endogenous variables.

Organizational outcomes recorded as endogenous variables are the products of the organizational process(es) that the model or theory intends to represent and explain (Kozlowski & Klein, 2000). As the variable products of the organizational processes under study, outcomes must be represented and accounted for during future operationalization and testing procedures.

1. Observability

The criterion of observability addresses the need to monitor the products or effects of a model or theory, and to determine the product properties in terms of their presence or absence, and increase, decrease, or status of remaining unchanged

2. Measurability

Measurability is a criterion requiring calculation of the products or effects of a model or theory and representation of calculated outcomes as endogenous variables for subsequent operationalization and testing.

Table 4: Summary of derived criteria for evaluating outcomes obtained in construction of collective constructs and levels through use of an integrated methodology for multi-level theory (Reynolds Fisher, 2000).

Construction of Collective Constructs and Levels of a Model of the Formulation of NHRD Policy for Strategic Practice	
Steps	Derived Criteria of Excellence for Construction of Collective Constructs and Levels in Multi-Level Theory
Definition of Collective Constructs (Morgeson & Hofmann, 1999)	<p>1.) Descriptiveness of Contextual Causation = clarification of the contextual conditions that produce a specified collective construct or set of collective constructs</p> <p>2.) Level-Specific Functionality = specification of the function of a construct at the collective level and demonstration of subsequent output at lower organizational levels</p> <p>3.) Distinguishing of Level of Existence and Level(s) of Measurement = both the level at which a collective construct resides and the level or levels at which it is measured must be distinguished</p>
Specification of Levels, including Boundaries (Rousseau, 1985)	<p>1.) Functionalism/Reductionism = specification of the hierarchical levels of a model or theory in which the levels are functionally interdependent in terms of obtaining inputs or exchanging outputs (Rousseau, 1985), thus enabling determination of the relative positions of units residing within each level of the model or theory</p> <p>2.) Inclusion = specification of the levels of a model or theory in terms of their relative position to one another such that a relationship is achieved of levels as integral parts of a whole organization as attention is focused on the distinct types of units comprising the level, and the degree to which the level is contained and influenced by all other levels</p>
Identification of Laws of Interaction among Constructs (Morgeson & Hofmann, 1999)	<p>1.) Sufficiency = the minimum number of interactions required to relate the components of a collective with one another such that a distinct collective is established, or the minimum interactions required to establish influence from one distinct collective on one or more other distinct collectives to influence the entire collective, organization</p> <p>2.) Persistence = requires that the laws of interaction among collective constructs, either providing for a given collective construct or influencing, through the interrelating of two or more distinct collectives, the entire organization, must endure through a meaningful period of time</p>

Table 4 Continued

Construction of Collective Constructs and Levels of a Model of the Formulation of NHRD Policy for Strategic Practice	
Steps	Derived Criteria of Excellence for Construction of Collective Constructs and Levels in Multi-Level Theory
Specification of Functional Relationships among Levels (Chan, 1998)	<p>1.) Specification of Interactivity of Constructs among Levels = identification of the mode by which lower level units convene to compose concepts which become collective constructs at higher levels</p> <p>2.) Identification of Composition Model Type = specification of the type of composition model (Chan, 1998) that most closely approximates the operational combination process by which lower level units produce collective constructs at higher levels of a model or theory</p>
Specification of Sources of Variability among Levels (Klein, Dansereau, & Hall, 1994)	<p>1.) Specification of Theoretical Level = stipulating the organizational level or levels at which a model or theory is intended to be applicable, thereby explicitly or implicitly predicting the sources of variability for the constructs represented</p> <p>2.) Degree of Explication of Assumptions of Variability = explication by the researcher-theorist of the sources of predicted variability, homogeneity, independence, or heterogeneity among levels with regard to the constructs of a model or theory</p>
Specification of Outcomes in Terms of Endogenous Variables (Kozlowski & Klein, 2000)	<p>1.) Observability = monitoring of the products or effects of a model or theory to determine properties of presence or absence, and increase, decrease, or status of remaining unchanged</p> <p>2.) Measurability = calculation of the effects of a model or theory and representation of calculated outcomes as endogenous variables for purposes of subsequent operationalization of the model or theory</p>

In addition to satisfying the quality criteria defined and described by Dubin (1978) for measuring the rigor and accuracy of the outcomes obtained from each step in the hypothetico-deductive theory building methodology, the emerging model of the formulation of NHRD endeavored to fulfill the integrated criteria of excellence for theory building methodology as these were derived from their original sources and outlined in Table 6 (see page 132). The objective of this research was to measure the results obtained from each of the steps completed toward the construction of the model under development against the quality criteria, both defined and derived, to assess the validity and trustworthiness of the structure and organization of the forthcoming model in its capacity to represent the formulation of NHRD.

Lincoln and Lynham's (2011) Criteria for Assessing HRD Theory from an Interpretivist Perspective

Lincoln and Lynham (2011) offered criteria for judging theory in HRD and applied disciplines from an interpretivist (social constructivist) perspective that recognizes and affirms, “the unexpected, the imaginative, the creative, the unusual, the deviation, the messiness, [that] are all unpredictable and simultaneously desirable characteristics of human life and activity” (p. 9). Deriving from Dubin's (1978) hypothetico-deductive quality criteria of excellence, Patterson (1983) developed a set of eight conventional criteria for the evaluation of theory that serve as a widely-referenced standard throughout the HRD literature addressing theory building and evaluation. Building from Patterson (1983), Lincoln and Lynham (2011) deconstructed and reconstructed the eight original conventional criteria to provide for the judging of theory

in HRD from an interpretivist perspective. Five new criteria were added to complete the set of 13 criteria introduced, defined, explained, and described by Lincoln and Lynham (2011) for assessing applied theory, including HRD theory. This set of 13 criteria offered by Lincoln and Lynham (2011) for judging HRD theory was applied in the evaluation of the quality of the emerging model of the formulation of NHRD from an interpretivist (social constructivist) perspective. The 13 criteria, detailed below, are meaningfulness and understandability, thick description and insightfulness, narrative elegance, transferability, mutuality of concepts and descriptive logic, empirical verifiability, fruitfulness and provocativeness, usefulness and applicability, compellingness, saturation, prompt to action, fittingness, and transferability and transportability.

1. Meaningfulness and Understandability

Derived from Patterson's (1983) criterion of *Importance*, stating that theory should be significant and relevant to life or real behavior, the criterion of *Meaningfulness and Understandability* (Lincoln & Lynham, 2011) advocated that interpretivist theory is not unimportant if it "provide[s] explanation and deep understanding of actual events, behaviors, or the meaning-making activities of stakeholders and respondents" (p. 12). Further, it is "equally important" that such theory be "accepted by professionals and stakeholders who co-constructed the theory" (p. 12).

2. Thick Description and Insightfulness

Lincoln and Lynham's (2011) criterion of *Thick Description and Insightfulness* originated in Patterson's (1983) criterion of *Precision and*

Clarity wherein Patterson called for internally consistent theory that should be free from ambiguities. Lincoln and Lynham (2011), however, posited that interpretive theory, “a rich or a thickly described theory that is widely applicable to many situations” (p. 12), will nearly always exhibit some ambiguity “since theories are built, at least in part, on the sense-making, meaning-making and socially constructed activities of respondents and stakeholders [themselves and their experiences inhabitants of our messy world]” (Lincoln & Lynham, 2010, p. 5). Therefore, “interpretive theory should ... be understandable and insightful; exhibit reasonable structural corroboration ([that is] be internally and contextually consistent); [and] accommodate some ambiguity (a hallmark characteristic of human affairs)” (p. 16) in its aim to achieve “clarity towards understanding (rather than prediction or control)” (p. 12).

3. Narrative Elegance

In reviewing Patterson’s (1983) criterion of *Parsimony and Simplicity*, Lincoln and Lynham (2011) concluded that *Parsimony* is a mathematical approach to theory that does not serve “the complexity of human affairs” (p. 12), and, therefore, is only constructive for interpretive theory where such theory concedes transferability and applicability. Instead, “an interpretive theory should ... be either simple or complex, depending on the matter or phenomenon being theorized; be understandable beyond the scientific community (i.e., accessible in natural language), narratively

elegant, and conceptually rich, provocative and evocative” (Lincoln & Lynham, 2011, p. 16).

4. Transferability

Patterson (1983) advocated that a theory should include all known data in the field under study to fulfill the criterion he termed *Comprehensiveness*.

Lincoln and Lynham (2011) contended rather that, “An interpretive theory should ... be as complete as possible” (p. 16) for the area of interest or

context “in which [it] is intended primarily to apply; they [theories] only begin to gain comprehensiveness when others see their utility and begin to transfer the learnings to other settings and contexts” (p. 13). In renaming

the term *Transferability*, Lincoln and Lynham (2011) reinforced their

stance that “comprehensiveness is not a characteristic of interpretivist theories - rather a consequence of their perceived utility [capacity to convey propositional or tacit knowledge] beyond the original context” (p. 13).

5. Mutuality of Concepts and Descriptive Logic

Patterson (1983) defined the criterion of *Operationality* as the capacity of a theory to be reduced to procedures so as to enable the testing of its propositions or predictions. Lincoln and Lynham (2011) challenged

Patterson’s requirement for *Operationality* on behalf of interpretive theory that is “never reduced to procedures” but, is instead, “elaborated by those who see their own lives reflected in [its] assumptions and narrations” (p.

13). The reshaped criterion, *Mutuality of Concepts and Descriptive Logic*

(Lincoln & Lynham, 2011), established that “an interpretive theory should ... display mutuality of concepts and descriptive logic; be made operational, i.e. the descriptive and explanatory framework (concepts, logic and propositions) are made explicit and thus able to be put into action; be capable of being tested by other researchers, and enjoy stakeholders assent to its usefulness for their lives and contexts” (p. 16). Although the concepts comprising interpretive theory need not be operationalized, “some may be used to indicate relationships, junctures, axes, or lines of organization between and among other concepts” (Lincoln & Lynham, 2011, p. 13).

6. Empirical Verifiability

Patterson (1983) stipulated the necessary criterion of *Empirical Validity or Verification* to evaluate a theory’s capacity to be supported and confirmed by experience and experiments such that the theory eventually generates new knowledge. In defining the criterion of *Empirical Verifiability*, Lincoln and Lynham (2011) drew from Patterson in their explanation that interpretive theory “cannot be tested with contrived experiments, but can against human experience” (p. 13), that it “should ... be supported by ‘lived experience,’ be verified by the respondents that it ‘rings true,’ or that it reflects some aspect of their experience, meaning-making, or observation; match some element of socially constructed life” (p. 16). Lincoln and Lynham (2011) further extended the criterion of *Empirical Verifiability*

further to require that interpretive theory should generate social scientific knowledge together with new learning on the part of respondents.

7. Fruitfulness and Provocativeness

Patterson (1983) called for theories to fulfill the criterion of *Fruitfulness*, the capacity to generate testable predictions that might advance the development of new thinking, new ideas, and new knowledge. Lincoln and Lynham (2011) expanded Patterson's concept in their description and explanation of *Fruitfulness and Provocativeness*, a criterion to be met by good quality interpretive theory. More precisely, *Fruitfulness* conveys “the capacity of the [interpretive] theory to lead to deep understanding, [and] the degree to which this understanding can be translated into action,” while *Provocativeness* “identify[ies] the degree to which [the theory] provokes the stimulation and development of new ideas, new theories, or new avenues of social action” (Lincoln & Lynham, 2011, p. 14). Lincoln and Lynham (2011) further referenced the important potential of interpretive theory to be *Fruitful and Provocative*, even in the absence of providing predictive possibilities, by stimulating innovative thinking and revolutionary social action” by “lead[ing] to disbelief or resistance in others [prior theory or ideas]” or “erase[ing] false consciousness” (p. 14).

8. Usefulness and Applicability

In setting forth the criterion of *Practicality*, Patterson (1983) advocated that theory should provide a conceptual framework for practice that might aid

practitioners in organizing their thinking and strategies. Lincoln and Lynham (2011) affirmed the criterion of *Practicality*, but renamed it as *Usefulness and Applicability*, to explain the necessary embrace of two elements by interpretive theory: (a) the provision by the theory of “deep and holistic understanding of practice” and (b) the utility of the theory in “organizing practitioner thinking and practice by providing a conceptual framework for that practice” (p. 14). Lincoln and Lynham (2011) further elaborated the notion of *Usefulness and Applicability* to state that, “interpretive theory should ... be useful and applicable to ordinary persons, suggesting ways of being in the world, or ways of altering one’s circumstances in some context; provide new ways of seeing old situations, such that meaningful human change can occur; provide models for human flourishing, as living knowledge, and for practical application and high organizational performance” (p. 16).

9. Compellingness

Lincoln and Lynham (2011) developed the criterion of *Compellingness*, the ability of interpretive research and theory to “move stakeholders to action” (p. 16), to “recognize and honor the abandonment of the detached observer, by re-inserting social science’s mandate to provide information for positive action in the world” (Lincoln & Lynham, 2010, p. 13). To fulfill the criterion of *Compellingness*, interpretive theory must satisfy two components: (a) give rise to “findings that mirror the ineffable experience

of respondent audiences (fidelity, or internal validity)” (Lincoln & Lynham, 2011, p. 16), and (b) “create a vicarious, emotional response in those who read/experience it, which acts as a prompt to action on the part of some stake-holding audience” (Lincoln & Lynham, 2010, p. 14). Lincoln and Lynham (2011) clarified that a stakeholder audience engaged with research and its attendant questions or issues is broad and inclusive of the researchers, communities and participants engaged with the research, and anyone, such as policy groups, members of governance, and funders of the research, who has a legitimate stake in the research findings, policy process, and subsequent policy.

10. Saturation

The criterion of *Saturation*, as put forward by Lincoln and Lynham (2011), designates two points that are reached when little new knowledge is forthcoming from an interpretive theory’s process of assembling social constructions and meaning-making narratives to inform a theory system. The stage of *Saturation* exists at two points: “The first form of Saturation refers to the narratives and respondents’ explanations having been exhaustively sampled; the second form exists when multiple examples of the phenomenon can be found independently, that is, by independent researchers” (Lincoln & Lynham, 2010, p. 14). Accordingly, a theory is said to be “saturated with exemplars” when it is known to be supported by

multiple examples in the real world of the phenomenon that is being theorized (Lincoln & Lynham, 2011, p. 17).

11. Prompt to Action

Lincoln and Lynham (2011) built the criterion of *Prompt to Action* around the fundamental notion guiding quality research, that is, “An interpretive theory should ... provide a good conceptual understanding of practice” (p. 17). The earlier-defined criterion of *Compellingness* (Lincoln & Lynham, 2011) is “inextricably linked” with and gave rise to the criterion of *Prompt to Action* and its call to “connect theory with action and learning [in context] for continuous refinement and improvement” (Lincoln & Lynham, 2011, p. 17). “Prompts to action include prompts to refine, hone, sharpen and revise practice – to alter performance in the light of new information” (Lincoln & Lynham, 2010, p. 14) and, thus, promote continuous refinement of the theory, itself. Lincoln and Lynham (2011) further explained that the criterion, *Prompt to Action* “consequently relates to the persuasiveness of a theory and is both multi-leveled and multi-layered” (Lincoln & Lynham, 2010, p. 15

A theory can be persuasively imbued when it has the ability to persuade people to act and to do so on multiple levels separately or simultaneously for example, rhetorically, emotionally and psychologically. A theory can also possess the ability to persuade action on multiple layers—for example, individually (self) and collectively (self and others). When a theory acts to

move people to act then it can be said that it becomes a *prompt to action* and thus satisfies this criterion (p. Lincoln & Lynham, 2010, p. 15).

12. Fittingness

Fittingness was defined by Lincoln and Lynham (2011) as the extent to which an interpretive theory is “rooted in local context”, with the context, itself, created and grounded in “native and indigenous perspectives, meanings and narratives” (p. 17). Recognition of “equifinality”, that “there can be no final solution to any given problem - rather that there are multiple, endlessly creative responses or solutions, any of which might be satisfactory in a given context” (Lincoln & Lynham, 2011, p. 17), is necessary for interpretivist theories to satisfy the criterion of *Fittingness*. As a criterion, *Fittingness* enables a researcher to consider whether the “paradigm and methods chosen to explore the question exhibit high fit/resonance/alignment with the research or theory question itself” (Lincoln & Lynham, 2010, p. 16).

13. Transferability and Transportability

Lincoln and Lynham (2011) established the dual criterion of *Transferability and Transportability* for interpretivist theory to reference two linked properties, transfer and transport, associated with the usability of good quality theory. *Transferability* of a theory, a property determined by the interaction between the user(s) who would employ research and theory and the research or theory, itself, describes “the ability in individuals (through

interaction between the knower and the known) to carry propositional and/or tacit knowledge from one context to inform another, or multiple other, contexts” (Lincoln & Lynham, 2011, p. 17). *Transportability* describes the capacity of interpretive theory to become increasingly inclusive in terms of “applicability to different populations, of utility in varying contexts, with varying populations” (Lincoln & Lynham, 2011, p. 17).

The second test of the forthcoming model of the formulation of NHRD assessed the model by application of the 13 criteria offered by Lincoln and Lynham (2011) (summarized in Table 5) for assessing theory in applied disciplines, such as HRD, from an Interpretive (Social/Constructivist) perspective.

Table 5: Thirteen criteria for assessment of theory in applied disciplines from an interpretive (social/constructivist) perspective (Lincoln & Lynham, 2010, p. 5).

Criteria	Description of Criteria for Assessing Theory from an Interpretive Perspective (Lincoln & Lynham, 2010)
<i>Meaningfulness & Understandability</i>	A theory should provide explanation and deep understanding of actual events, behaviors, or the meaning-making activities of stakeholders and respondents; and should be accepted by professionals and stakeholders who co-constructed the theory.
<i>Thick Description & Insightfulness</i>	A theory should be understandable and insightful, and should exhibit reasonable structural corroboration (that is, be internally and contextually consistent). However, some ambiguity will always exist (as ambiguity is taken to be a hallmark characteristic of human affairs), since theories are built, at least in part, on the sense-making, meaning-making and socially constructed activities of respondents and stakeholders.
<i>Narrative Elegance</i>	An interpretive theory may be either simple or complex, depending on the matter or phenomenon which is being theorized. Such theory ought to be understandable beyond the scientific community (i.e., accessible in natural language), narratively elegant, and conceptually rich, provocative and evocative.
<i>Transferability</i>	A theory should be as complete as is possible, given its intended range, that is, local, regional or grand theorizing, so that other users may see the extent to which the theory may be useful in their own situation/context. Transferability references the ability of individuals to carry propositional and/or tacit knowledge from one context to inform another, or multiple other contexts.
<i>Mutuality of Concepts and Descriptive Logic</i>	Mutuality of concepts and descriptive logic refer to the extent to which the theory is made operational, that is, the extent to which the descriptive and explanatory framework that constitutes the theory, is made explicit and thus can be put into action. A theory is therefore operational if its concepts are richly described, its descriptive logic is made explicit and, together with its propositions, is capable of being tested by other researchers, and the stakeholders to whom it is intended to apply assent to its usefulness for their lives and contexts.
<i>Empirical Verifiability</i>	Theories must be supported by what anthropologists term ‘lived experience,’ be verified by respondents that it ‘rings true,’ or reflects some aspect of their experience, meaning-making, or observation, must match some element of socially constructed life, and generate new social scientific knowledge, and new respondent learning.
<i>Usefulness and Applicability</i>	Theories are useful and applicable to ordinary persons to the extent that they suggest ways of being in the world, or ways of altering one’s circumstances in some context. Theories provide new ways of seeing old situations, such that meaningful human change can occur. At their best, theories provide models for human flourishing (Reason 1997; Heron, 1996), as living knowledge (Schwandt, 1996), and for practical application (Heron, 1996) and high organizational performance (Lincoln and Guba, 1985; Swanson, 1999).

Table 5 Continued

Criteria	Description of Criteria for Assessing Theory from an Interpretive Perspective (Lincoln & Lynham, 2010)
<i>Compellingness</i>	A theory should demonstrate the ability to move stakeholders to action. Two such components need to be satisfied: the first is that the findings mirror the ineffable experience of respondent audiences (fidelity, or internal validity); and the second is that the research creates a vicarious, emotional response in those who read/experience it, which acts as a prompt to action on the part of some stake-holding audience (not just the research funders but a wider set of audiences who have a legitimate stake in the findings, including researchers, other communities, policy circles, legislators, and those who participated in the research).
<i>Saturation</i>	The social constructions and meaning-making narratives that inform the theory system should be such that little new knowledge is forthcoming and should exist at two points. The first refers to the narratives and respondents' explanations having been exhaustively sampled; and the second to that multiple examples of the phenomenon can be found independently (by independent researchers). To the extent to which the theory is buttressed by multiple examples of the phenomenon we can say that the theory itself is saturated with exemplars.
<i>Prompt to Action</i>	A good theory provides a good conceptual understanding of practice. Proceeding from compellingness (an inextricably linked criterion) the theory should help researchers and respondents to understand where and how to move next in a given context and includes how to refine, hone, sharpen, and revise practice, and to alter performance in the light of new information. This criterion closely connects theory with action and learning and so continuous refinement and improvement and should illustrate that good theory is essentially practical.
<i>Fittingness</i>	The extent to which a theories exhibit 'fittingness' with their derivative context, are rooted in local context, native and indigenous perspectives, meanings and narratives, and exhibit 'fit' with the notion of equifinality. This criterion recognizes there can be no final solution to any given problem—rather that there are multiple, endlessly creative responses or solutions, any of which might be satisfactory in a given context.
<i>Transferability & Transportability</i>	Transferability of a theory references the ability of individuals to carry propositional and/or tacit knowledge from one context to inform another, or multiple other, contexts, and is a property of the interaction between the knower and the known. Transportability, on the other hand, refers to the ability of a theory to apply to different populations. Transportability is therefore a quality of theories and theoretical perspectives, and reflects the relative utility of theories in varying contexts, with varying populations.

Two-Test Assessment of the Balance of Structure and Specificity with Flexibility for Transferability

“*Good science and good theory can and should be derived from multiple paradigms and epistemologies, and should reflect the multiple ways of knowing circulating in the social sciences’ paradigmatic, theoretical and methodological literature today*” (Lincoln & Lynham, 2011, p. 18). The forthcoming model of the formulation of NHRD resulted from the informed and conceptual development, classification, organization, and structuring of the elements necessary to the configuration of NHRD, a procedure that loosely follows a hypothetico-deductive theoretical methodology that was subsequently infused with interpretivist (social constructivist) qualities to convey rich understanding of the social processes of human behavior, experience, and performance. Thus, the model, still under development, endeavored to comply, to the extent possible, with the hypothetico-deductive quality criteria defined and described by Dubin (1978) for measuring the rigor and accuracy of the outcomes obtained from completion of each step in the hypothetico-deductive theory building methodology and supplemented with derived, integrated criteria of excellence for construction of levels and collective constructs (Reynolds Fisher, 2000) while also attending to interpretivist/constructivist quality criteria developed by Lincoln and Lynham (2011) for judging theory in HRD. On the hypothetico-deductive side, the emerging model aimed for logical and consistent construction of specified, replicable elements while, on the interpretive/constructivist side, the model under development desired openness and flexibility to achieve meaningful understanding in its representation of human activities and processes

(Lincoln & Lynham, 2011). Use of the two sets of paradigmatic criteria, the first a theoretical test and the second an interpretivist perspective, to evaluate the emergent model proposed to link the dual objectives, achievement of both specificity and flexibility in transferability, of the model, thus attending to the often contradictory requirements of complexity and intricacy in the development of theory intended for application in the applied social sciences.

*Determining Sufficiency of the Model in Fulfilling Quality Criteria of Excellence
Established by Dubin (1978) and Lincoln and Lynham (2011)*

Does the model under development fulfill any, most, or all of the quality criteria of excellence specified by the two prescribed sets of assessment criteria? How is the sufficiency of the model determined in its satisfaction of each requirement? Are there any of the stated quality criteria of excellence that are not fulfilled by the emerging model, and if so, how does the model fail to satisfy these criteria? Collectively, the responses to these questions determined whether the still-emergent model of the formulation of NHRD is worth pursuing in terms of undertaking the next steps set forth by the evaluative standards of theory building methodology for rigor and trustworthiness and rich description and widely accessible understanding. Specifically, should the researcher-theorist proceed with research operationalization for empirical testing of this model of the formulation of NHRD using data collected from the field? And should the researcher-theorist apply the model to the lived experience of the human undertaking in planning and implementing HRD policy at the national level?

Constant Comparison Method of Analysis

Lincoln and Guba (1985) described the constant comparison method of analysis as the “continuous and simultaneous collection *and* processing of data” (p. 335), a strategy [that] combines inductive category coding with a simultaneous comparison of all social incidents observed ... the discovery of relationships ... begins with the analysis of initial observations, undergoes continuous refinement throughout the data collection and analysis process, and continuously feeds back into the process of category coding. As events are constantly compared with previous events, new typological dimensions, as well as new relationships, may be discovered (Goetz & LeCompte, 1981, p. 58 as cited in Lincoln & Guba, 1985).

The constant comparison method of analysis enabled the researcher-theorist to compare the emergent model of the formulation of NHRD with each of two sets of quality criteria of excellence, the first established by Dubin (1978) and the second offered by Lincoln and Lynham (2011). More precisely, the constant comparison method of analysis was employed to measure each of the outcomes obtained from fulfillment of the steps completed in the conceptualization of the emerging model of the formulation of NHRD against the specified quality criteria of excellence established by Dubin (1978) for the evaluation of theory. Subsequently, the constant comparison method of analysis permitted the researcher-theorist to balance the entire model under development against

the interpretive criteria for judging applied theory delineated by Lincoln and Lynham (2011). A framework of questions, as follows, standardized the process for making each comparison.

1. What is the definition of the element of the model to be analyzed? (for use in applying criteria of excellence established by Dubin (1978)).
Or is the entire model the focus of the assessment?(for use in applying assessment criteria described by Lincoln & Lynham, (2011))
2. What are the quality criteria of excellence that have been specified and established for assessment of the element, or the model, under analysis? Does the element, or the model, fulfill the specified and established quality criteria of excellence?
3. If so, how does the element, or the model, fulfill the specified and established quality criteria of excellence?
4. According to a rating scale bearing rankings of *N/A*, *Low*, *Moderate*, and *High*, is the model sufficient in its satisfaction of the specified quality criteria of excellence?
5. In the case that the element, or the model, under analysis does not fulfill the specified and established quality criteria of excellence, how does the element, or the model, fail to satisfy these quality criteria?
6. In the case that the element, or the model, under analysis does not fulfill the specified and established quality criteria of excellence, how does the element, or the model, fail to satisfy these quality criteria?

In applying the constant comparison method of analysis to analyze the fit of the emergent model of the formulation of NHRD with established criteria of excellence, the criterion of excellence designated to measure each obtained outcome served as the category for comparison while the forthcoming model, itself, served as the observed social incident(s). In comparing the model's obtained outcomes, its properties and capacities, with their respective quality criteria, it was anticipated that there would be an initial observation by the researcher-theorist of the congruency of each outcome with its defined measure. As the process of making the comparisons continued, each one immediately following the preceding one, the researcher-theorist was likely to gain new insights around the emergent model that would serve to refine her initial observations, and then feed back into the continuous process of making the comparisons. The researcher-theorist documented each comparison in narrative description to detail her study of and observations made during the process of comparison. Such synthesis of narrative detail attempted to discern and report the nature of the perceived congruence, or incongruence, of each of the elements of the emerging model of the formulation of NHRD with the specified and established evaluative quality criteria of excellence. The characteristics of the model that fulfilled the governing quality criteria of excellence were noted and the characteristics of the model that did not fulfill the governing quality criteria of excellence were also recorded.

As observations, comparisons, and measurements of congruency and sufficiency or insufficiency were made, new dimensions of the forthcoming model were discovered, new relationships among the elements of the model were revealed, new learning

occurred, and the creation and accumulation of new knowledge took place. The activity and meaning-making inherent within the process of applying the constant comparison method of analysis to the model of the formulation of NHRD enabled the researcher-theorist to acquire a richer, deeper, more comprehensive understanding of the concepts and elements comprising the model, together with their organization, structure, trustworthiness and utility in providing for the formulation of HRD policy at the national level.

At the conclusion of each of the two assessments, a summary of the applicability of all the criteria assessed, accompanied by ratings of *Low*, *Moderate*, *High*, or *N/A* was compiled by the researcher-theorist. The summary for Assessment 1 was then analyzed to provide responses to Research Question 1 that was developed for the purpose of guiding this study:

How can Dubin's (1978) hypothetico-deductive criteria of excellence for theory building research methodology, with the addition of an integrated multi-level theory building method (Reynolds Fisher, 2000) and its derived set of quality criteria for analysis of multiple levels, be applied to the proposed informed, conceptual, multi-level model of the formulation of NHRD policy for planned implementation in the form of practice such that we can be reasonably certain of the validity, trustworthiness, and utility of the model in pinpointing,

explaining, and predicting the elements necessary to the formulation of NHRD policy?

The summary for Assessment 2 was analyzed to provide responses to Research Question 2 that was developed to guide this study:

How can we assess the sufficiency of the forthcoming model in “provide[ing] deep and widely accessible understanding” (Lincoln & Lynham, 2011, p. 9) in its interpretivist (social constructivist) representation of “actual events, behaviors, or the meaning making activities” (Lincoln & Lynham, 2011, p. 12) undertaken by stakeholders and respondents in their collaboration, organization, and allocation of the resources and elements from which NHRD policy is formulated for implementation in the form of strategic practice?

Finally, Chapter VI of this dissertation analyzed the summaries of both assessments to explicate the findings provided by their aggregate in terms of gaining new insight and understanding about the emerging model to respond to Research Question 3 that was set forth to guide this study:

In juxtaposing the findings revealed by the two tests, representative of contrasting paradigms for theory evaluation and assessment, Dubin’s (1978) hypothetico-deductive criteria of excellence for theory building research, with the addition of an integrated multi-level theory building method (Reynolds

Fisher, 2000) and its derived set of quality criteria for analysis of multiple levels, and Lincoln and Lynham's (2011) interpretive/constructivist assessment criteria for judging theory in HRD, what can be learned about the informed, conceptualized, multi-level model of the formulation of NHRD policy?

- a. In comparing and analyzing the outcomes obtained through application of each of the two tools for evaluation, what can be learned about the organizational and structural form of the model and about its potential and capacity for conveying depth of understanding?
- b. Does the model offer a sufficient or a deficient representation of the resources and component elements necessary to the process of formulating NHRD policy, and their collaborative roles and responsibilities in the activity, behavior, experience, and performance of composing NHRD policy for implementation?
- c. Is there, perhaps, more included in the model than is necessary to represent the formulation of NHRD policy?

Finally, the researcher-theorist responded to the broad question that motivates this study: Is the emergent model of the formulation of NHRD, policy in its present form, ready for and worthy of entering the next phase of theory building, that is, for research operationalization and empirical testing by application of data collected from one or more nations?

CHAPTER IV

ASSESSMENT 1: A CRITICAL-REALIST TEST OF THEORY

Application of Hypothetico-Deductive Criteria to Evaluate a Model of the Formulation of NHRD Policy

Dubin (1978) was centrally concerned with empirical processes employed in pursuit of scientific inquiry and upon which he developed a hypothetico-deductive, theory-to-research methodology to guide the development of theory.

1. What is the source of an hypothesis to test?
2. What are the necessary and sufficient characteristics of a theoretical model that will generate empirically testable hypotheses?
3. What is the nature of the test of an hypothesis?
4. What are the feedbacks from the empirical test of an hypothesis to the theoretical model generating it? (p. 1)

This hypothetico-deductive methodology provided for conceptualization of a model of the formulation of NHRD policy from which theory might eventually be drawn.

The conceptual development phase of Dubin's (1978) theory research methodology specified categories of data, principles of interaction, system boundaries, and system states, all necessary to theory or models representing activities and processes in the applied disciplines. Each category of units comprising the model was defined in terms of dimensions and associated properties, and related to all other units of the model. Laws of categoric, sequential, and determinant interaction in the model were specified, boundaries of the model were determined, and six system states of the model delineated.

"Model of the Formulation of National Human Resource Development (NHRD) for Use in Planning Policy for Practice
Intended as a Roadmap to Guide the Collection of Data to Enhance National Learning for
Economic, Political and Socio-Cultural Performance and Wellbeing"

Human Resources + Human Resource Development => Human Development

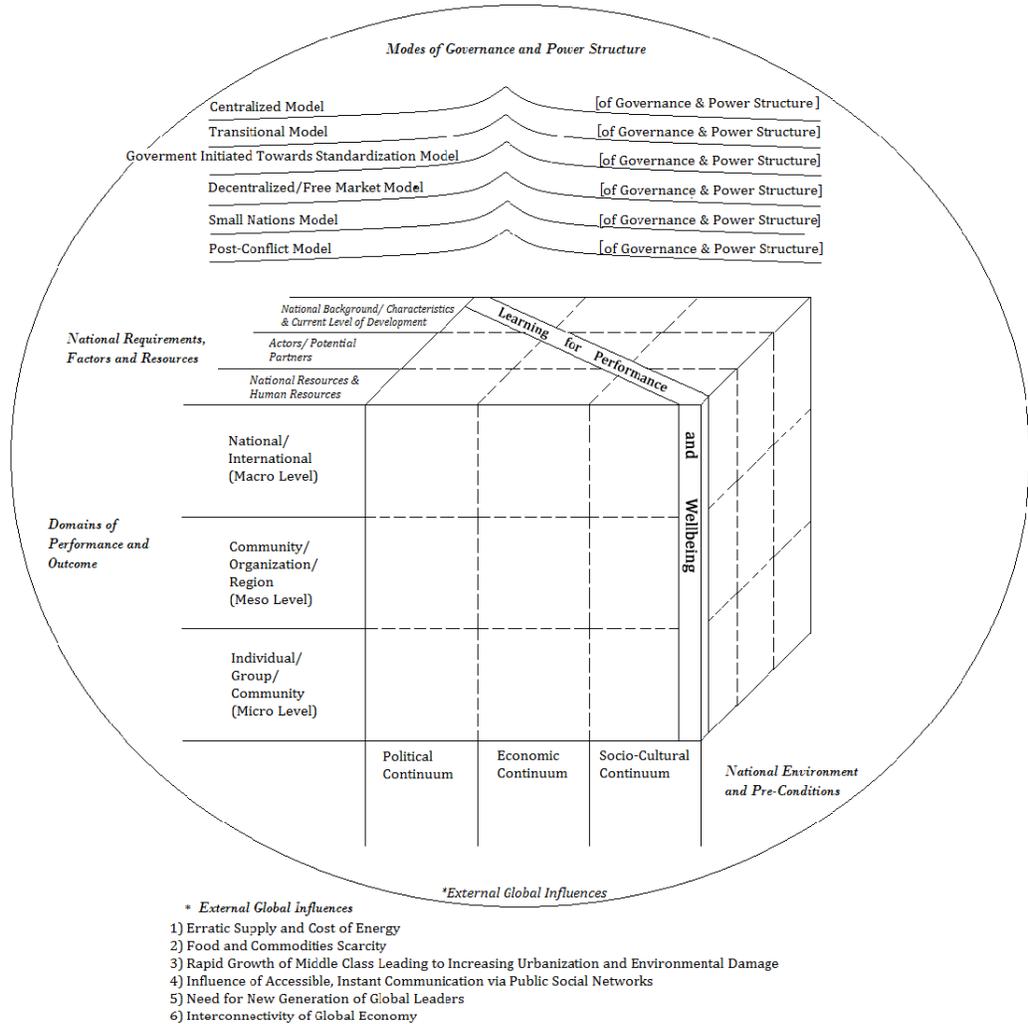


Figure 3: Another look at the model of the formulation of national human resource development (NHRD) policy for strategic practice.

Attending to issues of quality in inquiry, Dubin (1978) delineated a precise set of criteria of excellence to first inform the development of theory and, subsequently, to evaluate results obtained through use of theory research methodology. Fulfillment of quality criteria specified for the conceptualization phase of theory development is essential to insure that the research effort “results in an empirically verified and trustworthy theory” (Lynham, 2002, p. 244). The capacity of the model to adhere to the stipulated criteria (Dubin, 1978) supports the validity and trustworthiness of theory that might subsequently be drawn from the model following testing by direct application of the model in the field to the NHRD policy processes of as many nations as possible.

The model was further developed through the researcher’s approximate use of a multi-level methodology for theory research built by Reynolds Fisher (2000) in synthesizing the work of Chan (1998), Klein, Tosi, and Cannella (1999), Kozlowski and Klein (2000), Morgeson and Hofmann (1999), and Rousseau (1985). The collective constructs, levels (including boundaries), laws of interaction among constructs, functional relationships among levels, sources of variability among levels, and outcomes represented as endogenous variables were measured against quality criteria derived by the researcher-theorist from the literature (Chan, 1998; Klein, Tosi, & Cannella, 1999; Kozlowski & Klein, 2000; Morgeson & Hofmann, 1999; Reynolds Fisher, 2000, Rousseau, 1985) describing the use of constructs and levels in multi-level theory. The elements comprising the informed, conceptual, multi-level model of the formulation of NHRD policy, their organization, structural roles, and satisfaction of proposed quality criteria of excellence are explicated in this Chapter IV of the dissertation.

Quality Criteria for Assessing the Theory Development Phase of Dubin's (1978)

Research Methodology

Seven Categories of Conceptualized Units

This assessment judged the conceptualized units of the model of the formulation of NHRD policy against the quality criteria of *Rigor and Exactness*, *Parsimony*, *Completeness*, *Logical Consistency*, and *Degree of Conformity to the Limitations on Employment and Combination of Units* using the constant comparison method of analysis. Units are “the things about which the researcher is trying to make sense” (Lynham, 2002, p. 247). In identifying and ordering units for construction of models or theory, the researcher-theorist must observe that units represent the properties of things while understanding that there are “limitations set forth [by Dubin] ... for employment and combination of units” (1978, p. 78). According to Dubin (1978), the researcher-theorist has limitless opportunities to employ units as she or he chooses. However, “there would be utter chaos if no order existed among the possible units available for developing a model” such that “the probability of replication of research would be materially lowered” (Dubin, 1978, p. 58).

“Fortunately, it is possible to classify the units employed in behavioral theory into a limited set of types and to then examine the manner in which mixed types may be incorporated into the same model” (Dubin, 1978, p. 58). Dubin (1978) sorted types of units in terms of mode for assessment of property characteristics: (a.) unit versus event, (b) attribute versus variable, (c) real versus nominal, (d) primitive versus sophisticated, (e) collective versus member and (f) enumerative (either attribute or variable),

associative, relational, statistical, and summative. These classifications represent characteristics that formed the basis for quality criteria of excellence established by Dubin (1978) for assessing models and theory.

The model was constructed of seven categories of conceptualized units that reside, independently and interdependently, in various combinations, at the three levels of the model: (a) Individuals, (b) Groups, (c) Organizations, (d) Communities, (e) Regions, (f) Nations, and (g) International community. Units are hierarchical, nested structures in which lower-order units, such as Individuals, are embedded in higher-order units, such as Groups, Organizations, Communities, Regions, and Nations, themselves embedded within the International community. The seven categories of units comprising the model were generally classified into the three overlapping levels of the model in which stakeholders are known to reside: micro-level (generally Individuals, Groups, Communities, Organizations), meso-level (generally extensive Organizations, networked Communities, Regions), and macro-level (Regions, National-level Organizations, including corporations and governments, multinational Organizations, multinational enterprises, governmental alliances, and the International community).

Dubin (1978) advised that units must be differentiated “in order to draw out their consequences” (p. 37). To assess the conceptualized units comprising the model, it was first necessary to review their consequences. A summary of the units comprising the model is presented in Table 6. Each unit is listed, level(s) of the model where the unit is known to reside is/are designated, Unit Type(s) are identified, Associated Properties are specified, and representative examples of the unit are provided.

Table 6: Conceptualized units of a model of the formulation of NHRD policy with specified level, unit type, associated properties, and representative examples of units.

	Conceptualized Unit	Unit Type	Associated Properties/ Representative Examples of Units	
<i>Micro</i>	Individuals	Enumerative	<ul style="list-style-type: none"> ▪ Variable ▪ Real ▪ Sophisticated ▪ Member 	Farmer Student State Governor Warren Buffett
<i>Micro</i>	Groups	Associative	<ul style="list-style-type: none"> ▪ Variable ▪ Real ▪ Sophisticated ▪ Collective 	Family Neighborhood Local Entrepreneurs Social Movement
<i>Micro/ Meso</i>	Communities	Associative	<ul style="list-style-type: none"> ▪ Variable ▪ Real ▪ Sophisticated ▪ Collective 	Fishing Village University Environment Sudanese in U.S. Jewish Diaspora
<i>Micro/ Meso/ Macro</i>	Organizations	Associative	<ul style="list-style-type: none"> ▪ Variable ▪ Real ▪ Sophisticated ▪ Collective 	Local Government National Corporation Amnesty International ExxonMobil
<i>Micro/ Meso</i>	Regions	Relational & Associative (<i>complex unit</i>)*	<ul style="list-style-type: none"> ▪ Variable ▪ Real ▪ Sophisticated ▪ Collective 	South Texas New England States Western China Lesser Sunda Islands of Indonesia
<i>Macro</i>	Nations	Associative	<ul style="list-style-type: none"> ▪ Variable ▪ Real ▪ Sophisticated ▪ Collective 	Australia Pakistan Canada Spain
<i>Macro</i>	International	Relational & Associative (<i>complex unit</i>)*	<ul style="list-style-type: none"> ▪ Variable ▪ Real ▪ Sophisticated ▪ Collective 	West Africa European Union Borlaug Institute Bill Gates Foundation United Nations

*The Regions and International units were classified as *complex unit* types since the existence, in both instances, of the unit was derived from interaction between two Associative unit types. That is, Regions, as a unit, was derived from interaction between two or more sub-areas (states, localities, etc.), while International, as a unit, was derived from interaction between two or more nations.

Rigor and Exactness

This pre-fieldwork assessment found that the units of the model were *Highly* sufficient in fulfilling the criterion of *Rigor and Exactness* which “relates to the use of attribute [distinguishable by presence or absence of a property] and/or variable [distinguishable by a property present in degree] units in the development of the theory” (Lynham, 2000a, p. 112). Variable units are preferable to attribute units in models or theory, particularly in preparation for research operationalization and testing by means of empirical testing. However, “the use of a combination of attribute and variable units is preferred over attribute units only” (Lynham, 2000a, p. 112).

The seven categories of units of the model were classified as variable units since each is capable of representing the degree to which a specified entity might or might not participate in a given action or interaction within the overall process of formulating NHRD policy. The variability of the unit types, and, concomitantly, participation in the formulation of NHRD policy, was influenced by the frame of the X-axis, “National Environment and Pre-Conditions” specifically the Political Continuum, the Economic Continuum, and the Socio-Cultural Continuum, properties that are measurable in degrees. The units of the Z-axis, “National Requirements, Factors and Resources”, bearing National Background and Characteristics and Current Level of Development, Actors and Potential Partners, and National Resources, including the Human Resources, were all properties that have a presence measurable in degrees. Thus, the model’s units were found to be of the preferred unit type, variable rather than attribute, increasing the kinds of predictions and the extensiveness of empirical tests that might subsequently be

supported (Dubin, 1978) by the model and eventual theories that might be drawn from the model. The model, however, did not achieve a combination of both variable and attribute units.

Parsimony

The units of the model demonstrated a *High* level of satisfaction in fulfilling the criterion of *Parsimony*, “the degree to which the theory contains a minimum of complexity and assumptions ... in the presentation and discussion of the theory units” (Lynham, 2000a, p. 112). The model’s seven units required a moderate level of detail and discussion to sufficiently present and describe their structure and organization. Importantly to the model’s fulfillment of the criterion of *Parsimony*, however, there were not more units than necessary to provide for the model’s sufficient representation of the formulation of HRD policy at the national level, a multi-part and multi-level course of action occurring synchronously on the macro, meso, and micro scales, that aims for both specificity and flexibility in attending to transferability across multiple contexts. The logic provided by the positioning of the units at the micro, meso, and macro levels of the Z-axis was helpful in minimizing complexity and assumptions associated with the units, as well as with the model, itself.

Completeness

The seven categories of units of the model, six of which are classified as Associative types, were *Highly* satisfactory in fulfilling the criterion of *Completeness*, a criterion predicated entirely on “the use of associative units and the resulting possible zero [an absent or even negative] value of these units” (Lynham, 2002, p. 248). “An

associative unit is a property characteristic of a thing in only some of its conditions” such that it is “associated ... with the thing partially and under limited conditions” (Dubin, 1978, p. 60). Consideration of *Completeness* is important to eventual testing of “the completeness of the predictions generated by the theory” (Lynham, 2002, p. 248).

Logical Consistency

The units of the model were *Highly* satisfactory in their fulfillment of the criterion of *Logical Consistency*, a criterion that “relates to the logic of the types of units combined in and used to compose the theory” (Lynham, 2002, p. 248). The model was constructed of three unit types, Enumerative, Associative, and Relational/Associative (complex units). Use of more than one unit type in the construction of theory and models is preferable to enable future inquiry within the four quadrants of the Cartesian coordinate system which “creates flexibility and spread in the types of data and types of inquiry that can be used in the future operationalization, verification and refinement of the theory” (Lynham, 2000a, p. 114) or model from which theory might subsequently be drawn.

Degree of Conformity to the Limitations on Employment and Combination of Units:

The units of the model were *Moderately* satisfactory in their fulfillment of the criterion of *Degree of Conformity to the Limitations on Employment and Combination of Units*. Dubin (1978) cautioned the researcher-theorist to adhere to three limiting rules governing the combination of unit types in the construction of theory or models:

- a. “a relational unit is not combined in the same theory with enumerative or associative units that are themselves properties of those relational units” (Dubin, 1978, p. 73)
- b. “where a statistical unit is employed, it is by definition a property of a collective. In the same theory do not combine such a statistical unit with any kind of unit (enumerative, associative, or relational) describing a property of members of the same collective” (p. 74).
- c. “summative units have utility in education and communication with those who are naive in a field. Summative units are not employed in scientific models” (p. 78).

In combining Relational units (Regions and International) with Associative units (Communities, Organizations, Nations) that are, themselves, properties of those Relational units, the model violates the first rule of limitations. Dubin (1978) explained that difficulty in overcoming the first rule of limitation is commonly associated with construction of models or theory for use in the behavioral and social sciences. While the model’s violation of the first rule of limitations was not to be ignored, researcher awareness of this deficiency in the model should prompt the use of statistical accommodation, such as multiple factor analysis, during empirical testing and analysis of propositions of the model. Since the model did not employ Statistical units, the second rule of limitations was not applicable. Similarly, the model was not constructed of Summative units and, thus, did not engage the third rule of limitations.

Laws of Interaction

This assessment judged the laws of interaction of the model of the formulation of NHRD policy against the quality criteria of *Parsimony* using the constant comparison method of analysis. Units interrelate within levels, as well as between levels of a model or theory. “It [a law] is a statement of a relationship [of units]. It is the *relationship* that is the lawful part of it and not the definition, or identification, of units that are related” (Dubin, 1978, p. 90). Laws of interaction specify categoric (associating values of a unit with values of a different unit), sequential (sequentially ordering the values, and, thus, the relationships, between two or more units), and determinant (associating determinate values of a unit with determinate values of one or more different units) linkages and connections between and among conceptualized units (Dubin, 1978).

More precisely, laws of interaction identify lines of pressure and influence that conceptualized units comprising the model of the formulation of NHRD policy exerted on one another within and between levels as they responded to national and global forces acting upon them. Lines of dialogue, negotiation, and interactivity amongst stakeholders engaged in formulating NHRD policy for strategic practice followed and reinforced laws of interaction among the conceptualized units at all levels of the model. The model demonstrated categoric, sequential, and determinant unit interactions that resided, independently and interdependently, in various combinations, at the three component levels.

To assess the laws of interaction of the model, it was necessary to review and classify the unit relationships. A summary of laws of interaction is presented in Table 7,

together with the level of the model where the unit is known to reside and the levels at which the unit engaged in interaction, the types of laws of interaction (categoric, sequential, or determinant) in which the unit engaged, and a representative example of each interaction.

Table 7: Summary of laws of interaction between units of a model of the formulation of NHRD policy classified by unit type, levels at which unit interacted, types of laws, and representative examples of interactions.

	Units Engaged in Interaction	Level(s) of Interaction	Laws of Interaction	Representative Examples of Interactions
<i>Micro</i>	Individuals	Micro/Meso/Macro	Categoric	-Farmers participated in agricultural extension education
			Sequential	-Texas Governor rewarded teachers, national Congress addressed primary education
			Determinant	-Warren Buffett's economic projections determined investment in foundations to support education for growth
	Groups	Micro/Meso	Categoric	-Families engaged in health education
			Sequential	-Social Movement grew, racial inequities examined
			Determinant	-Local entrepreneurs unionized to enhance state economy
	Communities	Micro/Meso	Categoric	-Fishing villages took part in environmental studies
			Sequential	-Research centers relocated to University environment Growing Sudanese community
			Determinant	in U.S. increased awareness of difficulties for new nations

Table 7 Continued

	Units Engaged in Interaction	Level(s) of Interaction	Laws of Interaction	Representative Examples of Interactions
<i>Meso</i>	Organizations	Micro/Meso/Macro	Categoric	-Local governments adhered to state and national education policy
			Sequential	-National Corporation diversified, business education expanded
			Determinant	-ExxonMobil funding increased national-level research on alternative energy sources
	Regions	Micro/Meso/Macro	Categoric	-South Texas schools modeled bilingual education for state and national districts
			Sequential	-Western China implemented education reforms policy, Chinese workers protested factory conditions
			Determinant	-Lesser Sunda Islands of Indonesia expanded gender education curriculum in schools, foretelling an upward trend in female enrollment at national universities

Table 7 Continued

	Units Engaged in Interaction	Level(s) of Interaction	Laws of Interaction	Representative Examples of Interactions
<i>Macro</i>	National	Micro/Meso/Macro	Categoric	- Australian university graduates in STEM fields pursued UK or US post-graduate studies
			Sequential	-Government systems in Pakistan were increasingly ineffective, privatized education sector grew
			Determinant	-Canada's expanded national immigration policy increased demand for multilingual educators at all levels
	International	Micro/Meso/Macro	Categoric	-West African education systems blended traditional values with Western pedagogy
			Sequential	-European Union introduced Bologna Accords, international educational exchange increased in Western nations
			Determinant	-Borlaug Institute undertook agricultural development projects in Iraq, leading to increased national and international consideration of the role of agricultural education in rebuilding conflict-torn nations

Parsimony

This pre-fieldwork assessment determined that the laws of interaction of the model were *Moderately* sufficient in fulfilling the criterion of *Parsimony*. In defining the criterion of Parsimony for use in assessing laws of interaction in theory, or models, Dubin (1978) advised that:

A system has a *minimum* of one law of interaction. ... The *maximum* number of laws of interaction for a system of n units is the number of laws necessary to relate the units two at a time each once with all the other units (p. 113).

The compilation of units comprising the model was significant, requiring great numbers of varied interactions with one another to sufficiently represent the formulation of NHRD policy, a multi-part, multi-process, and multi-level course of action. As a consequence, even the researcher-theorist taking care to insure that none of the units exceeded the maximum allotment of relationships permitted by Dubin's (1978) methodology, learned that the number of laws necessary to relate each of the categorical units comprising the model just once with all other units is vast. Developed to represent complex human processes, behaviors, and meaning-making, the model struggled to achieve conformity with Dubin's (1978) criterion of *Parsimony*.

Boundaries: Bounding the Model

This assessment judged the boundaries of the model of the formulation of NHRD policy against the quality criteria of *Homogeneity* and *Generalization* using the constant comparison method of analysis. It was necessary to understand the domain of the phenomenon that the informed, conceptual, multi-level model attempted to represent and explain. Boundaries convey understanding by "mak[ing] clear and explicit the limited portions of the world within which the theory [or conceptual model from which theory might subsequently be drawn] is expected to hold" (Lynham, 2000a, p. 133).

The model was known to reside within an open boundary (mostly porous to the immediate external environment) that is generally equivalent to the defined borders of a nation. The open boundary envelopes the model's axes, conceptualized units, laws of interaction, levels, collective constructs, and modes of governance and power structure that shape the system states of the model, together with all of the human behaviors, activities, processes, meaning-making, and experiences comprising the human performance system seeking to formulate NHRD policy for practice. The model's boundary is dually enforced by internal national constituents and their actions against the broader external environment that is the entire global arena of concomitant megatrends and pressures that, in turn, pushes against the porous boundary to influence internal constituents. Acting against one another, the nationally defined internal environment and the broader external global environment reinforce and maintain the boundary of a nation and, thus, bounded the emergent model of the formulation of NHRD policy.

The model is situated within a sea of external global influences and world conditions that continue to intrude through the open and increasingly porous boundary of the model to influence the policy and practice of NHRD. Current global conditions expected to figure prominently in the planning and practice of NHRD include: (a) erratic supply and cost of energy, (b) food and commodities scarcity, (c) rapid growth of middle class leading to increasing urbanization and environmental damage, (d) influence of accessible, instant communication via public social networks, (e) need for new generation of global leaders, and (f) interconnectivity of the global economy (Rose, 2009). Proactive stakeholders diligently monitor volatile external global influences and

predict their effects for communities, organizations, regions, and a nation so as to adjust NHRD policy and associated practices accordingly.

Homogeneity

This pre-fieldwork assessment determined the boundaries of the emergent model of the formulation of NHRD policy to be *Highly* sufficient in their fulfillment of *Homogeneity*, a criterion requiring that the units employed in a theory and the laws by which they interact satisfy the same boundary-determining criteria (Dubin, 1978). It was clearly evident that six of the seven categorical units comprising the model (Individuals, Groups, Communities, Organizations, Regions, and Nation) and the laws by which they interact, each unit once with all other units, satisfied a singular set of boundary-determining criteria. It must be recognized, however, that the seventh categorical unit of the model, International, was a relational unit derived by interaction between two associative units (two nations). The International unit must reside partially outside the boundary of the model since one or more associative nation units must be situated outside the boundary of the associative nation unit for which NHRD policy is being formulated.

Generalization

The boundaries of the model were *Highly* satisfactory in fulfilling the criterion of *Generalization* which stipulates that theory becomes more general as the domain that it attempts to represent is expanded (Dubin, 1978). The model's representation of the formulation of NHRD policy for practice, a course of action occurring synchronously at the micro, meso, and macro levels, is too large for further development as a single

theory, and overly complex for classification even as one grand theory. Therefore, the representative explanation of the formulation of NHRD policy was developed as a multi-level model. Pending a successful conclusion to the present pre-fieldwork assessment followed by subsequent empirical and interpretivist verification and refinement of the still-emergent model in the field by HRD researchers, together with colleagues grounded in disciplines adjacent to and supporting HRD, and stakeholders, one or more theories might be drawn from the model for future testing. Dubin (1978) highlighted the importance of tests of boundaries for the development of models. “Any need for modification of boundaries in the light of empirical evidence not only shifts the boundary of the model but also requires the modification of its units, its laws of interaction, or both” (p. 142). In the short-term, the model avoided violating Dubin’s (1978) criterion of *Generalization* by the researcher-theorist’s acknowledgement that the formulation of NHRD, the domain of the phenomenon under study, is too large for consideration as a single theory.

System States and Their Effects on a Model or Theory

This assessment judged the system states of the model of the formulation of NHRD policy against the quality criteria of *Inclusiveness, Persistence, and Distinctiveness* using the constant comparison method of analysis. According to Dubin (1978), social science theories have many possible system states, the distinct set of conditions under which a model or theory operates as a whole. “When all units of the system have characteristic and determinant [measurable] values, and when these constellations of values persist through some time interval, we can designate this a

system state” (Dubin, 1978, p. 145). System states are, by definition, separate from outcomes, the “distinctive conditions of one or more units” (Dubin, 1978, p. 146) of the model or theory.

The model of the formulation of NHRD policy is framed by six potential “Modes of Governance and Power Structure” that shape six system states for NHRD proposed by the model. First introduced as “Emerging Models of NHRD” by Cho and McLean (2004), the (a) centralized mode, (b) transitional mode, (c) government initiated towards standardization mode, (d) decentralized/free market mode, and (e) small nations mode, are accompanied by the introduction in the present research of the (f) post-conflict mode. (Appendix B of this dissertation presents a micro-view of the model that offers comprehensive descriptions of each of the six modes of governance and power structure framing the model.)

Each mode of governance and power structure forms a distinct system state for NHRD of the model by determining the distribution of power and agency amongst actors, potential partners, and stakeholders, in general, as they engage in the formulation of NHRD. Power informs the fulfillment of roles and agency shapes assumption of responsibilities in the collaboration (or failure to do so) efforts by all actors, stakeholders, and potential partners as they accommodate national factors and utilize national resources toward NHRD policy. Its mode of governance and power structure, therefore, controls a nation’s application of the means for construction of NHRD policy, and, ultimately, determines the system state (and sustainability) of NHRD that a nation is capable of achieving.

Inclusiveness

This pre-fieldwork assessment found the system states of the emergent model of the formulation of NHRD policy to be *Highly* satisfactory in demonstrating *Inclusiveness*, a criterion stipulating the need for all units comprising the system to be included in the system state of the model or the theory. The previous assessment of boundaries of the model against the criterion of *Homogeneity*, a criterion requiring that units and laws of a theory satisfy the same boundary-determining criteria (Dubin, 1978), informed the present assessment of *Inclusiveness* of the system states of the model. Six of the seven categorical units comprising the model (Individuals, Groups, Communities, Organizations, Regions, and Nation) and the laws by which these units interact satisfy a defined set of boundary-determining criteria such that they are collectively included in any of the six potential system states of the model. The seventh categorical unit of the model, International, is a relational unit derived by interaction between two associative units (two nations). The International unit requires that one associative nation unit must reside outside the boundary of the model for which NHRD policy is being formulated. The nation unit that resides outside the boundary of the model might, depending on the mode of governance and power structure that shapes the system state of the model, also reside outside the system state. Under the centralized, transitional, government initiated towards standardization, and decentralized/free market modes of governance and power structure, the second associative nation unit of the International unit resides outside the system state of the model. However, the small nations mode, and, frequently, the post-conflict mode, are forms of governance that rely upon international cooperation.

Therefore, in the system states for NHRD that are shaped by the two latter modes of governance, both nation units of the International unit reside within the same system state of the model to accommodate cooperation between two or more nations.

Persistence

The system states of the model were *Highly* sufficient in their fulfillment of *Persistence*, a criterion which requires that a given system state endure through a meaningful period of time. Each of six modes of governance and power structure holding the potential to shape a system state of NHRD of the model is a condition of distributed power and agency amongst actors, partners, and general stakeholders. Such conditions of governance persist for unique and meaningful periods of time, often indefinitely, until a transition is made, or forced, to an alternate mode of governance and power structure.

Distinctiveness

The system states of the model were *Highly* satisfactory in fulfilling the criterion of *Distinctiveness* which requires that all units take on determinant (measurable) values for the system state. Six modes of governance and power structure form the model's distinct system states of NHRD by determining the distribution of power and agency amongst actors, prospective partners, and stakeholders who fulfill roles and perform responsibilities as they engage in the formulation of NHRD policy. The distribution of power for each unit and at each level of the model takes on determinant values according to the mode of governance and power structure shaping a given system state for NHRD of the model. The units are determinant to the extent that measures of their participation

under one system state are distinct from the measures of participation by the units under a different system state. Further, determinant values for units of the model correspond to control of national factors, and utilization and collaboration around national resources toward the formulation of NHRD policy.

Quality Criteria for Assessing Collective Constructs and Levels of Multi-Level Models and Theory

In proposing a multi-level methodology for construction of theory, Reynolds Fisher (2000) did not introduce nor describe quality criteria of excellence for use in evaluating outcomes obtained through development of the collective constructs and levels that produce the multiple levels of models and theory. It is probable that those steps identified by Reynolds Fisher (2000) which correspond directly with Dubin's (1978) theory building methodology might rely upon the quality criteria for excellence that were previously established by Dubin (1978). It is likely, then, that the construction of units, boundaries, laws of interaction, and system states for multi-level theory must adhere to assessment criteria as defined by Dubin (1978) and explicated in the previous section of this study.

In order to identify quality criteria for assessment of collective constructs and levels, the researcher-theorist consulted the informing literature sources cited by Reynolds Fisher (2000) during specification of the five steps for development of these elements and their interactions. In instances where the authors of the multi-level theory research procedures established guidance or offered narrative description to influence outcomes for collective constructs and levels, such direction was interpreted and applied

in the form of quality criteria for assessment of the multiple levels comprising the model of the formulation of NHRD policy. To resolve occasions where authors of multi-level theory research did not reference quality issues relative to the construction of collective constructs and levels, evaluative criteria were developed by the researcher-theorist through close approximation of the logic employed by Dubin (1978) for assessment of similar elements in single-level theory. Accordingly, quality criteria were derived, proposed, and employed to evaluate the results of the work of the researcher-theorist in defining collective constructs, identifying the laws of interaction among constructs, specifying levels including boundaries, specifying the functional relationships among levels, specifying the sources of variability among levels, and identifying outcomes, termed endogenous variables, for the model of the formulation of NHRD policy.

Six Collective Constructs

This assessment judged the collective constructs of the model of the formulation of NHRD policy against the quality criteria of *Descriptiveness of Contextual Causation*, *Distinguishing of Level of Existence and Level(s) of Measurement*, and *Level-Specific Functionality* using the constant comparison method of analysis. Constructs serve as tools for use in creating logical and systematic associations among observable phenomena (Nunnally & Bernstein, 1994; Morgeson & Hofmann, 1999). Where constructs relate phenomena that are likely to be situated at multiple levels of an organization, they are known as collective constructs, and their structures are formed by the actions and interactions of organizational members. “That is, only through interaction does a construct acquire meaning and structure” (Morgeson & Hofmann,

1999, p. 256). Further, the collective (an entire system of interaction) “determines the collective construct, and through their actions, influence the behavior of others in the collective” (Morgeson & Hofmann, 1999, p. 253). Dissimilarities between the compositions of various organizational levels, however, influence the manifestation of collective constructs such that the presence of a construct becomes distinct at each unique level of the organization (Morgeson & Hofmann, 1999).

The model of the formulation of NHRD policy is composed of six principal collective constructs. Three collective constructs, termed “National Environment and Pre-Conditions” exist along the X-axis and are known as the “Political Continuum,” “Economic Continuum,” and “Socio-Cultural Continuum” that cut through the three levels of the model to interface with an additional set of three collective constructs. Situated along the Z-axis, the second set of three collective constructs is termed “National Requirements, Factors and Resources”, and includes “National Background and Characteristics and Current Level of Development”, “Actors and Potential Partners”, and “National Resources, including Human Resources”. Control of the collective constructs represented in the model is shared by all stakeholders, but is maneuvered by actors and potential partners operating at any level or within a particular national or multinational sector to influence the formulation and implementation of NHRD policy.

Descriptiveness of Contextual Causation

This pre-fieldwork assessment found that the model demonstrated a *Moderate* level of sufficiency in fulfilling the criterion of *Descriptiveness of Contextual Causation*, a criterion referring to the requirement for explication of the contextual conditions that

produce a specified collective construct or set of collective constructs. Characteristics of organizational contexts are reflected in the systems of interaction they support and subsequently determine the structure of collective constructs that might be produced (Morgeson & Hofmann, 1999). “Accounts of collective constructs should provide details about their developmental aspects and should specify the processes through which the constructs emerge, particularly in terms of the importance of critical events” (Morgeson & Hofmann, 1999, p. 257). It is anticipated that direct testing of the model should further clarify the process by which the collective constructs of the model emerge from the conjoining of national conditions with the surrounding sea of contextual global conditions, thus enhancing the model’s performance against the criterion of Descriptiveness of Contextual Causation

The model is comprised of six principal collective constructs. As described in assessment of the boundaries of the model, global influences and world conditions surrounding the model intrude continuously by means of the model’s porous boundary to exert their influences on a nation’s constituents. Acting against each other, the constituents of a nationally defined internal environment and the forces of the broader external global environment maintain the boundaries of a given nation represented by the model of the formulation of NHRD policy. This dynamic context of trending global forces, incorporates issues of supply and scarcity of energy, food, and commodities, rapid growth of populations, urbanization, environmental damage, instantly accessible communication, and interconnectivity of the global economy (Rose, 2009). Acting with and against the national environment, the surrounding context of global influences gives

rise to the collective constructs demonstrated by the model: three collective constructs categorized as “National Environment and Pre-Conditions”, are the “Political Continuum,” “Economic Continuum,” and “Socio-Cultural Continuum,” and a second set of three collective constructs, categorized as “National Requirements, Factors and Resources”, are “National Background and Characteristics and Current Level of Development”, “Actors and Potential Partners”, and “National Resources, including Human Resources”.

Level-Specific Functionality

The collective constructs of the model were *Highly* sufficient in their fulfillment of *Level-Specific Functionality*, a criterion that requires specification of the function of a construct at the collective level and demonstration of subsequent output at lower organizational levels. While a focus on the structure of collective constructs highlights differences among constructs across levels, a functional approach integrates constructs across levels. Morgeson and Hofmann (1999) urged researchers to begin developing theory, or models intended for eventual theorization, using a functional perspective to “clearly specify the function of a construct at the collective level and demonstrate how it has a similar output at the lower level” (p. 258).

To assess the level-specific functionality of the collective constructs represented in the model of the formulation of NHRD policy, it was necessary to specify the function of each construct at the collective level, and then to classify the subsequent outputs from the construct according to each of the lower levels of the model. Table 8 presents a summary of specification of the functions of the six collective constructs at the collective

level of the model, and identifies outputs from the constructs at the meso and micro levels of the model. A review of Table 8 achieves a modified version of the micro-view of the model provided in Appendix B of this manuscript.

Table 8: Summary of functions of collective constructs represented in the model at the collective level, and demonstration of subsequent output from collective constructs at lower levels of the model.

Collective Constructs of the Model	Functionality at Macro-Level (<i>Nation/International</i>)	Output at Meso-Level (<i>Organization/Region</i>)	Output at Micro-Level(s) (<i>Individual/Group/Community</i>)
Political Continuum	National Profile in International Arena, National System of Governance	National Political System, Modes of Political Engagement/Connectivity	Local Governance/ Services, Citizenship
Economic Continuum	International Trade/Commerce GNP, GDP	Intra-nation Productivity, Transport/Availability of Goods/Services	Individual/Family Income, Mobility, Access to Goods/Services
Socio-Cultural Continuum	National Tolerance, Protection for Human Rights, Diversity	Strength/Influence, Activity of Religious, Social Groups	Individual/Family Gender, Religion, Social Status
National Background and Characteristics and Current Level of Development	National Consciousness, Self-Identity, Future View, Pace/Distribution/Equality of Modernization	Intra-nation Climate/Dialogue, Patterns/Rates of Migration-Rural to Urban, Region to Region	Individual Opportunity
Actors and Potential Partners	National Government, Multinational Corporations, NGOs	Regional Governments, National Corporations, Universities, Labor/Trade/Professional Associations	Local Leaders-elected, unelected
National Resources, including Human Resources	Geographic Location, Maritime/Mining/Oil Capacity for Innovation/ Knowledge Creation, Health System	Agriculture, Production/Industry, Citizens' Expertise/ Capability, Healthcare Accessibility	Individual Performance & Wellbeing

Distinguishing of Level of Existence and Level(s) of Measurement

The collective constructs of the model were *Highly* satisfactory in fulfilling the criterion of *Distinguishing of Level of Existence and Level(s) of Measurement* which requires that, for all collective constructs, both the level at which the construct resides and the level or levels at which it can be measured must be distinguished in preparation for operationalization and testing of the model or theory. “Scholars should not simply assume that the measurement of collective phenomena is the same as the measurement of analogous individual-level phenomena” (Morgeson & Hofmann, 1999, p. 260). The level at which a construct resides is mostly observable in a model or theory’s representation of the phenomenon under focus. “The level of theory, on the one hand, describes the target (e.g., individual, group, or organization) that the researcher or theorist is attempting to describe and explain (Morgeson & Hofmann, 1999, p. 261). Morgeson and Hofmann (1999) advise that “choice of level of measurement should be guided by one’s theoretical model, the nature of the construct under investigation, the question one is trying to investigate, and whether one is concerned with assessing structure” (p. 261). It is, however, possible to measure collective phenomena at the individual (micro) level for application in addressing theoretical questions at the collective (macro) level.

One set of three collective constructs, the “Political Continuum,” “Economic Continuum,” and “Socio-Cultural Continuum” resides at the Individual (micro) Level of the model, but is equally measurable at the micro, meso, and macro levels. These three collective constructs demonstrate the principle of bottom-up influence whereby the

properties of the entire organization, the nation, emerge from interactions among the constructs (Computer Information Systems Department, 2004). “When measuring these constructs, one may find it useful to focus on an individual's particular role in the context of the wider collective, thereby treating individuals as informants about collective processes” Morgeson & Hofmann, 1999, p. 261). The second set of three collective constructs, “National Background and Characteristics and Current Level of Development”, “Actors and Potential Partners”, and “National Resources” resides at the macro-level of the model and, while influencing the meso and micro levels, is measurable at the macro level. This set of collective constructs demonstrates the principle of top-down influence such that the properties of elements of the organization, a nation, are enabled or constrained by the properties of the entire organization (Computer Information Systems Department, 2004).

Laws of Interaction among Collective Constructs

This assessment judged the laws of interaction among the collective constructs of the model of the formulation of NHRD policy against the quality criteria of *Sufficiency* and *Persistence* using the constant comparison method of analysis. Morgeson and Hofmann (1999) described a collective as “any interdependent and goal-directed combination of individuals, groups, departments, organizations, or institutions” (p. 251). Laws of interaction are “a fundamental component of collective action” (Morgeson & Hofmann, 1999, p. 251) that cause the components of a collective to interrelate, creating the collective. Laws of interaction that relate two or more distinct collective constructs cause these collective constructs to influence one another, thereby causing their

composite influence on individuals, groups, institutions, and the entire collective, the organizational system (Morgeson & Hofmann, 1999).

Laws of interaction within and between the two sets of collective constructs, each containing three collective constructs to comprise the total of six collective constructs represented in the model of the formulation of NHRD, relate these collective constructs in various configurations. Affecting one another and creating a variety of composite influences for a nation, the six collective constructs create conceptual categories delineated along the X, Y, and Z axes of the model. To illustrate, one conceptual category of the model is located within the “Political Continuum” of the X-axis, is situated at the “National-International” level on the Y-axis, and is defined along the Z-axis at “Actors and Potential Partners” such that it can be descriptively labeled by delineating parameters as: Political/National-International/Actors and Potential Partners.

Each conceptual category defined by the intersection of influences from the two sets of collective constructs and situated at a specified level of the model contains varying combinations of distinct elements. The elements represent data points that must be engaged and analyzed to support the formulation of NHRD policy. The conceptual category specified above as Political/National-International/Actors and Potential Partners includes this collection of varying elements: National Government; Regional Governments/External; NGOs; Multinational Corporations; National Corporations; Labor/Trade/Professional Associations; and Universities. A micro-level view of the Model of the Formulation of National Human Resource Development (NHRD) Policy, presented in Appendix B of this dissertation, identifies the 27 conceptual categories

comprising the model and their varying combinations of elements that represent data points for analysis to support the formulation of NHRD.

Sufficiency

The laws of interaction among collective constructs of the model were *Highly* sufficient in their fulfillment of *Sufficiency*. *Sufficiency* is a criterion requiring at least the minimum number of laws of interaction necessary to relate the components of a collective with one another such that a distinct collective construct is established. In applying *Sufficiency* to relationships of two or more collective constructs, the criterion calls for at least the minimum interactions required to establish influence from one distinct collective on one or more other distinct collectives, thereby influencing the entire collective, the organizational system.

The model was proposed as a flexible roadmap capable of transfer across multiple national contexts to guide the development of NHRD policy. Its inherent transferability, suggests that the collective constructs expressed in the model cannot be created nor sustained by fixed laws of interaction. Instead, the model's two sets of collective constructs interrelate within sets and between sets to create contexts that accommodate unique sets of national circumstances, thus delineating conceptual categories for data specific to particular instances of application. Elements and circumstances that might cause one or more of the six principal collective constructs to demonstrate significant influence within a given context to which the model is applied include heightened engagement by actors or potential partners at a specific level or within a certain sector to exert extraordinary influence on the formulation of NHRD

policy. In all instances of application, however, sufficient laws of interaction among collectives produce and maintain each of the collective constructs represented in the model. Similarly, the relationships between and among the six collective constructs demonstrated in the model are sufficiently sustained by laws of interaction among distinct collectives so as to influence one another as well as the entire system, the nation.

Persistence

The laws of interaction among collective constructs of the model were *Highly* sufficient in their fulfillment of *Persistence*, a criterion which requires that the laws of interaction among collective constructs, either providing for a given collective construct or influencing, through the interrelating of two or more distinct collectives, the entire organization, must endure through a meaningful period of time.

As described during assessment of the system states of the model, each of six modes of governance and power structure that shapes a system state of NHRD is a condition of distributed power and agency amongst actors, partners, and general stakeholders. Such modes and conditions of governance result from and are structured by the interactions of collective constructs that distribute power to influence groups, institutions, and the entire organization. Therefore, both modes of governance and power, and the collectives that influence and shape them, persist for unique and meaningful periods of time, often indefinitely, until a transition occurs to an alternate mode of governance and power structure that, too, will be influenced by an arrangement of varied, underlying laws of interaction among collective constructs.

Three Levels (and their Boundaries)

This assessment judged the levels and their boundaries of the model of the formulation of NHRD policy against the quality criterion of *Functionalism/Reductionism* and the criterion of *Inclusion* using the constant comparison method of analysis.

Rousseau (1985) cautioned that, “In organizational research, levels may be hard to specify in absolute terms” (p. 24). Nevertheless, the study of multi-level phenomena requires the researcher-theorist to seek to identify some sort of boundary conditions to support specification of each organizational level. “In short, we must specify the levels ... meaningful to us from the perspective of theory development and empirical generalization” (Rousseau, 1985, p. 24).

The model of the formulation of NHRD policy is comprised of three levels specified as the micro-level, the meso-level, and the macro-level. As demonstrated in Table 9, below, each of the units of the model is known to reside at more than one level of the model, causing the boundaries to overlap such that it becomes difficult to specify absolute boundaries for any of the three levels comprising the model. This overlapping of boundaries suggests that the model is a hierarchical, nested structure. Therefore, the criteria derived for assessment of levels and their boundaries of multi-level theory, and models, such as the version developed to represent the formulation of NHRD policy, are grounded in the statistical procedure known as hierarchical linear modeling. Following operationalization of the model, hierarchical linear modeling will enable testing at each level of the nested structure, as well as subsequent analysis of the structural model in its entirety.

Table 9: Summary of the distribution of units comprising the model across the three functional levels of the model.

Level	Micro	Meso	Macro
Units	<i>Individual</i>		
	<i>Group</i>		
	<i>Community</i>	<i>Community</i>	
	<i>Organization</i>	<i>Organization</i>	<i>Organization</i>
		<i>Region</i>	<i>Region</i>
			<i>National</i>
			<i>International</i>

Functionalism/Reductionism

The levels and their boundaries of the model were *Highly* sufficient in their fulfillment of *Functionalism/Reductionism*, a criterion requiring specification of the hierarchical levels of a model or theory in which the levels are functionally interdependent in terms of obtaining inputs or exchanging outputs (Rousseau, 1985). In recognizing interdependent relationships among levels, *Functionalism/Reductionism* enables determination of the relative positions of the units, including Individuals, Organizations, and Regions residing within each level. The criterion of *Functionalism/Reductionism* does not, however, enable identification or definition of a unique level or the relative position of a unit independently of all other levels.

It is the interchange of units between adjacent and porous borders of the levels of the model that renders the three levels interdependent as it softens their boundaries, making them impossible to define in absolute terms. Nevertheless, variation among the combinations of units persistently residing within the micro, meso, and macro levels of the model clearly differentiates each level from the others. Specifically, Organization is a unit known to reside at all three levels of the model, particularly for purposes of the present analysis which focuses on the meso and the macro levels of the model. Still, the Organization unit is accompanied by the Community, Group, and Individual units at the micro level while Organization is accompanied by the Region and Community units at the meso level, and by the Region, National and International units at the macro level, establishing the distinction between the model's micro, meso, and macro levels. Importantly, the criterion of *Functionalism/Reductionism* highlights the model's

“performance of increasingly complex tasks at higher hierarchical levels and the corresponding need to coordinate activities of components” (Rousseau, 1985, p. 26).

Inclusion

The levels and their boundaries of the model were *Highly* sufficient in their fulfillment of *Inclusion*, a criterion that requires specification of the levels of a model or theory in terms of their relative position to one another such that a relationship is achieved of levels as integral parts of a whole organization. The criterion of *Inclusion* attends to the distinct types of units comprising the level under focus, and the degree to which the level is contained and influenced by all other levels.

Each of the three levels of the model of the formulation of NHRD policy contains a unique set of units, the combination of which supersedes the combination of units contained within all lower levels to establish the hierarchical structure of the model. Specifically, the units residing at the macro-level of the model, International, National, Region, and Organization, encompass and exceed the units residing at the meso-level of the model, Region, Organization, and Community, which encompass and exceed the units residing at the micro-level of the model, Organization, Community, Group, and Individual. “The concept of inclusion is useful in exploring cross-level relationships” (Rousseau, 1985, p. 27) that will become important during research operationalization and direct testing of the model in the field.

Functional Relationships between Constructs among Levels

This assessment judged the functional relationships between constructs among levels of the model of the formulation of NHRD policy against the quality criteria of

Specification of Interactivity of Constructs among Levels and Identification of Composition Model Type using the constant comparison method of analysis.

“Organizational phenomena have the properties of dynamic systems, with critical antecedents, processes, and outcomes conceptualized and measured at multiple levels” (Chan, 1998, p. 234). “What becomes a critical question is how these levels of analysis link with each other between adjacent levels and how they link up between levels separated by one or more intervening ones” (Dubin, 1978, p. 56). Functional relationships among levels map the transformation of concepts across levels to create systematic frameworks of these relational processes (Chan, 1998) that are most often recognized as constructs.

Chan (1998) established a typology of five basic composition models to aid in development and validation of constructs in multi-level research: (a) additive, (b) direct consensus, (c) referent-shift consensus, (d) dispersion, and (e) process composition. Each composition model represents a distinct functional relationship between constructs at different levels of a model or theory. “Corresponding to each form of functional relationship is a typical operational process by which the lower level construct is combined to form a higher level construct” (Chan, 1998, p. 235). Chan (1998) advised that the research question engaging relationships among levels of a model or theory determines the level at which a construct relationship begins to be conceptualized for operationalization and testing.

Specification of Interactivity of Constructs among Levels

The functional relationships between constructs among levels of the model were *Moderately* sufficient in their fulfillment of *Specification of Interactivity of Constructs among Levels*, a criterion requiring identification of the mode by which lower level units convene to compose concepts which become collective constructs at higher levels.

Possible operational combination processes include: (a) a sum or average of lower level variables to represent values of higher level variables, (b) within-group agreement on lower level variables to represent variables at the higher level, (c) derivation of a lower level construct in a new form for aggregation at a higher level based on within-group consensus, (d) within-group variance among lower level variables operationalized as a higher level construct, and (e) lower level process parameter relationships that are recomposed to accommodate higher level process parameters (Chan, 1998).

There is not a unique algorithm to identify the mode by which lower level units, Individuals, Groups, and Communities, of the model of the formulation of NHRD policy interrelate among the micro, meso, and macro levels to compose the collective constructs demonstrated by Organizations, Regions, and the Nation residing at higher levels of the model. Instead, the units of the model vary, interact, and convene according to a multitude of operational combinations, themselves embedded with subprocesses (Chan, 1998), at each level to produce and advance the collective constructs categorized as national characteristics, actors, and national resources. This dynamic process is further informed by the prevailing system state influencing the governance and power structure among all units comprising the model.

Identification of Composition Model Type

The functional relationships between constructs among levels of the model were *Highly* sufficient in their fulfillment of *Identification of Composition Model Type*, a criterion requiring specification of the type of composition model (Chan, 1998) that most closely approximates the operational combination process by which lower level units produce collective constructs at higher levels of a model or theory.

The model of the formulation of NHRD policy is most accurately represented by the process composition model of operational combination. The composition model types (Chan, 1998) were developed to classify less comprehensive organizational systems than nations. Still, the process model permits the interrelationships inherent among the multiple constructs engaged in the multidimensional process of formulating NHRD policy, and, therefore, of the five composition model types, the process model offers the most sufficient representation of the model.

Sources of Variability among Levels

This assessment judged the sources of variability among levels of the model of the formulation of NHRD policy against the quality criteria of *Specification of Theoretical Level* and *Degree of Explication of Assumptions of Variability* using the constant comparison method of analysis. Sources of variability among levels are the homogeneous, independent, or heterogeneous properties, with respect to the constructs represented in a model or theory, expressed by the individuals or groups to whom a model or theory is intended to apply.

In stipulating the organizational level or levels at which a model or theory is intended to be applicable, the researcher-theorist explicitly or implicitly predicts “that the relationships among theoretical constructs are a consequence of differences between groups, differences between members independent of groups, or differences within groups” (Klein, Dansereau, & Hall, 1994, p. 199). By specifying that the level of a model or theory is a group, the researcher-theorist predicts that group members are homogeneous with respect to a theoretical construct such that the group is characterized as a whole (Klein, Dansereau, & Hall, 1994). Therefore, sources of variability are posited as existing between groups with respect to one or more theoretical constructs. If the level of a model or theory is designated as the independent individual, the researcher-theorist predicts that individual members comprising a group are independent of the group’s influence with respect to the value of a theoretical construct (Klein, Dansereau, & Hall, 1994). Sources of variability are conceptualized as individual differences. If the focus of a model or theory is an individual attribute relative to a group average of the same attribute, the researcher-theorist predicts that individuals vary within the group with respect to the theoretical construct of interest. Thus, sources of variability are proposed to exist within groups.

Specification of Theoretical Level

The model was determined to be *Highly* sufficient in specifying sources of variability among levels, thus fulfilling the criterion of *Specification of Theoretical Level*. To avoid misrepresentation of organizational relationships, the criterion, *Specification of Theoretical Level*, requires that the researcher-theorist specify the level

at which the model or theory will be applicable, the level of measurement that describes the source of data, and the level at which statistical analysis will be performed. Insuring that the level of generalization, level of measurement, and level of statistical analysis are identical provides for more precise models and theory, and eliminates confusion in collecting and analyzing data during research operationalization and testing (Klein, Dansereau, & Hall, 1994).

The model of the formulation of NHRD policy was proposed to represent the elements and interactions necessary to national (organizational) level development of HRD strategy. The researcher-theorist's explicit specification that the model is applicable at the organizational level implies that individuals will vary within groups with respect to the constructs represented in the model. It can be further predicted that within-group variability on one construct of the model will relate to within-group variability on additional constructs (Klein, Dansereau, & Hall, 1994) demonstrated in the model.

Subsequent to the research operationalization and testing phases of theory development for continued reverification and refinement of the model, theories might be drawn from one or more of the three levels comprising the model. Should the micro or meso levels of the model become the focus of future efforts at theorization, the theoretical level would then be specified as that of the group level. The implicit prediction of the group level for theory is that members at the micro and meso levels of the model comprise homogeneous groups with respect to the theoretical constructs of interest at these lower hierarchical levels. Therefore, sources of variability with respect

to one or more theoretical constructs demonstrated in the model would be posited to exist between the groups residing at the micro and meso levels.

Degree of Explication of Assumptions of Variability

The sources of variability among levels of the model were *Moderately* sufficient in their fulfillment of *Degree of Explication of Assumptions of Variability*, a criterion requiring explication by the researcher-theorist of the sources of predicted variability, homogeneity, independence, or heterogeneity, among levels with regard to the constructs demonstrated by a model or theory. Klein, Dansereau, and Hall (1994) urge researchers predicting sources of variability among levels to consult scholarly literature addressing the composition and practices of organizations, including attraction and selection procedures, socialization, culture, diversity, interaction, ranking, commitment and more. Application of concepts drawn from the organizational literature to inform and justify inquiries proposing assumptions of variability among levels of a model or theory under development “yields a more comprehensive and convincing theory” (Klein, Dansereau, & Hall 1994, p. 207). The researcher-theorist is further advised to consider alternative assumptions of variability during the process of forming predictions as “it refines their thinking and spurs their creativity to speculate about alternative conceptualizations of their constructs” (Klein, Dansereau, & Hall, 1994, p. 208).

Grounded in the perspective of a nation as a comprehensive and diverse organization, the model guides the formulation of national-level HRD policy as synchronous interactions of required elements occurring at a nation’s micro, meso, and macro levels. In its representation of national planning for investment in the human

resources, the model rests upon a foundation that is the large and diverse body of literature addressing the interdependence of human resource development with human development, and is enriched by attendant concepts drawn from research and practice of both disciplines. Proposing the model as an organization situated among the disciplines most centrally concerned with development of the human resources significantly explicates the sources of variability among the three levels of the model to support the researcher-theorist's prediction that individuals will vary within groups with respect to the constructs represented in the model. This degree of explication of assumptions of variability for the model proposes, also, to support the prediction that the micro and meso levels should be specified at the group level of theory with the implication that these levels are comprised of homogeneous groups. Sources of variability were, therefore, posited to exist between groups residing at the micro and meso levels of the model.

Outcomes as Endogenous Variables

This assessment judged the outcomes of the model of the formulation of NHRD policy, indicated in terms of endogenous variables, against the quality criteria of *Observability* and *Measurability* using the constant comparison method of analysis. Endogenous variables, the elements that Dubin (1978) identified as “outcomes” (p. 22) of theory and that Kozlowski & Klein (2000) described as “endogenous constructs, or dependent variables” (p. 12), are a model or theory's representation and explanation of the products of organizational processes. While outcomes are real and important, Dubin (1978) cautioned researcher-theorists in the social sciences against a singular focus on

predicting outcomes, urging them to attend equally to the power of understanding as a form of knowledge about the processes of social interaction that produce the outcomes under study. Classification of outcomes yields primary and secondary endogenous variables based upon order of production. While primary endogenous variables provide for secondary endogenous variables, secondary variables are equally significant representations of organizational outcomes of interest.

The intended products of the model's representation of the formulation of NHRD policy are represented as three organizational process outcomes. The primary endogenous variable is "Learning", an outcome anticipated to provide for two secondary endogenous variables, economic, political, and socio-cultural "Performance", and economic, political, and socio-cultural "Wellbeing". National learning is capable of providing for economic, political, and socio-cultural performance and wellbeing for individuals, their societies, and their nations.

Observability

The outcomes of the model, indicated in terms of endogenous variables, were *Highly* sufficient in their fulfillment of *Observability*. As a criterion, *Observability* requires monitoring of the products or effects of a model or theory in order to determine the presence, absence, increase, decrease, or status of remaining unchanged of their properties for representation as endogenous variables.

The model's primary outcome, "Learning", can be observed as being either present or absent, and can be determined to be increasing, decreasing, or unchanged such that these observations can be recorded as endogenous variables. Further, the presence or

absence of the model's secondary outcomes, economic, political, and socio-cultural "Performance", and economic, political, and socio-cultural "Wellbeing", can be observed and determined to be increasing, decreasing, or unchanged. These observations of secondary outcomes of the model can be recorded as endogenous variables.

Measurability

The outcomes of the model, indicated in terms of endogenous variables, were *Moderately* sufficient in their fulfillment of *Measurability*, a criterion that requires calculation of the effects of a model or theory. *Measurability* requires representation of the outcomes of calculation as endogenous variables to record the presence or absence of effects or products, and their increase, decrease, or status of remaining unchanged for subsequent operationalization and testing of the model or theory.

Various methods of measurement can determine the presence or absence of the many forms of "Learning", the primary outcome of the model, at each of the micro, meso, and macro levels, as well as in terms of the totality of the model's representation of national learning. Calculated measures can further be employed to determine whether the various forms of "Learning" are increasing, decreasing, or unchanged, and these measures can be recorded as endogenous variables.

The two secondary outcomes of the model, economic, political, and socio-cultural "Performance" and economic, political, and socio-cultural "Wellbeing", can each be calculated as either present or absent and recorded as endogenous variables. There is difficulty, however, associated with calculating increases and decreases in the secondary outcomes of the model. It is possible to use various systems of measurement

to calculate economic, political, and socio-cultural “Performance” outcomes.

“Wellbeing”, the concomitant secondary outcome of the model is a construct difficult to confine to a singular definition. Instead, “Wellbeing” is frequently measured in clusters of objective indicators, including income per capita, empowerment, and health outcomes, together with subjective descriptors such as life satisfaction, “individuals’ perceived distance from their aspirations” (Conceicao & Bandura, 2008, p. 5). While objective and subjective combinations of indicators improve descriptive accuracy of the construct of “Wellbeing”, they increase the difficulty of identifying universally calculable terms that might provide for measurability of this construct. Therefore, the model’s fulfillment of the criterion of *Measurability* was heavily dependent upon the researcher’s coordinated selection of compatible tools for measurement of the various indices comprising economic, political, and socio-cultural “Performance”, and upon clear definition and associated measures to guide calculations of increasing, decreasing or unchanging status of economic, political, and socio-cultural “Wellbeing”.

Table 10: Summary of assessment 1: A critical-realist test for theory.

Summary of Assessment 1: A Critical-Realist Test for Models and Theory Application of Critical-Realist (Hypothetico-Deductive) Criteria for Evaluation of Theory (Dubin, 1978) with addition of Criteria Suggested for Evaluation of Collective Constructs and Levels in Multi-Level Theory (Reynolds Fisher, 2000), and Criteria for Evaluation of Outcomes, to an Emergent Model of the Formulation of National Human Resource Development (NHRD) Policy		
Dubin Criteria of Excellence for Evaluation of Theory	Description of Criteria of Excellence (Dubin, 1978) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>Units of the Theory</i>	<p style="text-align: center;"><i>Units are “the things about which the researcher is trying to make sense” (Lynham, 2002, p. 247).</i></p> <ol style="list-style-type: none"> 1.) Rigor and Exactness = use of Variable rather than Attribute units, and preferably combining both unit types 2.) Parsimony = minimization of complexity and assumptions 3.) Completeness = use of Associative units and their resulting possible zero, an absent, or even negative, value 4.) Logical Consistency = logic of the types of units combined and used 5.) Degree of Conformity to the Limitations on Employment & Combination of Units = adherence to three limiting rules governing the combination of types of units for development of theory 	<p><i>High</i></p> <p><i>High</i></p> <p><i>High</i></p> <p><i>High</i></p> <p><i>Moderate</i></p>
	<ol style="list-style-type: none"> 1.) The model is comprised of seven categories of units, all of the preferred unit type, Variable rather than Attribute, increasing the kinds of predictions and extensiveness of empirical tests that it might support (Dubin, 1978). The model, however, does not achieve a combination of both Attribute and Variable units. 2.) The model’s units are numerous, requiring a substantial level of detail for description and organizational structure. However there are not more units than necessary to sufficiently representation the formulation of NHRD policy, a multi-part, multi-level course of action attending to both specificity and flexibility across contexts. 3.) Six of the model’s seven categories of units are classified as Associative units. The Associative unit type is representative of a property characteristic that is present only partially and under limited conditions. That the model is comprised of Associative units becomes important during empirical testing when predictions generated must be tested for completeness in terms of covering those system states in which Associative units hold zero or negative values. 4.) That the model is comprised of three unit types, Enumerative, Associative, and Relational/Associative (complex units) is preferable to enable empirical inquiry within the four quadrants of the Cartesian coordinate system. “Creating flexibility and spread in the types of data and types of inquiry that can be used in the future operationalization, verification and refinement of the theory” (Lynham, 2000a, p. 114) or model. 5.) In combining Relational units with Associative units that are, themselves, properties of those Relational units, the model violates the first rule of limitations, a difficulty commonly associated with construction of models and theory for use in the social sciences (Dubin, 1978). However, the violation created by the combining of Relational and Associative units might be statistically accommodated, using a tool such as multiple factor analysis, during empirical testing and analysis of propositions of the model. 	

Table 10 Continued

Summary of Assessment 1: A Critical-Realist Test for Models and Theory Application of Critical-Realist (Hypothetico-Deductive) Criteria for Evaluation of Theory (Dubin,1978) with addition of Criteria Suggested for Evaluation of Collective Constructs and Levels in Multi-Level Theory (Reynolds Fisher, 2000), and Criteria for Evaluation of Outcomes, to an Emergent Model of the Formulation of National Human Resource Development (NHRD) Policy		
Dubin Criteria of Excellence for Evaluation of Theory	Description of Criteria of Excellence (Dubin, 1978) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>Laws of Interaction Among Units</i>	<p style="text-align: center;"><i>A Law of Interaction is "... a linkage or connection among two or more units" (Dubin, 1978, p. 90).</i></p> <p>1.) Parsimony = the maximum versus the minimum number of laws required to relate the units of a theory at least once with each other</p>	<p><i>Moderate</i></p>
	<p>1.) The number of units of the model is significant, requiring great numbers of interactions to represent the formulation of NHRD policy, a multi-part, multi-process, multi-level course of action. While insuring that none of the units exceeds the maximum allotment of relationships permitted by Dubin's (1978) methodology, the number of laws necessary to relate each of the categorical units comprising the model just once with all the other units is vast. In representing complex human processes and meaning-making, the model struggles to conform with Dubin's (1978) criterion of <i>Parsimony</i>.</p>	
<i>Boundaries of the Theory</i>	<p style="text-align: center;"><i>Boundaries "... make clear and explicit the limited portions of the world within which the theory [or model] is expected to hold" (Lynham, 2000a, p. 133).</i></p> <p>1.) Homogeneity = the units employed in the theory and the laws by which they interact satisfy the same boundary-determining criteria</p> <p>2.) Generalization = the bigger the domain, the more general the theory</p>	<p><i>High</i></p> <p><i>High</i></p>
	<p>1.) Six of the seven categorical units of the model (Individuals, Groups, Communities, Organizations, Regions, and Nation) and the laws by which they interact all satisfy a singular set of boundary-determining criteria. However, the seventh categorical unit of the model, International, is a Relational unit derived by interaction between two Associative units (two nations). The International unit must reside partially outside the boundary of the model as one or more of the Associative nation units must be situated outside the boundary of the Associative nation unit that is engaging in the formulating of NHRD policy.</p> <p>2.) The model's representation of the formulation of NHRD policy for practice, a multi-synchronous course of action occurring synchronously at the micro, meso, and macro levels, is too large for further development as a single theory, and overly complex for classification as one grand theory. Therefore, this representation of the formulation of NHRD policy was developed as a multi-level model. Pending a successful conclusion to the pre-fieldwork assessment followed by empirical and interpretivist evaluation, one or more theories might be drawn from the model for future testing. For the short-term, the model attends to the criterion of <i>Generalization</i> by the researcher-theorist's acknowledgement that the formulation of NHRD, the domain of the phenomenon under study, is too large for consideration as a single theory.</p>	

Table 10 Continued

Summary of Assessment 1: A Critical-Realist Test for Models and Theory Application of Critical-Realist (Hypothetico-Deductive) Criteria for Evaluation of Theory (Dubin,1978) with addition of Criteria Suggested for Evaluation of Collective Constructs and Levels in Multi-Level Theory (Reynolds Fisher, 2000), and Criteria for Evaluation of Outcomes, to an Emergent Model of the Formulation of National Human Resource Development (NHRD) Policy		
Dubin Criteria of Excellence for Evaluation of Theory	Description of Criteria of Excellence (Dubin, 1978) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>System States and their Effects on the Theory</i>	<p style="text-align: center;"><i>System States are "... the conditions under which the theory [or model] is operative" (Dubin, 1978, p. 146).</i></p> <p>1.) Inclusiveness = the need for all the units of the system to be included in the system state of the theory</p> <p>2.) Persistence = requires that the system state endure through a meaningful period of time</p> <p>3.) Distinctiveness = requires that all units take on determinant (measurable, distinctive) values for the system state</p> <p>1.) The previous assessment of Boundaries of the model informs assessment of <i>Inclusiveness</i> of the system states of the model. Six of the seven categorical units comprising the model (Individuals, Groups, Communities, Organizations, Regions, and Nation) and the laws by which these units interact satisfy a defined set of boundary-determining criteria, and are collectively included in each of the six potential system states of the model. The seventh categorical unit of the model, International, is a relational unit derived by interaction between two Associative units (two nations). The International unit requires that one Associative nation unit reside outside the boundary of the model for which NHRD policy is being formulated. The nation unit that resides outside the boundary of the model might, depending on the mode of governance and power structure that shapes the system state of the model, also reside outside the system state. Under the centralized, transitional, government initiated towards standardization, and decentralized/free market modes of governance and power structure, the second Associative nation unit of the International unit resides outside the system state of the model. However, the small nations mode, and frequently the post-conflict mode, are forms of governance that rely upon international cooperation. In the system states for NHRD that are shaped by the two latter modes of governance, both nation units of the International unit reside within the same system state of the model.</p> <p>2.) Each of six modes of governance and power structure holding the potential to shape a system state of NHRD of the model is a condition of distributed power and agency amongst actors, partners, and stakeholders. Such conditions of governance persist for unique and meaningful periods of time, often indefinitely, until a transition is made, or forced, to an alternate mode of governance and power structure.</p> <p>3.) Six modes of governance and power structure form the model's distinct system states of NHRD by determining the distribution of power and agency amongst actors, prospective partners, and stakeholders who fulfill roles and perform responsibilities as they engage in the formulation of NHRD. The distribution of power for each unit and at each level of the model takes on determinant values according to the mode of governance and power structure shaping a given system state for NHRD of the model. The units are determinant to the extent that measures of their participation will be distinct in one system state from the measures of participation by the same units under a different system state. Further, determinant values for units of the model correspond to control of national factors, and utilization and collaboration around national resources toward the formulation of NHRD policy.</p>	<p><i>High</i></p> <p><i>High</i></p> <p><i>High</i></p>

Table 10 Continued

ASSESSMENT OF COLLECTIVE CONSTRUCTS & LEVELS OF MULTI-LEVEL MODELS & THEORY		
Derived Criteria of Excellence for Evaluation of Multilevel Theory	Description of Criteria of Excellence and Comparison with the Emerging Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>Collective Constructs</i>	<p style="text-align: center;"><i>Collective Constructs are tools, formed through the actions and interactions of organizational members, for creating logical and systematic associations among observable phenomena (Nunnally & Bernstein, 1994; Morgeson & Hoffman, 1999).</i></p> <p>1.) Descriptiveness of Contextual Causation = clarification of the contextual conditions that produce a specified collective construct or set of collective constructs</p> <p>2.) Level-Specific Functionality = specification of the function of a construct at the collective level and demonstration of subsequent output at lower organizational levels</p> <p>3.) Distinguishing of Level of Existence and Level(s) of Measurement = both the level at which a collective construct resides and the level or levels at which it is measured must be distinguished</p>	<p><i>Moderate</i></p> <p><i>High</i></p> <p><i>High</i></p>
	<p>1.) Characteristics of organizational contexts are reflected in the systems of interaction they support that subsequently determine the structures of collective constructs that might be produced (Morgeson & Hoffman, 1999). The dynamic context of global forces acting with and against a national environment gives rise to two sets, each set comprised of three constructs, of collective constructs, demonstrated in the model. Three collective constructs categorized as “National Environment and Pre-Conditions”, are: “Political Continuum,” “Economic Continuum,” and “Socio-Cultural Continuum,” and a second set of three collective constructs is categorized as “National Requirements, Factors and Resources”, and includes: “National Background and Characteristics and Current Level of Development”, “Actors and Potential Partners”, and “National Resources, including Human Resources”.</p> <p>2.) A functional approach to assessment of the collective constructs comprising the model integrates constructs across levels. Researchers are encouraged to begin developing theory, or models intended for eventual theorization, using a functional perspective to “clearly specify the function of a construct at the collective level and demonstrate how it has a similar output at the lower level” (Morgeson & Hofmann, 1999, p. 258). Specification of the functions of the six collective constructs at the macro-level of the model, and identification of their outputs at the meso and micro levels of the model, achieves an abridged version of the micro-view of the model presented in Appendix B of this manuscript.</p> <p>3.) The level at which a construct resides is mostly observable in a model or theory’s representation of the phenomenon under focus. However, Morgeson and Hoffman (1999) advise that “choice of level of measurement should be guided by one’s theoretical model, the nature of the construct under investigation, the question one is trying to investigate, and whether one is concerned with assessing structure” (p. 261). One set of three collective constructs, the “Political Continuum,” “Economic Continuum,” and “Socio-Cultural Continuum” demonstrate the principle of bottom-up influence in residing at the Individual (micro) Level of the model while being measurable at the micro, meso, and macro levels. The second set of three collective constructs, “National Background and Characteristics and Current Level of Development”, “Actors and Potential Partners”, and “National Resources” demonstrates the principle of top-down influence in residing at the macro-level of the model while being mostly measurable at the macro level.</p>	

Table 10 Continued

ASSESSMENT OF COLLECTIVE CONSTRUCTS & LEVELS OF MULTI-LEVEL MODELS & THEORY		
Derived Criteria of Excellence for Evaluation of Multilevel Theory	Description of Criteria of Excellence and Comparison with the Emerging Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>Laws of Interaction Among Constructs</i>	<p><i>Laws of Interaction Among Constructs are actions connecting elements that comprise a collective, or connecting two or more distinct collectives that influence each other, and, consequently, an organization (Morgeson & Hofmann, 1999)</i></p> <p>1.) Sufficiency = the minimum number of interactions required to relate the components of a collective with one another such that a distinct collective is established, or the minimum interactions required to establish influence from one distinct collective on one or more other distinct collectives to influence the entire collective, organization</p> <p>2.) Persistence = requires that the laws of interaction among collective constructs, either providing for a given collective construct or influencing, through the interrelating of two or more distinct collectives, the entire organization, must endure through a meaningful period of time</p>	<i>High</i>
	<p>1.) The inherent transferability of the model suggests that the collective constructs expressed cannot be created nor sustained by fixed laws of interaction. Instead, the model's two sets of collective constructs interrelate within sets and between sets to create contexts that accommodate unique sets of national circumstances, thus delineating conceptual categories for data specific to particular instances of application. In all instances, the collective constructs represented in the model are produced and maintained by sufficient laws of interaction among collectives. Similarly, the relationships between and among the six collective constructs demonstrated in the model are sufficiently sustained by laws of interaction among distinct collectives so as to influence one another as well as the entire system, a nation.</p> <p>2.) Each of six modes of governance and power structure that shapes a system state of NHRD is a condition of distributed power and agency amongst actors, partners, and general stakeholders. Modes and conditions of governance result from and are structured by the interactions of collective constructs that distribute power to influence groups, institutions, and the entire organization. Therefore, modes of governance and power, and the collectives that create them persist for unique and meaningful periods of time until a transition occurs to an alternate mode of governance and power structure that, too, will be influenced by underlying laws of interaction between and among collective constructs.</p>	<i>High</i>

Table 10 Continued

ASSESSMENT OF COLLECTIVE CONSTRUCTS & LEVELS OF MULTI-LEVEL MODELS & THEORY		
Derived Criteria of Excellence for Evaluation of Multilevel Theory	Description of Criteria of Excellence and Comparison with the Emerging Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>Levels (Including Boundaries)</i>	<p><i>Levels (including Boundaries)</i> differentiate the limited portion of the model or theory in which specified units of the model or theory are thought to reside</p> <p>1.) Functionalism/Reductionism = specification of the hierarchical levels of a model or theory in which the levels are functionally interdependent in terms of obtaining inputs or exchanging outputs (Rousseau, 1985), thus enabling determination of the relative positions of units residing within each level of the model or theory</p> <p>2.) Inclusion = specification of the levels of a model or theory in terms of their relative position to one another such that a relationship is achieved of levels as integral parts of a whole organization as attention is focused on the distinct types of units comprising the level, and the degree to which the level is contained and influenced by all other levels</p>	<i>High</i>
	<p>1.) It is the interchange of units between adjacent borders of the levels of the model that renders the three levels interdependent by softening their boundaries, making them impossible to define in absolute terms. Nevertheless, varying combinations of units persistently residing within the micro, meso, and macro levels of the model clearly differentiates each level from the others. Importantly, the criterion of <i>Functionalism/Reductionism</i> highlights the model's "performance of increasingly complex tasks at higher hierarchical levels and the corresponding need to coordinate activities of components" (Rousseau, 1985, p. 26).</p> <p>2.) Each of the three levels of the model of the formulation of NHRD policy contains a unique set of units, the combination of which supersedes the combination of units contained within all lower levels to establish the hierarchical structure of the model. Specifically, the units residing at the macro-level of the model, International, National, Region, and Organization, encompass and exceed the units residing at the meso-level of the model, Region, Organization, and Community, which encompass and exceed the units residing at the micro-level of the model, Organization, Community, Group, and Individual. "The concept of inclusion is useful in exploring cross-level relationships" (Rousseau, 1985, p. 27) that will become important during research operationalization and testing of the model with data from the field.</p>	<i>High</i>

Table 10 Continued

ASSESSMENT OF COLLECTIVE CONSTRUCTS & LEVELS OF MULTI-LEVEL MODELS & THEORY		
Derived Criteria of Excellence for Evaluation of Multilevel Theory	Description of Criteria of Excellence and Comparison with the Emerging Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>Functional Relationships Between Constructs Among Levels</i>	<p><i>Functional Relationships Among Levels map the transformation of concepts across levels to create systematic frameworks of these relational processes (Chan, 1998) that are most often recognized as constructs</i></p> <p>1.) Specification of Interactivity of Constructs Among Levels = identification of the mode by which lower level units convene to compose concepts which become collective constructs at higher levels</p> <p>2.) Identification of Composition Model Type = specification of the type of composition model (Chan, 1998) that most closely approximates the operational combination process by which lower level units produce collective constructs at higher levels of a model or theory</p>	<p><i>Moderate</i></p> <p><i>High</i></p>
	<p>1.) There is not a unique mode by which lower level units, Individuals, Groups, and Communities, of the model of the formulation of NHRD policy interrelate among the micro, meso, and macro levels to compose the collective constructs demonstrated by Organizations, Regions, and the Nation residing at higher levels of the model. Instead, the units of the model vary, interact, and convene according to a multitude of operational combinations, themselves embedded with subprocesses (Chan, 1998), at each level to produce and advance the collective constructs categorized as national characteristics, actors, and national resources. This dynamic process is further informed by the prevailing system state influencing the governance and power structure among all units comprising the model.</p> <p>2.) The model is most accurately represented by the process composition model (Chan, 1998). The composition model types were developed to classify less comprehensive organizational systems than nations. Still, the process model permits the interrelationships inherent among the multiple constructs engaged in the multidimensional process of formulating NHRD policy, and, therefore, of the five composition model types, the process model offers the most sufficient representation of the model.</p>	

Table 10 Continued

ASSESSMENT OF COLLECTIVE CONSTRUCTS & LEVELS OF MULTI-LEVEL MODELS & THEORY		
Derived Criteria of Excellence for Evaluation of Multilevel Theory	Description of Criteria of Excellence and Comparison with the Emerging Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>Sources of Variability Among Levels</i>	<p style="text-align: center;"><i>Sources of Variability Among Levels are the homogeneous, independent, or heterogeneous properties, with respect to the constructs represented in a model or theory, expressed by the individuals or groups to whom the model or theory is intended to apply (Klein, Dansereau, & Hall, 1994)</i></p> <p>1.) Specification of Theoretical Level = stipulating the organizational level or levels at which a model or theory is intended to be applicable, thereby explicitly or implicitly predicting the sources of variability for the constructs represented</p> <p>2.) Degree of Explication of Assumptions of Variability = explication by the researcher-theorist of the sources of predicted variability, homogeneity, independence, or heterogeneity among levels with regard to the constructs of a model or theory</p>	<p><i>High</i></p> <p><i>Moderate</i></p>
	<p>1.) The model was proposed to represent the elements and interactions necessary to national (organizational) level development of HRD strategy. Specification that the model is applicable at the organizational level implies that individuals will vary within groups with respect to the constructs represented in the model such that within-group variability on one construct of the model will relate to within-group variability on additional constructs (Klein, Dansereau, & Hall, 1994) demonstrated in the model. Should the micro or meso levels of the model become the focus of future efforts at theorization, the theoretical level would be specified as group with the implicit prediction that members at the micro and meso levels of the model are homogeneous with respect to the theoretical constructs of interest at these lower hierarchical levels. Therefore, sources of variability would be posited to exist between groups residing at the micro and meso levels with respect to one or more theoretical constructs of the model.</p> <p>2.) Grounded in the perspective of a nation as a comprehensive and diverse organization, the model guides the formulation of national-level HRD policy as synchronous interactions of required elements occurring at a nation's micro, meso, and macro levels. In its representation of national planning for investment in the human resources, the model rests upon a foundation of literature addressing the interdependence of human resource development with human development, and is enriched by attendant concepts drawn from research and practice of both disciplines. Proposing the model as an organization situated among the disciplines concerned with development of the human resources significantly explicates the sources of variability among the three levels of the model to support the researcher-theorist's prediction that individuals will vary within groups with respect to the constructs represented in the model. This degree of explication of variability for the model predicts, also, that the micro and meso levels should be specified at the group level of theory with the implication that these levels are comprised of homogeneous groups with sources of variability posited to exist between groups residing at the micro and meso levels of the model. The researcher-theorist is advised to consider alternative assumptions of variability during the forming of predictions as "it refines their thinking and spurs their creativity to speculate about alternative conceptualizations of their constructs" (Klein, Dansereau, & Hall, 1994, p. 208).</p>	

Table 10 Continued

ASSESSMENT OF COLLECTIVE CONSTRUCTS & LEVELS OF MULTI-LEVEL MODELS & THEORY		
Derived Criteria of Excellence for Evaluation of Multilevel Theory	Description of Criteria of Excellence and Comparison with the Emerging Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
<i>Outcomes as Endogenous Variables</i>	<p style="text-align: center;"><i>Outcomes as Endogenous Variables are the products of the organizational process(es) that the model or theory intends to represent and explain (Kozlowski & Klein, 2000)</i></p> <p>1.) Observability = monitoring of the products or effects of a model or theory to determine properties of presence or absence, and increase, decrease, or status of remaining unchanged</p> <p>2.) Measurability = calculation of the effects of a model or theory and representation of calculated outcomes as endogenous variables for purposes of subsequent operationalization of the model or theory</p> <p>1.) The model's primary outcome, "Learning", can be observed as being either present or absent, and can be determined to be increasing, decreasing, or unchanged such that these observations can be recorded as endogenous variables. Further, the presence or absence of the model's secondary outcomes, economic, political, and socio-cultural "Performance", and economic, political, and socio-cultural "Wellbeing", can be observed and determined to be increasing, decreasing, or unchanged. Observations of secondary outcomes of the model can be recorded by the researcher-theorist as endogenous variables.</p> <p>2.) Various methods of measurement are available for application to determine the presence or absence of the many forms of the primary outcome of the model, "Learning", at each of the micro, meso, and macro levels, as well as in terms of the totality of the model's representation of national learning. Calculated measures can further be employed to determine whether various forms of "Learning" are increasing, decreasing, or unchanged, and these measures recorded as endogenous variables. The two secondary outcomes of the model, economic, political, and socio-cultural "Performance" and economic, political, and socio-cultural "Wellbeing", can both be calculated as either present or absent and both can be recorded as endogenous variables. There is difficulty, however, associated with calculating increases and decreases in the secondary outcomes of the model. It is possible to use a number of varied systems of measurement, some of which are compatible and many of which are incompatible, to calculate economic, political, and socio-cultural "Performance" outcomes. "Wellbeing", the concomitant secondary outcome of the model is a construct difficult to confine to a singular definition such that it is most frequently measured in clusters of objective indicators, including income per capita, health outcomes, and empowerment together with subjective descriptors including and life satisfaction, "individuals' perceived distance from their aspirations" (Conceicao & Bandura, 2008, p. 5). While objective and subjective combinations of indicators improve descriptive accuracy of the construct of "Wellbeing", they increase the difficulty of identifying universally calculable terms that might provide for the measurability of this construct. Therefore, the model's fulfillment of the criterion of <i>Measurability</i> is heavily dependent upon the researcher's coordinated selection of compatible tools for measurement of the various indices comprising economic, political, and socio-cultural "Performance", as well as clear definition and associated measures to guide calculations of increasing, decreasing or unchanging status of economic, political, and socio-cultural "Wellbeing".</p>	<p><i>High</i></p> <p><i>Moderate</i></p>

Analysis of Assessment 1 Outcomes

Good theory building should result in two kinds of knowledge: outcome knowledge in the form of predictive and explanative knowledge, and process knowledge in the form of enhanced understanding of how a phenomenon works and what it means in the world (Dubin, 1978). The 24 criteria comprising this assessment from a critical realist perspective formed a structured approach to comprehending and then judging outcomes obtained through construction of a model of the formulation of NHRD policy that might subsequently become theorized. The assessment was built from the foundational criteria of excellence provided by Dubin (1978) for evaluation of units, laws of interaction, boundaries, and system states. Analysis was extended with the addition of criteria of excellence derived from the research literature defining and describing the multi-level construction of models and theory as proposed by Reynolds Fisher (2000). Criteria for evaluating collective constructs, laws of interaction among collective constructs, levels including boundaries, functional relationships among levels, and sources of variability among levels were drawn from the work of Chan (1998), Klein, Tosi, and Cannella (1999), Kozlowski and Klein (2000), Morgeson and Hofmann (1999), and Rousseau (1985), and applied to the model of the formulation of NHRD policy. One additional set of criteria for evaluating the outcomes, termed endogenous variables, of theory was introduced in this dissertation by the researcher-theorist.

Results obtained through application of the critical realist criteria of excellence reaffirmed the systemic nature of the model. The positions and roles of the units, laws, collective constructs, levels, and endogenous variables of the model are interconnected

such that each element is reinforced while its essential role in reinforcing all other elements is emphasized. This task of assessment highlighted responsibilities of the elements in contributing to the model's capacity to provide predictive, explanatory, and process knowledge of the phenomenon that is the formulation of NHRD policy. Assessment made clear that the altering or removing of any one or more of the elements and their interactions comprising the model would fundamentally revise the model, and, thus, researcher and stakeholder understanding of the formulation of NHRD.

The process of assessment, itself, is a form of refining a model or theory still under development. As the researcher-theorist applied each criterion of excellence to the model of the formulation of NHRD, the constituent elements and their interactions within the whole of the system comprising the model were examined, and occasionally adjusted. As the positions and roles of elements were solidified, the system became increasingly stabilized such that it prevailed. As a result, any additional modification of elements was performed for the purpose of strengthening the system, rather than to highlight the individual element. Instances of modification included specification of components along the Z-axis (National Background/ Characteristics/Current Level of Development, Actors/Potential Partners, and National Resources) as top-down collective constructs while components along the X-axis, (Political Continuum, Economic Continuum, and Socio-Cultural Continuum) were designated as bottom-up collective constructs. Ultimately, this critical realist assessment established that the logic and structure of the model are worthy of undertaking the next phases of research

development, research operationalization for testing by direct application of data gathered in the field from the NHRD policy planning process of nations.

The evaluative criteria employed to perform this assessment became progressively more complex as the evaluation proceeded from assessment of single-level models and theory to multi-level models for theory. The focus of each multi-level criterion is a composite of variables, nearly making these criteria interpretivist in their application for evaluation. For instance, application of the criterion of *Measurability* to the secondary endogenous variable of Wellness required interpretation for measurement of clusters of objective and subjective indicators of health outcomes, empowerment, and life satisfaction. It is unclear, and merits further application of the derived criteria to instances of multi-level models and theory, to determine whether the seemingly interpretive characteristics of higher-level critical realist criteria are the result of the researcher-theorist being influenced by the interpretivist assessment criteria proposed by Lincoln and Lynham (2011). Or perhaps, this trend followed naturally along Dubin's proposition that, ultimately, there is some room for stakeholder judgment of the performance of theory (Dubin, 1978), particularly since models and theory are human attempts at representing and explaining the activities and processes of human organizations.

CHAPTER V

ASSESSMENT 2: AN INTERPRETIVIST TEST OF THEORY

Application of Interpretivist Criteria to Judge a Model of the Formulation of NHRD Policy

Denzin and Lincoln (2005) drew from Bateson (1972) to offer a tangible guide for the undertaking of qualitative research.

All qualitative researchers are philosophers in that “universal sense in which all human beings ... are guided by highly abstract principles” (Bateson, 1972, p. 320). These principles combine beliefs about ontology (What kind of being is the human being? What is the nature of reality?), epistemology (What is the relationship between the inquirer and the known?), and methodology (How do we know the world, or gain knowledge of it?) (Guba, 1990, p. 18; Lincoln & Guba, 1985, p. 14-15). [Qualitative research and] the [qualitative] researcher [are thus] “bound within a net of epistemological and ontological premises which – regardless of ultimate truth or falsity – become partially self-validating” (Bateson, 1972, p. 314) (p. 22).

Qualitative researchers study phenomena in their natural settings and may develop interpretivist (social constructivist) theory as attempts to make sense of human actions, processes, and experiences in terms of the meanings people associate with them.

In response to the need to determine which attempts at explanation make for good theory from an interpretivist (social constructivist) perspective, Lincoln and Lynham (2011) suggested criteria for assessment of theory in the applied disciplines, including HRD. A set of 13 evaluative criteria, informed by Patterson's (1983) criteria, but reshaped through close examination of and fitting for congruence to interpretivist axioms of inquiry, recognize and affirm, "the unexpected, the imaginative, the creative, the unusual, the deviation, the messiness, [that] are all unpredictable and at the same time desirable characteristics of human life and activity" (Lincoln & Lynham, 2011, p. 9).

Where Dubin's (1978) criteria of excellence attended to the organizational structure and logic of the model developed to represent the formulation of national-level HRD, Lincoln and Lynham's (2011) criteria more closely assessed the activities, behaviors, process, performance, and meaning-making intrinsic to the formulation of NHRD. The 13 evaluative criteria developed by Lincoln and Lynham (2011) are: meaningfulness and understandability, thick description and insightfulness, narrative elegance, transferability, mutuality of concepts and descriptive logic, empirical verifiability, fruitfulness and provocativeness, usefulness and applicability, compellingness, saturation, prompt to action, fittingness, and transferability and transportability.

Use of Lincoln and Lynham's (2011) assessment criteria to judge the emergent model of the formulation of NHRD should be most adequately performed through comparison in the field of the emergent model with the NHRD policy planning processes of as many nations as possible. However, for the purposes of conducting the present

pre-fieldwork assessment, the 13 qualitative criteria were held as closely as possible to the forthcoming model to enable a formative analysis of the model at two levels, the local-level and the macro-level. (To make possible the estimation of stakeholder responses necessary to carry out this pre-fieldwork assessment, the meso-level of the model was approximately divided between the local level and the macro level.) Each of these two levels of the model represents the anticipated, collective perspectives of stakeholders residing and acting at (a) the local level or at (b) the macro level of a nation.

Local-level Stakeholder

The local-level stakeholder was defined for purposes of this assessment as any entity affiliated with and demonstrating influence at the Individual level, at the Group level, at the Community level, at the locally-situated Organizational level, or at the lower Regional level of the emergent model of the formulation of NHRD policy. The Individual level represents the smallest unit characterizing a local-level stakeholder who might fulfill the role of head of household, farmer, activist, professional, philanthropist, business owner or any other single-member position. The Group level consists of two or more connected Individual stakeholders, and might be represented by a family, a neighborhood, or two or more loosely-affiliated local entrepreneurs. The Community level consists of two or more connected Groups of local-level stakeholders, and might include representatives such as a fishing village or a university and residents of the surrounding local area. The Organizational level consists of two or more formally-connected Groups of local-level stakeholders bound by a common purpose, and might be

represented by a local government, a regional corporation, or a nongovernment organization (NGO) demonstrating regional influence. At the lower Regional level, included in the analysis of local-level stakeholders in carrying out this pre-fieldwork assessment, an immediate region, such as a portion of a province or a small state, is representative of the role of local-level stakeholder.

Macro-level Stakeholder

The macro-level stakeholder was defined for purposes of this assessment as any stakeholder residing and exhibiting influence at the upper Regional level, at the Nationally or Internationally-situated Organizational level, at the National level, or at the International level of the emergent model. A macro-level stakeholder demonstrates significant influence across two or more regions to approach and often encompass the National level in order to exert influence within the global community. The macro-level stakeholder at the upper Regional level might be represented by a large regional government, an alliance of two or more state or regional governments, or a regional alliance of corporations. At the National or International level, the macro-level stakeholder might be represented by a national or multinational corporation, or a multilateral organization such as the World Bank, the International Monetary Fund (IMF), or the United Nations Development Programme (UNDP).

Meaningfulness and Understandability

This assessment judged the entire model of the formulation of NHRD against the criterion of *Meaningfulness and Understandability* using the constant comparison method of analysis. Originating in Patterson's (1983) criterion of *Importance*, which

stated that theory should be significant and relevant to life or real behavior, Lincoln and Lynham's (2011) criterion of *Meaningfulness and Understandability* advocates that interpretivist theory is not unimportant if it "provide[s] explanation and deep understanding of actual events, behaviors, or the meaning-making activities of stakeholders and respondents" (p. 12). Lincoln and Lynham (2011) further contended that it is "equally important" that theory be "accepted by professionals and stakeholders who co-constructed the theory" (p. 12).

The model's comprehensive framework, the X-axis (National Requirements, Factors, and Resources) bearing the conceptual categories of National Background/Characteristics and Existing Level of Development, Actors and Potential Partners, and National and Human Resources, the Y-axis (Domains of Performance and Outcome) supporting the Individual/ Organizational, Regional, and National levels, and the Z-axis (National Environment and Pre-Conditions) carrying Political, Economic, and Socio-Cultural influences offer a substantial foundation from which to provide *Meaningfulness and Understandability* around the formulation of NHRD for stakeholders and researchers. The set of 27 conceptualized units structured by the framework, each containing distinct elements, deepens understanding of the actual components and proposes the processes necessary to the formulation of NHRD policy to guide practice. In its thorough estimation of data that must be collected and analyzed by actors and potential partners to support development of NHRD policy, the model suggests the wide-ranging events and behaviors, including dialogue, analysis, and negotiation undertaken amongst stakeholders and actors essential to the development of

NHRD policy. Thus, the model affords professionals, researchers, policy makers, and stakeholders a strong foothold toward essential understanding of the nature and the role of NHRD, and offers a meaningful preview of potential outcomes and benefits that might be obtained by stakeholders and their affiliated nations through the collaborative achievement of NHRD policy for implementation as practice. Such capacity of the model further suggests the stimulation of meaning-making so integral to the human experience of formulating NHRD to fulfill Lincoln and Lynham's (2011) criterion of *Meaningfulness and Understandability*. It is anticipated that, when put into use through direct application to the NHRD policy planning processes of multiple nations, the emergent model will be accepted by professionals and stakeholders, quite likely with some modifications, to demonstrate a *Moderate* level of sufficiency in its satisfaction of the quality criterion of *Meaningfulness and Understandability* at the local-level, and a *High* level of *Meaningfulness and Understandability* at the macro-level.

Local-level Stakeholder

The forthcoming model was determined to be capable of providing a *High* level of *Meaningfulness and Understandability* for local-level stakeholders in instances where the local-level stakeholder is integral to the process of formulating NHRD policy or where local-level contributions to national policy are significant. Both these cases would monumentally inform stakeholder experience at the local level. It is noteworthy to mention that preliminary experiences of sharing the model with several local-level stakeholders fairly knowledgeable about issues of global political economy elicited thoughtful consideration and favorable responses. Although they may derive substantial

comprehension for *Meaningfulness and Understandability* through examination and use of the model, local-level stakeholders, not frequently involved in the development of national policy, are less likely to obtain significant meaningful from use of the model and its representation of a process not close to their own experience. Thus, the model is evaluated as demonstrating a *Moderate* level of sufficiency in its satisfaction of *Meaningfulness and Understanding* for local-level stakeholders.

Macro-level Stakeholder

The model demonstrated a *High* level of sufficiency in its satisfaction of *Meaningfulness and Understanding* for macro-level stakeholders. Macro-level stakeholders will derive indepth understanding of NHRD through investigation of the model's vivid representation of interactions amongst necessary elements at all levels as these potentially fit together to enable fully-functioning NHRD policy. The model offers meaningfulness by means of examination through experiential experimentation. In this function, the model permits macro-level stakeholders to forecast real-life outcomes resulting from modifications in NHRD policy through the repositioning, altering, or removal of one or more of the model's component elements and associated processes as they simulate strategic possibilities that respond to unique national needs, events, assets, and resources. Further, the model's macro-level view of the formulation of NHRD policy affords governmental and multinational stakeholders the opportunity of reviewing multiple instances of the elements, processes, logic, and propositions underpinning NHRD policy to cumulate their knowledge for deepened understanding.

Thick Description and Insightfulness

This assessment judged the entire model of the formulation of NHRD against the criterion of *Thick Description and Insightfulness* using the constant comparison method of analysis. Lincoln and Lynham's (2011) criterion of *Thick Description and Insightfulness* was derived from Patterson's (1983) criterion of *Precision and Clarity* wherein Patterson called for internally consistent theory that should be free from ambiguities. Lincoln and Lynham (2011), instead, rendered interpretive theory as "a rich or a thickly described theory that is widely applicable to many situations" (p. 12), and that nearly always exhibits some ambiguity "since theories are built, at least in part, on the sense-making, meaning-making and socially constructed activities of respondents and stakeholders [themselves and their experiences inhabitants of our messy world]" (Lincoln & Lynham, 2010, p. 5). As a consequence, the criterion of *Thick Description and Insightfulness* calls for "interpretive theory [that] should ... be understandable and insightful; exhibit reasonable structural corroboration ([that is] be internally and contextually consistent); [and] accommodate some ambiguity" (Lincoln & Lynham, 2011, p. 16) in its aim to achieve "clarity towards understanding (rather than prediction or control)" (p. 12).

The thick descriptions offered by the combinations of distinct elements collected within each of the 27 conceptualized units, demarcated along the X-axis, (National Environment and Pre-Conditions), the Y-axis (Domains of Performance and Outcome), and the Z-axis (National Requirements, Factors, and Resources) provide significant insight into the intricate execution of collective processes, information-seeking dialogue,

data gathering, analysis and interpretation, and lived experience that are necessary to the developing of collaborative, coordinated policy to guide the implementation of NHRD. One conceptual category is delineated along the X-axis by the Political Continuum, along the Y- axis at the National Level, and along the Z-axis at Actors and Potential Partners to include this collection of distinct elements: National Government; Regional Governments/External; NGOs; Multinational Corporations; National Corporations; Labor/Trade/Professional Associations; and Universities. Together, these entities, each of which contributes a unique system of sense-making and socially-constructed activities to the overall collaboration, must be encouraged to engage in the richly intertwined discussions, negotiations, development, implementation, evaluation, and meaning-making that form the human processes and experience of developing cohesive NHRD policy for practical application.

The model strives for descriptive representation for understanding by delineating the elements and portraying their interactions necessary to the formulation of NHRD. Concurrently, the model aims for structural corroboration in terms of internal consistency throughout its three levels of analysis and contextual consistency across innumerable local, regional, and national contexts. Stakeholders are encouraged to gain insight into the nuanced formulation of NHRD using the model's capacity, through movement, interchange, replacement, or elimination of elements at multiple levels and under variable, defined forms of governance and power structure, to demonstrate multiple views of NHRD and its potential outcomes yet to be fully explored.

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD demonstrated a *Moderate/High* level of sufficiency in its satisfaction of the quality criterion of *Thick Description and Insightfulness* at the local level, and a *High* level of *Thick Description and Insightfulness* at the macro level.

Local-level Stakeholder

The model was determined to provide a *High* level of *Thick Description and Insightfulness* for the local-level stakeholder who seeks a sophisticated level of understanding and insight into the formulation of NHRD, possibly to inform macro-level stakeholders of local and regional contributions to and requirements of NHRD. However, the local-level stakeholder, generally less involved and not as experienced in national policy development, would be more likely to require and, thus, attain a *Medium* level of sufficiency in terms of the model's provision of *Thick Description and Insightfulness*. Therefore, the model was assessed at a *Moderate/High* level in its satisfaction of the quality criterion of *Thick Description and Insightfulness* at the local level.

Macro-level Stakeholder

The model demonstrated a *High* level of sufficiency in its satisfaction of *Thick Description and Insightfulness* for macro-level stakeholders. The model provides rich depiction for macro-level stakeholders in its representation of the varied interactions amongst the actors and the elements at each of three levels as these are configured and reconfigured and transposed across various local, regional, and national contexts in response to changing global conditions. In this regard, the model provides a form of

scenario planning by offering insight into potential outcomes as the pieces are assembled and fused together in multitudinous combinations to simulate the myriad shapes in which NHRD policy might be developed and sustained.

Narrative Elegance

This assessment judged the entire model of the formulation of NHRD against the criterion of *Narrative Elegance* using the constant comparison method of analysis.

Lincoln and Lynham (2011) concluded that Patterson's (1983) criterion of *Parsimony* is a mathematical approach to theory that does not serve "the complexity of human affairs" (p. 12), and, therefore, is only constructive for interpretive theory where interpretive theory concedes transferability and applicability. Interpretive theory should, instead, "... be either simple or complex, depending on the matter or phenomenon being theorized; be understandable beyond the scientific community (i.e., accessible in natural language), narratively elegant, and conceptually rich, provocative and evocative" (Lincoln & Lynham, 2011, p. 16).

The model of the formulation of NHRD is fairly simple where a single level, such as the Individual/Organizational level, of the model is the focus of examination. However, the model becomes progressively more complex with the accumulation of each additional level, such as the combining of the Community/Regional level with the Individual/Organizational level, for consideration by stakeholders. Nevertheless, the model's "conceptually rich, provocative and evocative" (Lincoln & Lynham, 2011, p. 16) purpose, logic, and descriptions can be expressed in either natural language or scientific language, depending upon the priorities and preferences of a particular

stakeholder audience. Natural language comfortably accommodates the elements and processes comprising the model, particularly in conveying local practices and solutions associated with the Individual/Organizational level of engagement, while sufficiently conveying outcomes from NHRD policy representing the human experience of performance and wellbeing at any given level of assessment. Scientific language contributes opportunities for empirical evaluation of NHRD policy, including economic analysis of learning for performance by region or comparisons of growth and performance ratios over time, to the dialogue around elements, processes, and outcomes represented by the model. The model's fulfillment of additional criteria applied in this interpretivist pre-fieldwork assessment (Lincoln and Lynham, 2011), notably *Transferability and Transportability*, was found to be supported through the use of both natural language and scientific language.

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD demonstrated a *High* level of sufficiency in its satisfaction of the quality criterion of *Narrative Elegance* at the local-level, as well as a *High* level of *Narrative Elegance* at the macro level.

Local-level Stakeholder

The model provided a *High* level of *Narrative Elegance* for the local-level stakeholder who might seek to employ either natural language or scientific language to engage in dialogue, negotiation, and analysis with other local-level stakeholders, as well as with macro-level stakeholders, around local and regional contributions to the elements and processes necessary to the formulation of NHRD policy.

Macro-level Stakeholder

The model offered a *High* level of *Narrative Elegance* for the macro-level stakeholder who, although likely to prefer scientific language to define and negotiate macro-level participation in and outcomes from formulating NHRD policy, might nevertheless select natural language to engage other macro-level stakeholders or local-level stakeholders in discussion around development of NHRD policy for implementation in the form of strategic practice.

Transferability

This assessment judged the entire model of the formulation of NHRD against the criterion of *Transferability* using the constant comparison method of analysis. Patterson (1983) advocated that a theory should include all known data in the field under study to fulfill the criterion he termed *Comprehensiveness*. Lincoln and Lynham (2011) proposed rather that, “An interpretive theory should ... be as complete as possible” (p. 16) for the area of interest or context “in which [it] is intended primarily to apply; they [theories] only begin to gain comprehensiveness when others see their utility and begin to transfer the learnings to other settings and contexts” (p. 13). In exchanging the designation of *Comprehensiveness* for *Transferability*, Lincoln and Lynham (2011) reinforced their stance that “comprehensiveness is not a characteristic of interpretivist theories - rather a consequence of their perceived utility [capacity to convey propositional or tacit knowledge] beyond the original context” (p. 13).

Transferability represents an essential property of the emergent model of the formulation of NHRD which is the capacity to convey and distribute knowledge gained

through practice and experience of the phenomenon under consideration. This primary need to achieve *Transferability*, the capacity “to transfer the learnings [obtained through application of the model to one or more prior contexts] to other settings and contexts” (Lincoln & Lynham, 2011, p. 13), prompted development of the model’s central attribute: Flexibility. Moreover, the three levels of the model were conceptualized around the notion that the concepts, elements, and processes comprising NHRD are transferable from the individual and organizational levels and through the regional and community level to demonstrate equal applicability also at the national level. It is anticipated that the emergent model will, through repeated use, experimentation, and refinement, achieve full sufficiency in its satisfaction of the criterion of *Transferability*.

Given the current level of understanding of NHRD, both in terms of scholarship and practice, the model, still under development, was constructed to “be as complete as possible” (Lincoln & Lynham, 2011. p. 16), at each of three levels, in its designation of the elements and the processes inherent in the formulation of NHRD policy. As stakeholders at all levels begin to employ and test the model through application to varied and unique contexts, and to adjust it to fulfill distinct needs and requirements, they will participate in continuous learning processes through which they will acquire and create new knowledge, some of which will be transferrable to multiple other settings and contexts (Lincoln & Lynham, 2011). Settings to which such newly-attained knowledge is likely to be transferrable include comparable, in terms of such factors as national resources and/or governance, levels, and contexts of peer nations.

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD was *Highly* satisfactory in its fulfillment of the quality criterion of *Transferability* at the local level, as well as *Highly* sufficient in fulfilling the criterion of *Transferability* also at the macro level.

Local-level Stakeholder

The model offered a High level of Transferability for the local-level stakeholder who might apply learning and new knowledge acquired through application of the model within the local community to various instances throughout the community, as well as seek to transfer new understanding and practices of NHRD from one community to other, comparable communities.

Macro-level Stakeholder

The model demonstrated a *High* level of *Transferability* for the macro-level stakeholder who might seek to implement learning derived through application and analysis of the model in various national contexts bearing overarching similarities, particularly in terms of political, economic, and/or socio-cultural resources, factors, and influences.

Mutuality of Concepts and Descriptive Logic

This assessment judged the entire model of the formulation of NHRD against the criterion of *Mutuality of Concepts and Descriptive Logic* using the constant comparison method of analysis. Lincoln and Lynham (2011) challenged Patterson's (1983) requirement for *Operationality*, the capacity of a theory to be reduced to procedures so as to enable the testing of its propositions or predictions, on behalf of interpretive theory

that is “never reduced to procedures” but is, instead, “elaborated by those who see their own lives reflected in [its] assumptions and narrations” (p. 13). The reshaped criterion, *Mutuality of Concepts and Descriptive Logic* (Lincoln & Lynham, 2011), established that “an interpretive theory should ... display mutuality of concepts and descriptive logic; be made operational, i.e. the descriptive and explanatory framework (concepts, logic and propositions) are made explicit and thus able to be put into action; be capable of being tested by other researchers, and enjoy stakeholders assent to its usefulness for their lives and contexts” (p. 16). Although the concepts comprising interpretive theory need not be operationalized, “some may be used to indicate relationships, junctures, axes, or lines of organization between and among other concepts” (Lincoln & Lynham, 2011, p. 13).

The emergent model of the formulation of NHRD policy conveys sufficient descriptive logic and propositions by means of its central framework and structural organization. Concurrently, the symmetry and affiliation shared amongst the 27 conceptual categories, nine congruent categories at each of three levels, together with the descriptive capacity of the combinations of elements contained within each category, display the model’s mutuality of concepts. In its comprehensive estimation and presentation of local, regional, and national factors and resources that must be reviewed to support the development of NHRD policy, the model visually represents the layered activities that comprise the process of formulating NHRD, and explicates the wide-ranging set of behaviors, including dialogue, discussion, negotiations, and data-seeking required to move from roadmap to performance on the part of stakeholders planning

NHRD policy for implementation. The model, open to refinement by all stakeholders, affords both practitioners and researchers an understanding as realistic and dynamic as a three-dimensional strategy outlined on paper possibly can of the synchronous, systemic processes that must take place in order to achieve NHRD policy, and, thus, provide for the human experience of NHRD.

It remains to be learned and understood by direct application of the model to NHRD policy planning in the field as to whether stakeholders for whose experiences the model is intended to be relevant and applicable might assent to the operationality of the model. Stakeholder experience should assess the model in terms of the explicitness of its descriptive logic, the usefulness of its propositions, the rich descriptiveness of its concepts, and of the model as a holistic tool for the contexts of their lives. Similarly, the extent to which the mutuality of concepts and descriptive logic of the emergent model are trustworthy, durable, and replicable remains to be determined through independent application and testing carried out by colleague HRD researchers, together with scholars representing the many disciplines adjoining HRD.

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD demonstrated a *High* level of satisfaction against the quality criterion of *Mutuality of Concepts and Descriptive Logic* at the local level. At the macro level, too, the model is *Highly* sufficient in its fulfillment of the criterion of *Mutuality of Concepts and Descriptive Logic*.

Local-level Stakeholder

Satisfaction by the forthcoming model of the criterion of *Mutuality of Concepts and Descriptive Logic* will be “elaborated by those [primarily local-level stakeholders] who see their own lives reflected in [its] assumptions and narrations” (Lincoln & Lynham, 2011, p. 13). As local-level stakeholders are proximally closest to the action in terms of the human experience of NHRD policy, they possess firsthand perspectives of the model’s capacity to accurately reflect the processes unfolding – or failing to do so – around them in their daily lives. Thus, the model fulfilled, at a *High* level of sufficiency, the criterion of *Mutuality of Concepts and Descriptive Logic* at the local level.

Macro-level Stakeholder

The macro-level stakeholder will assume a bird’s eye overview in terms of experiencing the proposed model’s *High* level of satisfaction of the criterion of *Mutuality of Concepts and Descriptive Logic*. While the macro-level stakeholder might not be as likely as the local-level stakeholder to focus directly on the individual human experience of the model’s reflection of life assumptions and narrations, macro-level stakeholders will be afforded the capacity to view multiple instances of the model’s logic, propositions, and concepts across varying contexts and timeframes. This cumulating of experiences should place the macro-level stakeholder in a position to assent to or to dispel the model’s usefulness in representing actual behavior, events, and processes inherent in the planning and execution of NHRD policy.

Empirical Verifiability

This assessment judged the entire model of the formulation of NHRD against the criterion of *Empirical Verifiability* using the constant comparison method of analysis. Patterson (1983) stipulated the necessary criterion of *Empirical Validity or Verification* to evaluate a theory's capacity to be supported and confirmed by experience and experiments such that the theory eventually generates new knowledge. In defining the criterion of *Empirical Verifiability*, Lincoln and Lynham (2011) drew from Patterson to explain that interpretive theory "cannot be tested with contrived experiments, but can against human experience" (p. 13), that it "should ... be supported by 'lived experience,' be verified by the respondents that it 'rings true,' or that it reflects some aspect of their experience, meaning-making, or observation; match some element of socially constructed life" (p. 16). Lincoln and Lynham (2011) further extended the criterion of *Empirical Verifiability* to require that interpretive theory should generate social scientific knowledge together with new learning on the part of respondents.

The forthcoming model of the formulation of NHRD policy was initially conceptualized and substantially developed through use of the researcher-theorist's informed imagination, and was grounded in her observations, experiences, and meaning-making around the phenomenon of NHRD in the world. Following a successful conclusion of the present pre-fieldwork assessment, the researcher-theorist will pursue verification of the logic, scope, representation, explanation, and human experience encompassed in the model's interpretation of the formulating of NHRD through continuous comparison of the model with stakeholder perceptions, lived realities, and

sense-making at all levels and across a broad representation of contexts. While the model is ultimately expected to demonstrate a *High* level of performance in its satisfaction of the criterion of *Empirical Verifiability*, it is uncontested that only its direct application to lived NHRD policy planning and processes, together with confirmation by stakeholders and influential actors that it illustrates their truths inherent in the formulating of NHRD, can attest to the model's satisfaction of this criterion. Deviations or shades of discrepancy revealed between stakeholder experiences and the model's representative explanation of the formulation of NHRD should indicate points for reconsideration and possible correction by the researcher-theorist's adjustment of the model, followed again by comparison with the varied experiences of stakeholders. Therefore, rigorous analysis of the *Empirical Verifiability* of the emergent model, and its projected demonstration of a *High* level in its performance against this criterion, must await further evaluation in the field.

This pre-fieldwork assessment affirmed that the continuous process of applying the model against NHRD policy planning and lived realities for modification and refinement serve to fulfill the requirement of the criterion of *Empirical Verifiability*, a criterion that calls for the generating of social scientific knowledge and new learning on the part of stakeholders, as well as for researchers. New knowledge acquired through the model's comparison to processes and meaning-making around the formulating of NHRD policy will further uncover the conditions and mechanisms by which NHRD is designed, developed, functions, and can be sustained. This recursive procedure of assessment and adjustment is also expected to begin to identify indicators of successful NHRD, as well

as motivators and barriers that might influence and stimulate or hinder implementation and resultant potential outcomes and benefits from NHRD policy.

It is anticipated that the emergent model of the formulation of NHRD will be *Highly* sufficient in its satisfaction of the quality criterion of *Empirical Verifiability* at the local level, as well as *Highly* sufficient in fulfilling the criterion at the macro level. At present, however, the newly-introduced model was assessed as demonstrating *Moderate* sufficiency in fulfilling the criterion of *Empirical Verifiability* at both levels.

Local-level Stakeholder

Local-level stakeholders will, over time, provide for the forthcoming model's *High* performance against the criterion of *Empirical Verifiability*. Local-level stakeholder contributions of firsthand knowledge and truths inherent in NHRD, revealing shades of understanding and insights grounded in first-level perceptions, lived realities and experiences, and organizational and community meaning-making around NHRD, will be garnered through local participation in the formulating of and human flourishing through NHRD policy. Use of one stakeholder's, the researcher-theorist's, informed imagination (Lynham, 2000a) of the existence of NHRD in the world as a primary source from which to develop the model to its present state, and the social scientific knowledge and new learning that might be generated by means of this effort, supported the current assessment that the model demonstrates a *Moderate* level of sufficiency in fulfilling the criterion of *Empirical Verifiability* at the local level.

Macro-level Stakeholder

Macro-level stakeholders, too, will drive the model's attainment of *High* sufficiency in fulfilling the criterion of *Empirical Verifiability*. Occasional macro-level stakeholder contributions of firsthand experiences of NHRD will be accompanied by the continuous collection, cumulating, and recounting of the myriad interactions and experiences obtained via macro-level stakeholder engagement with actors and stakeholders at all other levels and across national contexts in their various collaborations toward the formulation of NHRD policy. Because the identification of macro-level stakeholder engagements for NHRD has recently been initiated, the model was judged as *Moderately* sufficient in its present fulfillment of the criterion of *Empirical Verifiability* at the macro level.

Fruitfulness and Provocativeness

This assessment judged the entire model of the formulation of NHRD policy against the criterion of *Fruitfulness and Provocativeness* using the constant comparison method of analysis. Patterson (1983) called for theories to fulfill the criterion of *Fruitfulness*, the capacity to generate testable predictions that might advance the development of new thinking, new ideas, and new knowledge. Lincoln and Lynham (2011) broadened Patterson's concept in their description and explanation of *Fruitfulness and Provocativeness*, a criterion to be met by good quality interpretive theory. More precisely, *Fruitfulness* conveys "the capacity of the [interpretive] theory to lead to deep understanding, [and] the degree to which this understanding can be translated into action," while *Provocativeness* "identify[ies] the degree to which [the

theory] provokes the stimulation and development of new ideas, new theories, or new avenues of social action” (Lincoln & Lynham, 2011, p. 14). Lincoln and Lynham (2011) further referenced the important potential of interpretive theory to be *Fruitful and Provocative*, even in the absence of providing predictive possibilities, by stimulating innovative thinking and revolutionary social action” by “lead[ing] to disbelief or resistance in others [prior theory or ideas]” or “erase[ing] false consciousness” (p. 14).

An earlier portion of this assessment, analysis comparing the criterion of *Meaningfulness and Understanding* to the emergent model, proposed that the model’s foundational representation of the elements, partners, and processes necessary to the formulation of NHRD policy suggests the wide-ranging array of activities, including dialogue, data-seeking, and negotiations that deepen stakeholder understanding of NHRD while also serving to achieve development of NHRD policy. Stakeholder participation in one or many of these interrelated activities generates understanding for knowledge that translates individual and organizational interests into intent and then engagement aimed at the collective undertaking of HRD at the national level. This journey from participation to interest to learning to development and active implementation, and, eventually, sustainment of NHRD policy demonstrates a *High* level of *Fruitfulness* as stakeholders and researchers become motivated to action and collaboration at the many component levels of NHRD.

One of the central purposes underlying the researcher-theorist’s desire to introduce a model of the formulation of NHRD and, while it is still under development, to put the model forward to undergo the two pre-fieldwork assessments described in this

study, is to reinvigorate discussion by scholars and practitioners around the formulation of NHRD policy, and its potential outcomes and benefits for individuals, and for organizations, including nations. In providing a roadmap for comprehensive organization of the elements and interactions required for NHRD, the model exhibits a *High* level of *Provocativeness*. This is accomplished by the model's opening up of new avenues and levels for innovative thought, rigorous dialogue, and deepened understanding around the possibilities for individual, organizational, community, regional, and national participation and growth through learning for performance, and illuminating of potential new strategies focused on enhancing the wellbeing of our global community through the promise of NHRD policy. In addition, the emergent model established a foundation from which sub-theories might eventually be developed at the three component levels to further inform our understanding and practice of NHRD policy.

This pre-fieldwork assessment finds that the emergent model of the formulation of NHRD policy demonstrated a *High* level of sufficiency in its satisfaction of the quality criterion of *Fruitfulness and Provocativeness* at the local-level, and a *High* level in its fulfillment of *Fruitfulness and Provocativeness* also at the macro level.

Local-level Stakeholder

The model under development demonstrated a *High* level in its satisfaction of the criterion of *Fruitfulness and Provocativeness* for local-level stakeholders whose primary understanding of the benefits of NHRD, particularly in terms of the potential from unique local-level contributions for enhancing NHRD, is expected to motivate these stakeholders to action. It is further anticipated that local-level stakeholder activity will

heighten innovative thinking toward local range theories that will further stimulate our understanding and practice of NHRD policy at all levels.

Macro-level Stakeholder

The model was *Highly* sufficient in fulfilling of the criterion of *Fruitfulness and Provocativeness* for macro-level stakeholders, particularly in its suggestion of potential benefits to all stakeholders that stand to be derived from collaborative macro-level contributions to thought and resources targeted to development and implementation of NHRD. In this regard, the model highlights new possibilities that might be obtained through NHRD as a common denominator for our living, and urges focused research and action on the part of macro-level stakeholders to strengthen pursuit of these outcomes at every level.

Usefulness and Applicability

This assessment judged the entire model of the formulation of NHRD policy against the criterion of *Usefulness and Applicability* using the constant comparison method of analysis. In setting forth the criterion of *Practicality*, Patterson (1983) advocated that theory should provide a conceptual framework for practice that might aid practitioners in organizing their thinking and strategies. Lincoln and Lynham (2011) affirmed the criterion of *Practicality*, but renamed the construct as *Usefulness and Applicability*, to explain the necessary embrace by interpretive theory of two elements: (a) the provision by the theory of “deep and holistic understanding of practice” and (b) the utility of the theory in “organizing practitioner thinking and practice by providing a conceptual framework for that practice” (p. 14). Lincoln and Lynham (2011) further

elaborated the notion of *Usefulness and Applicability* in their statement that, “interpretive theory should ... be useful and applicable to ordinary persons, suggesting ways of being in the world, or ways of altering one’s circumstances in some context; provide new ways of seeing old situations, such that meaningful human change can occur; provide models for human flourishing, as living knowledge, and for practical application and high organizational performance” (p. 16).

The model under development endeavored to achieve practicality in its tangible and applicable, yet comprehensive, conceptual framework that presents the essential elements and their collaborations necessary to the formulation of NHRD policy: (a) national background and current characteristics, (b) national resources (including human resources), (c) governance and power structure amongst influencing actors and potential partners, (d) national economic, political, and socio-cultural environment, and (e) integration at the individual/ organizational, community/ regional, and national levels, all situated within the (f) global megatrends shaping NHRD and its outcomes. The model proposes usefulness in terms of its organizational structure that encompasses three levels and provides for 27 conceptual categories, the contents of which guide the collection of data for analysis by stakeholders as practitioners and scholars, alike, in preparing to formulate NHRD policy.

The logic of the model serves to order and systematize stakeholder thinking and subsequent practice for the undertaking of what is, at the very least, an overwhelming process of “meaningful human change” (Lincoln & Lynham, 2011, p. 16) – coordinated enhancement of a nation’s learning. Stakeholders, practitioners, and researchers can

locate themselves and their potential contributions to the processes of stimulating national learning by means of NHRD policy within the model's design. This capacity enables the development of plans capable of accommodating and managing a multitude of synchronous activities, including dialogue, interpretation, negotiation, data-seeking, and the creation and sharing of new knowledge that must take place in order to move nations from roadmap to action along the process of strategizing NHRD policy for implementation. Further, the model's holistic representation of the formulation of NHRD policy suggests methods by which the collaborative, mutually supportive alignment of actions on the part of all stakeholders and potential partners stands to maximize utilization of organizational, community, regional, and national resources, and magnify resultant returns on investment. Conscientious coordination is essential so that the experience of NHRD and its benefits might be equitably extended to reach the lives of all populations of a nation, particularly those most in need but least able to advocate on their own behalf, such that human flourishing might prevail to enhance performance and wellbeing of all.

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD policy achieved a *High* level of sufficiency in its satisfaction of the quality criterion of *Usefulness and Applicability* at the local level, as well as demonstrated a *High* level of fulfillment of the criterion of *Usefulness and Applicability* at the macro level.

Local-level Stakeholder

In providing new ways of viewing and analyzing their potential contributions of effort and resources toward national performance and wellbeing, and, thereby, enabling the maximizing of their benefits from cumulative NHRD outcomes, the model fulfilled the criterion of *Usefulness and Applicability* at a *High* level for local-level stakeholders. At the local level, stakeholders are able to employ the model's levels and logic to practically track and logically compare suggested paths for improving local-level performance and wellbeing within the overall national context, thus insuring the address of their needs by policy intended to bring about meaningful national change.

Macro-level Stakeholder

The proposed model demonstrated agile utility at the macro-level in its provision of a comprehensive logic to be distributed across multiple levels. Such logic in strategy should enable analysis by macro-level stakeholders of the simultaneous actions and processes within and across contexts, the performance of which must be coordinated in order to maximize use of resources for NHRD policy. Comprehensive logic in organization subsequently provides for evaluation of effectiveness and efficiency in the allocation and application of resources to produce desired outcomes and benefits from NHRD. Thus, the model demonstrated a *High* level of sufficiency in its satisfaction of the criterion of *Usefulness and Applicability* at the macro-level.

Compellingness

This assessment judged the entire model of the formulation of NHRD against the criterion of *Compellingness* using the constant comparison method of analysis. Lincoln

and Lynham (2011) developed the criterion of *Compellingness*, the ability of interpretive research and theory to “move stakeholders to action” (p. 16), to “recognize and honor the abandonment of the detached observer, by re-inserting social science’s mandate to provide information for positive action in the world” (Lincoln & Lynham, 2010, p. 13). To fulfill the criterion of *Compellingness*, interpretive theory must satisfy two components: (a) give rise to “findings that mirror the ineffable experience of respondent audiences (fidelity, or internal validity)” (Lincoln & Lynham, 2011, p. 16), and (b) “create a vicarious, emotional response in those who read/experience it, which acts as a prompt to action on the part of some stake-holding audience” (Lincoln & Lynham, 2010, p. 14). Lincoln and Lynham (2011) clarified that a stakeholder audience engaged with research and its attendant questions or issues is broad and inclusive of the researchers, communities and participants engaged with the research, and anyone else, including policy groups, members of governance, and funders of the research, who has a legitimate stake in the research findings, policy process, and subsequent policy.

An earlier portion of this pre-fieldwork assessment, analysis of the model against the criterion of *Fruitfulness and Provocativeness*, introduced the notion of a journey of both local-level and macro-level stakeholders from participation to deep understanding to action dedicated to the development, achievement, and sustaining of NHRD policy. Progress along this evolutionary journey on the part of one or more responding stakeholder audience(s) results from the capacity of good theory (and models from which theory may eventually be drawn) to attain internal validity with audience experiences, and, thereby, to elicit emotional responses leading to proactive behaviors

and activities from the same audience(s). In highlighting this process, the criterion of *Compellingness* came closest to addressing the psychological rationale underpinning stakeholder motivations to action for NHRD policy.

In clarifying the elements and collaborations required for the development and implementation of NHRD policy, the emergent model makes more tangible the potential process, outcomes, and benefits of the imprecise construct of NHRD at the individual/organizational, community/regional, and national levels. This capacity of the model to bridge the seeming divide between scholarly notion and practical utility by bringing a valid and achievable representation of NHRD policy into the daily lives of stakeholders ensures that the construct will resonate with personal experiences and organizational aspirations. In this way, NHRD policy becomes an accessible and universal vision of stakeholder hopes for their lives as they consider the future while concurrently drawing upon the emotional reserves of the very actors whose intentional steps are required and must be then compelled to accomplish the policy necessary to provide for the reality of NHRD.

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD demonstrated a *High* level of sufficiency in its satisfaction of the quality criterion of *Compellingness* at the local level, as well as a *Highly* sufficient level of satisfaction of *Compellingness* at the macro level.

Local-level Stakeholder

The model achieved a *High* level in its satisfaction of the criterion of *Compellingness* for local-level stakeholders by drawing upon those primary experiences

and emotions central to the welfare of the individual as a human being, values that are also manifested in the aspirations of communities and nations as they envision their futures. The call for focused action from the keepers of these emotions, who are also the bearers of the necessary responses and actions, resonates at all levels of the model, but is most firmly grounded and rooted at the local level.

Macro-level Stakeholder

In building from the most personal and individual level of human experience and emotion (from the bottom up), the model achieved a *High* level of sufficiency for macro-level stakeholders in its satisfaction of the criterion of *Compellingness*. Macro-level stakeholders most often hold and control the power and access required to mobilize resources, including the legions of individuals, required to translate interest and intent into NHRD policy for coordinated action – but first they must be moved to do so.

Saturation

This assessment judged the entire model of the formulation of NHRD against the criterion of *Saturation* using the constant comparison method of analysis. The criterion of *Saturation*, as put forward by Lincoln and Lynham (2011), designates two points that are reached when little new knowledge is forthcoming from that process of interpretive theory by which social constructions and meaning-making narratives are assembled to inform a theory system. The stage of *Saturation* may exist at two points: “The first form of *Saturation* refers to the narratives and respondents’ explanations having been exhaustively sampled; the second form exists when multiple examples of the phenomenon can be found independently, that is, by independent researchers” (Lincoln

& Lynham, 2010, p. 14). Accordingly, a theory is said to be “saturated with exemplars” when it is known to be supported by multiple examples in the real world of the phenomenon that is being theorized (Lincoln & Lynham, 2011, p. 17).

The forthcoming model of the formulation of NHRD policy is recently-developed and not yet mature, particularly in terms of stakeholder examination for congruency with and support of narratives, social constructions, and meaningful explanations around NHRD policy. Additionally, while multiple instances of the phenomena of NHRD policy and practice are known to exist at the organizational, community, regional, and national levels, these await rigorous comparison with the model. At this point, the newly-introduced model has not begun the process of fulfilling either the first or the second form of the criterion of *Saturation*. The model is being prepared by means of this pre-fieldwork assessment for direct comparison with actual instances of stakeholder experience in planning and strategizing the formulation of NHRD policy, as well as with multiple examples of community, regional, and national demonstrations, narrations, and documentations of NHRD policy supported in practice.

The researcher-theorist will conduct direct testing of the model in the field to collect and cumulate narrative explanations and meaning-making constructions from stakeholders, actors, and potential partners at all levels of engagement and influence around the formulation of NHRD policy with the objective of fulfilling the first form of *Saturation* (Lincoln & Lynham, 2011). As suggested during this assessment, it is anticipated that initiation of the model will reinvigorate discussion around NHRD among researchers and practitioners, activities that will surely call forth increasingly broader

representations of stakeholder experiences and firsthand descriptions for comparison with the model and further fulfillment of the first form of the criterion of *Saturation*. As more stakeholders engage with the model, they should continue to generate, investigate, and document exemplars of unique implementations of NHRD policy and practice to fulfill the second form of the criterion of *Saturation*. New knowledge obtained through these processes will serve to refine and mature the model as it will also open and expand new possibilities for inquiry to further foster the cycle of learning through enhancing the model's representation of the formulation of NHRD policy. That a multitude of stakeholder narratives, social constructions, and rich explanations exist around the formulation of NHRD, at the local level and at the macro level, and that these are capable of fulfilling the criterion of *Saturation* on behalf of the emergent model, is uncontested. The task at hand for the researcher-theorist, and for many colleague and independent researchers and practitioners, is to collect and share this knowledge so that we might all learn deeply from all stakeholders of NHRD.

This pre-fieldwork assessment determined that, at this point in its development, the emergent model of the formulation of NHRD demonstrates a *Low* level of sufficiency in its satisfaction of the quality criterion of *Saturation* at the local level, and a *Low* level of sufficiency in fulfilling the criterion of *Saturation* also at the macro level.

Local-level Stakeholder

The newly-proposed model demonstrated a *Low* satisfaction of the criterion of *Saturation* at the local level. It is anticipated, however, that local-level stakeholders will be instrumental in providing firsthand narratives, social constructions, and meaning-

laden explanations of their lived experiences of the formulation of NHRD policy and associated practices that will collectively support the model's eventual fulfillment of the criterion of *Saturation*.

Macro-level Stakeholder

The emergent model was assessed at a *Low* level in its satisfaction of the criterion of *Saturation* at the macro level. It is projected that the model's eventual fulfillment of the criterion of *Saturation* with macro level exemplars will enhance macro-level stakeholder decision-making around the equitable distribution and efficient use of resources in order to maximize outcomes from NHRD policy such that its benefits and experience might be extended to stakeholders at all levels of as many nations as possible.

Prompt to Action

This assessment judged the entire model of the formulation of NHRD against the criterion of *Prompt to Action* using the constant comparison method of analysis. Lincoln and Lynham (2011) built the criterion of *Prompt to Action* around the fundamental notion guiding quality research, that is, "An interpretive theory should ... provide a good conceptual understanding of practice" (p. 17). The earlier-defined criterion of *Compellingness* (Lincoln & Lynham, 2011) is "inextricably linked" with and gives rise to the criterion of *Prompt to Action* and its call to "connect theory with action and learning [in context] for continuous refinement and improvement" (Lincoln & Lynham, 2011, p. 17). "Prompts to action include prompts to refine, hone, sharpen and revise practice – to alter performance in the light of new information" (Lincoln & Lynham,

2010, p. 14) and, thus, promote continuous improvement of the theory, itself. Lincoln and Lynham (2011) further explained that the criterion of *Prompt to Action* “consequently relates to the persuasiveness of a theory ... the ability to persuade people to act and to do so on multiple levels separately or simultaneously – for example, rhetorically, emotionally and psychologically ... individually (self) and collectively (self and others)” (Lincoln & Lynham, 2010, p. 15).

The emergent model submitted a dichotomous performance when analyzed against the criterion of *Prompt to Action*. Firstly, the model does “... provide a good conceptual understanding of practice” (Lincoln & Lynham, p. 17). As described in an earlier portion of this pre-fieldwork assessment, comparison of the model with the criterion of *Mutuality of Concepts and Descriptive Logic*, the framework, axes, and close affiliation amongst the 27 conceptual categories, together with the descriptive capacity of the combinations of elements contained within each category, effectively organize and explicate the wide-ranging set of components and efforts required to translate the model from roadmap to action. Further, the model strongly suggests the behaviors and experiences, including dialogue, data-seeking, analysis, negotiation, development, implementation, and sustainment, that move stakeholders from interest to performance within a context of continuous learning as they collaborate for NHRD. Secondly, as revealed during analysis of the model’s fulfillment of the criterion of *Compellingness*, the model demonstrates the capacity to move stakeholders across organizational layers, encompassing individuals, communities, regions, and entire nations, and at all human levels, “rhetorically, emotionally and psychologically” (Lincoln & Lynham, 2010, p. 15)

to plan and to carry out the activities and processes that support development and implementation of NHRD policy.

However, the model is too recent to be capable of undertaking the mandate of the criterion of *Prompt to Action* that calls for sharpening, refining, and honing of principles of practice to increase and improve stakeholder collaboration toward the formulation of NHRD policy. Because it has not yet withstood testing, let alone refinement, by means of direct application in the field, the model has not been sufficiently applied, critiqued, nor adjusted and refined such that it might be deemed capable of determining best practices around NHRD policy for stakeholders, or even for researchers. It is anticipated that widespread and repeated use and experimentation of the model by all stakeholders should generate deep understanding and learning that might serve to mature the model and its capacity to propose, sharpen, and hone principles of practice to guide development of NHRD policy for implementation. Going forward, new knowledge will be gained from stakeholders as they engage with the model and findings from such learning are cumulated and reapplied in refining the model, a process by which the model will, over time, fulfill the criterion of *Prompt to Action* in its call for theory “to alter performance in the light of new information” (Lincoln & Lynham, 2010, p. 14).

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD demonstrated *Moderate* sufficiency in its satisfaction of the quality criterion of *Prompt to Action* at the local level, as well as *Moderate* sufficiency in its fulfillment of the *Prompt to Action* criterion at the macro level.

Local-level Stakeholder

The model's *Medium* performance against the criterion of *Prompt to Action* was grounded in layers of human rhetorical, emotional, and psychological (Lincoln & Lynham, 2010) interpretation by local-level stakeholders who motivate essential firsthand and first-level engagement with the elements and processes required to collaboratively formulate NHRD policy. The local level is the fundamental point at which stakeholder interest and intent inspires movement along the roadmap offered by the model of the formulation of NHRD policy. As learning around NHRD is gathered through comparison of the emergent model against local practices, solutions, and lived experiences, it is anticipated that this new knowledge will refine, hone, sharpen, and revise the model's capacity to inform development of NHRD policy in order to enhance performance at all levels. The model's potential for *High* sufficiency in fulfilling the criterion of *Prompt to Action* at the local level is critical to its subsequent advancement from a *Moderate* to a *High* level of overall performance against this criterion.

Macro-level Stakeholder

The newly-proposed model was assessed as demonstrating a *Moderate* performance in its satisfaction of the criterion of *Prompt to Action* at the macro-level. The model's eventual fulfillment of the criterion of *Prompt to Action* rests substantially on macro-level stakeholder refinement of NHRD policy for improved practice at every level, capacity that will be deeply informed by the lived experiences of NHRD by all stakeholders across contexts and over time.

Fittingness

This assessment judged the entire model of the formulation of NHRD policy against the criterion of *Fittingness* using the constant comparison method of analysis. *Fittingness* was defined by Lincoln and Lynham (2011) as the extent to which an interpretive theory is “rooted in local context”, with the context, itself, created and grounded in “native and indigenous perspectives, meanings and narratives” (p. 17). Recognition of “equifinality”, that “there can be no final solution to any given problem - rather that there are multiple, endlessly creative responses or solutions, any of which might be satisfactory in a given context” (Lincoln & Lynham, 2011, p. 17), is a necessary accomplishment for interpretivist theories to satisfy the criterion of *Fittingness*. As a criterion, *Fittingness* enables the researcher to consider whether the “paradigm and methods chosen to explore the question exhibit high fit/resonance/alignment with the research or theory question itself” (Lincoln & Lynham, 2010, p. 16).

In its conceptualization and continuing development, the model was designed to serve as a flexible and adaptable roadmap that might be individualized to fit the unique characteristics of stakeholders, inclusive of native and indigenous perspectives, meanings, and narratives, within any given local, regional, or national context. The model was proposed to serve as an accommodating guide to fit to varying circumstances such that it might enable dialogue, negotiation, collection, organization, and interpretation of data (background, characteristics, resources, participating actors, potential partners, influencing structures of governance, prevailing political, economic,

and socio-economic climate at the individual/ organizational level, community/regional level, and the national level) by and for stakeholders who will shape NHRD policy and implement resultant practices in the quest to move from concept to action in launching original approaches to NHRD. Encouraging the consideration, exploration, and adaptation of policy solutions and strategies of NHRD by stakeholders at all levels, on behalf of their organizations, communities, and nations, together with potential partners, in various forms and by multiple methods, is central to the purpose of the model under development as it is also to the successful planning of policy for implementation of NHRD.

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD demonstrated a *High* sufficiency in its satisfaction of the quality criterion of *Fittingness* at the local level, as well as a *High* sufficiency of *Fittingness* at the macro level.

Local-level Stakeholder

The model was *Highly* satisfactory in its performance of *Fittingness* at the local level where stakeholders might seek increasingly influential roles in the formulation of NHRD policy to insure consideration of the unique needs and requirements of individuals, organizations, and communities. It is not uncommon for local-level stakeholders to create innovative solutions that might subsequently be scaled, in terms of resources, numbers of participants and beneficiaries, and potential outcomes, to fit the needs of larger regions, and even of entire nations.

Macro-level Stakeholder

The model was *Highly* sufficient in fulfilling the criterion of *Fittingness* at the macro level where stakeholders most often possess the power and resources to analyze myriad possibilities and solutions for NHRD, and, thereby, to effect national policy - for subsequent conversion to daily reality. Macro-level stakeholders must recognize that dissimilar HRD strategies might be crafted to fit at each organizational level of a nation so long as these function cohesively as universal NHRD policy. Further, macro-level stakeholders are urged to consider the criterion of *Fittingness* in determining where and how much and by what means to invest in NHRD solutions in context so as to produce the greatest potential outcomes for as many stakeholders as possible.

Transferability and Transportability

This assessment judged the entire model of the formulation of NHRD against the criterion of *Transferability and Transportability* using the constant comparison method of analysis. Lincoln and Lynham (2011) established the dual criterion of *Transferability and Transportability* for interpretivist theory to reference two linked properties, transfer and transport, associated with the usability of good quality theory. *Transferability* of a theory, a property determined by the interaction between the user(s) who would employ research and theory and the research or theory, itself, describes “the ability in individuals (through interaction between the knower and the known) to carry propositional and/or tacit knowledge from one context to inform another, or multiple other, contexts” (Lincoln & Lynham, 2011, p. 17). *Transportability* describes the capacity of interpretive theory to become increasingly inclusive in terms of “applicability to different

populations, of utility in varying contexts, with varying populations” (Lincoln & Lynham, 2011, p. 17).

As described in comparison by this pre-fieldwork assessment of the emergent model with *Transferability* as a singular criterion, and analysis of the model’s congruency with the criterion of *Fittingness*, construction of the model as an adaptable roadmap was a direct response to the vital recognition that there are “multiple, endlessly creative responses or solutions [to formulating NHRD policy], any of which might be satisfactory in a given context” (Lincoln & Lynham, 2011, p. 17). Flexibility was, therefore, integral to the framework and concepts comprising the model in order to insure utility and transferability in its capacity to convey learning and new knowledge that might advance exploration, experimentation, and adaptation around NHRD policy and practice by stakeholders collaborating at all levels, across contexts, and through varied methods in interpreting the formulation of NHRD policy.

Linked closely with *Transferability* is the criterion of *Transportability* (Lincoln & Lynham, 2011), also central to the development and purpose of the model. The model attends to *Transportability* by consistently advocating inclusivity in providing for human flourishing through NHRD in its service to enhance performance and wellbeing of all populations comprising our global community. As revealed in assessment of the model against the quality criterion of *Usefulness and Applicability*, the model intends to coordinate stakeholder utilization and distribution of resources such that potential benefits and experiences from NHRD policy might be equitably extended to reach the lives of all people, particularly those least able to advocate on their own behalf.

This pre-fieldwork assessment found that the emergent model of the formulation of NHRD demonstrated a *Highly* sufficient performance in its satisfaction of the linked quality criteria of *Transferability and Transportability* at both the local and macro levels.

Local-level Stakeholder

The model was *Highly* sufficient in its satisfaction of *Transferability and Transportability* at the local level where stakeholders will, in most cases, seek to implement their learning and experiences obtained through their experimentation of the model and concurrent practices of NHRD policy within similarly situated contexts. It is important to note, however, that such congruent circumstances might be located outside the immediate local environment, a factor that contributes to *Transportability* of the model in advancing local-level solutions and practices across varying contexts.

Macro-level Stakeholder

The model was *Highly* sufficient in its fulfillment of the criterion of *Transferability and Transportability* at the macro-level where stakeholders possess the capacity to amass large-scale analyses of NHRD implementations and evaluations of resultant outcomes, and to transfer learning from such examinations to support their subsequent decisions regarding the transfer and transport of power and resources through levels and across contexts. As suggested during assessment of the model through use of the criterion of *Usefulness and Applicability*, macro-level stakeholders are instrumental in aligning and allocating essential resources to insure that NHRD might be equitably shared amongst all populations. Macro-level stakeholders, thus, hold significant responsibility for the model's fulfillment of the criterion of *Transportability*.

Table 11: Summary of Assessment 2. An interpretivist test for models and theory.

Summary of Assessment 2: An Interpretivist Test for Models and Theory Application of 13 Interpretivist (Social Constructivist) Criteria for Judging Theory in Applied Disciplines (Lincoln & Lynham, 2011) to an Emerging Model of the Formulation of National Human Resource Development (NHRD)		
Lincoln & Lynham Criteria for Assessment of Applied Theory	Description of Quality Criteria (Lincoln & Lynham, 2011) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
Meaningfulness and Understandability	<i>Theory should provide explanation and deep understanding of actual events, behaviors, or the meaning-making activities of stakeholders and respondents; and should be accepted by professionals and stakeholders who co-constructed the theory.</i>	Local-Level Moderate
	The framework, the axes, conceptual categories, and descriptive elements, of the model provides for substantial understanding of the actual elements and their interactions while proposing the wide-ranging processes, including dialogue, discussion, negotiations, and data-seeking, necessary to the formulating of NHRD policy for practical implementation. Thus, stakeholders and researchers are afforded deep understanding of the nature and role of NHRD that can sustain meaningful representations of the outcomes, potential benefits, and meaning-making integral to the human experience of NHRD. Local-level stakeholders will derive significant understanding but less meaningfulness from the model that mostly represents processes not close to their own experiences. Macro-level stakeholders will obtain high levels of understanding and meaningfulness from the model's representation of their capacity to maneuver the integral components of NHRD, and, thus, influence real-life outcomes associated with these actions. Testing by means of application in the field will determine the model's acceptance by professionals and stakeholders at all levels.	Macro-Level High
Thick Description and Insightfulness	<i>Theory should be understandable and insightful, and exhibit reasonable structural corroboration (be internally and contextually consistent). Some ambiguity will always exist since theories are built, at least in part, on the sense-making, meaning-making and socially constructed activities of respondents and stakeholders.</i>	Local-Level Moderate/High
	The model offers insightfulness through delineation and rich detailing of the elements contained within 27 conceptual categories and intricate execution of interactions necessary to the formulation of NHRD. The model maintains structural corroboration, even while offering significant flexibility, in terms of internal consistency throughout three levels of analysis and contextual consistency across innumerable local, regional, and national contexts. Local-level stakeholders will attain insight from the model's capacity to highlight and value local contributions to and requirements from NHRD. Macro-level stakeholders will employ the model in scenario planning by assembling its elements in various combinations representing the myriad shapes and interactions by which NHRD policy and practice might be developed and sustained in response to changing global conditions so that they might obtain insight for use in gauging their influence on potential results, outcomes, and benefits at any given level.	Macro-Level High
Narrative Elegance	<i>Interpretive theory may be either simple or complex, depending on the phenomenon being theorized. Such theory ought to be understandable beyond the scientific community (accessible in natural language), narratively elegant, and conceptually rich, provocative and evocative.</i>	Local-Level High
	The model is fairly simple at each of the unique levels, but becomes progressively more complex as the levels are cumulated. The model is capable of accommodating the natural language commonly employed by local-level stakeholders in communities and small regions to convey local requirements, practices and solutions. As well, the language articulated and utilized by mostly macro-level stakeholders in the scientific community contributes capacity for analysis and empirical verification of the performance, growth, and wellbeing outcomes suggested by the model. In either case, the model is narratively elegant and conceptually rich in that it provokes and evokes stakeholder responses and input at each level and collectively.	Macro-Level High

Table 11 Continued

Summary of Assessment 2: An Interpretivist Test for Models and Theory Application of 13 Interpretivist (Social Constructivist) Criteria for Judging Theory in Applied Disciplines (Lincoln & Lynham, 2011) to an Emergent Model of the Formulation of National Human Resource Development (NHRD)		
Lincoln & Lynham Criteria for Assessment of Applied Theory	Description of Quality Criteria (Lincoln & Lynham, 2011) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
Transferability	<i>Theory should be as complete as is possible given its intended range - local, regional or grand theorizing - such that other users may see the extent to which the theory may be useful in their own situation or context. Transferability references the ability of individuals to carry propositional and/or tacit knowledge from one context to inform another, or multiple other contexts.</i>	Local-Level High
	Given the current level of understanding of NHRD, both in terms of scholarship and practice, the model was constructed to “be as complete as possible” (Lincoln & Lynham, 2011. p. 16) in fulfilling its purpose of conveying and distributing knowledge gained through experience of the phenomenon under consideration, NHRD. Moreover, the three levels of the model were conceptualized around the notion that the concepts, elements, and processes comprising NHRD are transferable from the Individual/Organizational level and through the Regional/ Community level to demonstrate equal applicability also at the national level. It is anticipated that the emergent model will, through repeated use, experimentation, and refinement, achieve full sufficiency in its satisfaction of the criterion of <i>Transferability</i> at both the local level where stakeholders seek to transfer new understanding and practices of NHRD from one community to other, comparable communities and at the macro level where stakeholders will implement new knowledge in model in various national contexts bearing political, economic, and/or socio-cultural similarities, particularly in terms of resources, factors, and influences.	Macro-Level High
Mutuality of Concepts and Descriptive Logic	<i>Mutuality of concepts and descriptive logic refer to the extent to which the theory is made operational; the extent to which the descriptive and explanatory framework that constitutes the theory is made explicit such that it can be put into action. A theory is operational if its concepts are richly described, its descriptive logic is made explicit and, together with its propositions, it is capable of being tested by other researchers, and the stakeholders to whom it is intended to apply assent to its usefulness for their lives and contexts.</i>	Local-Level High
	Its framework and structural organization convey the descriptive logic and propositions of the model while the symmetry and affiliation shared amongst the 27 conceptual categories, together with the descriptive capacity of the combinations of elements contained within each category, display the model’s mutuality of concepts. In its comprehensive presentation of local, regional, and national factors and resources that must be reviewed to support development of NHRD policy, the model represents the layered activities that comprise the process of formulating NHRD. Further, the model explicates the wide-ranging set of behaviors required to move from roadmap to performance on the part of stakeholders planning NHRD policy for implementation. Open to refinement by all stakeholders, the model affords practitioners and researchers an understanding as realistic and dynamic as a three-dimensional strategy outlined on paper possibly can of the synchronous, systemic processes that must take place in order to achieve NHRD policy and that provide for human experiences of NHRD. It remains to be learned and understood by direct application of the model to NHRD policy planning in the field as to whether local-level stakeholders’ firsthand narratives and macro-level stakeholders’ birds’ eye perspectives will assent to the operability of the model as relevant and applicable for their experiences. The extent to which the mutuality of concepts and descriptive logic of the emergent model are trustworthy, durable, and replicable remains to be determined through independent application and testing carried out by colleague HRD researchers as well as by scholars representing the many disciplines adjoining HRD.	Macro-Level High

Table 11 Continued

Summary of Assessment 2: An Interpretivist Test for Models and Theory Application of 13 Interpretivist (Social Constructivist) Criteria for Judging Theory in Applied Disciplines (Lincoln & Lynham, 2011) to an Emerging Model of the Formulation of National Human Resource Development (NHRD)		
Lincoln & Lynham Criteria for Assessment of Applied Theory	Description of Quality Criteria (Lincoln & Lynham, 2011) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
Empirical Verifiability	<p><i>Theory must be supported by ‘lived experience,’ be verified by respondents that it ‘rings true,’ or reflects some aspect of their experience, meaning-making, or observation, and must match some element of socially constructed life while also generating both new social scientific knowledge, and new respondent learning.</i></p>	Local-Level Moderate
	<p>Initially conceptualized and developed through use of the researcher-theorist’s informed imagination, the model is grounded in her observations, experience, and meaning-making around the phenomenon of NHRD in the world. Following a successful conclusion of this assessment, verification of the still-emergent model’s logic, scope, and representation of the formulation of NHRD will be pursued through its comparison with the perceptions, lived experiences, recounting of interactions, and sense-making, of stakeholders representing a vast array of interests at local levels (individual, organizational, community, lower regional) and macro levels (upper regional and national). Only direct application of the model to a range of NHRD policy planning processes with results validated by participating stakeholders can affirm that the model is illustrative of their experiences of NHRD and, therefore, satisfies the criterion of <i>Empirical Verifiability</i>. New knowledge acquired through the recursive procedure of comparison, assessment, and adjustment of the emergent model will begin to reveal indicators of successful NHRD, and motivators and barriers that might influence and stimulate or hinder the development, implementation, and potential outcomes of NHRD. This pre-fieldwork assessment can attest that application of the model in the field and the continuing process of its comparison and refinement or modification will fulfill the requirement to generate social scientific knowledge and learning on the part of stakeholders at all levels, as well as for researchers.</p>	Macro-Level Moderate
Fruitfulness and Provocativeness	<p><i>Theories are fruitful and provocative to the extent that they illuminate some aspect of social life, and suggest new avenues of research and/or description and/or action.</i></p>	Local-Level Moderate
	<p>The model’s foundational organization and representation of the elements, partners, and processes necessary to the formulation of NHRD policy suggests the wide-ranging array of activities in which stakeholders participate and that generate new understanding for knowledge to translate individual and organizational interests into understanding and intent to engagement aimed at the collective undertaking of HRD at the national level. This journey from interest to participation to learning for development and active implementation and sustainment of NHRD policy demonstrates the model’s fulfillment of <i>Fruitfulness</i> as local-level stakeholders and macro-level stakeholders, as well as researchers, become motivated to take action and to collaborate at the component levels of NHRD. The model demonstrates <i>Provocativeness</i> in its opening up of new avenues for innovative thought, rigorous dialogue, and deepened understanding around the possibilities for individual, organizational, community, regional, and national growth through learning for performance, and illuminates potential new strategies focused on enhancing the wellbeing of our global community through the promise of NHRD. Local-level stakeholder activity will generate new thinking toward local-range theories to stimulate our understanding and practice of NHRD policy at all levels. Further, the model illuminates new possibilities that might be obtained through consideration of NHRD as a common denominator for our living, and, in this regard, urges focused research, resources, and action on the part of macro-level stakeholders to strengthen pursuit of these outcomes at every level.</p>	Macro-Level Moderate

Table 11 Continued

Summary of Assessment 2: An Interpretivist Test for Models and Theory Application of 13 Interpretivist (Social Constructivist) Criteria for Judging Theory in Applied Disciplines (Lincoln & Lynham, 2011) to an Emerging Model of the Formulation of National Human Resource Development (NHRD)		
Lincoln & Lynham Criteria for Assessment of Applied Theory	Description of Quality Criteria (Lincoln & Lynham, 2011) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
Usefulness and Applicability	<p><i>Theories are useful and applicable to ordinary persons to the extent that they suggest ways of being in the world, or ways of altering circumstances in some context. Theories offer new ways of seeing old situations such that meaningful human change can occur. At their best, theories provide models for human flourishing (Reason 1997; Heron, 1996), as living knowledge (Schwandt, 1996), and for practical application (Heron, 1996) and high organizational performance (Lincoln and Guba, 1985; Swanson, 1999).</i></p>	Local-Level High
	<p>The model strives for practicality in its tangible and applicable, conceptual framework presenting essential elements and their collaborations necessary to the formulation of NHRD policy. The model proposes usefulness in terms of its organizational structure and logic that serve to order and systematize stakeholder thinking and subsequent practice for the undertaking of what is an overwhelming process of “meaningful human change” (Lincoln & Lynham, 2011, p. 16) – the coordinated enhancement of a nation’s learning. Further, the model’s holistic representation of the formulation of NHRD policy suggests methods by which the collaborative, mutually supportive alignment of actions on the part of both local-level and macro-level stakeholders, together with potential partners, might maximize utilization of organizational, community, regional, and national resources to magnify resultant returns on investment. Coordination is essential so that the experience of NHRD and its benefits might be equitably extended to reach the lives of all populations of a nation, particularly those most in need but least able to advocate on their own behalf, such that human flourishing might prevail to enhance performance and wellbeing for all.</p>	Macro-Level High
Compellingness	<p><i>Theory should demonstrate the ability to move stakeholders to action. To achieve action, two components need to be satisfied: the first is that the findings mirror the ineffable experience of respondent audiences (fidelity or internal validity); and the second is that the research creates a vicarious, emotional response in those who read/experience it, which acts as a prompt to action on the part of some stake-holding audience (not just research funders but a wider set of audiences who have a legitimate stake in the findings, including researchers, other communities, policy circles, legislators, and those who participated in the research).</i></p>	Local-Level High
	<p>Analysis of the model against the criterion of <i>Fruitfulness and Provocativeness</i> suggests the journey of both local-level and macro-level stakeholders from participation to deep understanding to action dedicated to developing, achieving, and sustaining NHRD. Progress along this evolutionary journey on the part of one or more responding stakeholder audience(s) results from the capacity of good theory (and models from which theory may eventually be drawn) to attain internal validity with audience experiences, and, thereby, to elicit emotional responses leading to proactive behaviors and activities from the same audience(s). In highlighting this process, the criterion of <i>Compellingness</i> comes closest to addressing the psychological rationale underpinning stakeholder motivations to action for NHRD. The model bridges the seeming divide between scholarly notion and practical utility by bringing a valid and achievable representation of NHRD into the daily lives of stakeholders so that it resonates with their personal experiences and aspirations. In this way, NHRD becomes a tangible vision of stakeholder hopes for their lives as they consider the future and draws upon the emotional reserves of the very actors whose intentional steps are required and must be then compelled to accomplish the policy required to provide for the reality of NHRD.</p>	Macro-Level High

Table 11 Continued

Summary of Assessment 2: An Interpretivist Test for Models and Theory Application of 13 Interpretivist (Social Constructivist) Criteria for Judging Theory in Applied Disciplines (Lincoln & Lynham, 2011) to an Emerging Model of the Formulation of National Human Resource Development (NHRD)		
Lincoln & Lynham Criteria for Assessment of Applied Theory	Description of Quality Criteria (Lincoln & Lynham, 2011) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
Saturation	<p><i>The social constructions and meaning-making narratives that inform the theory system should be such that little new knowledge is forthcoming and should exist at two points. The first point refers to the narratives and respondents' explanations having been exhaustively sampled; and the second point is known to exist when multiple examples of the phenomenon can be found by independent researchers. To the extent to which the theory is buttressed by multiple examples of the phenomenon under study we can say that the theory is saturated with exemplars.</i></p> <p>The newly-introduced model is not yet mature, particularly in terms of stakeholder examination for congruency with and support of narratives, social constructions, and meaningful explanations around NHRD. At this point, the model has not begun the process of fulfilling either form of the criterion of <i>Saturation</i>. The model is being prepared by means of this pre-fieldwork assessment for testing through its direct comparison with actual instances of stakeholder experiences in planning the formulation of NHRD policy, as well as with multiple examples of community, regional, and national demonstrations, narrations, and documentations of NHRD policy supported in practice. As increasingly broader representations of stakeholders engage with the model, new exemplars of unique implementations of NHRD policy and practices will be generated to open and expand possibilities for inquiry to further foster the cycle of learning through enhancing and refining the model's representation of the formulation of NHRD. That a multitude of stakeholder narratives, rich explanations, and established protocols exist around the development, implementation, and sustaining of NHRD, at the local level and at the macro level, and that these are capable of fulfilling the criterion of <i>Saturation</i> on behalf of the emergent model, is uncontested. The task at hand is to gather this knowledge so that we might learn deeply from all stakeholders.</p>	<p>Local-Level <i>Low</i></p> <p>Macro-Level <i>Low</i></p>
Prompt to Action	<p><i>Good theory provides a conceptual understanding of practice to help researchers and respondents understand where and how to move next in a given context, including how to refine, hone, sharpen, and revise practice, and to alter performance in the light of new information. This criterion closely connects theory with action and learning and so continuous refinement, illustrating that good theory is essentially practical.</i></p> <p>The model "... provide[s] a good conceptual understanding of practice" (Lincoln & Lynham, p. 17). As described in assessment of the model against the criterion of <i>Mutuality of Concepts and Descriptive Logic</i>, the framework, axes, and close affiliation amongst the 27 conceptual categories and corresponding descriptive elements collectively suggest the dialogue, data-seeking, analysis, interpretation, and negotiations that translate stakeholder interest into engagement in the process of strategizing NHRD policy for implementation. Secondly, as demonstrated in its fulfillment of the criterion of <i>Compellingness</i>, the model is capable of moving stakeholders at all organizational layers, individual, community, regional, and national, and at all human levels, "rhetorically, emotionally and psychologically" (Lincoln & Lynham, 2010, p. 15), to undertake the necessary behaviors and activities, supported in lived experience, that stand to bring about development of NHRD. However, the model is too recent to carry out the mandate of <i>Prompt to Action</i> that calls for the sharpening, refining, and honing of principles for practice to increase and enhance the formulation of NHRD. Because the model has not yet withstood testing by means of direct application in the field nor has it been sufficiently utilized, critiqued, improved, and matured such that it might effectively determine best practices around NHRD for stakeholders or researchers. With widespread and repeated use and experimentation, the model generates new learning for local-level and macro-level stakeholders who will acquire and cumulate deep understanding and knowledge to refine the model and its capacity for guiding development of NHRD policy. The model's potential for <i>High</i> sufficiency in fulfilling the criterion of <i>Prompt to Action</i> at the local level is critical to its subsequent advancement from <i>Moderate</i> to <i>High</i> performance against this criterion at all stakeholder levels.</p>	<p>Local-Level <i>Moderate</i></p> <p>Macro-Level <i>Moderate</i></p>

Table 11 Continued

Summary of Assessment 2: An Interpretivist Test for Models and Theory Application of 13 Interpretivist (Social Constructivist) Criteria for Judging Theory in Applied Disciplines (Lincoln & Lynham, 2011) to an Emerging Model of the Formulation of National Human Resource Development (NHRD)		
Lincoln & Lynham Criteria for Assessment of Applied Theory	Description of Quality Criteria (Lincoln & Lynham, 2011) and Comparison with the Emergent Model of the Formulation of NHRD	Applicability of Criteria (Low, Moderate, High, N/A)
Fittingness	<i>The extent to which theories exhibit 'fittingness' with their derivative context is determined by the degree to which they are rooted in local context, native and indigenous perspectives, meanings and narratives. Further, theory should exhibit 'fit' with the notion of equifinality - that there can be no final solution to any problem. Rather, there are multiple, endlessly creative responses or solutions, any of which might be satisfactory within a given context.</i>	Local-Level High
	In conceptualization and continuing development, the model is intended to serve as a flexible roadmap that can be individualized to fit the unique characteristics of stakeholders, inclusive of native and indigenous perspectives, meanings, and narratives, within any given local, regional, or national context. The model accommodates the dialogue, negotiation, and collection and organization of national data (background, characteristics, resources, participating actors, potential partners, influencing structures of governance, prevailing national political, economic, and socio-economic climate at the individual/ organizational level, community/regional level, and the national level) by and for stakeholders who shape NHRD policy and implement resultant practices to launch their unique approaches to NHRD. Enabling the consideration, exploration, and adaptation of policy solutions and strategic practices of NHRD by stakeholders at all levels and by multiple methods is central to the purpose of the model as it is also to the success of policy planning for implementation of NHRD. Local-level stakeholders demonstrate capacity to create innovative solutions that might subsequently be scaled, in terms of resources, numbers of participants and beneficiaries, and potential outcomes, to fit the needs of larger regions, and even of nations. Macro-level stakeholders must consider 'fit' in determining where and how much and by what means to invest in NHRD solutions in context so as to produce the greatest potential outcomes for as many stakeholders as possible.	Macro-Level High
Transferability and Transportability	<i>Transferability of a theory references the ability of individuals to carry propositional and/or tacit knowledge from one context to inform another, or multiple other, contexts, and is a property of the interaction between the knower and the known. Transportability is to the ability of a theory to apply to different populations and reflects utility of theories in varying contexts, with varying populations.</i>	Local-Level High
	The model was constructed in response to the vital recognition that there are "multiple, endlessly creative responses or solutions [to formulating NHRD], any of which might be satisfactory in a given context" (Lincoln & Lynham, 2011, p. 17). Sufficient flexibility is integrated into the framework and concepts of the model to insure <i>Transferability</i> in conveying learning and new knowledge to advance the exploration, deliberation, and adaptation of policy and practice by stakeholders at all levels, across contexts, and through varied methods as they interpret the formulation of NHRD to represent solutions for distinct combinations of characteristics, resources, and interests. The model attends to <i>Transportability</i> by consistently advocating and practicing inclusivity in providing for human flourishing from NHRD in its service as a guide to enhancing performance and wellbeing of all populations. At the local level, stakeholders mostly seek to implement their experiences obtained through experimentation of the model and concurrent practices of NHRD within similarly situated contexts that might, however, be located outside the local environment, a factor that contributes to <i>Transportability</i> of the model. Macro-level stakeholders are capable of amassing large-scale analyses of NHRD implementations and outcomes, and to transfer knowledge from such examinations to support their decisions regarding transport of resources through levels and contexts. As suggested in assessment against the criterion of <i>Usefulness and Applicability</i> , macro-level stakeholders are instrumental in aligning power and resources to insure that NHRD might be equitably extended to reach the lives of all people, and, thus, hold significant responsibility for insuring the model's fulfillment of the criterion of <i>Transportability</i> .	Macro-Level High

Analysis of Assessment 2 Outcomes

Just as qualitative researchers and qualitative research are “bound within a net of epistemological and ontological premises” (Bateson, 1972, p. 314), the interpretive quality criteria proposed by Lincoln and Lynham (2011) for judging of theory in the applied social sciences, too, are linked intricately together. The 26 criteria, 13 criteria applied at each of the macro and micro levels of the model, comprising this assessment from an interpretivist perspective coincided with and drew from one another – *Meaningfulness and Understanding with Thick Description and Insightfulness and Compellingness with Prompt to Action*. The result of such interwoven criteria was a system of expectations supported in rich, realistic descriptions upon which a theory (or emergent model that might subsequently become theorized) might aspire to rest. If a tentative theory or model was found capable of attending to any one, and then to another, and to a third criterion, and was subsequently judged as being reasonably thorough in its fulfillment of these several initial attempts, the theory began to stand a chance at being assessed as sufficient and could be expected to withstand, and even be refined by means of, subsequent testing in the field. Conversely, if an emergent model failed at attempting to fulfill at least three initial assessment criteria, it was realistic to assume that such a hesitant attempt at representing human behavior might not succeed against a majority or even all of the interpretivist criteria established by Lincoln and Lynham (2011). Faced with this dilemma, a cautious researcher-theorist might be advised to reconsider the purpose guiding the effort, and to revisit development of the original theory or model in characterizing human processes, and experience.

Its pre-fieldwork nature influenced the present assessment and demonstrated that the task of attempting to predict perspectives, experiences, and the potential actions of stakeholders is a more straightforward undertaking where performed on behalf of stakeholders at the Individual/Organizational level as well as on behalf of stakeholders as one collective at the National level. It was significantly more difficult to venture predictions around the experiences and possibilities for action on behalf of stakeholders at the Community/Regional level, the meso-level, of the model. Such difficulty was, perhaps, a result of the need to interpret the increasing interactions of multiple influences pressuring the multiple borders comprising the meso-level of a model. Assessment of stakeholder behavior at the Community/Regional level of the model of the formulation of NHRD, therefore, must await evaluation by direct application of the proposed model to the NHRD policy planning processes of one or more nations. Complexity in making pre-fieldwork assessment predictions at the meso-level of the emergent model coincided with a central position of multi-level researcher-theorists. Klein and Kozlowski (2000) figured prominently in the argument calling for increased attention to theory building at multiple levels in organizational research and practice so that we might begin to understand more deeply the interplay of behaviors, processes, and experiences at the organizational meso-level.

This pre-fieldwork assessment further revealed that the several interpretivist criteria, including *Mutuality of Concepts and Descriptive Logic*, *Thick Description and Insightfulness*, and *Narrative Elegance*, that rest most heavily in evaluation of conceptualization, structuration, organization, and illustration proposed by theory or

models in their judging of potential for descriptive explanation were satisfied by the emergent model of the formulation of NHRD at a *High* level. Those criteria that proposed to evaluate actions to be undertaken by stakeholders, including *Prompt to Action* and *Saturation*, were less predictable objectives for pre-fieldwork assessment. These criteria were more likely to be fulfilled at either the *Moderate* or the *Low* level pending subsequent testing of the model by means of direct application in the context of national planning initiatives. Based on observations gained through performance of this interpretivist assessment, it is proposed that the model might fulfill the 13 interpretivist criteria following a sequence that begins with the criterion of organization and structure, namely as *Mutuality of Concepts and Descriptive Logic*, and concludes with the criterion of stakeholder action, namely *Saturation*. Further observation of application of the interpretivist criteria against new or matured models and theory would be required to establish or dispel the presence of a pattern of performance in fulfilling the set of evaluative criteria proposed by Lincoln and Lynham (2011).

The third limitation delineated for this study cautioned that researcher bias threatened to influence outcomes from the pre-fieldwork assessment of the emergent model of the formulation of NHRD policy. The possibility of manipulated comparisons of the model against the 13 interpretivist criteria existed since this analysis was performed by the same researcher-theorist who constructed the model through synthesis of her knowledge of NHRD with concepts drawn from the foundations of human development for growth of nations. Although guidance from the research committee charged with overseeing and evaluating this work assisted in identifying and addressing

issues of partial judgment on the part of the researcher in carrying out this assessment, it was important to document here a confession of researcher bias.

That is, where overstatement of the model's structure, logic, capacity, capability or descriptiveness might be identified – as it is certain that inflation can be found to exist – this is a case of researcher aspirations for the model influencing performance of the assessment more than it was a deliberate inflation of outcomes from the model. The expectation of the researcher was that the model should be judged as being of good quality and capable of fulfilling its promise to enhance the formulation of NHRD policy. Thus, the desire was that the model should reach and match the criteria of excellence for interpretivist theory as set forth by Lincoln and Lynham (2011). Nevertheless, based on analysis of outcomes from this assessment comparing the emergent model of the formulation of NHRD policy against 13 interpretivist (social constructivist) criteria (Lincoln and Lynham, 2011) for judging theory in HRD, it was affirmed that the model is ready, indeed calling, for testing by direct application in the field to the NHRD policy planning processes of nations.

CHAPTER VI

SUMMARY, FINDINGS, AND IMPLICATIONS OF THE RESEARCH

Summary of Research

In his masterwork, *The Republic*, Plato envisioned the benefits of a just society wherein education is structured around the teaching of lessons from literary works that encourage young people, as citizens, to improve themselves for the overall good of the state (Plato & Bloom, 1968). Is it possible that Plato was so gifted in foresight that he could have conceived the central tenets of national-level HRD centuries ahead of its time? Taking inspiration from Plato's wisdom, an informed, conceptual, multi-level model of the formulation of NHRD policy was constructed and put forward for comparison with the NHRD planning processes of as many nations as would be willing to employ and test the model in terms of trustworthiness, applicability, utility, and transferability across contexts.

A Model of the Formulation of NHRD Policy

An emergent model was proposed to identify, organize, explain, and richly describe the elements and their interactive processes necessary to the development of HRD policy at the national level for implementation in the form of strategic practices aimed at the macro, meso, and micro levels of nations. Derived from current understanding of NHRD offered by scholarship within the field of HRD, integrated with existing knowledge and concepts addressing the myriad facets of human development for nation-building, the model was compiled through the researcher-theorist's observation and lived experience of the formulation of NHRD policy, and its elements

fused together using her informed imagination of NHRD. The model suggested that the nation-specific process of developing NHRD policy must follow from a comprehensive gathering and analysis of data depicting national characteristics and historical background, efforts and interests of participating parties, significant actors and stakeholders and the power structure amongst them, and national and human resources, all intersected with the political, economic, and socio-cultural national environs. Additionally, the multi-level model situated the data collection process under a given nation's system of governance and within the regional and global megatrends (Rose, 2009) that continually influence NHRD policy and outcomes.

Pre-Fieldwork Evaluation of the Model of the Formulation of NHRD Policy

This research conducted a pre-fieldwork evaluation of the emergent model of the formulation of NHRD policy by assessing the potential of the model to serve as a valid, trustworthy, useful, adaptable, and transferable roadmap to guide the formulation of policy aimed at enhancing national learning for economic, political, and socio-cultural performance and wellbeing of individuals, societies, and their nations. Three research questions guided this study. Findings obtained in response to each question determined the extent to which the objectives set forth for inquiry were satisfied by this research, and, ultimately, whether the proposed model of the formulation of NHRD policy is worthy of undertaking the next phases in development of models and theory: Research operationalization and testing.

Research Question 1: Dubin's (1978) Hypothetico-Deductive Criteria

Dubin's (1978) hypothetico-deductive theory building methodology specified criteria of excellence that imposed order and logic on the juxtaposition of the conceptual elements with which the researcher-theorist engaged to build and evaluate a functional model of the formulation of NHRD policy.

Research Question 1:

How can Dubin's (1978) hypothetico-deductive criteria of excellence for assessing theory construction and outcomes, with the addition of an integrated multi-level theory building method (Reynolds Fisher, 2000) and derived quality criteria for analysis of multiple levels, be applied to the informed, conceptual, multi-level model of the formulation of NHRD policy such that we can be reasonably certain of the validity, trustworthiness, and utility of the model in pinpointing, explaining, and predicting the elements and interactions necessary to the formulation of NHRD policy?

Employing the constant comparison method of analysis to apply Dubin's (1978) criteria of excellence to both the construction and evaluation of categories for units of data, principles of interaction, system boundaries, and system states resulted in the viable, practical, and responsible model. The deliberate organization and classification of the model's elements to comply with Dubin's (1978) criteria insured the model's capacity to support subsequent empirical testing for refinement and reverification.

Through satisfaction of Dubin's evaluative criteria, the emergent model, grounded in current thought addressing economic, political, socio-cultural development of nations through learning, demonstrated worthiness for undertaking the next stages of development for construction of theory around NHRD. The researcher-theorist's narrated assessment of the model's performance against each of Dubin's (1978) criteria documented the process of developing and evaluating the model, a record that promises new discussion leading to further inquiry around the formulation of NHRD policy.

Supplementing Dubin's (1978) method with steps, synthesized by Reynolds Fisher (2000) from the work of Chan (1998), Klein, Tosi, and Cannella (1999), Kozlowski and Klein (2000), Morgeson and Hofmann (1999), and Rousseau (1985) for construction of multi-level theory produced a layered, nuanced, and more precise representation of the complex yet synchronous human processes inherent in the formulation of NHRD policy. Evaluative criteria for collective constructs, levels (including boundaries), laws of interaction among constructs, functional relationships among levels, sources of variability among levels, and outcomes of the model represented as endogenous variables, all derived by the researcher-theorist from the multi-level theory research literature (Chan, 1998; Klein, Tosi, & Cannella, 1999; Kozlowski & Klein, 2000; Morgeson & Hofmann, 1999; Reynolds Fisher, 2000; Rousseau, 1985) and applied to the model insured validity, trustworthiness, and capacity for explanation of the multi-level representation of the formulation of NHRD policy. Increasingly focused interpretation of the elements, interactions, and collaborations shaping NHRD policy should enable in-depth examination of factors that might stimulate, as well as

barriers, deficiencies, and limitations that stand to hinder, the provision of outcomes from NHRD policy in national context.

Use of multi-level methodology is more likely to produce theory that “creates a foundation for enhancing policy impact for the disciplines that study organizations” (Kozlowski & Klein, 2000, p. 45). Accordingly, the address of such crucial questions as requirements for sustainable NHRD policy and outcomes, characteristics of NHRD that promote transition from one system state to a distinctly different system state, together with future lines of inquiry around NHRD, will necessarily rely upon a multi-level interpretation, such as the one offered by the proposed model, of this still-emergent phenomenon. Its satisfactory performance against the multi-level assessment criteria derived and introduced in this study suggested that the model is capable of supporting extensive inquiry around NHRD.

Research Question 2: Lincoln and Lynham’s (2011) Social Constructivist Criteria

Assessment criteria developed by Lincoln and Lynham (2011) afforded realistic flexibility in judging theory and models for use in the applied social sciences by accommodating the dynamism and unpredictability that pervade human activities, performances, and experiences.

Research Question 2:

How can the sufficiency of the model be assessed in terms of “provide[ing] deep and widely accessible understanding” (Lincoln & Lynham, 2011, p. 9) in the interpretivist representation of “actual events, behaviors, or the meaning

making activities” (Lincoln & Lynham, 2011, p. 12)
undertaken by stakeholders and respondents in their
collaboration for analysis and allocation of the resources
from which NHRD policy is formulated for implementation
in the form of strategic practice?

The 13 interpretivist/social constructivist criteria (Lincoln & Lynham, 2011) for evaluation of interpretivist theory enabled the researcher-theorists to breathe humanity into a conceptualized and structured model designed to emulate real life processes: meaningfulness and understandability, thick description and insightfulness, narrative elegance, transferability, mutuality of concepts and descriptive logic, empirical verifiability, fruitfulness and provocativeness, usefulness and applicability, compellingness, saturation, prompt to action, fittingness, and transferability and transportability. Application of interpretivist criteria (Lincoln & Lynham, 2011) revealed an accessible and practical model, capable of accommodating limitless variations in human activity, experience, and meaning-making in service as a guide to the formulation of NHRD policy.

Performance of this pre-fieldwork assessment required a certain level of prediction by the researcher-theorist of stakeholder actions and experiences associated with the model, tasks that are more easily accommodated at the micro and the macro levels, than they are at the meso organizational level. Even so, use of the interconnected interpretivist criteria for evaluation highlighted opportunities for stakeholder

implementation of the model across multiple levels and contexts, suggesting areas in which deepened knowledge of NHRD might be obtained.

Research Question 3: Aggregating Responses to Research Questions 1 and 2

Aggregating findings obtained in response to Research Questions 1 and 2 deepened understanding of the relationship between the model's composition and the human experience of engaging in the formulating of NHRD policy. Findings responding to Research Question 3 represented the most profound level of knowledge to be obtained from this pre-fieldwork assessment.

Research Question 3:

In juxtaposing for analysis the findings revealed by the two tests representative of contrasting paradigms for theory construction and assessment:

(a) Dubin's (1978) hypothetico-deductive criteria of excellence for theory building research, with the addition of an integrated multi-level theory building method (Reynolds Fisher, 2000), and a derived set of quality criteria for analysis of multiple levels, and

(b) Lincoln and Lynham's (2011) interpretive/constructivist criteria for judging theory in HRD,

What can be learned about the informed, conceptualized, multi-level model of the formulation of NHRD policy?

- i. what can be learned from the logic, organization, and structure of the model in terms of conveying depth of understanding?

- ii. what does nuanced, meaningful understanding conveyed by the model offer for comprehension of the logic, structure, and organization of the model?
- iii. to what extent does the model offer a sufficient or deficient representation, or an overly complex interpretation, of the resources and component elements necessary to the process of formulating NHRD policy, and of the collaborative roles, activities, experiences, and performance of composing NHRD policy for implementation?

Ultimately, is the emergent model of the formulation of NHRD policy, in its present form, ready for and worthy of entering the next phases of theory building, that is, for research operationalization and for empirical testing by application of data collected in the field from one or more nations?

“Having more than one ontological perspective [in the consideration of theory for informing practice] allows for a richer, more complete consideration of the question” (Lincoln & Lynham, 2011, p. 19). Employing competing ontological perspectives in the construction and evaluation of theory, or a model that might support future theorizing, demanded multi-faceted consideration by the researcher-theorist of the qualities of each constituent element, of the influences associated with such qualities, and of the interactions relating all these qualities as the element is situated within the overall structure of the model.

Assessment by multiple paradigms, firstly required consideration of how components, individually and in collectively constituting the model under development, might respond under the conditions imposed by each paradigmatic perspective. Secondly, the researcher-theorist was required to attend to the questions of whether and how the elements of the model and their associated qualities might (or might not) fulfill the quality criteria imposed by each perspective. The cumulated result from these multidimensional considerations was a deepened and more comprehensive understanding of the phenomenon under study, as well as of the model's capacity to sufficiently and vividly represent the phenomenon, the formulation of NHRD policy, which was the subject of this examination.

Logic and Structure Provide for Deepened Understanding

Paradigmatic juxtaposing of critical realism against social constructivism highlighted the capacity of the model's logic, conceptual organization, and structure to convey meaningful understanding on the part of stakeholders engaged with the formulation of NHRD policy. Central to the model are the micro, meso, and macro levels, all controlled at any time by one of six possible system states representing governance of a national system. This structure, together with the general description of NHRD as national-level HRD policy aimed at promoting learning for performance and wellbeing, established a foundation from which stakeholders could begin to conceptualize local, regional, and nation-specific notions of NHRD. Meaning-making is cultivated as stakeholders transfer and begin to apply the framework of the model to fit their unique sets of circumstances. Subsequently, stakeholders learn to pinpoint

collective constructs and the rich, descriptive influences produced by interactions of two or more collective constructs, and then to consider how these relationships might interface with national factors and resources. As stakeholder learning and understanding becomes more deeply engaged around contributions by level-specific elements of the model and of the interrelationships of collective constructs, resulting NHRD policy is more skillfully adapted and shaped to existing national conditions. Simultaneously, stakeholders begin to assume the benefits that NHRD promises to convey, and to take upon themselves the roles and responsibilities required to actualize the whole of the enterprise of NHRD in pursuit of such foreseen benefits.

Interpretation and Transferability Enhance Organization and Structure

Contrasting the social constructivist with the critical realist perspective revealed that the capacity for interpretation and for transferability of the model productively informs conceptual organization and structure. Particularly in fitting the model to varied local, regional, and national contexts, the model's provision of description and meaning allows for flexibility across levels and contexts. These inherent qualities of the model enable widely applicable stakeholder employment of the foundational concepts and logic underpinning the formulating of NHRD policy. Generous scope for interpretation encourages stakeholders to adapt the original model in order to accommodate the certainties of specific cases of NHRD, and then to imagine and address uncertainties and deficiencies intrinsic in attempting the formulation of NHRD policy. Further, it is interpretability and transferability that make it possible for the model's concepts, organization, and logic to attend to the dynamic process of formulating NHRD policy

and concomitant need to synchronize a multitude of events. The abundant possibilities for interpretation and transferability afforded by the model render the structure and organization of this three-dimensional representation as close and trustworthy approximations of reality, thus supporting stakeholders in their strategic work to formulate NHRD policy.

The Model is Sufficient in Representation of the Formulation of NHRD

In conceptualizing, structuring, and assessing models of human behaviors and processes, researchers and stakeholders develop deep familiarity with individual elements, interactions amongst elements, and capacity of elements in terms of their contributions to the whole of the model and the phenomenon it represents. Each element is unique in its facility to inform the development of a forthcoming policy or in adding meaningfulness and understanding to analysis of existing policy. “As a result, theory building is becoming not so much about the search for truth but rather about the search for comprehensiveness stemming from different worldviews and leading to the production of more complete views of organizational and social and human phenomena” (Eisenhardt, 1989; Gioia and Pitre, 1990 as cited in Lynham, 2000b, p. 171).

Cumulatively, the findings responding to the three research questions initially proposed to guide this inquiry answer the broad question that motivates this study: Is the emergent model of the formulation of NHRD, policy in its present form, ready for and worthy of entering the next phases of theory building, that is, for research operationalization and testing? The outcome of this dual-paradigmatic pre-fieldwork evaluation was the judgment that the proposed model is valid, trustworthy, adaptable,

and transferable such that it is capable of serving as a fundamental roadmap to facilitate the collection and consideration of representative data, thus enabling deep understanding of the formulation of NHRD policy for strategic practice. The model was determined to be ready for research operationalization in preparation for empirical testing by application of the model against data and processes associated with the formulation of NHRD policy in as many national cases as possible.

In reflecting on the achievement of good, valid, trustworthy, and useful theory, Dubin (1978), in spite of his reliance upon the post-positivistic, hypothetico-deductive paradigmatic stance, appeared to suggest that it is the opinion and acceptance by stakeholders invested in a theory or model that become most prominent in determining the ultimate value of outcomes obtained through the various methodologies for theory development.

In the end, theories [and models] will be put to use to provide understanding and to make predictions about future states of affairs. Whenever people agree among themselves that understanding has been more or less satisfactorily achieved or that predictions have proved accurate within agreed-to limits of error, then the theoretical models will continue to be favored. Thus, the continuing viability of a theory [or model] rests on human consensus (Dubin, 1978, p. 14).

Findings and Preliminary Implications from the Research

“The ultimate judge of *good theory [or models from which theory might be drawn]* in an applied field is primarily its practice” (Lynham, 2000b, p. 169). A pre-fieldwork assessment was applied to the emergent model of the formulation of NHRD policy to prepare this tool for practical use during instances of nation-specific processes of policymaking aimed at national-level HRD. Research findings revealed through the course of this study hold importance for our understanding of NHRD, as well as for the use of multi-level construction of models from which theory might subsequently be drawn to inform and to advance the research and practice of HRD.

Findings and Implications for NHRD Policy

Findings derived from assessment of the model of the formulation of NHRD policy turn on the notion that NHRD is comprised of synchronous human processes, occurring at multiple levels, to promote and support learning for performance and wellbeing. These myriad human activities are influenced and driven by stakeholder engagement at each of the micro, meso, and macro levels. Therefore, stakeholder negotiation of power and collaboration for resources through their assumption of roles and responsibilities is crucial to formulating and implementing NHRD policy. Indeed, stakeholder ownership of power, and of the process of formulating NHRD policy, propose to be critical also for sustainability of NHRD strategy over time.

The broad concepts comprising the model and their structural organization for the formulation of NHRD policy are essentially constant; but exist in, or are shaped to assume, varied proportions according to characteristics and requirements of the host

context. Specifically, these concepts and their structure stand to be adjusted through stakeholder efforts in applying understanding and meaning-making around NHRD to effect distinct policies and outcomes. Further, stakeholder attention to collective constructs and influences from their interactions is instrumental in contextualizing NHRD strategy for policy capable of both accommodating and benefitting the host context. Stakeholder efforts to build NHRD policy that is applicable to local, regional, and national requirements are significantly supported in the model's scope for interpretation, transferability, and flexibility. Cumulating and sharing by stakeholders of their growing knowledge of the processes necessary to the formulating of NHRD policy will, over time, be beneficial for training policymakers charged with undertaking NHRD initiatives.

In its representation of living, working, performing, and flourishing within our global community, the model promotes systemic learning about NHRD. Our further understanding of NHRD is dependent upon renewed conversation together with collaboration for innovative research focusing on the attributes, barriers, limitations, and outcomes of the formulation, implementation, and sustainability of NHRD policy, practice, and theory. Suggestions for future verification and ongoing refinement of the proposed model, and of theory that might eventually be derived at each level of the model, will require application and testing against data from as many nations as are willing to participate in intensive case study research. The purpose of collecting and analyzing data within the proposed NHRD framework will help to insure results that reliably point a way forward for nations, both individually and collectively, as they

move from concept to action in launching their individualized, practical approaches to NHRD. The objective of extending and enriching the model under development is to increase its accessibility for application to multiple national sites. Findings from this study will enable us to locate our conversations and contributions to NHRD, as well as elicit new questions to reinvigorate the scholarly search for responses and practical solutions around NHRD. It is the hope of the researcher-theorist that this work will motivate committed reflection for action among the HRD community, and, ultimately, from the world at large.

Findings and Implications for Multi-Level Construction of Models and Theory in HRD

Methodologically, this study advances and advocates for the practice of constructing and assessing multi-level models to interpret and illustrate human activities, processes, and lived experiences. Such representations of human behavior around events and meaning-making of experiences, frequently works in perpetual progress, offer invaluable contributions to our growing knowledge and understanding of the utility and applicability of theory in HRD and the social sciences. Models further serve to pinpoint interactions between policy components as nexuses for adjustment or modification such that policy might be more fully developed both to stimulate and then sustain human flourishing. Its potential to support both nuanced explanation of the present and scenario planning for the future suggests model-building as a useful tool for further lines of inquiry focusing on learning, in all of its varied formats, for performance and wellbeing.

Pre-fieldwork assessment develops intimate familiarity of the researcher with a model and the interactions of its compositional elements. A comprehensive and thorough

working knowledge of the model is essential preparation for a researcher-theorist who intends to undertake testing of the model in the field. Findings obtained in the field are expected to both corroborate and contradict the researcher's foundational understanding of the phenomenon under study, compelling the researcher to press forward to uncover the reasons behind observed discrepancies and their influences for the model as a whole. Exploration and resolution of incongruence between the working model and observed and lived experiences of stakeholders, including the researcher, should result in refinement for reverification of models. Ideally, a model achieves increasingly realistic representation of human behavior such that it becomes a more trustworthy and widely applicable guide for informing practice, such as policymaking.

Construction of the multiple levels comprising the model of the formulation of NHRD relied upon a multi-level theory methodology developed by Reynolds Fisher (2000). It is not clear, however, whether the Reynolds Fisher (2000) methodology, proposed as a tool to build levels representative of hierarchical organizational structures in the social sciences, sufficiently accommodates the multiple levels of an organizational system as large and overly complex as a nation. Testing by means of direct application in the field against the NHRD planning processes of nations is expected to highlight deficiencies in levels of the model for representing the form and function of the formulation of NHRD policy at the local, regional, and national environs. Once identified, and lived, these inadequacies must be addressed for refinement of the model, a process to support further development of multi-level theory methodology for representation of large and complex human systems.

“The push to study and understand organizational and social phenomena demands that the assumptions of multiple research paradigms be accepted and embraced in the process of developing the HRD body of knowledge” (Lynham, 2000b, p. 171). Juxtaposing critical realist and social interpretivist criteria for assessment of the multi-level model of the formulation of NHRD caused the researcher-theorist to compare elements of the model that otherwise might not have been put together for consideration. Questions around logic for deepened understanding and of transferability for structure provoked innovative thinking to stretch the researcher far beyond the confines of the sketch of the model on a page. Pushed to focus on the newly-seen, the researcher pursued deeper exploration of the concepts and elements comprising the model, including interactions of their qualities under both paradigms. Such richer, more detailed and complete observation enhanced understanding of the model and its functionality to strengthen preparation for testing in the field while revealing potential lines for future inquiry around NHRD.

Future Research

Research Agenda for NHRD Policy

Future research aimed at sustaining the evolution of NHRD, a construct situated between human resource development (HRD) and human development (HD), will be informed by knowledge through application offered by both disciplines. Once the model is relatively stable (the assessment task initially undertaken in this study), it will undergo field testing that will follow two lines of exploration of the formulation of NHRD policy: (1) the potential benefits from NHRD call for focused examination of the elements,

activities, and collaborations that shape and sustain NHRD, and for investigation of motivators that might stimulate NHRD, and barriers, deficiencies, and limitations that stand to hinder planned outcomes from NHRD policy in national context, and (2) the capacity of the model to convey understanding of human experience and meaning-making around NHRD:

- 1) empirical evaluation of individual and collaborative roles of elements comprising the model, their interrelationships, responsibilities, and contributions through comparison of national data against the model's configuration, for obtaining functional, transferable understanding of the collective process of formulating NHRD policy, and
- 2) application of the proposed model to the NHRD policy planning and strategy implementation processes of as many nations as possible to undertake stakeholder verification of the model's configuration through lived experience while judging capacity of the model to convey "deep and widely accessible understanding" (Lincoln & Lynham, 2011, p. 9) of human living, working, and flourishing through NHRD.

Similar consultations with nongovernment organizations and with multinational and national corporate enterprises will explore and assess these interests, degrees and modes of participation, contributions, and anticipated and obtained outcomes from collaboration with national entities to formulate and implement NHRD policy for strategic practice.

Research Agenda for Multi-Level Construction of Models for Theory in HRD

Through continued efforts toward verification and refinement, the emergent model of the formulation of NHRD policy might become theorized or, alternatively, unique theories might be drawn from one or more of the model's levels, or constructed through further interpretation of the logic underpinning the model. Each prospective methodological route promises to contribute new thought and effort toward the process of developing multi-level theory to realistically represent individual and collective behavior and experiences in human organizations. Methodological inquiry around the representing of NHRD and of NHRD policy, itself, is a form of HRD in its sharing of research expertise in terms of techniques for interpreting and applying data.

Future inquiry around NHRD must be charged with the mandate to recognize and to engage non-Western paradigms of inquiry. Working through the medium of NHRD strategy for policy, collaboration with governments and universities in the developing nations will enhance these institutions' research capabilities so that they might achieve greater independence in their conduct of studies to examine national priorities and interests. Support for these nations' expanded participation in the address of world issues will contribute greatly to establishing a foundation for more responsible and equitable global policymaking.

A journey begins with but a single step. The model put forward to guide the formulating of national policy for human resource development represents the very beginning of an ongoing research agenda aimed at uncovering the fine distinctions of national learning for economic, political, and socio-cultural performance, and the greater

wellbeing of our world community. Subsequent steps, and the objective of all research engaging the still-emergent model, including that of independent scholars, practitioners, and stakeholders, as well as opportunities for undergraduate and graduate student investigative experience with potential for meaningful contributions, is the enriching and extending of representation, accessibility, application, and analysis of the formulation of NHRD policy within and across national contexts.

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APPENDIX A

THE HRD CUBE: A HEURISTIC FRAMEWORK FOR IDENTIFYING,
LOCATING, AND SELECTING HRD THEORY, RESEARCH AND PRACTICE

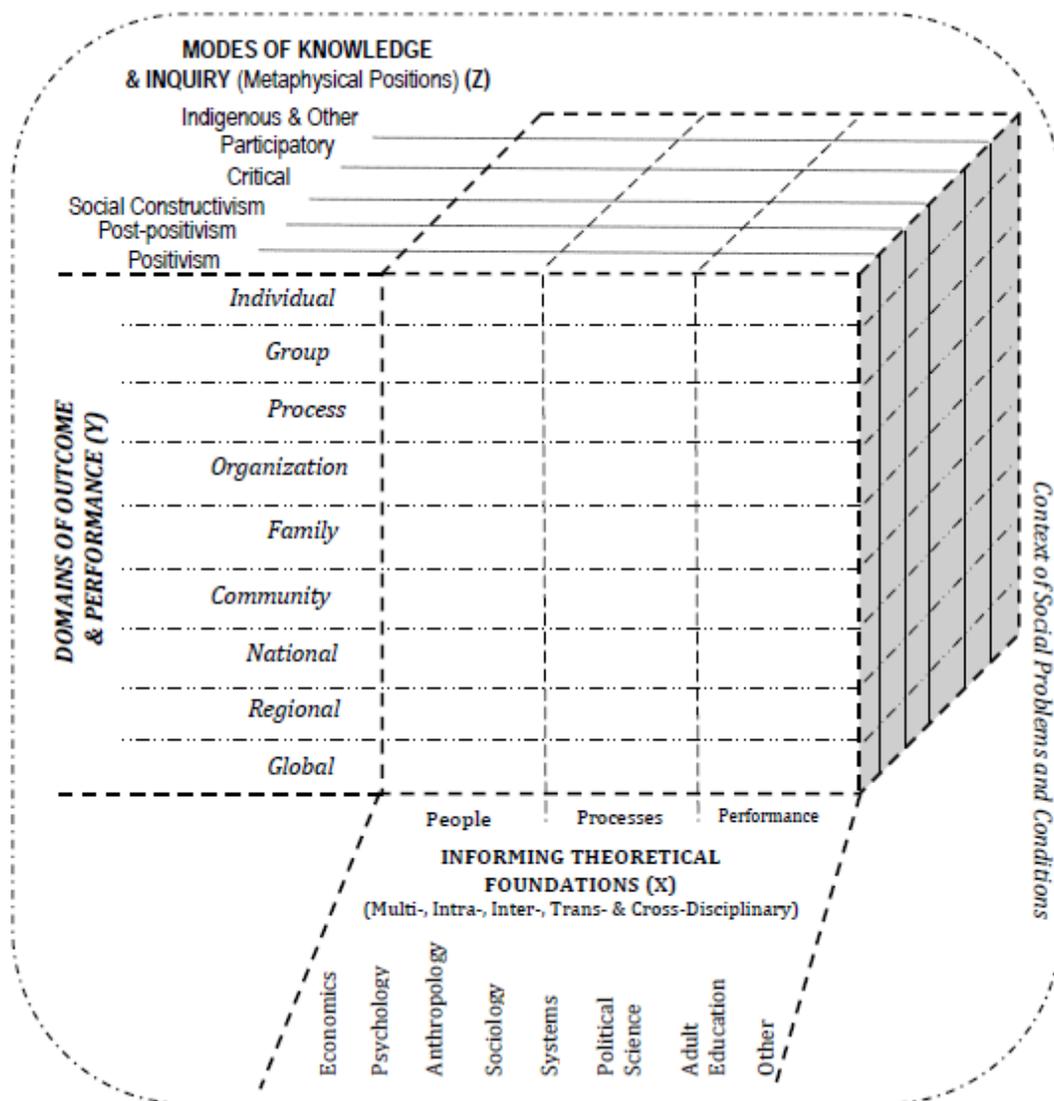


Figure A-1: The HRD cube: a heuristic framework for identifying, locating and selecting HRD theory, research and practice (Lynham, 2007, 2008, Lynham, Lincoln, Hurt, & McLean, 2010).

APPENDIX B

MICRO-VIEW OF A MODEL OF THE FORMULATION OF NATIONAL
HUMAN RESOURCE DEVELOPMENT (NHRD) FOR USE IN PLANNING POLICY
AND PRACTICE: A GUIDE TO THE COLLECTION OF DATA FOR PLANNING
AND ENHANCING NATIONAL LEARNING FOR ECONOMIC, POLITICAL, AND
SOCIO-CULTURAL PERFORMANCE AND WELLBEING

Human Resources + Human Resource Development -> Human Development

National Requirements, Factors, and Resources (X-Axis)							
		<u>Nat'l Background/Characteristics & Current Level of Development</u>		<u>Actors/Potential Partners (Governance & Power Structure Among These)</u>		<u>National Resources & Human Resources</u>	
National Environment & Pre-Conditions (Z-Axis)	Political Continuum Authoritarian Rule / New Democracy / Established Democracy	Political History to Current State	National Self-Identity/ National	National Government	Geographic Location	Citizens' Capacity	and Capability for Knowledge Creation, Expertise, Innovation, Application and Performance
		Governmental Structure	Consciousness and National Dialogue (Communication)	Regional Governments/External Regional Governments/Internal	Oil and Gas		
		Governance and Leadership		Citizen Participation Social Movements Political Engagement Volunteerism	Maritime		
		Rule of Law & Judicial System	National		Mining		
		Degree of De/Centralization	Resistance to/Acceptance of Change	NGOs	Environment		
		Degree of "Openness" of System	National Future View	Multinational Corporations			
			Human Rights	National Corporations			
			Minorities' Voices	Labor/Trade/Professional Associations			
				Universities			

Figure B-1: Micro-view of a model of the formulation of National Human Resource Development (NHRD) for use in planning policy and practice: A guide to the collection of data for planning and enhancing national learning for economic, political, and socio-cultural performance and wellbeing.

National Requirements, Factors, and Resources (Z-Axis)					
		<u>Nat'l Background/Characteristics & Current Level of Development</u>		<u>Actors/Potential Partners (Governance & Power Structure Among These)</u>	<u>National Resources & Human Resources</u>
National Environment & Pre-Conditions (X-Axis)	Economic Continuum Closed Market / Conservative Free Market / Liberal Free Market	Economic History to Current State	Prevalent Health Issues (i.e. AIDS)	Access, Participation in National Political, Economic, Social Processes and Events	Production Industry
		Institutions	Maternal Health	Workers' Rights	Physical Capital
		Corruption – Prevalence, Formal & Informal Address	Infant Mortality	Technological Capacity	Agriculture
		Per Capita/Income	Healthcare System – Options, Accessibility, Affordability	Capacity for Innovation	Others
		Family Size		Patterns and Rates of Migration – to/from Nation, Rural to Urban	
		Family Income		Gender Issues & Women's Rights	
		National GNP/GDP		Literacy Rates	
		GINI Index			
		Openness of Markets/ Balance of Trade			

Figure B-1. Continued

National Requirements, Factors, and Resources (Z-Axis)				
	<u>Nat'l Background/Characteristics & Current Level of Development</u>		<u>Actors/Potential Partners (Governance & Power Structure Among These)</u>	<u>National Resources & Human Resources</u>
National Environment & Pre-Conditions (X-Axis)	Socio-Cultural Continuum Isolated / Fractured / Integrated	Social/Cultural History to Present Religion(s) and Religious Freedom Population Demographics Majority/Minority Groups Age Gender Marriage Rate Family Unit and Family Size Life Expectancy Male/Female		Tourism

Figure B-1. Continued

Domains of Performance and Outcome (Y-Axis)			
	<u>INDIVIDUAL / GROUP / COMMUNITY</u> (MICRO LEVEL)	<u>COMMUNITY / ORGANIZATION/REGION</u> (MESO LEVEL)	<u>NATIONAL / INTERNATIONAL</u> (MACRO LEVEL)
Learning for Performance & Wellbeing	Basic Education/Literacy Education	Vocational/Technical Training	National Rates of Participation in Education
	Education System Primary Secondary Primary Secondary Post-Secondary/Tertiary Including Teacher Training	Youth Enterprise/Entrepreneurship Workforce Development/Professional Development & Job Training, Certification	Education Completion Rates by Level, Gender, Subpopulation, Discipline, STEM, Other Fields
	Distance Education	Post-Conflict/Crisis/Peace Education	National Rates of Participation in and Completion of Training by Industry, Sector
	Continuing Education/Retraining	Early Childhood Education	National Investment in STEM Education and Research
	Youth Leadership Development	Gender/Women & Girls Education	National Monitoring/Evaluation Systems for Education
	Adult Education	Human Rights & Social Justice Education	
	Religious Education	HIV/AIDS/Disease Prevention Education	
		Citizenship/Civic/Democracy Education	
EXTERNAL GLOBAL INFLUENCES			
1.) Erratic supply and cost of energy 2.) Food and commodities scarcity 3.) Rapid growth of middle class leading to increasing urbanization and environmental damage 4.) Influence of accessible, instant communication via public social networks 5.) Need for new generation of Global Leaders 6.) Interconnectivity of global economy			

Figure B-1. Continued

~ EMERGING MODELS [of Governance and Power Structure] for NHRD ~	
Centralized Model (Cho & McLean, 2004)	<ul style="list-style-type: none"> *Top-down, state-driven approach to education and training *HRD policy and strategy formulation, implementation, and assessment a critical role of central government *HRD needs part of central planning of national government with implications for local government, private enterprises, and their agencies *Addressing social and moral needs a vital dimension of HRD *Economic development a key role of central government, not of corporate sector; such that entrepreneurship, intrapreneurship, and individual innovation are mostly discouraged by a top-down management style *HRD policies typically linked to a multi-year, national development plan *Cho & McLean (2004) examples: China, Poland, Kenya, Mexico
Transitional Model (Cho & McLean, 2004)	<ul style="list-style-type: none"> *Applies to countries under transition from the centralized model to a government-initiated or decentralized model *Typified by tripartite approach to HRD policy and strategy (government, trade unions, private sector) *Role of HRD is coordinating HRD goals and initiatives to meet national political, social, and economic skill needs *Multiple government departments responsible for planning, implementation, and evaluation of HRD policy and strategy *Cho & McLean (2004) examples: India, Singapore
Government Initiated, Toward Standardization Model (Cho & McLean, 2004)	<ul style="list-style-type: none"> *Standardization of every aspect of NHRD is the central theme *Consultative and stakeholder view of HRD and economic needs *Development of human resources competencies are controlled and coordinated by a national needs framework *A network of government-monitored agencies drive implementation and evaluation of NHRD needs and goals *Private sector pressured into compliance through established and monitored targets and tax incentives to comply *Cho & McLean (2004) examples: United Kingdom, South Africa, Australia, and Singapore
Decentralized/Free Market Model (Cho & McLean, 2004)	<ul style="list-style-type: none"> *Competitive market forces push HRD efforts *Education and training seen as the responsibility of the individual and the private sector *The state indirectly supports the individual and private sector initiatives *Cho & McLean examples: Canada and United States
Small Nations Model (Cho & McLean, 2004)	<ul style="list-style-type: none"> *Driven by need to cooperate regionally for increased competitiveness *Distinguished by cooperation – the need to simultaneously compete and cooperate *NHRD initiatives supported and promoted by regional intergovernmental organizations *Characterized by use of participative processes to determine HRD needs and how these can be addressed for benefit of all *Cho & McLean (2004) examples: Pacific Islands and St. Lucia
Post-Conflict Model	<ul style="list-style-type: none"> *Driven by need to initiate national peace-building efforts, create safety and security, and commence human capacity development toward immediate reconstruction, and long-term nation building and sustainability in terms of rule of law, institutions and policies *NHRD initiatives introduced, administered, funded, politically-supported, and promoted through joint efforts and personnel representing NGOs and foreign governments determining HRD needs and strategies for fulfilling basic requirements of food, health, and security with goal of incoming government and citizens assuming these roles and responsibilities for long-term development *Examples: Rwanda, Liberia, and Iraq

Figure B-1. Continued