

DIFFERENTIAL PATTERNS  
IN COMPARATIVE  
EDUCATION DISCOURSE

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**Abstract**

DIFFERENTIAL PATTERNS IN COMPARATIVE EDUCATION  
DISCOURSE

By

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This dissertation study argues that ‘policy advice formation’, as a discourse development, is a differentiated hybrid resultant from merger between comparative education and policy studies disciplines. Through discourse analysis based on John Creswell’s format, this study identifies revisions, restatements and shifts in emphasis of theories, methodological models and challenge topics of comparative education and policy studies. Findings which display the development of policy advice formation’ discourse. In conclusion, this study found differential patterns seemingly formed because of collaborative affects of standardization in education science knowledge expressed within discourse.

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## I n t r o d u c t i o n

### DIFFERENTIAL PATTERNS IN COMPARATIVE EDUCATION DISCOURSE

*“Educational research is currently being challenged on many different fronts for not contributing effectively enough to the improvement of educational policy and practice”*

Michael Crossley, 2000, p13

Place into a multinational context, current times seem to be marked by an increase in educational standardization. As Michael Crossley reasons, academic discourse is increasingly affected by the pressure to reform education (Crossley, 1996, p.13). Examples being transnational standards, international university degree alignment, total quality management reform initiatives and university curriculum mandates. A standardization, which refers to the practices of borrowing, diffusion, reception and lending policy as communicated through policy advice discourse. Discourse defined, in the words of Jürgen Schriewer, as “insights into the constructed-ness of academic knowledge as well as to models meant to conceptualize such insights”. (Schriewer, 2000, p.26) Thus, the impact of standardization on academic discourse concerns, among other things, the purpose for which comparative education discourse is communicated. The specific affect of standardization on discourse seems to be a differentiation of education and policy studies intellectual knowledge domain theories, methodological models and challenge facets. Therefore, the primary argument of the study reasons that differentiation has transformed communicative dynamics by merging comparative education and policy study disciplinary identities. This

argumentation rests on the notion that aspects of disciplinary intellectual knowledge exhibit variation of epistemology, typology and ontology (ETO) communication knowledge patterns. As such, it is hypothesized that comparative education and policy studies ETO patterns have transformed generating 'policy advice formation' (PAF) discourse engineered to contribute to educational standardization in a multinational context. For as Nicholas C. Burbules and Carlos Torres state, "new information and communication technologies are changing both the conception of 'community' and the practices and institutions by which it is constituted" (Burbules and Torres, 2000, p. 15).



## OUTLINE OF CHAPTERS

Following the introduction, chapter 1 entitled 'Discourse' describes the core parameters of this study. This chapter conveys hypothesis and justification for the differential patterns in comparative education discourse and includes a synopsis of foundational Creswell and Gall et.al, categorization theories as applied to communicative dynamics of information knowledge articulated in discourse.

Chapter 2, entitled 'No Dignity - No Doubt' presents the basic theoretical concepts, defines terms within these concepts and provides the basis for the methodical design of this study. This Chapter positions argumentation under the 'the global myth', preliminary study, 'the merger' and 'the interstice' segments. These segments examine disciplinary discourse from the interstice, created by merger of comparative education and policy study disciplines from a worldview perspective.

This chapter also examines communicative dynamics of disciplinary identity and formation. It echoes Niklas Luhmann's notion that "hybrid disciplinary formations are mechanisms of differentiation and self-referential processes" (Luhmann/Schorr, 2000, p.37)

The third chapter, termed 'Methodology', overviews discourse narratives concerning epistemic, typological and ontology knowledge domain facets. At the root of knowledge examination seems to be the age-old theory-practice dichotomy and the assumption that policy formation seems no longer directly interlinked with policy implementation but rather defined by communicative purpose. This notion is examined in the segment entitled 'Clarity of Congruity'. As such, the argument unites Parsons' actor and Luhmann's systems constructs to examine theory and practice communicative dynamics. This interweaving

formulates the philosophical reasoning by which communicative disciplinary identity constructs exhibit epistemic, typology and ontology knowledge facets.

In addition to providing a literature review defining, the linkage of knowledge facets to theory, methodological models and challenge topics of communicative disciplinary function, this chapter includes identification of the specific categories within each facet of examination. Therefore, this chapter is framed in distinct segments termed 'Clarity of Congruity', 'Method' and 'Research Design'.

The fourth chapter, called 'Discoveries', presents specific frequency distribution data of the discourse surveyed. Following a display of the data, an analysis of these findings is presented. This chapter contains empirical data analysis and draws quantitative analysis from frequency distribution percentage identifying the counts of knowledge facet categories prevalent in comparative education, policy studies and 'policy advice formation' discourse. Therefore, this chapter is framed in three distinct segments. The first termed 'Data Analysis' presents raw data findings resultant from the discourse surveys. The second termed 'Data' presents sequences of tables and findings categorizing the raw data. It also conveys the order of categorical occurrence in the sub-sequence segment entitle 'Frequency Distribution'. The third segment of this chapter contains comparisons of percent and patterns of occurrence formed from 'Tabular Findings'.

The final chapter entitled 'Conclusions' contains 'conclusive discussion' and 'conclusive remarks' segments. Both of which surmise a cognitive mapping of tabular findings.

The chapters are followed by, bibliographic information, citation and attachments appendix documentation.

## *Chapter 1*

### 1.00 DISCOURSE

In this study, discourse refers to the information communicated in published written text by scientific authors in specific disciplinary academic context. As John W. Creswell reasons, a ‘phenomenology of problem articulated by authors within literature’ (1994, pp. 45-49). Specifically, defined as the production of knowledge for the action of standardization coupling comparative education and policy study discourse. In this case, it is defined as an educational system phenomenon as author action coupling problem and phenomenon. Specifically, defined as the production of knowledge for the action of standardization coupling comparative education and policy study discourse. This chapter renders segmental discussion on disciplinary differential patterns, core disciplinary hypothesis related to knowledge construction and justification of such hypothesis.

Discourse, as a communicative dynamic, seems to be arbitrating standardization of educational systems as both international and borderless in function. Discourse by which basic educational subject matter, testing profiles, degree requirements and study systemology are standardized. In this case, standardization seems to be a specific topic within the educational community for which literary and research discourse are communicated

This standardization of educational systems, not only affects how education is systemized but how discourse is communicated thereby transforming intellectual knowledge facet patterns of conceptualization. To the question, ‘How is this study framed?’ The answer contends that this study is an investigating knowledge

domain facet patterns represented in comparative education, policy study and 'policy advice formation' discourse for formulating a cognitive map of conceptualizations. To form this cognitive map, epistemic legitimacy, typological capacity and ontological validity knowledge facets are empirically documented by occurrence and distribution within theory, methodological models and challenge topic categories. Therefore, this study examines knowledge-domain facet patterns evidenced in comparative education, policy studies and "policy advice formation" discourse.

To the question, 'What justifies this study?': The answer is that discourse on education standardization seems to generate new differentiations of subject matter knowledge. As Jürgen Schriewer reasons 'the social and infra-structural conditions highly differentiated by international networks of social scientific and educational communication and publication facilitating a development and increased complexity of the intellectual knowledge domain' (Schriewer, 2001, preface). Thus, it would seem that discourse communications presents a need to facilitate adequate examination of conjoined knowledge domain facets, termed in this study, a cognitive map. The purpose of this study is to form a cognitive map of discourse knowledge domain facets in comparative education, policy studies and policy advise formation discourse.

The hope of this author is to provide a cognitive reflection on comparative education, policy studies and 'policy advice formation' discourse. It is hoped that this study will be useful to those concerned with discourse analysis; those concerned with comparative education 'policy advice formation' disciplinary investigation; and all other interested scholars. In short, this study offers a knowledge facet pattern analysis of comparative education (CE); policy studies (PS) and 'policy advice formation' (PAF) discourse.

The study of communications in academic conceptualizations reflects substantial changes in the way knowledge is patterned concerning CE, PS and PAF discourse as a dynamic of communication. The communicative dynamics refers to both a process of knowledge distribution profiling and formation methodology concerning the specific topic of standardization. As concerns educational policy communicative dynamics it seems that borrowing, diffusion, reception and lending of educational knowledge has transformed into communicative process dynamics of policy advisement through discourse <sup>4</sup>. Discourse communications may not be a mode of borrowing, diffusion, reception or lending policy existent in some geo-political space but rather formulation of educational policy knowledge within the worldwide scientific community to address a specific problem or phenomenon. For example, many western nations are facing a concern of educational quality management. The knowledge base seems to be linked to knowledge rooted in standard international business conceptualizations. The most specific of which seems to be total quality management. Total quality management (TQM) knowledge has been enveloped into economic, cultural, political and social aspects communicated in discourse distributed around the world. TQM policy advice discourse provides a variable standard roadmap for a variety of nation states to increase educational productivity. Therefore, this pattern seems to position TQM challenge topics in borderless knowledge discourse parameters and defines quality as an educational standard.

Aside from issues such as standardization, discursive differentiation patterns also convey the notion that dichotomy of knowledge theory and practice are

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<sup>4</sup> In this study both educational and academic science refer to philosophical investigation of education as an abstract analysis. The difference is a matter of practical verse theoretical investigative communications. Neither educational nor academic science references define real world research but both contain notion of research, investigation and evaluation of similar educational subject topics for as Peter Mortimore states “research can never match the real world in its complexity” (Mortimore, 1997, p. xi). Education verses academic science represents the difference between theory and practice in educational subject matter communications not the science. In this case both academic and education are considered portions of science of education communicative dynamics when applied to discourse.

seemingly no longer separate communicative dynamics but rather epistemologically distinguishable patterns of knowledge linkage. It is then reasoned that aspects of educational policy knowledge seem to unite discursive educational and academic sciences for formation of policy advice communicated by non-nation state specific determinants. This argument rests on the notion that educational policy advice seems to be communicated in borderless discourse knowledge domain facet<sup>5</sup> parameter. For example, United Nations ‘Education for All’ is seemingly based on a universal right of all individuals<sup>6</sup> (within member nation states) to basic academic literacy, uniting the confines of knowledge theory with the practice of education. It defines a worldwide educational system within a mass variety of geo-political spaces, which has a theoretical right to basic literacy from a practical educational stance.

This policy advice seems to have been formulated by the scientific community as knowledge applicable to all educational systems. For example, the notion of borderless Internet and computer function. “As computers have become indispensable for creative work in science and engineering, academic institutions are increasingly aware of the importance of computer use and promoting software literacy” (Hanselman, 1997, p.xiii). The standardization policy advice discourse seems formulated by communication in discourse-distributed throughout the world. This universal knowledge theory seems to have been formulated by the scientific community as practical knowledge applicable to all educational systems. The way to apply practice seems to have become a matter of borderless education ‘policy advice formation’ discourses.

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<sup>5</sup> In this case, knowledge domain refers to the information communicated about educational systems and actors based upon facets that define the legitimacy, capacity and validity of scientific investigation.

<sup>6</sup> In this case, individual refers to persons within a nation-state citizenship parameter as opposed to a human being conceptualization. The human being that is a part of a society is thus, termed an individual.

From this perspective, the hypothesis of the study argues that policy ‘advice formation’ discourse is a communicative dynamics that conveys knowledge about educational system problems and phenomenon. It is not posed on decision options relative to any nation state or current systematic portfolio brought on via borrowing and/or lending of existing policy. Rather it is to be a re-conceptualized investigation of specific problem or phenomenon to render ways of dealing with a specific condition. In this case, borrowing and lending have become barrowing<sup>7</sup>. The core theoretical frame of barrowing reasons that communicative dynamics are based upon specifically patterned theories, methodological models and challenge topics (TMC) of knowledge.

The core motif of this research project is engineered on the abstract level of aggregate variable<sup>8</sup>. It seeks to ascertain if ‘policy advice formation’ can be a valid communicative dynamic capable of discoursing legitimate theories, methodological models and educational standardization challenge topics (TMC). It seeks to map the pattern of TMC contained within source discourse in three specific disciplinary identity categories: comparative education, policy study and ‘policy advice formation’ written communication. This study is an analysis of discourse knowledge patterns utilizing quantitative question surveys to empirically micro-analyze.

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<sup>7</sup> Barrowing as a term is made with attribution to the Arctic explorer Sir. John Barrow (1761-1848) who explored the last undiscovered land mass of the world. Sir John Barrow reasoned that the arctic panacea was not separated but firmly connected to continental structure. It seems appropriate that in this way educational systems are not separated by nation-state borders but are re-constructed by problem or phenomenon conditional co-relations that occur within various border confines. From this perspective the term is not based on noun constructions such as ‘handbarrow’ or ‘wheelbarrow’ but is reframed as a verb maintaining the notion of global communications of knowledge distributed from a single source with multiple handlers through the world society. The borrowing, lending, reception and diffusion of educational ‘policy advice formation’ (PAF) is neither borrowing nor lending but produced in conjoined global/glocal relations and distributed via discourse.

<sup>8</sup> In this case, abstract level of aggregate variable refers to designation of frequency distribution that Thorndike and Dinnel define as “a listing, in order, of each value of the variable that occurred, along with the number of times that value occurred (2001, p. 28).

The English language is used primarily in the Anglo-Saxon world, additionally, it is the lingua franca for transnational communication. This study utilizes the English language for both systematic and pragmatic reasons. From the pragmatic stance, it is the most common language. Thus, most of the sources are conveyed in English. From the systematic stance, it is reasoned that most transnational publication is by and far, English. That is to say, for a great many reasons, transnationally and comparatively oriented authors publish in English. Therefore, systematic and pragmatic stances provide the core aspect of educational discourse exchange of knowledge inducing both collaboration and participation from a wider variety of sources.



## 1.01 DIFFERENTIAL PATTERNS

The issue of interest in this study is cognitive mapping designed for knowledge facet analysis of comparative educational discourse. If one considers that 'policy advice formation' has changed affecting administrators and bureaucratic institutions within nation-states via international communicative networks, associations and institutions. While simultaneously remanding policy advice implementation in the hands of local jurisdictions, and redirecting the role of governance administration and bureaucratic institutions to decisive action of policy reformation. It is assumed that the power dynamics have transformed. A transformational change of power dynamics carries with it a change in communicative dynamics as reflected in discourse. Therefore, a cognitive map of the knowledge facets of comparative educational policy formation discourse is needed for accurate analysis of these communicative transformations.

In this case, transformation refers to the conceptualization of change in discourse communication modernization. In other words, differential patterns occur. As such, differential patterns are the dynamics engineering development of communicative discourse. In this study, these dynamics of transformation are defined as the communicative methods of disciplinary change in discursive dynamics. A change that promotes analysis of discourse or as Val Rust defines the 'criteria by which a change occurs' (Rust, 1977, p.197).

From this vantage-point, transformation may be seen as a process of shifts according to changes. Within this process of transformation, a pattern of discourse power dynamics forms which differentiates disciplinary knowledge. That is to say, in the 'knowledge era' communication through discourse may have given rise to a discourse discipline. In this fashion, it differentiates policy advice into three tiers: formation, decision and implementation. This three-tiered

differentiation redefines and restructures the theories, methodological models and challenge topics of comparative knowledge. This study only attempts to map knowledge facet occurrence in the formation paradigm as evidence in discourse not decision or implementation because knowledge pertaining to decision or implementation is matters of subject reflection not methods of communicative dynamics. The communicative dynamics of discourse knowledge are theoretical evaluation and have no reference to practical power dynamics. In this case, differentiability is established between discourse content and discourse composition as concerns knowledge construction.

## 1.02 HYPOTHESIS

The primary hypothesis of differential patterning construction contends that comparative education and policy studies disciplines merge discourse to form ‘policy advice formation’ (PAF). PAF discourse represents the information paradigm termed the knowledge construction with which educational advisement is related to educational policy. As such, the development of this disciplinary specialization carries two assumptions: a) time/space parameter and b) origins. It is assumed that the time/space parameter of its development is within a global/glocal confine. It is assumed that educational policy advice discourse originated as a result of merger between comparative education and policy studies. Therefore, it is assumed that the scientific differentiation of disciplinary discourse establishes epistemic legitimacy, typological capacity and ontological validity<sup>9</sup>.

The first assumption entitled the time/space parameter is a matter of what Antonia Novoa defines as a complexity of memories and projects building senses of identity (Novoa, 2002, pp. 131-155). The time/space dynamic is further enhanced by what Val D. Rust describes as a “new historical periods” which “addresses more and more its own style, values and inventions” (Rust, 1977, p. 14). From this perspective, it is reasoned that ‘policy advice formation’ discourse obtains identity in reference to time of development and space context. As Martin Lawn when *Imaging A European Space in a Time of Brands and Networks in Borderless Education* states, “the capability of the European Union to create a European education identity, an education space is limited by its own politics and history and its available instruments, most of all, by time” (Lawn, 2001, p.10). From this perspective, it is reasoned that disciplinary identity is rooted in the time

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<sup>9</sup> Creswell, 1994, see appendix A

and space of phenomenon or problem occurrence. That is to hypothesize that ‘policy advice formation’ communication seems to be situated in a current time continuum obtaining its identity in a borderless space. This notion is also supported by the redirection of notable Comparative Education journals since 1998. For example, volume 45, number 4 of *Comparative Education Review* yields articles entitled, *Comparative and International Education Society Facing the twenty-First Century* by Robert F. Arnove, 2001. *The Social Construction of the Local School Curriculum: Patterns of Diversity and Uniformity in Israeli Junior High Schools* by Aaron Benevot and Nura Resh, 2001, where they state that “curriculum development in a normative world view”. As well as Henry M. Levin’s, 2001, *Pedagogical Challenges for Educational Futures in Industrial Counties* in which he argues that the key challenges are resultant from economic globalization processes. This particular journal also includes three papers under the heading of Focus on Theories in Comparative education, all of which refer to a Global Millennium. The editorial for this volume is entitled, ‘Globalization and Comparative education in the World System’ and the book reviews also follow the same pattern in addressing educational reform, comparative theory or political issues in some aspect of a global time-space dynamic. In fact, the occurrences of ‘global’ time/space constructs are evidenced in most issues of both *Comparative Education* and *Policy Study* journals from the mid-1990’s onward.

On the one hand, as the Stanford Group (John Meyer, John Bali, George Thomas and Francisco Ramirez, 2001) reason, the identity of comparative education and policy studies is based on:

- 1) imagery of worldwide global models that legitimate agendas for local action;
- 2) shape the structures and policies of nation-states and
- 3) function of other national local actors.

That is to reason a global standardization of education. On the other hand, scholars such as Jürgen Schriewer as well as Gita Steiner-Khamsi, position the identity of comparative education disciplinary fields, in more philosophical confines of historic reflection rather than of perceived daily occurrences. The dichotomy of time as everyday experience or change in discourse communication trend and space as worldwide society or global systemology seem to be issues of globalization for comparative analysis. However, the dichotomy transforms when applied to differentiated specializations such as ‘policy advice formation’. Thus, the time/space perception contends that ‘policy advice formation’ as opposed to comparative education or policy studies emerged from global information era constructs. In this fashion, analysis of ‘policy advice formation’ discourse, as a communicative discipline, relies on philosophical construction of why and how communicative determinants are legitimate, capable and valid academic science. In other words, contention about globalization issues for discourse analysis is positioned in the time and space communicative dynamics as opposed to disciplinary construction.

The second assumption hypothesizes that the origin of ‘policy advice formation’ (PAF) is predicated on the notion that a merger of comparative education and policy studies. A merger which emerged out of “re-configuration of comparative methodology around topics of education policy” (Hofstetter and Schneuwly, 1999, p.17). The emergence of this communicative specialty rests on the idea that comparative education without focus of policy studies communicates knowledge ambiguity and undermines the capacity of its research findings. Inversely, policy studies without comparative education communicates advice knowledge ambiguity and undermines the capacity of its research findings. The deficit in knowledge capacity also forms additional complexity lending to further differentiation of both comparative education and policy studies as academic disciplines. From this perspective, the close coupling of comparative education

and educational policy studies represents an attempt at the integration of various types of knowledge indicating internal differentiation within both fields (Mattheus, 1998, pp.189-190). More attempts to classify this differentiation are demonstrated in the formation of various models, processes and diagrams etc. offered from the likes of Val Rust, 2000; Mark Bray, 1998; David Phillips, 2000; Robert Arnove, 2001; Brian Holmes, 1988; Clive Dimmock and Alan Welsh, 2000; just to name a few.

While much is written concerning the formation of comparative education policy studies, discussions of the 'policy advice formation' communicative hybrid discipline are rare and a cognitive map for analysis seems not yet clearly articulated.

### 1.03 JUSTIFICATION

The justification for cognitive mapping of knowledge contends that disciplinary discourse knowledge is defined by epistemic legitimacy, typological capacity and ontological validity attributes. This hypothesis rests on the notion that scientific communication is composed of theories, methodological models and challenge topic knowledge facets. As Creswell (1994) reasons, they convey information concerning specific theories, derived by specific methodological models to address specific challenge topics. In doing so, this informational discourse becomes knowledge, which establishes legitimacy of defined categories of the nature, source and limits of that studied. It establishes capacity by the types and symbolism used to denote issues relative to that, which is studied. It establishes validity through the theories, methodological models and challenge topic purpose of that studied. In essence, epistemological legitimacy, typological capacity and ontological validity (ETO) characterize knowledge. It is also noted that knowledge legitimacy, capacity and validity carry other characteristics but as concerns communications ETO characters are selected as the most apparent. Further discussion of this point is addressed in following chapters. The cross-reference of theories, methodological models and challenge topics with ETO variants forms the cognitive map for analysis of discourse disciplines. Therefore, the pattern formed is a mapping of disciplinary identity categories with reference to communicative knowledge facets.

While there seems to be many types of discourse analysis, this design contends that analysis of discourse knowledge by disciplinary identity categories addresses the disciplinary transformation of communication dynamics. For example, John Greco and Ernest Sosa defines disciplinary identity as ‘the nature of epistemic evaluation, (Greco, 1999, p.9). Stephen Hobden defines it as ‘typological capacity

of knowledge transmission' (Hobden, 1998, p. 39). Gill Friedmann and Harvey Starr define it as 'ontological validity of distributed knowledge' (Friedmann and Starr, 1997, p.127). Note that from this vantage point the knowledge facets are individually categorized. As such, this study combines these attributes to evaluate discourse disciplinary via epistemic, topologic and ontological (ETO) within a tripod analytical knowledge frames termed theory, methodological model and challenge topics (TMC).

To this end, this project seeks to ascertain the ETO patterns of 'TMC knowledge domain'<sup>10</sup> facets in comparative education, policy studies and 'policy advice formation' discourse. Ascertainment of the pattern of knowledge facets more precisely examines transformed<sup>11</sup> communication dynamics as represented in discourse. From this perspective, the study is based on quantitative empirical question survey of discourse that combines a grounded theory for discourse analysis with an empirical sociological methodology for statistical analysis. As such, this study entwines methodology of Barney Glaser (1967, p1-76) and Gene Glas (1976, p.5-97) termed as Glassian Theory when applied to quantitative empirical management of qualitative data. In other words, this study is a cognitive survey of comparative education, policy study and 'policy advice formation' discourse designed to pattern differentiation of communicative knowledge domain facets.

The analysis is framed in keeping with John W. Creswell's (1994) analysis of qualitative reasoning and quantities of category occurrence approaches of

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<sup>10</sup> In this case, knowledge domain refers to information that by "virtue of its being shared and confirmed through practices of review, critical scrutiny and consent that grants to these knowledge claims that status of being commonly held to be true within the community" (Burbules, 2000, p.15). Knowledge domain, in this context refers to information conveyed within disciplinary discourse and thus, three dominant facets (epistemology, typology and ontology) represent the knowledge domain inherent in all disciplinary categories under investigation. Although other knowledge domain facets appear, ETO is the chosen variables. More discussion of other variables is outlined in the third chapter.

<sup>11</sup> Key to this notion of transformation is the conceptualization of evolutionary modernization. In other words, transformation refers to the process by which differentiation occurs.



research via survey. As such, discourse literature paradigms question the source of author reality, study value and type as articulated in theoretical context, methodological model of information and topic challenges.

A underlying assumption of this project contents that the communicative dynamics by which educational leadership actors and academic scholars merged to generate reform linking practice and theory. This project does not assume advice is implemented. It does not attempt to address implementation dynamics. It is assumed, as Val Rust argues, that educational policy comprises of (at least) two dynamics: formation and implementation (Rust, 2000, pp.36-69). The study also fails to differentiate policy advice that is formulated within a particular nation-state with those influenced by external actors or nations.

In concordance with John Creswell's concept, it is also assumed that the practice of scientifically generating theory based policy formation advice, as articulated in discourse, carries revision, restatement and continued shifting of emphasis for theory, methodological models and challenge topics. As the acclaimed sociologist Walter Robertson Smith, an important reference author of Creswell, expressed in 1917, "The theory and methodology of science demand continued revision and restatement and continued shifting of emphasis as new discoveries are made, and new differentiations of subject matter must follow any growth or increased complexity of the knowledge area to be dealt with" (Smith, 1917, p.761)

Indeed, when viewed in this context, the very decision about which categories, methods and frameworks should be used can ill guide a research project because it necessarily simplifies a problem by excluding a range of potentially relevant factors. Therefore, the study needs to be made in an interdisciplinary context if it is to be guided by due consideration of the possibilities that many of these excluded factors may turn out to be salient. Thus, considering salient cross of disciplinary facets, the theories, methodological models and challenge topics of

comparative education and policy study discourse formation is not only associated with differentiation but incorporate aspects of close coupling with other disciplines: for example, politics and economics variants. Thus, in the typological capacity scales survey includes social, political and economic theory, both empirical and non-empirical methodological models and distinguishes between network, association and institutional formation dynamics but does not distinguish within these dynamics.

As Val Rust, in his 1977 examination of political, social and economic modernity reasons, these aspects cover the most complete range while legitimizing criticism that they do not convey all aspect of social science investigation of disciplinary development (Rust, 1977, pp.7-12) As such, this study also provides the basis for variation of knowledge evident in discourse by allowing non-occurrence rating and indicating that other determinants may exist. Further discussion of this theme is covered in the next chapter.

As concerns the international nature of communicative dynamic, the core context of this examination poses that the educational sciences systematically differentiated<sup>12</sup> in light of the societal growth currently termed globalization. Meaning that international institutions are formulating educational policy associated with matters of society growth such as mobilization. In that respect, globalization has increased the complexity of scientific analysis expressed through discourse: what Val Rust calls a ‘type of societal change’ that affects scientific research (Rust, 1977, pp.1-2). It is therefore, reasoned that educational policy formation advice is a dynamic of globalization thereby requiring a comparative

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<sup>12</sup> Differentiation, in this context, represents the process of formulating variant self-identified fields of scientific investigation. This notion will be discussed further but for now, interpretation of differentiation represents the categorization of scientific investigation and discourse into a new field of study.

perspective for analysis<sup>13</sup>. Thus, in a global paradigm, recognition of the vast number of existent nations, the diversity of their cultures and therefore, the complexity of comparative analysis of relative discourse sources. It is also argued the globalization does not refer to a united global nation but rather views co-relations between already established nation-states.

The act of juxtaposing knowledge relies on disciplinary categorization in assessment of the epistemic legitimacy; typological capacity and ontological validity evident in theories, methodological models and challenges. As such, this categorization seems self-reflective disciplinary discourse identification. The author(s) direct the information to a specific audience<sup>14</sup>, which defines the self-reflection disciplinary identity of the discourse. The format is based on the assumption that theories, methodological models and challenges define the communicative dynamics of discourse in general and of science of education particularly. Knowledge domain, in this context refers to information conveyed within disciplinary discourse and thus, three dominant facets (epistemology,

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<sup>13</sup> Many scholars share the position that dynamics of globalization has interlinked study of education with comparative education perspective. Even scholars such as McGinn in analysis of local and national considerations state “globalization, however, brings winds of change to buffet communities” (McGinn, 1996, p. 350). Phillip Jones discussing the interaction and relational dynamics of international education and comparative education argues that “implications are acknowledged not only at the level of terms of the out-workings at local levels of international dynamics of education” (Jones, P., 1998, p143) In much the same fashion, but from a different perspective David Phillips contents the same need for resign of social scientific investigation in the global era to include comparison for international scope (Phillips, D., 2000, pp1-2). The list of scholars goes beyond traditional pluralistic, Fordistic, Post-Modern or other perspectives. The apparent determination holds that some level of globalization has established a need for comparative theory and methodology in the study of all aspects of education.

<sup>14</sup> The specific audiences are defined as scientific community, educational professional and policy maker. It is recognized that both professions and policy makers may reside in the scientific community and that educational professions may possess policy-making capacity. As so, a categorical system is applied where specific self-reference to policy maker discourse is categorized as PAF [‘policy advice formation’ (PAF), the profession of education as PS [Policy Studies (PS)] and scientific community as CE [Comparative Education]. Overlapping self-reference is ranked and categorized accordingly. This qualitative analysis of overlapping variables is based on categorical specification in which the trend in knowledge facets by time is the most relevant factor. For more discussion of this phase, see the section entitled ‘Criteria for Selection of Disciplinary Discourse Identity’.

typology and ontology) represent the knowledge domain inherent in all disciplinary categories of educational science. Although other knowledge domain facets appear, ETO is the chosen variables. At this point, suffice it to say, that knowledge domain represents the legitimate rationale, methodology of information expressed through written discourse when referencing international, transnational or national challenges. The communicative dynamic of investigation is thereby defined as discourse available in journals, universality publications (primary those generated by or with approval of department chairs) and papers published by institutions, associations or networks.

As to study structure, once the disciplinary identity of the discourse is categorized, according to the specific audience addressed, the study proceeds to calculate the occurrence of each knowledge facets in each discourse source. The epistemic legitimacy exhibits society, systems and/or organizations from either qualitative or quantitative research methodological models formed to address international, transnational or national challenge topics. The typological capacity of social, political or economic theoretical knowledge facets are cataloged. Either or a combination of these knowledge facets are attributed to empirical or non-empirical or both types of methodological models in application to network, association and/or institutional challenge topics. The ontological knowledge domain is mapped in theory as governmental and/or philosophical, in methodology models as macro and/or micro and in challenge topic categorization as problem and/or solution analysis. All these distinctions and categories are presented and discussed in more detail in the following chapter.

## Chapter 2

### 2.00 NO DIGNITY – NO DOUBT

*“On a policy level, interventions across a range of social institutions and interactions need to be based upon research that does not fall within simple disciplinary categories and does not frame hypothesis around simple linear cause-effect dynamics. Rather research needs to be sensitive to the highly complex and interactive way in which significant social problems are determined”*

Nicolas C. Burbules, 2001

Disciplinary discourse grouping, within the science of education, is predicated on a notion that theoretical approaches, methodological models and challenge topics define communicative spaces within academia. As David Coulby reasons concerning disjuncture and difference in the global cultural economy has converted the old European space based on states disguised as nations into highly differentiated pattern defined by *knowledge* flow (Coulby, 2002, pp. 295-310). This notion brings to bear the question of whether and under which conditions differential patterns are identifiable by categorization of specific kinds of scientific parochialism. Knowledge base in educational research that continues to expand at an accelerating rate. Thus, when applied to communicative function of discourse in current time and space, categorization of knowledge via academia determination is a matter of cognitive envisioning. That is to say, it seems a matter of systematic process for the review of research literature.

While literary reviewers such K.T. Henson (1995) and David Coulby (2002) give extensive characteristics of literary formation and description, they do not provide specific categories by which discourse can be empirically compared. In a similar fashion, discourse analyst specific to disciplinary fields use a more non-

empirical format for content analysis rather than survey distinction such as Jürgen Schriewer (2000) and Rolland Paulston (2000). Thus, this dissertation has been based on the determinants of John W. Creswell's (1994) and Gall et.al (1999) for knowledge-facet categorization or Epistemology, Typology and Ontology format. The survey method of empirical analysis does not draw Creswell's cognitive categorization in completion but rather chooses those categories, which relate to the knowledge domain facets under study. By narrowing the topic, this study has identified ETO as the primary categories prevalent in this analysis of discourse.

However, the disciplinary distinction does not follow an empirical assessment of specific patterns in the communicative text but rather relies on self-definition by author. The use of author self-definition of discipline is rooted on Parsons' action theory for identification of disciplinary identity. In this argumentation, the action is a matter of audience or addressee. A matter of author intent or to whom is the discourse directed and rooted on Luhmann's self-referential theoretical differentiation. It deems that academically certified authors possess qualified aptitude to determine the addressees of his/her work. While self-reference combines with action theory in this motive, the notion challenges the concurrent validity of disciplinary identity categorization and thereby gives rise to various forms of interior disciplinary distinction. Other theories which are not framed in author self-reference but rather by various forms of categorical, causal-effect, or methodological determinant classification create an inventory of knowledge reflection by specific factors based on contextual emphasis in analysis of discourse. From this position, it seems a matter of either deductive or inductive rational. To this matter, David Hume's basic insight which according to Paul Smeyers's reasons "that formal reasoning cannot reveal causation because we cannot deduce the nature of an effect from a description of the cause or the nature of the cause from a description of an affect categorization" (Smeyers, 2002, p.1).

This notion brings to bear the possible existence in comparative education and policy studies of more interior disciplinary categorization. Alternatively, as Tomlinson referring to John Dewey argues, “specific categorization envelops specific research limitations” (Tomlinson, 1997,p.365). The concern is whether or not some other distinction carries the same categorical determinants such as policy advice application discourse. In this fashion, this study turns to the differentiation process that reasons disciplinary identities seem to have re-configured. As Hofstetter and Schneuwly reason, “emerges out of re-configuration of comparative methodology around topics of education policy:” (Hofstetter and Schneuwly, 1999. P. 17). Altering this view is Mark Bray and David Phillips (2000), which argue that this re-configuration is not a matter of methodology but rather reveal dramatic differentiation based on theory. In the middle of this two conceptualization stands what Brian Holmes (1988) refers to as the practical reality. He argues that disciplinary differentiation is not a re-configuration of either method or theory in discourse analysis, but rather rests on variation of challenges discussed in topics on education. In this case, this study argues from all three-index paradigms: theory, methodological model and challenge topic.

#### INDEX PARADIGMS

	Epistemological Legitimacy	Typological Capacity	Ontological Validity
Theory	Society, System, Organization	Social, Political, Economic	Philosophical, Governance
Methodological Model	Quantitative, Qualitative	Empirical, Non Empirical	Microanalysis, Macro analysis
Challenge topic	International, Transnational, National	Network, Association, Institutional	Problem Analysis, Solution Analysis

Table 2-1 Index Paradigms:

*This table positions the categories surveyed according to TMC juxtapositions against ETO variants.*

The primary argument forewarning communicative disciplines such as ‘policy advice formation discourse’, reason that merger establishing disciplinary fields

reframe the science of education or as Edwin Keiner reasons, internal restructuring. In this fashion, disciplinary discourse refers to the communicative dynamics by which, knowledge seems to be articulated within the educational community via publication (Keiner, 2002: Steiner-Khamsi, 2002).

There seems to be no dignity in scientific research if no doubt about validity, capacity and legitimacy exists. Doubt that leads to examination of the discourse justifies evaluation of the primary theoretical, methodological models and the scope of challenge topics communicated. It seems that with dignity of professional educational science that doubt about the disciplinary epistemic legitimacy, typological capacity and ontological validity knowledge communicated in discourse arises<sup>15</sup>. In this case, communication in discourse as publication where “publication represent the basic communicative act that generate, continue and reproduce the self-regulating flow of the disciplinary communication process” (Keiner, 2002, p.88).

Core to this philosophical debate rests the notion of merger. A merger between comparative education and policy studies. It contends that in the global era this merger has lead to the development of ‘policy advice formation’ discourse, which echoes the relationship between educational practice and theory. As Edwin Keiner terms it, “the relationship between discipline and profession” (Keiner, 2002, p.91). A relationship re-constructed to alleviate the disciplinary knowledge applicability as differentiation from academic investigation rendering a form of internal disciplinary development.

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<sup>15</sup> In this respect, knowledge domain facets represent informational categories, which are used for specific purpose in discourse. The facets are extensively defined in this chapter with association of methodological models. Suffice it to say, that knowledge domain facets are categories of communication provided in discourse analysis to justify specific acts of research, debate or academic discussion.



As Nicholas C. Burbules and Carlos Torres argues, at the practical policy level, disciplinary identity as well as philosophical hypothesis may really be unnecessary. (Burbules and Torres, 2000, p.3). However, this study hypothesizes that educational ‘policy advice formation’ discourse seems to be either standardization of education policy or a “crisis of new regulation/reform” (Gruschka, 2001, p.1) based communication. From this perspective, it seems to be also reasoned that policy reform or regulation has transformed from nation-state specific social, political and economic determinants to a multi-national educational enterprise i.e. Europeanize, Globalize, Americanize, UN ‘Education for All’ etc.). It seems to have become a highly complex and interactive communication pertaining to significant social problems (and/or phenomenon) thereby linking theory and practice.

The linkage of theory and practice represents an epistemological co-relational coupling of knowledge. A coupling specific to forms of education as a profession and thus, prefer conceptual differences in types of knowledge dependent on functional requirements of the social systems to which the respective type of knowledge is related (Seddon, 2002, p.160-161). This notion seems to be also defined as the “type-specific use and purpose of knowledge” (Radtke, 1996. p14) or as Andreas Gruschka states, “typical method (typology) that describes which reform strategies have reason for success at which schools” (2001, p.2). In this light, differential patterns of knowledge domain facets of ‘policy advice formation’ as a communicative dynamic of discourse need clear identification or put more soundly, cognitive mapping.

The history and philosophical context of the linkage between theory and practice, for a variety of reasons, seems to have been discussed from many points of view [Keiner, 2002: Radtke, 1996: Schriewer, 2000: Popkewitz, 2000: Zymek, 2000]. On the one hand, it is argued that profession and practice are reflectively separate

investigations. The contention that science of education as a profession rooted on theoretical investigation exhibits no linkage with educational practice but remains philosophically positioned. In this fashion, philosophers examine educational policy topics to reason the elements of application. On the other hand, it is argued that profession and practice are interlinked and have coupled in reflective position. In this fashion, coupling of practice aspects and theoretically reflection positions evaluation in both professional and practical domains. The merger of comparative education and policy studies thereby couples profession and practice as concerns the formation of policy advice discourse. This notion argues that theory and practice appears substantially linked in reference to communicative dynamic shifts concerning policy. Policy may therefore earmark the catalos for merged of theory and practice knowledge production.

Discrepancies concerning the level of profession-practice linkage rest on the difference between discourse self-identified as philosophic and that, which is directed at practical matters. On the one hand, the authors reflect on educational practice challenge topics from the position of analytical discussion. On the other hand, the authors reflect on educational practice challenge topics from the position of professional decision-making. This synopsis opens the question of 'how has communicative dynamics transformed to unite analytical discursive reflection with professional decision-making'.

While this project does not address decision making issues, it seeks to ascertain the scientific theories, methodological models and challenges prevalent in comparative education, Policy Study and 'policy advice formation' discourse. It thereby assumes that communication dynamics of education 'policy advice formation' discourse has evolved. In other words, 'policy advice formation' has changed hands from educational administrators and bureaucratic institutions within nation-states to the hands of scholars throughout international

communicative networks, associations and institutions. A transformation, which suggests that the communicative temporality of discourse have evolved thereby changing the structure of the knowledge communicated.

Conclusively, this project assumes that disciplinary discourse reflects transformation of knowledge focus. The underlying notions contends that 'theory' orientated comparative education and 'practice' orientated educational policy studies discourse have merged producing a theory-practice oriented 'policy advice formation' communicative discourse. This notion couples both profession and theory as the communicative dynamic of standardization of education. From a reflective point of view this coupling yields an objective reality. An objective reality positions system communications dynamics in the interstice between theory and practice. In this fashion, the mirrored reflection differentiates aspects of policy advice into formation and implementation. It assumes that policy implementation has become uncoupled with policy formation.

The knowledge domain facets investigation categorized from words expressed that fall into knowledge categories. The knowledge categories are defined and formed into a survey questionnaire by the purpose of usage in the discourse source. In other words, how the author(s) project deficiency, moralization and rapprochement concerns in the text. What the authors define as right, what they define as wrong, what they define as the solutions to the problem are the reframes of the knowledge categories. These question elements define the attributes of knowledge facet development in discourse analysis theory in accordance with Creswell theoretical position<sup>16</sup>. As such, this study contends that epistemic legitimacy; typological capacity and ontological validity of discourse are represented in the theories, methodological models and challenge topics.

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<sup>16</sup> Creswell's theoretical position is discussed in further detail in this chapter. Surface it to say this position defines the ETO parameters.

As the songwriters J. Gordon, T. Riley, C. Hannibal, L. Walters, W. Stewart, R. Murray, P. Brown and R. Wade proclaim in the Black Street rendition entitled 'No Dignity-No Doubt' state, there can be no doubt that 'word is the bond for knowledge'. The dignity of communicative specialization knowledge rest on the legitimacy, capacity and validity of that knowledge produced. When the knowledge may be characteristically published for scholastic interchange, continuation of knowledge production and disciplinary instruction of students, there can be no doubt as to communicative authenticity. In other words, it possesses dignity from the scientific community. However by what pattern does knowledge domain facet express disciplinary dignity and abolishes doubt becomes the question. 'Can 'policy advice formation' communicative discourse be dignified as a discipline?' The answer to this question rests in the occurrence rate of knowledge facets patterned within this communicative as compared to the merging disciplines.

## 2.01 THE GLOBAL IMAGERY

*“Comparative education discourse remains, as it has always been, a field of study characterized by contrasting approaches, controversial definitions and disciplinary identity crisis”*

Schriewer, 1988, p.25

The historic struggle mirrored by widespread critique and analysis of comparative education discourses centers around three primary arguments. The first and perhaps most contentious may be that of disciplinary<sup>17</sup> identity crises or ontological capacity, which questions the very legitimacy of comparative education as a field of study. The second concern seems to be aimed at contrasting approaches or typology capacity, which questions the comparative capacity of the field. The third concerns the massive use of controversial definitions or epistemological legitimacy, which undermines the knowledge values of the field. Thus, ontological, typological and epistemological concerns represent the core issues historically plaguing comparative education discourses.

In light of these concerns, comparative educationist seem to have turned to ‘global society’ and ‘globalization’ imagery as a theoretical construct to overcome nation specific or glocal variations through the re-conceptualization of disciplinary, institutional and objective veracities<sup>18</sup>. This study, therefore, examines issues of variations apparent in ontological, typological and epistemological knowledge relative to globalization time/space as a theoretical construct. Therefore, a secondary thesis holds that global imagery, as a theoretical

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<sup>17</sup> This reference to disciplinary does not refer to Comparative Education as a discipline in and of itself, but rather the notion it represents a field of study with the science of education.

<sup>18</sup> Veracities, although commonly used as a descriptor in poetic composition form or style, demotes the concept of truth or perceived reality.

construct secures the legitimacy and construct relationship in comparative education discourse.

From the frame of discourse, global society, globalization processes such as Europeanization imageries do not constitute social phenomena but rather represent a re-conceptualization of society itself. For this study, they represent a shift in objective point of view from the national to the international and/or borderless perspective. A transformation of institutional conceptualization that reframe geographic determinants from nation specific to borderless or cross-national. It also defines a perception of culture as internationally based or borderless<sup>19</sup> expression of pluralism.

Traditionally, the external influences were defined within geographic, cultural and politically bound conceptualizations known as the nation-state. The global imagery shifts the boundaries and dominant external influences from nation-states to multi-cultural governance configurations not by eradicating nation states but rather by enhancing their prominence and simultaneous reducing their steering capacity. Thus, the global imageries do not represent phenomena but rather serve as a re-conceptualization of social institutions.

Not to worry, the global objective reality occurs within historical sociology of education and does not violate basic understandings of social systems or subsystems but rather characterizes a new era in the science of education. In this context, the educational system was born out of the nation state to reproduce itself. It has grown into its own independence and not only reproduces nationally but also through networking reproduces international characteristics and thus, globalizes. Between 1879 and 1920, nation states witness what seems to be

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<sup>19</sup> The distinction between international and borderless is a matter of power dynamics. Borderless refers to absolute power dynamics of non-national actors yet international reasons that the nation state retains some degree of power in accepting or rejecting cross and inter nation options.

commonly referred to as the modern education system rooted in regional objective realities. Or as Holmes states, “The educational systems that emerged from the structural changes of that crucial period ended by perpetuating and reinforcing the hierarchic organizations of their societies” (Holmes, 1988, p.32). From the late 1920’s with the rise of industrialization until the mid 1980’s, these institutions characterized national objective realities and represented an expanded concept including larger national geo-political reproduction accompanied by shifting control of educational systems to national governance structures. The emergence, in the mid to late 1980’s of the global society conceptualization can be seen as a redefinition of the geo-political affiliations beyond individual nation-states and are structurally related to multinational political, economic and cultural structures. In this view, the objective reality can no longer base educational conceptualization on national economic markets, political structures or cultural distinctions but rather on communicative steering dynamics.

While the terms ‘globalization’ and the ‘global society’ are frequently referred to in the comparative education literature, especially those published since 1994, no one full understanding of this construct seems evident. In some cases it seems to be merely used normatively, that more like something the reader knows and understand – a given. In other instances, a vague and general definition may be offered from a variety of points of reference (e.g. economic, political, cultural). Note that within these approaches to global are re-conceptualization of the term in favor of other similarly vague constructs such as ‘global village’ or ‘world-wide consensus’ or ‘universal narrative’ to frame a international or global context for specific educational phenomena. Even within specific frames of comparative study, no concrete consensus as to the definition and features of either the globalization process or the global society exist. With the acknowledgement of the 192 nations of the world, the comparative education discourse has

constructed scientific research based on ontological, typological and epistemological scientific relationships.



## 2.02 PRELIMINARY STUDY

The preliminary study examines the effects of global conceptualization on ETO differential patterns in comparative education within a 1970-2001 time perspective. It examines the frequency of epistemological, typological and ontological (ETO) knowledge facets in comparative education discourse based on the notion that academic knowledge communications are legitimate, capable and valid information sources. This notion is rooted in a professional social scientific conceptualization of discourse.

The notion of global is conceptualized within the historical background which reasons that science of education emerged as an academic discipline differentiated from educational practice. The academic discipline of education seems to have undergone internal differentiation forming sub-disciplinary specialization (Keiner, 2002, pp.85-89). Differential patterns, which distinguishes educational profession from practice and thus, gave birth to educational academia at the turn of the 20<sup>th</sup> century (Meyer et.al, 1992, p.5). In the middle of the 20<sup>th</sup> century, internal differential patterns formed comparative education as a sub-disciplinary field to compare specific topics in education from a multinational perspective (Schriewer, 1993, Preface). The specific topics of comparative education represent an internal differential pattern within the science of education. As a differential pattern, it is assumed that the communicative knowledge is defined as legitimate, capable and valid scientific knowledge. The historical co-relationship of academic knowledge to published communications reason that “on the one hand, educational sub- or part- disciplines prefer ideas of open, relatively autonomous realms of multidisciplinary intersections and references. They refuse a differentiation according to the lines of the disciplinary analytical and systematic. On the other hand, since the 1990’s, one can clearly identify processes of intra-disciplinary

differentiation and hierarchy formation” (Keiner, 2002, p.88). The point noted that differential pattern seems to reflect knowledge domain facets of academic communication such as discourse. This assumption is based on the notion that educational science discourse carries knowledge domain facets (Gall et.al, 1999, p.373-374). In this study, the knowledge domain facets are identified according to epistemology, typology and ontology discourse analysis parameters (Creswell, 1994: Gall et.al, 1999). Deconstruction of discourse according to ontological, typological and epistemological arguments prior to the widespread use of global imagery seems to validate the possibility of juxtaposing fundamental tenants of knowledge against uses of global imagery in discourses<sup>20</sup>. As Iveta Silova argues ‘a hybridity of discourses’ (Silova, 2001, p.5). This hybridity of discourse reasons, amongst other notions, that discourse knowledge domain facets reflect: what comparative education is (the ontological validity): how it is organized (the typological capacity): and why it is of value (the epistemological legitimacy).

This notion of differential patterns in comparative education also reflects the assumptions that features of comparative education discourse seem to have evolved during global re-conceptualization. That is to argue that post 1990 hybridity of discourse emerged with comparative education discourse brings re-construction of ETO knowledge facets.

The purpose of the preliminary study is to investigate the effect of global conceptualization on ETO differential patterns in comparative education. The preliminary study begins with an initial survey of an enormous body of discourse published in either book or journal form and categorized in educational

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<sup>20</sup> The research format of the initial study seems inappropriate for use in the main study because of concerns about the design used for identification of source populations. In this case, key terms were used as identifiers rather than self-reflective descriptions produced by the author. However, the findings confirm time/space trends in knowledge patterns as hypothesized in current disciplinary literature.

databases. This initial survey produced more than 10,000 references between January 1970 and October 2001.

From these citations, more than 2000 references emerged from a coupling of comparative education and ontological, epistemological or typological Boolean. These references were further tallied according to validity, legitimacy and capacity Boolean to produce a body of 600 citations. The citations were then placed into global or non-global language groupings by either pre or post 1990 publication date categorization. This data analysis yielded four groupings: 1) pre 1990 non-global, 2) pre-1990 global, 3) post 1990 and 4) post 1990 non-global language. Once categorized, the citations were empirically listed into the ETO grid.

ETO Grid

	1970-1989 Non-global language	1990-2001 Global language	Post 1989 Non-global language	Pre 1990 Global language
Ontological validity	168	17	0	2
Typological capacity	157	13	1	0
Epistemological Legitimacy	82	147	8	74

Table 2-2 *ETO Grid*

*Pre-survey discourse analysis of global verse non-global verbal indicators framed in time sequence of pre and post 1989*

As table 2-1 shows, four grouping was formed. Group is termed 'Non-global language' containing discourse citations published between January 1, 1970 and December 31, 1989. A second grouping of discourse citations contained a global conceptualization published between January 1, 1990 and October 30, 2001. Group 3 discourse citations published between January 1, 1979 and December 31, 1989 contained global language indicators. A final Group 4 was formed of discourse citations published between January 1, 1990 and October 30, 2001 with no global conceptualizations.

The discourse citations were surveyed forming the matrix of occurrence finding presented in Table 2-1. The survey matrix denoted the answer to one question. The question asked, 'Does the author establish epistemological legitimacy, typological capacity and /or ontological validity within the text? The answer to this question yielded singular, double or triple responses. This format revealed ETO trends in comparative education discourse.

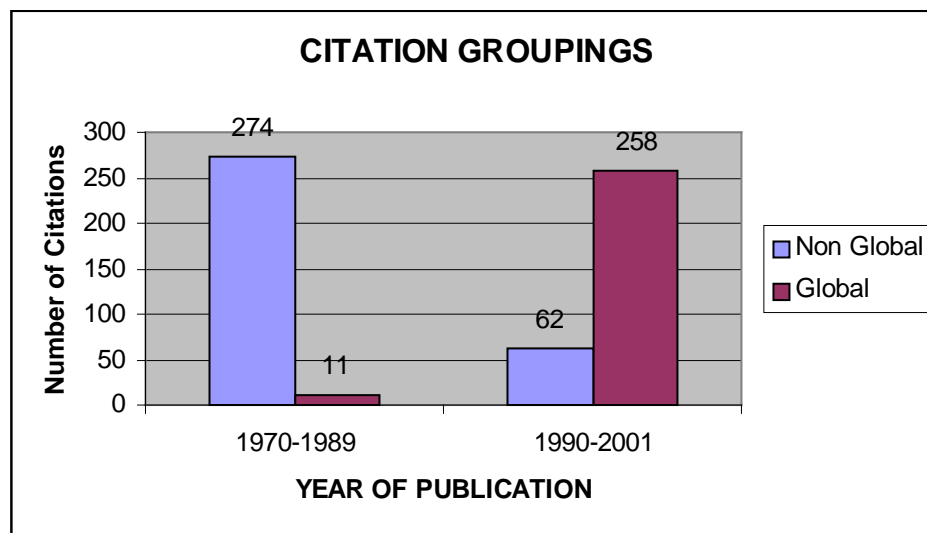


Figure 2-1 Citation groupings by number of citations according to year of publication grouping.

The trend reveals a differential pattern of decrease in ontological legitimacy and typological capacity conceptualization within global language indicators. (See Figure 2-1) It would seem that epistemological validity of comparative educational discourse increased as the form of academic knowledge justification in the post 1989 era.

The typological and ontological validity issues decreased in the advent of global imagery and provided some evidence of axiological ontological function within a global construction articulated. Early discourses either adamantly defend the theoretical base of comparative education as sociological (based on social science theory) or historical analysis (Noah and Eckstein, 1969; Farrel, 1979; Merritt and Coombs, 1980; Kohl, 1986; etc). Therefore, the vary legitimacy of discourse seems closely linked to social science research and bound to various worldview imaginations. It may be within the global construction that education policy study and comparative education finds identity and direction.

The same finding was discovered relative to the typological issue. For this issue, the underlying supposition of typological capacity seems to rest in an economic relativism where not only political implications but also social-cultural and ecological implications are also rely of global conceptualization. In this way, the concept of globalization seems to be an ever-enlarging void from which comparative education and policy studies derive commonality and define a theoretic base on phenomenology. A preliminary search of discourse revelations of global imagery in comparative education discourses with particular emphasis on ontological, typological and epistemological seems evident. As such, the preliminary study proceeds in further examination of issues of ontological validity, typological capacity and epistemological legitimacy issues.

### 2.02.1 ONTOLOGICAL VALIDITY

As concerns ontological validity, three predominant questions have emerged. They ask 'Is comparative education a field of study or a method of educational study', 'Are educational systems and/or phenomena comparable' and 'Are the findings generated from comparative education applicable at various levels of educational actions'. These concerns require examination of the literature base of comparative education discourse both prior to and in light of global imagery.

The preliminary study findings (see Table 2-1) suggest that many discourses contained reference to two or more horizontal characteristics. Therefore, discourses reporting any characteristics were doubled or tripled. A global conception was evidenced at higher percentages after 1990 carrying the epistemological question at a higher ratio. This finding reveals strong use of global mythology for legitimation of comparative education research.

The global myth in educational discourse seems based on the extent to which global constructs in educational discourse address issues of educational standardization by providing scientific validity through disciplinary veracity. That is to say, globalization seems to be the construct in which educational standardization knowledge is framed. As so, the specific knowledge is expressed as global constructs in comparative and policy studies education discourses linking contrasting educational system approaches by providing ontological validity through institutional veracity. Likewise, disciplinary discourse is seen to reveal the extent, to which global constructs increase theory-practice concerns thereby, expanding the objective veracity.

The first justification issue is based on the notion that ontological variations relate to the scientific validity of educational discourse as represented by the notion of

disciplinary identity. The ability of comparative education to establish disciplinary identity may be a concern of both educationalist and sociologist (Friedman and Starr, 1997, p.14). This identity may be linked between two dominant historical patterns. On the one hand, it is supposed that the disciplinary formation of comparative education as a field of study originated from the science of education, which in turn originated from mother/father philosophy, psychology, sociology disciplines. On the other hand, the fundamental differentiation between comparative field of study and the methodology of comparison where methods are understood as the collection of data and field of study seems predicated on the creation of universally applicable theories, principals and laws. These identity-forming histories bring to question the disciplinary legitimacy of comparative education as specific fields of study thereby either validating or devaluing the knowledge gained from its research.

Problems of disciplinary identity are rooted in the reciprocation of knowledge between disciplines and the fields they generate. In this construction, social science seems to be a discipline where psychology, philosophy and sociology represent communicative fields of study. The study of educational systems, as a composite of psychology, philosophy, and sociological aspects of social reproduction processes achieved through education institutions brings to question the position of education in the scientific frame. More contentious may be the position of specialized studies, such as comparative education and policy studies, in the larger scientific frame. If the science of education seems to be a field of social science research, then sub-disciplines can be understood as a single plot within the field of education. As Rita Hofstetter and Bernard Schneuwly ask: “do sciences of education really exist as a disciplinary field?” To this they answer “It seems to us to be more interesting and stimulating to approach sciences of education as a disciplinary field in constant change in discourse communications of the professional fields and the disciplinary knowledge which act as poles of

attraction and in regard to which any researcher has always to position him/herself” (Hofstetter & Schneuwly, 1999, p.1). In this case the knowledge about various educational systems seem to be cataloged by geo-political area and presented for comparison by academic and practice profession scientist. However, this argument asserts that analysis does not exist at this level.

At the point of data analysis for cross-national comparison there exists two primary disciplinary veracities:

- (1) to attest to similarities and difference thereby refuting or supporting existing comparative theories, principals and/or laws and
- (2) to assert new comparative theories, principals and/or laws based on similarities and differences between educational systems.

However, proliferation of a globalization re-construction amounts to establishment of a single educational system seemingly not in need of different comparative theories, principals and/or laws.

Where as global proliferation of case study research outside the context of differing theoretical affirmations and refutation questions scientific validity thereby calling into question the scientific legitimacy of comparative education as a field of study and ascribes variation to the very meaning of comparative when applied to policy studies. As Carlos E. Olivera states, comparative education should produce “confirmations or refutations of previous theories, new hypotheses for future research, tentative theories, perhaps laws or quasi-laws” (Olivera, 1988, p. 219). He also reasons, that by examining education systems and phenomena for the purpose of generating, refuting or confirming universally applicable principles, theories or laws on the one level and as the primary



scientific action, supported by methodology producing specific geo-political data on another level.

These arguments center on various levels of abstraction relative to educational systems distinguish the actions of comparison. As Erwin Epstein drawing from the work of Steward E. Fraser and Marc-Antoine Jullien, states,

“To Marc-Antoine Jullien, generally considered the father of comparative education, nothing could be clearer than the meaning of comparison. It refers to the act of contrasting the features and methods of education in different countries. In his now famous *Equisse*, Jullien went so far as to specify concretely an appropriate methodology for comparison, involving the use of standard questionnaires to collect information and arranging the findings into comprehensive tables so that differences in education among countries could be appreciated at a glance. These tables would show the elements that could profitably be transplanted from one country to another, taking into account local particularities and especially difference in mentality. His ultimate aim was as clear as his method: to deduce true principles and determine rules so that education seems to be transformed into an almost positive science.

(Epstein, 1988, p. 15)

From this argument, the ontological validity of comparative education seems based on the capacity for the development of practical principles, theories or laws. Ontological validity relates to the scientific legitimacy of comparative methodologies and educational policy sciences as perpetuates disciplinary identity. The primary question then asks to what extent, if at all, global constructs clarify the distinction of comparative education method and comparative education as a form of scientific inquiry.

## 2.02.2 TYPOLOGICAL CAPACITY

The second justification argues that typological capacity relates to the comparative capacity of types of comparative education research. In this context, typology refers to the variation in kinds of study apparent in the discourse and thereby concern contrasting topics or themes. The central argument concerns the application of cross-national findings to national or regional practice particularly and the universalization of those findings. Thereby defining the typological purpose comparative education and policy studies as fields of study based on the extraction of general principles, theories or laws of global education systemic standardization. So stands the question of the capacity of such principles, theories and laws in light of deep cultural geo-political distinctions. The comparative capacity embodies this paradigm: On the one hand, a field of study within the discipline of the science of education, findings must be generalized and universal. On the other hand, findings that are generalized and universal cannot be applied to national geo-political situations. The apex of this paradigm may signify geo-political cultural particularities. Thus, the comparative capability of educational systems and thereby policy represents the fundamental typological basis for historic conflicts existent within comparative education discourse formation<sup>21</sup>.

As Roger Dale states, “One of these poles is the cross-national comparison approach, where societies or education systems are compared on the basis of de-conceptualized variables at a high level of abstraction. Here, all the key variables are at such a high level of generality that we cannot possibly compare the systems to which they are applied. The other pole represents the juxtaposition and

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<sup>21</sup> The term discourse formation is derived from the body of social science discipline. Discourse that Bjoern Wittrock and Richard Whitley, 1991; Peter Wagner, Carol Hirschon Weiss, Bjoern Wittrock and Helmut Wollman, 1991 refers to, in the words of Jürgen Schriewer, 2000) as “insights into the constructed ness of academic knowledge. It also refers to models meant to conceptualized such insights” (preface, iii).

contrast of more or less discrete national studies of particular area of education” (Dale, 2000, p. 90). From this point of view, nationally (or even sub-nationally) based studies are juxtaposed and contrasted, often under the label of comparison. But it seems to be difficult to see how these studies can be compared, since they take for granted both all the details of their local education systems (and typically isolate them from the wider) and locally specific- institutional contexts of which they are part. There seems to be typically no attempt to ensure the level of commensurability between these national variations, or definitions of educational phenomena, that would be required for effective comparison to take place.

From this perspective, the typological capacity of comparative education may be based on the applicability of generalized principles, theories or laws with specific cultural particularities of geo-political boundaries, culture and values. Thus, the typological focus examines the extent to which global imagery provides a cultural foundation for comparative theories, principals and laws across geo-political boundaries.

Typological variants question the capacity of discourse to communicate objective purpose. In a comparative dynamic, the purpose of comparing educational challenge topic geographically necessitated an examination of this facet. It is not an aspect of Creswell’s analytical paradigms but rather is displayed in Gall, Gall and Borg’s *Applying Educational Research* paradigm. This form of capacity analysis is rooted on the premise that discourse analysis is a “form of multivariate correlational analysis that involves identifying moderator variables to improve the correlation between a predictor variable and a criterion variable” (Gall et.al, 1999, p. 219). That is to say, that aspect of the typological capacity determines the relationship between discourse and field of study, or discipline. Thereby correlating the field of study with knowledge domain facets contained in said discourse.

Typological capacity when applied to specific knowledge domain facets carries three fundamental assumptions. The first assumption reasons that comparative education research is capable of distinguishing social, political and economic knowledge facets between various cultural, national and regional spheres of situational activity. The second assumption centers on the level of abstraction by which social, political and economic national characters possess universal comparative capability. The third assumption is rooted on the capacity of comparative investigations of challenge topic network, institution and association dynamics. These assumptions pose that at some level of abstraction, investigation possesses typological capacity for specified situational constructs.

### 2.02.3 EPISTEMOLOGICAL LEGITIMACY

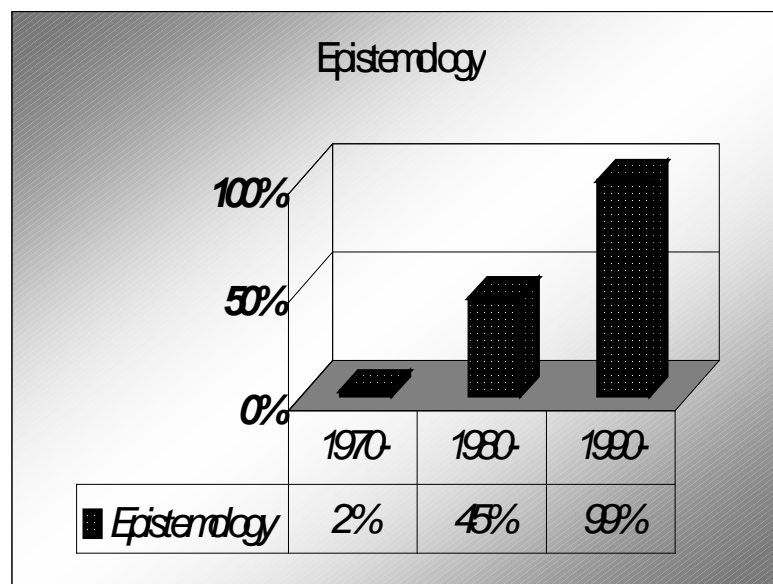


Figure 2-2 **Epistemological Findings**

The percent of epistemology indicators in pre-survey 1970's, 1980's and 1990's published discourse cites

The third justification argues that scientific legitimacy of comparative education and policy studies as fields of study may not only be a question of comparative capacity but also one of epistemic knowledge legitimacy. If one accepts the notion that the formation of generalized principles, theories and laws through the comparative analysis of various geo-political educational systems seems to be a valid and capable investigation within the science of education discipline, the question of the applicability of those findings or knowledge legitimacy emerges. Epistemological Legitimacy (theoretic understandings and practical application) may be a question of how legitimate is comparative education and policy study

knowledge in a global theoretical construct. That questions the utility of findings across varying levels of educational action.

Knowledge capacity seems to be also related by the inability of comparative scientists to properly differentiate various knowledge levels in the spatial structure representative of educational action. Traditionally this spatial structure occupies clearly defined theoretical research by scientists and practical action by professionals. The blurring of the spatial lines between theory and practice seems to be the essence of the debate over knowledge capacity. This blurring of the definite spatial (space/time) knowledge has been characterized as chaotic. The blur has been evidence from 1980 onward (See Figure 2-2). An attribute further complicated by increasing specialization. As Edwin Keiner states “If at present the theory-practice topic can be defined as a problem of the relationship of discipline to profession, it also arises from educational research on knowledge application based on social science...” (Keiner, 2002, p.89). It is than a problem of application and use of educational knowledge. While current cartographies make use of plurality arguments to rationalize the chaos, this view neither fixes the spatial structure nor establishes a pedagogic platform for comparative theory. As Thomas S. Popkewitz states, referring to hybridization states, “[hybridization] makes it possible to think of educational practices as having plural assumptions, orientations and procedures” (Popkewitz, 2000, p.261) that are rather undefined by either level of abstraction or purpose thus, further confusing the knowledge capacity of the collective discourses.

From this point of view, the legitimacy of comparative frames educational knowledge obtains legitimacy from principles, theories or laws on epistemic legitimacy. It also places knowledge validity on the applicability of these theories to practice. Thus, epistemological focus examines the extent to which global

imagery provides a foundation for the professional application of ‘comparative education’ policy theories, principles and laws by professionals.

The findings contend that prior to 1980, a low level of epistemological legitimacy was cited in comparative education discourse (See Figure 2-2). In essence, the global myth provides the substance relevant for the construction of educational standardization concerns discoursed within a global society construct. Hypothetically, the global construct has provided a reconciliation of ontological validity and typological capacity, which alleviates epistemological confusion through disciplinary objective veracities thus, restoring scientific legitimacy, expanding typological capacity and increasing epistemological legitimacy.

### 2.03 ETO PARAMETERS

On the epistemological question “Are the findings generated applicable at various levels of educational action?” a similar pattern was discovered. 82 cites pre-global (1970-1989) discourses contained references to this topic (Figure 2-1). On the other hand, post 1989 global discourses exhibited a proliferation of discourse on this topic showing an increased to 147 citations. The literature covering this topic was primarily in that the form of theory-verses-practice discussions. Of the 8 cites published after 1990 with no global references all except 1 contained reference to this theory-verses-practice theme.

In light of contrasting approaches, many epistemologists have proposed a variety of broad categories to identify these approaches. In 1988, Jürgen Schriewer in *Theories and Methods in Comparative education* (1988, p. 40) noted two primary approaches, which he termed universal mental operations and social scientific method. The universal mental operations approached cross-national comparison by establishing relations between observable facts. The primary focus involved the universalization of similarities and the hierarchy of graded differences. The social scientific approach, based on relativism and conceptualization in terms of patterns primarily focused on differences. By 2000, Schriewer argues that the “complex interweaving of social-cultural unities and global interdependencies” (p. 29) has questioned the basic assumptions of mainstream comparative social scientific approaches. Likewise, due to the same complexities, the basic assumptions of the universal approach also come into question. For Schriewer, it would seem that new world configuration has blurred the divide between these approaches and produced instead a merging of approaches under what he calls “functional equivalence” or Comparative law (Schriewer, 2000, pp. 42-52). In other words, the rapid and expansive global diversification of the field has



produced a variety of approaches leading to the need for a re-conceptualization of the field.

This imagery is thereby based on disciplinary re-conceptualization. A re-conceptualization that reasons co-relations between two distinct disciplinary fields has emerged. The co-relationship for this study is between comparative education and policy studies. Co-relations mirrored as merger.

## 2.04 THE MERGER

A co-relationship of disciplinary identity can be seen as merger or internal differentiation. In this case, co-relations reasons that differentiation of disciplinary constructs expands distance between profession and practice and in other ways establish closer co-relations between them. A co-relations that implies merger rather than a causal-relational or multi-disciplinary relationship. This argument contends that “in only few decades, of soft change in discourse communication” (Baumert & Roeder 1995, p. 1) education has transformed into a broadly expanded, almost completely diverse discipline. This conceptualization, when taken as discourse analysis, places rhetoric as discourse that underwent a ‘soft change to obtain solution to the formation of educational policy for professional use based on disciplinary investigation of problems or phenomenon wherever they exists. In other words, it represents re-construction as merger between comparative analysis and policy studies to formulate educational policy advise.

“...The recent programmatic concept of normality defines education as a field of knowledge in plurality. On the other hand, empirical investigations show an astonishing continuity and uniformity of traditional, practical oriented kind of thinking” (Keiner, 2002, p.14). From this point of view, the merger of policy studies and comparative education disciplinary discourse can be viewed as a construct for normality within the current disciplinary unit developed to form a vision of standardized education. It reasons that merger between comparative education and policy studies seems to be an aspects of a merger between related and professional discourse engineered to place education on the stage of universalism with pluralistic character.

As such, educational theory determinates practically oriented self-concept. It seems that the inherent difficulty of merger rest in the notion of uniting policy

studies practitioners with comparative education professional. As Andreas Gruschka states “new role understanding will have the advisors, who accompany the schools with the program work” (Gruschka, 2001, p.5). In essence, the merger of theory and practice signified by merger between comparative education and policy studies to formulate policy advice represents linkage between theory and practice or professionals and practitioners. While it must be noted that both Gruschka and Keiner are focusing on German educational systems, similar conceptualization espoused by Antonia Novoa in *‘Ways of thinking about education in Europe’* in which he states, “important changes have taken place in the so called ‘European educational space’ opening new perceptions of intertwined and overlapping levels of policy formation” (Novoa, 2002, p131). The concept has expanded from nation-specific, to European and lastly to global dynamics or as John Meyer, Francisco Ramirez and Yasemin Soysal states “Mass schooling has become a worldwide institution, both as a normative principle and as an organizational reality” (Meyer. et. al. 1992, p.128). Although Meyers and others examine two domains of education (mass and elite), their premise may be based on the assumption that practice and theory in science of education has globalized and as such laid the foundation for disciplinary merger. In this study, seem as merger of comparative education and policy studies communicative dynamics for formulation of ‘policy advice formation’.

In other words, if a merger occurred there seems to be no evidence of programmatic research to justify its validity, capacity or legitimacy. What are the epistemological legitimacy, typological capacity and ontological validity theories, methodological models and challenge topic parameters contained in discourse from merger between comparative education and policy study that formulate policy advisement? To answer this question, this study centers on mapping knowledge domain facets or information communicated in such discourse.

For analysis of merger, this study examines knowledge domain-facet patterns contributing to disciplinary formation to frame the coupling of cognitive units with discourse veracities<sup>22</sup>. The three predominant research questions that emerge from this vantage point are “Is comparative education a field of study or a method of educational science?” and “Are educational sub-systems and/or phenomena comparable?” if so, “Are the findings generated from such studies applicable at various levels of educational action?”

It is also hypothesized that knowledge obtained from research unilaterally defines both direction and method of scientific investigation. As Ulf Hannerz states, drawing from the work of Benita Louismann, “Increasingly in the twentieth century, the flow of meaning has come to make the passage through one general kind of scenery. It seems a society with a far-reach division of labor, which seems to be at the same time a division of knowledge: in this way, categories of knowledge of specialist are formed and always at the same time a matching category of lament” (Hannerz, 1992, pp.4-5). In other words, organization of patterns in specified discourse provides answers about the direction of scientific theories, methodology models and challenges knowledge facets. Therefore, the core context of this examination poses that the science of education systematically differentiated in light of societal growth currently termed globalization. In that respect, globalization has increased the complexity of the comparative education and policy study knowledge domain. This knowledge domain complexity increase has given rise to revision and restatement of theories, methodology models and new challenges within scientific investigation of educational systems. In other word, ‘policy advice formation’ in the global society may comprise theories, methodology models and challenges rooted in increased complexities via expansion and reduction of disciplinary knowledge.

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<sup>22</sup> Veracities, although commonly used as a descriptor in poetic composition form or style, denotes the concept of believed truth or perceived reality.

In that respect, it is reasoned that globalization (perhaps starting with the development of a European educational space) has increased the complexity of both comparative education and policy study knowledge domains. This knowledge domain complexity seems to have given rise to revision and restatement of theories, methodology models. It also seems to instrument new challenges within merger of disciplines therefore, developing a new communicative scientific investigation of educational systems termed educational 'policy advice formation'. In other word, educational 'policy advice formation' in the global society may comprise new differential patterns of theories, methodology models and challenges.

As so, the analysis of this study bases its argument on communicative investigation. It reasons that educational science may be both influenced by and influences practical educational systems but remains separate. As Niklas Luhmann and Karl-Eberhard Schorr state "For 'Educational Science', functional differentiation meant that different social systems for scientific research and for education were differentiated. That is the socio-structural reason for the problems that pedagogy has in regards to its scientific nature. The humanities-oriented pedagogy had tried one last time to overcome this socio-structurally established system difference by inflating the concept of science" (2000, p.12)

The basic combination of systems theory and differentiation process theory contends that differentiation process within scientific investigation rests in societal systems theory. Societal systems theory rests upon the principle of "separation between the scientific system and the system of education and then to inquire about interdependencies between them". (Luhmann et al, 2000, p.12). With reference to sociology-oriented 'societal growth', this study based on Niklas Luhmann construction of world society poses that both endogenous and exogenous facets are components of societal growth. From this perspective,

internal and external globalization processes hereby define societal growth. It thereby reasons that globalization leads to complexity of the knowledge area, which revise, restate and shift emphases of theories and methodology in differential scientific subject matter. Thus, from an educational science perspective<sup>23</sup>, the global society has produced a complexity of the knowledge domain leading to further differentiation of science of education.

In this fashion, educational science perspective formulated from differentiation is seen as the engineering, which produces specialized disciplines. As Nicholas C. Burbules states “ It is a truism that a research community, or discipline, defines and regulates the methodologies and standards of its sphere of investigation”<sup>24</sup>(Burbules, 2000, p.3). Based on Burbules’s definition of discipline as a research community assumes that theories, methodology models and challenges seem to be, as Burbules states, “interpreted and applied by the actual community of persons and institutions that constitute that discipline” (Burbules, 2000, p.5).

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<sup>24</sup> Quote taken from the paper entitled “Discipline, Community and Standards for Education Research: Implications of New Information and Communication Technologies” which was presented by Dr. Burbules in the Philosophy and History of the Discipline of Education conference in Leuven, Belgium on October 18<sup>th</sup>, 2000.

#### 2.04.1 THEORY AND PRACTICE

The overlap of theory and practice creates revision, restatement and shifts in emphasis of theories, methodology models and new challenges. As such, differentiation seems a theoretical combination of Luhmann's view of world society system and Parsons' notion of actor dynamics with reference to the scientific community. In this respect, differentiation of subject matter hinges on the notion of society growth, which increases the complexity of the knowledge domain. This sub-disciplinary differentiation was then following by another differentiation creating comparative education policy studies with revision, restatement and shifting of emphases for that knowledge domain. In light of society globalization, yet another differentiation<sup>25</sup> process seems to be evolving. Therefore, it reasons that changes in the knowledge domain evidence the justification of and need for revision, restatement and shifting of emphases for theories, methodology models and challenges rooted upon policy advice.

Given these core assumptions, both the notions of globalization, and knowledge domain have particular meaning. Hypothetically, this study argues that global constructs provide a reconciliation of cognitive mapping units when framed within global society and globalization actor imagery. It does not represent a global consciousness but rather imagines a universal connected of earth board social systems or global human connectedness. Prevalent to this conceptualization both the worldwide character of Luhmann's sociologically based society system and Parsons' transnational functionality of (to borrow from Martin Lawn) borderless networking, association and programming. Like so many molecules in space and time, human groupings collide and attract

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<sup>25</sup> The differentiation of science of education called comparative education represents one amongst other sub-disciplines. Likewise, sub-disciplinary differentiation such as comparative education policy studies and therefore, policy advice disciplines also represent one amongst others.

reforming structures, adapting social systems and transforming the definition of spatial relationships. In this regard, global constructs are elements of a constructed global theory not a globalization phenomenon, economic or otherwise. In this fashion, discourses represent an interpretation of societal context as social system or another words as a component wherein educational systems operating as a fundamental social systems environment.

In line with this reasoning, the knowledge domain of comparative education policy advice discourse as a differentiated field of comparative education and policy studies rests upon revision, restatement and shifting of emphasis of theories and methodological models and challenge topics. The notion of this revision, restatement and shifting of emphasis pertaining to disciplinary discourse can be centered upon the knowledge area otherwise called knowledge domain. On the one hand, the knowledge of disciplinary areas seems to be sociological framed into three predominate facets: ontological, typological and epistemological. These facets operate as the tools used for the examination of scientific disciplinary theories and methodological models and challenge topics. In as much as 'policy advice formation' falls into varying contextual domains, all categorical selection for comparisons seem to be defined by endogenous and exogenous globalization facets.

Traditionally policy advisement discourse seems to have practical framing within nation-state borders. However, education may be currently experiencing the transference of professional orientated policy advice discourse communicated across national borders. Concepts such as the borrowing, diffusion or borderless standardization of educational policy within communicative territories, networks, united ministries or continental associations are current topics under investigation within educational systemology. As such, a need arises for identification and validation (professional) of 'policy advice formation' discourse. In other words,



the transnational usage of 'policy advice formation' discourse for justification and validation of standardization continuously increases.

Knowledge domain, in this context refers to information conveyed within disciplinary discourse. Further in this study three dominant facets (epistemology, typology and ontology) of the social science system knowledge domain will be discussed. At this point suffice it to say, that knowledge domain represents the legitimacy, rationale and methodology of information expressed through discourse. Discourse may thereby be defined as a communicative process represented in journals, university publications (primarily those generated by or with approval of department chairs) and associated network publications. Thus, this study seeks to ascertain the legitimacy, capacity and validity of education system 'policy advice formation' information communicated in discourse within an absence of nation-state boundaries perspective.

## 2.04.2 DIFFERENTIAL SYSTEMIC THEORY

The differential systemic theory notion contains several assumptions. The first assumption argues that both comparative education and policy study exist as independent fields of educational science characterized by distinct knowledge domain facets. The second argues that a merger between the two has occurred. The third assumption holds that this merger produced (among others) a 'policy advice formation' discourse disciplinary variant. In light of the functionalist paradigm created by these assumptions, the view point of this study, which unlike the hermeneutic objective reality, does not seek to interpret but rather determine structure. Specifically, the structure lending knowledge validity<sup>26</sup> to the disciplinary sciences of comparative education and policy studies as well as the subsequent variant of policy advice captured in discourse.

The study therefore, continues with a discussion of the core assumptions in the 'interstice segment'. Then it proceeds, using a Glassian meta-analysis, to assess specific discourse disciplines according to knowledge domain facets. The findings of this analysis and conclusive statements follow in the last chapter.

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<sup>26</sup> Knowledge validity is thereby defined by assessment of the knowledge domain through epistemological, ontological and typological facets.

## 2.05 THE INTERSTICE

*The theory and methodology of science demand continued revision and restatement and continued shifting of emphasis as new discoveries are made, and new differentiations of subject-matter must following any growth or increased complexity of the knowledge areas to be dealt with.*

Walter Robinson Smith - 1917<sup>27</sup>

From this observer's point of view, the interstice denotes two primary assertions. On the one hand, it maintains the perspective under which this project occurs. On the other hand, it maintains that comparative 'policy advice formation' (PAF) discourse maybe a communicative discipline framed between comparative education and policy studies under the pretense of multi-disciplinary in contextual framing.

As to the first assertion, this author views and makes analysis from an objective reality perspective. This author performs detailed analysis as magnified for purpose of examination. All samples, surveys and literary analysis are conducted from external analysis. No subject presumptions are willfully denoted. The discourse documents are evaluated according to predefined standards and categorized according to content not author, nor nation-state of reference, nor association, network or institutional affiliation. It can be seen as a pair of binoculars that distinguishes data from data collection process and data analysis standards.

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<sup>27</sup> Smith, Walter-Robinson, 'The Foundations of Educational Sociology', American Journal of Sociology, vol. 22, Issue 6, May 1917, pp.761-778. Note that Smith's ascertain of theory and methodology formation and need for altercation are derived from Kantian notions of society, John Dewey's notion of educational discipline evolution and Edward Lee Thorndike's notion of historical based philosophy of education (especially American in origins). As Stephen Tomlinson, of the University of Florida states, "Edward Thorndike and John Dewey formulated... visions of how the art of teaching could be transformed into a science", p.365-383.

This vantage point is, therefore, a binocular<sup>28</sup> examination, a mirrored reflection that bounces off walls within the halls of education theory and echo communication. This vantage point takes reflective theory as espoused by Niklas Luhmann received from Rebecca A. Neuworth's translation of Niklas Luhmann's writing produced with Karl-Eberhard Schorr engineered by European Studies in Education and published by Waxman Münster of New York, München and Berlin in 2000<sup>29</sup>. To clarify the notion, specific sentences from this text are selected. The selection of specific sentences are conducted by paragraph structure and deems the first sentence of each paragraph as the target of reflection and remains of the paragraph as supportive conceptualization justifying or explaining the initial paragraph sentence. In this fashion, it reasons that questions are both generated and answered from initial paragraph probe<sup>30</sup>. The reflection frames a philosophical analysis of discourse.

In this fashion, the problem faced seems to be disciplinary merger between comparative education and policy studies. As so it characterizes differentiation of knowledge contained in 'policy advice formation' discourse (Luhmann, 2000, p.228). The concern maybe based on need for theory, methodological model and challenge restructuring in the advent of social change. A concern placing discourse communication in the global time/space continuum. As Val Rust states in 1977 when addressing time/space modern change in discourse

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<sup>28</sup> Binocular is a vantage point of reflection representing the glasses by which knowledge is reflected. Binocular situates the observer far from that which is reflected upon. It is methodologically constructed and thus, argues that detailed analysis is magnified for purpose of examination hereto termed objective reality.

<sup>29</sup> Luhmann, Niklas and Schorr, Karl-Eberhard, 'Problems of Reflection in the System of Education', Waxmann, New York, München, Berlin, 2000.

<sup>30</sup> "1.This book deals with problems of reflection in the system of education. 2. At first – and with good reason – one considers the field of Pedagogy to be responsible for carrying out reflection within and for the system of education. 3. In view of this situation, it seems to us that there is little point in searching for this Theory of Science and in starting up a discussion about the scientific nature of pedagogy yet again".

communication, “each new historical period addressed more and more its own style, values, or inventions as modern and those who emulated its wares only reinforced the sense that that which was modern was better than that which had existed in the past” (Rust, 1977, p.1) He uses as an example, American educators such as Calvin Stowe and Horace Mann, borrowing from Prussian schools for the American development of mass education. From this perspective, globalization of education can be viewed as a postmodern era change in discourse communication of the system of education, on which the bandages of epistemological legitimacy, typological capacity and ontological validity are placed. In other words, re-conceptualization of the science of education disciplinary investigation has evolved into a global differentiation mixing comparative analysis of nation-state educational systems with nation specific policy agendas to locally formulate policy advice generally called reform initiatives. An change in discourse communication process which Tomlinson describes as John Dewey’s “orgasmic ontology modeled on the process of adaptation and demonstrated that the scientific method depends upon the construction of a democratic community of problem solvers. (Tomlinson, 1997,p.365). Identification of the revision, restatement and shift in theory, methodological models and challenge orientation becomes a matter of recognition of knowledge facets patterns as they relate to philosophical theory based legitimacy, categorical definition and validity of phenomena.

Change in discourse communication philosophical theory bases legitimacy or epistemic aspects of theory, methodological models, and challenge knowledge facets seems to argue that disciplinary communications bases the primary argument reliant upon reframing of theories of society, systems or organization mean. For example, there might be evidence of reconstructed research investigation models utilizing a shifting from classic modern era grounded theory

to Glassian<sup>31</sup> re-conceptualization to justify global dynamics by inclusion or exclusion of cultural characteristics.

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<sup>31</sup> Glassian Theory refers to the reframing of traditional Grounded Qualitative Research Methodological Models to Grounded Principals of Statistical Analysis by Quantitative Research Methodology. It contends that education as a field of social science has normative aspects, which tally mathematically by frequency distribution, cause-effect dynamics, occurrence sequence analysis etc. This study uses a Glassian approach to discourse analysis. Typologically discourse analysis is considered a case study qualitative assessment. However, this study counts occurrence of specific word combinations and tallies them algebraically. The intermingling of discourse analysis and quantitative statistically methodology is termed Glassian Method.

### 2.05.1 PHENOMENOLOGY

For examination of author action about phenomenon, it is the position that this investigation in the interstice of knowledge. This interstice denotes two primary assertions. On the one hand, it maintains that discourse is by nature an individual author/authors perspective about a particular phenomenon. This notion of author as individual actor hold the distinction of methodological individualism verses moral individualism or as Anthony Giddens (1976, p.713) calls it ‘precisely Durkheim’s object to distinguish’. The interstice is the vantage point of this study as well as an examination of the vantage point of authors of the discourse studied. On the other hand, it maintains a multi-disciplinary contextual frame perspective inherent in data self-reflective communication. In this fashion, the Durkheim’s question moral individualism comes to bear. The moral individualism refers to the self-reflective disciplinary identity established by authors of discourse. From this reflective and self-reflective stance, this study does not seek to evaluate disciplinary identity as articulated by author – the moral individualism. However, it distinguishes the perspective of analysis held by me from that held by discourse authors.

What can change in discourse communication categorical definition as the notion that knowledge concerning theory, methodological models and challenges has transformed into a global re-construction of communication mean? The principle of change in discourse communication suggested that the science of education knowledge has evolved in capacity restructuring social, political and economic theory as was the case in modern and to some extent post-modern. The global era maybe marked by new differentiations in social mobility, political alliance and economic parliament, just to name a few. As Peter Drewek and Christopher Lueth state in ‘History of Educational Studies: Geschichte der

Erziehungswissenschaften: Histoire des Sciences de l'Education", Herbartian methods of instruction causing and transforming the context of educational studies due to social, economic and political change in discourse communication. (Preface, vol.3 Part 1, 1998). In this context, this transformation may be presented from a variety of perspectives by the likes of Antonia Novoa (2002 'Ways of Thinking, p.30-35) and Jürgen Schriewer (1988, p. v) for as Thomas S. Popkewitz states in Part 1, "a changing terrain of knowledge and power" (Popkewitz, 1998, p.21). It seems that vast change in discourse communication of the theory knowledge facets maybe also marked by redefinition of patterns of methodological models so diverse as their very distribution rest in either empirical or non-empirical and challenges to include dynamics of networking, association building and institutional function.

What change in discourse communication of what Luhmann calls the modern era, "Phenomenology"<sup>32</sup> which he argues has been re-imported from the United States means. He argues that those wanderings from Germany to the United States and back again have completely changes the content of this *scientific approach*. He reasons "It no longer teaches us about the appearance of the spirit

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<sup>32</sup> Phenomenology is interpreted in this context as the problem under reflection. According to Dorothy Ross, this notion of re-importation also carries a historical understanding that social sciences as a scientific discipline originated in Europe and was transposed in the United States during the antebellum period early in the 19<sup>th</sup> century. This transportation gave rise to a dynamic that she terms, in the chapter entitled *European Social Science in Antebellum America*, 'exceptionalism' (Ross D. 1991, pp. 3-40). As such, it is argued that the movement of disciplinary redefinition within American borders continued with the likes of Max Weber and Ferdinand Tönnies distinguishing between *Gemeinschaft* and *Gesellschaft* investigation as reflection of either current daily events or scientific evaluation of specific problems and categorized by Edward Ross as, 'communal forms of social control'. (Ross, *Social Control*, p. 401-403). In essence, the issue of exceptionalism of scientific inquiry within social science exhibited in America was an attempt at America control of sociological disciplinary control. This control was then termed tyranny by Emile Durkheim, which Harry Liebersohn in 'Fate and Utopia in German Sociology, 1870-1923' describes as "created anomie as well as solidarity". The notion contends that American Sociology moved "toward a sociology of social control" and "The task of social control fixed new liberal norms in the analytical framework of American sociology" D. Ross, 1991, p.237) In this light, Luhmann was following the notion that phenomenology was just another analytical modeled by American sociology discipline to control not only American analysis but through mobility the German and thereby, European scientific approach.



within the world or about the appearance of the world within the consciousness of the subject” (Luhmann, 2000, p.87). This may be more than merely a deplorable misunderstanding. The topic of everyday life itself has a long tradition, pointing to presuppositions underlying semantic differences or artificial distinctions (Luhmann, 2000). Perhaps Luhmann’s early notion of transatlantic influence brought on by transatlantic mobility has expanded to more international influence brought on by international mobility. In much the same way, scholars are arguing that much like American influence in the modern era, the global era seems to be experiencing an increase in external influence that in the ideological underpinning of the educational reform efforts...are strikingly similar despite differing political constructs and the varied organization patterns of school systems. (Berman, 1999) It is thereby reasons that in the context of principles of economic rationalism, the trend towards shifting ontological knowledge facet composition may be apparent. The uncanny restatement of fundamental hypothesis of knowledge offerings seems to be no longer based on theoretical, historical or sociological based philosophies but include a range of validity, based on conception of phenomena as something that happens in everyday life. The ontological validity of theory can no longer be separated by theory-practice dichotomy. The trend so exhibits revision that educational governance and philosophy merge both theory and practice. The distinction of knowledge in the theory facet seems to be a matter of ontological variation. It may either be philosophical or concerns governance or both. As such it obtains validity form challenge category: and it seems to be limited to problem analysis extend to include solution analysis or displays either option. In other words, it seems that scientific knowledge in the global era may be only valid when directed at investigate a problem. This trend limits the validity of investigation, project proposal and funding to a notion of phenomenon.

## 2.05.2 PERSPECTIVE

The linkage of problem assessment to reflection seems a matter of what one interprets as a problem to be reflected upon and the condition of artificial or specified observation. In the words of Niklas Luhmann, “question behind this phenomenology of everyday life. It asks how the semantic and social structure of modern life are possible as facts of everyday life” (2000, p.21). In this case, it becomes a question of the difference between observed global conditions and everyday life. The real question is, what constitutes a semantic phenomena or problem in need of justified reflection in the global era.

If one assumes that problems or semantic condition are appearances of the spirit within the world or about the appearance of the world within the consciousness of education. Then pattern development concerning knowledge facets of educational scientific reflect merger of comparative education and policy study disciplines. In this light, the question ‘what defines reflection’ becomes the issue. The notion that reflection defines a communicative self-referential process assumes some degree of philosophical character. As Robert Arnove, in his Comparative and International Education Society Presidential Address writes, “To develop a critical stance on one’s own existential world and that of those in distant lands”. (Arnove, 2001, p.500-501) From this perspective reflection can be deemed human self-philosophy of ideas observed in a specific time/space continuum. Following Arnove, it would be necessary to develop tools of analysis before entering legitimate reflection. It would seem that the Luhmann transitions from the conceptualization that a broader geographic understanding of problem scenario requires establishment of semantic legitimacy actions. Luhmann’s pretense of transnational influence seats reflection in a domain of personal non-

influenced legitimacy away from scholarship, policy development agents or other associated actors.

This seems to be the perspective of discourse analysis based on the Luhmann's principle that "The position and standing of Educational Science, however, has remained ambiguous. On the one hand, it may be clear that scientific work that takes educating as its subject matter does indeed go on. On the other hand, pedagogy seems to be confronted with the particular requirement of communicating to educators how situations should be understood and even of giving them guidance in handling situations."<sup>33</sup> because it does not concern matters of subject definition or problem analysis (Luhmann, 2000, p.11).

The interstice also maintains that specialized communicative disciplinary contextual frames are created by overlap of disciplines. For this project, defined as the interstice. As such, this project seeks to ascertain the scientific theories, methodology models and challenges prevalent in specific overlap of comparative education and policy study knowledge communicated in discourse. The core context of this examination poses that the science of education systematically not only differentiated in light of societal growth currently termed globalization, but also formed interdisciplinary relations with the formation of multi-disciplinary specializations.

The interstice between educational policy and comparative education seems to be the substance of comparative education policy study specializations (Phillips, Rust, Crossley, Le Me'tais and Allsop in Alexander et. al. 2000, pp.11-252). The development of specializations (sub-disciplinary-systems), such as 'policy advice formation', carries also a question of legitimacy. Phillips seems quite elaborate in

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<sup>33</sup> It must be noted that this statement follows a contention that this "holds true in particular within the German tradition" (p11)

his justification for the usefulness of such specializations (2000, pp.11-14). While Rust goes further to identify ways in which the comparative education field may be historical and methodologically suited for cross national policy studies (Rust, 2000, p. 221-257). New frameworks, research methodologies and semantic theories are central to sub-disciplinary analysis. However, along with sincerely positive appraisal of the merger there exists considerable concern about the scientific validity of comparative education discourse itself.

## *Chapter 3*

### 3.00 METHODOLOGY

“A survey design provides a quantitative or numeric description of some fraction of the population – the sample – through the data collection process of asking questions...”

E. J. Fowler, 1988

(Quote taken from John Creswell, 1994 p.117)

The method chapter assesses how discourse narrative is qualitatively analysis. This segment is composed of three subsections. The first displays the formats of survey questions and presents the discourse source response. The second displays discourse-analysis method and categorization. The third and final segment displays the design of this research format. As such the three segments entitled Clarity of Congruity, Method and Research Design are rooted in the notion that words represent given contextual ideas and therefore occurrences of certain specific contextual concepts are legitimately tallied in grounded discourse analysis. This research construction is primarily based on categorical data analysis of sociological methodology

The “Clarity of Congruity” segment contains a discussion of philosophies pertaining to the method used in this study. It is in this segment that differential aspects and components of knowledge facet are discussed. The primary construct of this segment is based on conceptualization of constructed-ness for critical theory and orthodox self-reflectivity philosophy, which gives justification for examination of occurrence frequency distribution of particular concepts as

articulated in self-identified disciplinary discourse. These discussions are frames within aspects of discourse selection and survey technique and discussion of the time-space continuum.

The second segment, entitled Method, outlines the specific design of this study. The segment begins with discussion and display of discourse source parameters, index and formulation for discourse analysis and categorization. The segment ends with display of the study's design.

The third and final segment overviews the specific research design of study. In this segment, clarification of survey questions, analytical process and finding interpretation are discussed. These aspects are delivered according to phase of use in the research format and therefore, are categorized using discursive knowledge domain facets and categorization format.

### 3.01 CLARITY OF CONGRUITY

This segment outlines the survey technique used in this study. It also details knowledge domain facets as juxtaposed with disciplinary identity. From the interstice perspective, this segment assesses qualitative analysis of discourse narrative thereby defining the vantagepoint from which the discourse is assessed.

The vantagepoint of this study is objective assessment of discourse via empirical quantitative method to ascertain frequency distribution of knowledge facets. The knowledge facets adhere to John Creswell 1994 determinants for information processing, framed for research design and Gall et.al. quantitative survey methodology. The discourse surveyed is framed in a multi-disciplinary context by comparative education, policy studies and 'policy advice formation' discourse categorization<sup>34</sup>. It is to be understood that discourse from this perspective also overlaps with other disciplines such as international studies, political science, medicine and an array of other disciplines (Schriewer, 1990). However, the primary self-reference by publication source remains inherently comparative, policy and advice formation educational in disciplinary identity.

The three primary analytical constructs position epistemic legitimizing, typological capacitating and ontological validating function in juxtaposition to theory, methodological model and challenge to form knowledge domain facets. These

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<sup>34</sup> Note that each discourse disciplinary identity category determinant has numerous key terms. For example, 'comparative' is represented by terms such as compare, comparison, X versus Y, similar etc. Policy is represented by terms such as procedure, program, practice, system, method, platform, method, approach, principle, code, guideline, rule or protocol. Advice carries such key terms as counsel, suggestion, hint, guidance, admonishment, recommendation, notification, information, report and communication. Policy maker is represented by terms such as leader, organizer, director, chief, supervisor, hegemony, player, agent, magistrate or decision maker. Key terms were taken from samples of discourse and from Sidney Landau and Ronald Bogus's "Completely Up-To-Date Rogers Thesaurus", Bantam, New York, Toronto, London, Sydney, Auckland, 1998 edition. While this thesaurus comprises of Tussi-Organidin's Rx Chemical Rhetoric of Wallace Laboratories it is heavily focused on education and educator specified terminology.

analytical constructs are formulated by linkage of John W. Creswell and Gall et.al quantitative education research design. In the tradition of James A. Wiley and John Levi Martin (1950), the study orders an algebraic representation to order models for item responses consistent with the Guttman Theory of Scaling. It uses this construct for empirical analysis of each discourse reference to generate numerical data within a 1% percent of error frame. This format is based on the conceptualization that “consistent survey of items pertaining to respondent reasoning (discourse contents), the Guttman assumption of uni-dimensionality (i.e. all items can be ranked on a single dimension of difficulty) gives us information not only about the relative order but as to how respondent reasoning are structure according to a strict order of procedure” (Wiley and Martin, 1950, pp.115-116).

John W. Creswell is a professor of Educational Psychology at Teachers College, University of Nebraska in Lincoln, Nebraska USA. He has authored five published books and numerous journal and presentation papers. His primary focus is in qualitative and quantitative research designs and methods however, his most recent work examines philosophical principles of discourse communication. His examination of discourse communication includes, amongst other topics, research design schematics pertaining to quantitative survey analysis.

Creswell mostly addresses research technology and academic leadership issues with reference to discourse analysis. This study however, reapplies his techniques with concern to comparative education, policy study and ‘policy advice formation’ discourse. In so doing, the need for other aspects of discourse analysis became apparent. Creswell’s dynamics were than linked with the work in discourse narrative survey by Gall, Gall and Borg. Joyce P. Gall and M. D. Gall are both affiliated with the University of Oregon in Portland Oregon USA. They primary focus of scholarship revolves around aspects of applied educational



research and research methodology. Their work is framed with the scholarly endeavors of Walter R. Borg, late of Utah State University. Borg is noted for `constructive discussions of differential patterns in qualitative and quantitative research paradigms, proactive survey analysis as applied to both qualitative and quantitative research.

This linkage provided the analysis frame used in this study. Creswell's cognitive mapping of discourse knowledge combined with Gall et.al, contributions for quantitative survey dynamics provided the frame for which the survey was developed. These sources also gave insight to both 1) educational research indexes and 2) terminology glossary to bear contextual interpretation of source data.

It must be noted that neither Creswell nor Gall et.al coupled narrative data survey with numerical data measurement schemes. In this regard, Robert M O'Briens model provided a frame to order of distribution and statistical analysis of narrative data.

A conceptualization which reasons<sup>35</sup> that "educational research, like research generally, is becoming more collaborative" (Burbules, 2000, p.157). Collaboration via unionization of independent nation states designed to improve the quality of education through systematic and scientific study. It maintains that this collaborative change in discourse communication may be rooted in unification of

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<sup>35</sup> Discourse analysis is usually defined as document analysis, "a type of qualitative investigation involving the study of written communications that are found in field settings" (Gall, Gall and Borg, 1993. p.531) However, in this study, discourse analysis uses a quantitative survey method to count the occurrence of pre-defined information within written communication in specific field settings. The process of analysis is referred to in sociological methodology as frequency distribution. Therefore, discourse is defined, in this study, as written communication and analysis is quantitative frequency distribution, the result of which are henceforth termed patterns. Discourse is thereby defined as communication of both what Thomas Kuhn (1970) describes as coherent scientific systems of topics and methods as well as what Daniel Tröhler describes as a diffuse conglomerate of divergent positions (Tröhler, 2002, p.41)

theory and practice through disciplinary merger producing. Merger conceptualized as a form of academic communications that seems to be both comparative in theory and method while possessing a policy study practical challenge orientation.

This notion of unification of theory and practice does not seem predicated a unification of academic science and practical application but rather reasons that disciplinary self-knowledge and identity are amongst the central aim of education as a science communicated via discourse. Reasoning which seems to define collaboration as a dualistic position (plurality) between action and system theory perspectives. While this is seemingly a substantial differentiation when applied to discourse-analysis, the dualism appears to merge traditional opposites. In this case, Luhmann's worldview reflection that differentiates problem from phenomenon seems coupled with Parsons' action theory that uncouples reflection and phenomenon while simultaneously equating problem with reflection. As Creswell reasons, a phenomenology of problem articulated by authors within literature (Creswell, 1994). Therefore, construction of a cognitive map of 2000-2002 discourses in reference to comparative education, policy studies and policy advice formation is designed to validate this assumption.

### 3.01.1 DISCOURSE SELECTION

Discourse selection is a search of published sources based on comparative education, policy studies and 'policy advice formation' keyword determinants in a 2000-2002 time frame. This search is based on action theory designed to investigate the disciplinary identity of the discourse source. To this end, one question is asked: To whom is the discourse directed? The answer to this question is then framed in the following narrative responses.

Discourse directed to the scientific community... CE

Discourse directed to educational professionals ... PS

Discourse directed to policy makers ... PAF

When discourse is directed to two or more audiences, a specific audience qualifier is applied and the category is determined. For example, a discourse source is categorized (PAF) 'policy advice formation' when policy makers are addressed even when the article, book or paper is also directed to the general scientific community and/or educational professionals. This reasoning asserts that comparative education is the general the scientific community spectrum in this study. All preliminary study Boolean included comparative education as a keyword indicator. When no audience or community is specified, comparative education is selected. In much the same way, educational professionals and academic scholars are combined target audiences. In this case, the direction of the professional audience is the category of selection. A professional audience is mostly targeted in policy directed discourse, however when decision-makers are addressed the category of policy studies is selected

For example, From Humboldt's Idea of general education to general education with the vocational medium by Andreas Gruschka self-identified as comparative

education due in publication abstract stating conjunction with the committee for educational research with the third world (Gruschka, 1988). However, the article goes on to specify policy study topic as not seeking renewal of the debate about the educational task of the upper secondary school, but that access to qualification is to be redistribution and reordering. It goes further to formulate policy advice in the conclusion by stating that:

“Only if we publicize the basic idea behind education within the medium of the vocation – the idea that gainful activity is not limited to the application of qualifications and to economic reproduction, that it involves, wherever possible, autonomous and conscious behavior – can we arouse people’s interest and a commitment to insistence on society’s realization of just and social conditions.”

Gruschka, 1988, p. 27)

A review of the abstract and conclusion segments of the discourse source is used to determine disciplinary identity. That means, discourse source is the particular article, not the journal as a whole. Upon assessment of these segments a category is determined. The sources are a) evaluated/assessed according to text segments and b) put to the respective category. Therefore, three categories entitled disciplinary identity are possible: comparative education, policy studies and ‘policy advice formation’ in answer to the question, ‘to whom is the discourse directed’. Out of a body of published sources, 100 are selected in each disciplinary category with 33 in 2000 & 2002 and 34 in 2001 time frame, creating an even distribution of sources by discipline consistent with distribution lattice to apply an even number of survey sources. At the end of the first segment, 33/34 of each disciplinary identity category source is selected for each year from 2000 to 2002<sup>36</sup>.

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<sup>36</sup> Note that while date of publication is key to establishment of distribution consistency, the dates are not used to establish evolutionary patterns. Pattern in this study reflects the frequency distribution of knowledge facets as they currently stand. The date frame is a three -year scope used

	Comparative Education	Policy-Studies	'Policy Advice Formation'
2000	33	33	33
2001	34	34	34
2002	33	33	33

Table 3-1 Source Count per Year

The count of discourse sources surveyed according to disciplinary self-identity according to the year of publication

Please note that over 600 sources were evaluated, only 300 were used in this study. Differential pattern indicators were examined for all sources in the preliminary study (see Preliminary Study p.37).

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to establish the state of the art during this time frame not comparison of change in knowledge communication.

### 3.01.2 SURVEY TECHNIQUE

This segment shows the construction of the categorical scheme and order of distribution by disciplinary identity juxtaposed with knowledge domain facets. As such, the construction of survey follows Creswell and Gall et al discourse analysis format coupled with Guttman algebraic format and O'Brien error percentage calculation beta equation profile.

	ETO	TMC
Society Systems Organization Social Political Economic Philosophy Governance	Epistemological	Theory
	Typological	
	Ontological	
Quantitative Qualitative Empirical Non-Empirical Micro Analysis Macro Analysis	Epistemological	Methodological Model
	Typological	
	Ontological	
International Transnational National Network Association Institution Problem Analysis Solution Analysis	Epistemological	Challenge Topics
	Typological	
	Ontological	

Table 3-2 Survey Construction

Grid list the categories surveyed according to ETO-TMC dimensions

This survey technique provides the order of distribution by disciplinary identity juxtaposed with knowledge domain facets<sup>37</sup>. Examination of table 3-2, from left to right display the knowledge facets is determined by ETO categorization of the theories, methodological models and challenge topics chosen for survey. These specific categories were chosen because they specifically relate to comparative education, policy studies and ‘policy advice formation’ discourse legitimacy, capacity and validity. The system of ‘knowledge domain facet’ selection item was a matter of preliminary survey of reflective and actor theory based discourse analysis. For example, society, system or organization was identified as core Luhmann conceptualization categories for educational reflection of theory. Philosophy verses governance is a matter of actor theory conceptualization while both reflective and action theory exhibit components of social, political and/or economic knowledge facets. All of these facets were also communicated within comparative education discourse analytical method by Jürgen Schriewer and/ or Hoftsetter, Rita and Schneuwly, Bernard and/ or Rolland Paulston.

Utilizing the format echoed in Table 3-2, society, system and organization theory categories are framed to establish epistemological legitimacy in the discourse examined. Although there are significant overlap and interweaving between these categories in comparative education discourse, they are distinctly utilized for legitimacy of argument in the disciplinary identity examined. As Marc Depeape (Depeape, 2001, p.1) argues, it has become a matter of “diversity of approaches”. Social, political and economic establish the typological capacity of the discourse under study. Philosophy and governance establish the ontological validity of in said discourse theory. For research purpose it is than a matter of theory not a matter of specific relationship between theoretic views. The survey takes under consideration general author view of theory not general academic definition. In this fashion, while society is often argued as from a systems perspective (Keiner,

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<sup>37</sup> See Appendix E

2001), it also appears in specified discourse as a separate phenomenon for the establishment of legitimacy. Arguably, there exist some evidence of establishment of ontological validity via systems philosophical criterion. For this study, the philosophical determinacy as opposed to any aspect of governance or any co-relations with systems, society or general organization was the category selected.

For example, Gordon Donaldson representing comparative education disciplinary identity argues that organization 'American secondary schools' provides systemic challenge to "rethink how they assess, organize and deliver leaning opportunities to adolescents" (NASSP, p. 100). In this citation, a clear overlap between governance and organization within an education system are apparent. However, the distinction between epistemological legitimacy via organization and system are clear. The argue place organization role with a education system criteria. He also, establishes ontological validity of the argument from a governance perspective as opposed to philosophical debate.

Methodological models categorical follows the same principle. In this regard, epistemological legitimacy is evaluated by presence of quantitative and/or qualitative knowledge facets within the discourse. Typological capacity is evaluated by the presence and/or absence of empirical/non-empirical methodological model. Ontological validity is a matter of micro and/or macro analysis models. In this analysis, the survey examines the method by which author justifies argumentation. For example, Martina Behrens and Karen Evans, "elected localities undergoing economic transformation in England and the new Germany, as part of the project "Taking Control" in the ESRC's Youth Citizenship and Social Change Programme: The 18-25 age group has been newly targeted... questionnaire survey and group interview 300 young people. The research builds on and extends the author's previous comparative research into the education



and training experiences of younger age groups in the two countries” (Behrens and Evan, 2002, abstract). Analysis of this discourse source reveals the establishment of epistemological legitimacy via qualitative survey procedure, typological capacity via empirical study and ontological validity via micro analytical international comparison methodological model.

Finally, challenge topic knowledge domain categories establish epistemological legitimacy via frame of analysis as international, national and or transnational. There exist a close co-relationship between international and transnational however, the two knowledge facet categories are distinguished within comparative education discourse to establish difference between unified nation states such as the European union and those that establish co-relations around a singular issue, topic or enterprise. This distinction revolves around debate concerning borderless, glocal and other significant academic communications. (Epstein, 1988). For example, Friedhelm O’Schuette reasons that all westerly countries are on the move to define new relations and mixtures between vocational and liberal education. Since the 1980ies, this relationship is discussed in the USA. The study summaries the discussion under the following aspects: The School-to-Work programme and its influences on the educational policy debate. Development of the VET system since the 1980ies and their implications on the School-to-Work Movement as well as on High Schools and Colleges. A comparative review between the American and the European/German discussion is added to outline parallels and differences between the systems in order to take methodological conclusions on it (O’Schuette, 2001, abstract). Other keywords in this database source were network, problem analysis, international, comparative, transatlantic etc. Further examination of this source revealed the establishment of epistemological legitimacy of challenge topic as both national and international, ontological capacity via network dynamic conceptualization and ontological validity via problem and solution analysis.

As the preceding examples revealed, this analyses uses a strict order of survey to tally occurrence of knowledge facets by disciplinary identity in specified time framing. The categories are knowledge domain theory, methodological models and challenge. The discourse survey questions are specific Yes/No answers to facet occurrence. The knowledge domain survey begins with a categorization of facets by author purpose. Epistemic legitimacy expressed as theory constructs tell what the source considers as wrong and therefore in need of research/discussion or analysis. Epistemic legitimacy theory survey questions ask:

Does the discourse utilize society theory to mirror the problem or phenomenon dealt with?

Does the discourse utilize systems theory to mirror the problem or phenomenon dealt with?

Does the discourse utilize organization theory to mirror the problem or phenomenon dealt with?

The answer is a strict yes or no. In keeping with Guttman's principles of survey, this order of strict yes/no survey response provides low error algebraic data to narrative items surveyed. In some cases, more than one theory may be positive and as such, both or all facets are identified. In this context, theory refers to the principle(s) by which the discourse is oriented. Problem thereby refers to the conditional bases of composition of the discourse. For example, in the society theory orientation, the discourse concerns a phenomenon or problem occurring within human communal dynamics that is to say, society or multiply society frames. In the systems theory context, the problem or phenomenon occurs within a functional dynamic or system. As to organization theory, the problem or phenomenon occurs with a grouping dynamic or reasonability rationale such as religion. Note that these facets unite a large array of opposing theories. Such variations within system; society or organization theories are not investigated.

The knowledge domain facet survey moves on to assess the typological capacity expressed as theory constructs. Typological capacity expressed as theory constructs indicate what the source considers to be correct and therefore in need of research/discussion or analysis. Typological capacity theory or termed morality survey questions ask:

Does the discourse argue that the problem or phenomenon functions from social attributes?

Does the discourse argue that the problem or phenomenon functions from political attributes?

Does the discourse argue that the problem or phenomenon functions from economic attributes?

The morality question is a structural construct. It refers to the author purpose of source construction. It does not suggest that a purposeful correctness is in operation, but rather the rightful analysis is predicated on investigation of these functions. As Marc Depeape (2001, pp.1-26) frame morality, it denotes conceptualization of studies in philosophy of education as social reflection therefore, not rooted on eminent examples but rather academic opinion or moral attributes of problems or phenomenon.

As noted for previous questions in the survey, more than one positive response can be assessed. Positive response for the social is given when the problem or phenomenon is characterized by or signifies social relations, community dynamics, and functional structure. Political positive responses are tallied when the problem or phenomenon is characterized by or signifies government configuration, planning, operation or action. Lastly, the economic attribute is assessed as positive when the problem or phenomenon is characterized by or signifies economic or marketing functions.

The knowledge domain facet survey moves on to assess ontological validity expressed as theory constructs. Ontological validity expressed as theory constructs indicates what the source considers being topic rapprochement and therefore how the issue is researched/discussed or analyzed. Ontological validity survey questions ask:

Does the discourse justify problem or phenomenon via philosophical irrefutability?

Does the discourse justify problem or phenomenon via governance irrefutability?

This final theory category or rapprochement question is an issue of irrefutability. It suggests the validity of purpose for discourse composition. As noted for previous questions in the survey, more than one positive response can be assessed. Positive responses for the philosophical categories are given when the problem or phenomenon is justified within historical or philosophical rationale. Governance positive responses are tallied when the problem or phenomenon is justified by or signifies governance as the rationale validating study. In this case, rationale denotes acts of reasoning that argue the validity of the study.

Once the survey of theoretical the epistemic, typological and ontological as well as the survey of theory knowledge domain facets are complete, it proceeds to investigate methodological models. The same format is applied and therefore survey questions follow the positive/negative response inventory for all questions. The methodological models knowledge domain is an inventory of the techniques used within discourse to obtain occurrence of information and therefore indicates epistemic legitimacy from investigation method, typological capacity from analytical investigation of methodological format, and ontological validity from the model of population analysis used. In the methodological model segment of the survey positive numerical scaling are numbered using Glass non-

nested models for contingency. As David L. Weakliem states, “It is useful to consider non-nested test for regression models before turning to models for count data” (Weakliem, 1994, p.149). As such, the conditions defining nested or non-nested methodological models are invalidated by the option to select two or more variants per category that frames this statistical analysis in the non-nested statistical analysis category. That is to say, a quantitative approach opposed to a qualitative approach. The knowledge facets are decoupled by as domains and disciplinary identities and thus permit dual or tripod numeration. Thus, following a Gaussian non-nested model, methodological models are scaled by frequency of occurrence in the same fashion used in theory analysis for this study. To this end, the survey asks:

Does the discourse utilize quantitative methodological models of investigation?

Does the discourse utilize qualitative methodological models of investigation?

Does the discourse analyze empirical data objective reality?

Does the discourse analyze non-empirical data objective reality?

Does the discourse justify problem or phenomenon via microanalysis?

Does the discourse justify problem or phenomenon via macro-analysis?

Once survey epistemic, typological and ontological survey of methodological model knowledge domain facets is complete, this study proceeds to investigation of challenges. The same format is applied and therefore survey questions follow the positive/negative response inventory for all questions. The challenge knowledge domain examples the scope and sequence of the issues examined in discourse. It is an examination of the frame in which the problem or phenomenon is positioned. As Tenuhisa Horin states in conclusion of ‘The Emergence and Development of Modern Japanese Educational Studies’, “It

appears that what is actually needed in educational research is that which is capable of embracing a vast amount of subjects which can lead to a deeper understanding of human nature” (Horin, 1998, p.371). In this manner, challenge represents epistemic legitimacy of issue geographic space, typological capacity of the issues frame of reference and ontological validity of discourse purpose. In all the challenge module of occurrence frequency distribution is the question of the scope and sequential character of specific disciplinary discourse. It tells in what geographic scope frame the information, what scope of functional dynamics problem or phenomenon occurs and for what purpose the information is being communicated. From this vantage point, the survey turns to objective discourse analysis of information reality. As educationalist our collective knowledge about education have been grounded in the relationship between society and education where society represented the traditions, values, political and economic structures in international, transnational or national special domains. The basic suppositions held that differing traditions would yield differing structures and functions for educational systems. Similarities between nation-states were then classified as either superfluous, related to state governance and economic structures or coincidental. This raging debate finds two opposing tenants across an ever-widening continuum. On the one side, stand state nationalist, who hold that their nation-state is historically and sociologically unique in its presentation of education. This view is predicated on a closed interpretation of the education system within the exclusive context of a national identity. On the other side, stand the globalists who hold that the nation-state has all but disappeared from social reality. This argument reduces national historical and sociological factors to subordinate subsystems whose function is not essential to the function of the education system. In the middle of the continuum is the notion that some intercourses between global and national factors so influence educational systems as to promote similar structural configurations, similar problems and thereby similar solutions across a transnational spectrum. To this end, the survey asks:

Does the discourse frame the problem or phenomenon in international contexture?

Does the discourse frame the problem or phenomenon in transnational (ore than one nation) contexture?

Does the discourse frame the problem or phenomenon in national contexture?

The common solution is found in decentralization of educational system processes primarily focused on a shifting of management and oversight functions from state governance structures to network, association or institutional dynamics. As such, for this study, it is a matter of the frequency by which specific typological capacities are expressed by challenge communication in discourse. To this end, the survey asks the questions:

Does the discourse character the problem or phenomenon within network dynamics?

Does the discourse character the problem or phenomenon within association dynamics?

Does the discourse character the problem or phenomenon with institutional dynamics?

It is thus reasoned that occurrence of these knowledge domain facets ontologically validate information communicated by conveying the purpose of challenge problem or phenomenon under investigation. From this perspective, 'policy advice formation' would communicate problem analysis and/or solution options. To ascertain the currency at which discourse expresses these challenges as a means of validation, the survey asks:

Does the discourse validate purpose of problem/phenomenon assessment?

Does the discourse validate purpose of solution to problem/phenomenon?

### 3.01.3 TIME-SPACE CONTINUUM

The discourse is also framed in a time-space prefix. The time ratio is 2000 to 2002 and the space ration is multi-national source index. That is to say, discourse reference sources are therefore taken with a fixed time frame and published in English at any regional, national, transnational or international space determinants. For example, discourse communicative sources from 2000 to 2002 published in the European educational space. Years prior to the beginning of the 21<sup>st</sup> century are not used in this study because historical influencers are recognized but not identified in relations to disciplinary identity.

It must also be noted that even objective quantitative analysis by specific variant analysis when applied to discourse analysis carries some degree of subjective opinion inherent to the researcher. Thereby assessment of each discourse source demands specific adherence to pre-defined category distinction. In this case, the researcher relies on multiple assignments of knowledge variants. When discourse presents two categorical knowledge facets, a empirical numeration is given to both. When discourse self-identified specific facets without qualification of such, empirical numeration is given.

Other concerns with vantage point are relevant in discourse contextual analysis. Selected discourse carries constraints or limitation of source, language and interpretation limits as John Creswell lists:

1. Protected information unavailable to public or primate access,
2. Requires the researcher to search out the information in hard-to-find places,
3. Requires transcribing or optically scanning for translation purposes resulting in a variable authenticity of the document  
(Creswell, 1994, pp. 150-151)



These limits remain but are consistently evident in the study. As concerns source, the discourse is generated from renowned journals, publishing houses and university sources on consistency premise to asset authenticity of the discourse source document. As concerns language, the study holds English as the official international language of comparative education and holds this language as a consistency premise thus analysis source documents published with author permission.. In all, the international sources and language possess minimal limits to objective analysis. As A. Fink and J. Kosecoff report, “internal consistency reliabilities of .89 (89%)” (1985, p.46) as concerns sources, language and interpretative scales apply to research reliability when no translation is utilized. Therefore, the vantage point perspective of this study is valued in the 99 percentage of viability scale. The absence of observation, interview, non-published documents and multi-language translation of source as well as the academic level of the researcher and one-person research investigation influences the scaling percentage positively.

Upon the parameters stated above, the study begins with a discussion of research consistency that includes the philosophical method, definition of discourse analysis and identification of pertinent knowledge domain and the facets therein. It than proceed to discuss the design of this study, elaborating knowledge domains and facets. As such, this chapter reasons that a framework juxtaposing knowledge domain and facets provides gainful insight into collaboration between comparative education and policy study discourse information.

This framework provides a statement of the conditions under which this research is appropriate. It represents the coordination of purpose and method. It ask the question of purpose and method suitability: the appropriateness of why and how aspects.

To the why condition, it reasons that cognitive map provides academic structure for communicative disciplines justified by epistemic, typological and ontological knowledge facet frequency distribution which provides scientific legitimacy. It is reasoned that cognitive mapping provides a legitimate structure for interchange, knowledge production, and interpretation and communicative disciplinary instruction. (Paulston, 2000) For the how or method suitability, the study analyzes the frequency distribution of knowledge facets contained in comparative education, policy studies and 'policy advice formation' discourse.

It reasons that time-space influences increase complexity. With this increased complexity, due to globalization processes, scientific investigation of the subject matter supposes transformation of theoretical, methodological models and enlists new challenges. To appropriately analysis this communicative discipline recognition of epistemic, typological and ontological variation is required. As such this study seeks to recognize transformation of theory, method and challenges by analysis of epistemic, typological and ontological frequency distributions contained in the merging disciplines as concerns the communicative discipline they produce. A cognitive map of epistemic, typological and ontological knowledge facets is then developed.

It may also be reasoned that all education discourse may carry similar reconstruction. The theories, methodological models and challenge knowledge domain facets represent similar transformation in all disciplines. This is to suggest that science of education has undergone new differentiation in a global era and the frequency distribution would be similar. However, the process of 'policy advice formation' differs from other practice-theory co-relational dynamics. It is to say, this unity of profession at every level of education and academic process is singular. What has been the age-old theory-practice divide reposition more extensively in 'policy advice formation' then in other subject contexts? It is also

argued that the formation of mass education in the early 20th century experienced increased complexity of 'policy advice formation'. However, it is also contended that 'policy advice formation' combines with borderless center-peripheries produce extensively regulations that are more complex. That borrowing and lending of policy derived from abroad has become formation of policy by combining national investigations and reflections through international networks, institutions and associations. These change in discourse communication factors distinguish the 'policy advice formation' communicative discourse discipline and legitimize renewed cognitive mapping. This contention is further supported by the notion that 'policy advice formation' derived from merger as apposed to new disciplinary development. As such, it is reasons that theory, methodological model and challenge frequency distribution of epistemic, typological and ontological knowledge facets have changed and require revision, restatement and shifting of emphasis – a new cognitive map. Thus, clarity of congruity rests upon discussion of methodological philosophy of discourse analysis to yield viable knowledge domain facet frequency distribution, which validate cognitive mapping.

### 3.02 METHOD

The revision, restatement and shifting emphases of knowledge because of increased complexity by discourse analysis based on quantitative frequency distribution methodology presents a renewal of methodological philosophy of Smithsonian Theory. A philosophical viewpoint based upon substantive principles of critical theory applied to epistemic analysis of discourse. As such, separation of philosophical theory and methodology is well recognized in many scientific fields. However, in comparative education the lineage is unalterable. In consideration of this question Jürgen Schriewer, renowned comparative educationist prefaces the 1988 Frankfurt book entitled 'Theories and Methods of Comparative Education' by stating that, "Issues of methodology have been a matter of particular concern for comparative education for decades" (Schriewer, 1988, p.23). Comparative education reviews and bibliographies also testify to the considerable amount of intellectual efforts devoted to establishing the purpose and utility of this field of study, to defining its nature and relationships to other disciplines, and to clarifying its methodological principles and specific procedures. This may be related to the fact that comparative inquiry across nations or cultures as compared with international research requires a higher degree of methodological problem-awareness and sophistications. Theory developments in the sociology of knowledge in respect to communicative dynamic (Schriewer, 2001), moreover call attention to an additional and at the same time more general, reason for this debate in that they interpret all social activity as self-reflective. Considerations of method attendant upon substantive comparative research only mark out, then, the very special case of a rather general phenomenon. Consequently, "continuing methodological considerations of and corresponding discussion in comparative education are as much a matter of course as an undertaking that will scarcely ever be concluded." (Schriewer, 1988, p. v)

In 2000, (over a decade later), he prefaces another book entitled “Discourse Formation in Comparative Education” highlighting the notion the “truly international scope” and “expansion of alternative research agendas” thereby stating that comparative education “adopt vantage point involving detached examination which confront the theoretical-cum-methodological programs development for comparative inquiry with the outcomes of substantive social research and, on this basis, try to assess the relative merits implied by alternative paradigms” (Schriewer, 2000, p. viii-ix). It is also well noted by the likes of Claude Diebolt, 2000; Roger Dale, 2000; Anthony Welch, 2000; and Schriewer, 2000 as well as other comparative educationists, contextual reference of comparative education is no longer positioned from separation of theory and method, rather an array of referential linkage between theory and methodology has developed with either critical or grounded orientation.

While both methodological orientations commonly form the bases for discourse analysis in a variety of academic disciplines, educational science discourse further differentiates these categories. Much debate over this differentiation has arisen leading to the juxtaposing of core philosophic orientations into quantitative and qualitative methodological mandates. In other words, discourse analysis in educational sciences is grouped by critical quantitative or grounded qualitative categories further acknowledging a strong linkage between method and theoretical philosophy (mostly strong orthodox theoretical positioning).

### 3.02.1 DISCOURSE ANALYSIS

Two points are most significant in this respect. The first concerns the differentiation of discourse analysis in substantive categorizing. The second concerns the classification of discourse analysis as a reflective methodology with distinct philosophical currents. This includes facets of knowledge, type and capacity of a specific self-reflection category as well as, the assessment of knowledge produced by specific studies as conceptualized by subject orientation. For example, topics such as comparison of educational leadership, teacher preparation, student achievement or techniques of total quality manager between nation states represent subject oriented self-reflective discourse. Note that as Paul Smeyers of the Center for Philosophy of Education remarks ‘this form of self-reflective discourse carries the question of internal or external point of reference and the array of questionable assumptions these techniques unfold’ (Smeyers, 2001, p.4). Therefore, comparative education discourse analysis is seen as “insights into the constructed-ness of academic knowledge, as well as to models meant to conceptualize such insights” (Schriewer, 2000, vii). This conceptualization of constructed-ness is labeled in the philosophy journals as substantive critical theory and orthodox self-reflectivity philosophy.

This event of strong linkage of philosophical base and methodology is also in current times reframed by challenge determinants. That is to say, the topic and audience for which the discourse is directed is a determined challenge. This connection of topic is a core principle of both sociology and philosophy disciplines rooted in the notion addressed by the likes of John Dewey’s 1863 arguing that “importance is attached, both in theory and in practice to occupational activities as the most effective approaches to genuine learning and to personal intellectual discipline” (Ratner, 1998, p 49). This concept, although

applied to the behaviorist action, is the bases on philosophy, which denotes a direct relationship of thought and its subject matter. This philosophical connection between subject matter and epistemological legitimacy is further attributed to the work of John Dewey by Donald A. Piatt in Dewey's Logical theory (1998, pp.105-156) as well as Arthur E. Murphy in "Epistemology and Metaphysics" where it is argues that true knowledge is generated by non-philosophical method (Murphy, 1998, pp.207-209).

## ETO

Epistemological Legitimacy quantitatively encompasses the notion that a relationship between the researcher and that, which is researched, has an affect on the results of such research. In the quantitative domain of discourse analysis, the epistemological legitimacy asserts that the researcher is independent from that being researched. In this light, this researcher stands in the interstice between viewing what Niklas Luhmann terms mirrored reflection of communications expressed within the three disciplinary categories analyzed. In the qualitative domain of discourse analysis, the epistemological legitimacy asserts that the author as researcher interacts with that being researched. This notion is rooted on Parsons' Actor Theory, which contends that in discourse analysis the author is defined as the actor by which discourse formulated. This knowledge domain facet was selected because it combines key aspects of knowledge formation for the analysis of discourse. It brings to question, which educational theories, methodological models and challenge topics the author presents in the discourse documents surveyed and identifies the researchers methodological assumption with regards to the challenge topic under investigation. As so, it provides identity of the process of research. In this study, the process is quantitative survey analysis of qualitative context bound data. The combination of perspective and process unites Creswell's epistemological and methodological assumption paradigms.

As a discourse analysis rooted on quantitative principle, the study is defined as both value-free and unbiased. That is not to suppose that the research is 100% free of bias but that the level of researcher bias in findings from survey analysis is minimal. This lack of researcher bias classification underpins the decision to omit axiological assumption from categories of analysis<sup>38</sup>.

Typological Capacity questions the capacity of discourse to communicate objective purpose. In a comparative dynamic, the purpose of comparing educational challenge topic geographically necessitated an examination of this facet. It is not an aspect of Creswell's analytical paradigms but rather is displayed in Gall, Gall and Borg's Applying Educational Research paradigm. This form of capacity analysis is rooted on the premise that differentiation analysis is a form of multivariate co-relational analysis that involves identifying moderator variables to improve the correlation between a predictor variable and a criterion variable (Gall, et.al, 1999). That is to say, typological capacity determines the relationship between discourse and field of study, discipline. In this study, the theories such as social, political, economic and the methodological models such as empirical or non-empirical and the challenge topics such as network, institution and/or association dynamics classify discourse within a field of study thereby correlating the field of study with the knowledge contained in said discourse.

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<sup>38</sup> Note that a general survey of Comparative Education (CE) and Policy Studies (PS) discourse and thereby policy advice relevant to the issue of globalization was done in the spring of 2001 under the heading 'The Global Myth'. In this survey, the time frame of increased globalization terminology was determined to span from mid -1990s. Present in this body of discourse were epistemological validity, typological variation and ontological legitimacy. The findings held the epistemological validation increased while typology and ontology decreased but remained evident. Little to no presence was made to concerns of Axiological value or rhetorical emphasis. This general survey was taken as a preliminary process for the identification of knowledge domain facets prevalent in Comparative Education (CE) and Policy Studies (PS) discourse in the global context. (More details of this survey are provided in the discussion of the Global Myth in this paper)



The analysis of Gall et al. and Creswell predicated selection of this knowledge domain facet. Although quantitative document investigation is a form of discourse analysis, it does not clearly represent a canonical correlation of discipline to knowledge. For this reason, the category of cannonological verification was omitted.

Ontological Validity quantitatively questions the reality of the knowledge separate from the researchers vantagepoint. It also questions the disciplinary objective of the discourse author's and/or publishers. In this regard, this category was selected for this study because the data collection is predicated on author self-identification of field of study. That is to say, all documents were first assessed for author's self-identification of discipline/field association. The preliminary survey assessed those which self-identified in the document as comparative education, policy studies or 'policy advice formation' fields of study. In this case, the question of reality is one of Parsons' actor reality determination and thereby ontologically valid according to qualitative subjective position of survey documents.

However, that is neither an informal nor formal language issue in the assessment. All documents were taken in one language as the official international language of the field and represented document authors and publishers from north-south, east-west nation states. Because of the internationality of language (author's choice to publish in English) the rhetorical assumption has no validity in this study. It may be argued that the language debate is raging to a point that all discourse analysis is affected. However, the primary questions of this study are based on disciplinary identity not language neither preferences nor cultural influences. Continued study of this issue may bring to bear rhetorical variation but as to the study, the issue was omitted because analysis is rhetorically self-reflective framed on an international discourse.

Upon selection of ETO knowledge facet categories, the study proceeded to identify those characteristics of discourse that uniformly define disciplinary orientation. In this fashion, theory, methodological models and challenge topic constructs were the most referenced. Following David Bridges 'Fiction Written under Oath' Epistemology in Educational Research, based on Immanuel Kant, David Hume and John Dewey presented as a paper for the international symposium on philosophy and history of the disciplines of education in November 2002 at the Catholic University of Leuevn, the notion that disciplinary identity is rooted in the reasoning that ethically legitimate disciplinary definition strives to "set boundaries to what researchers could do in pursuit of knowledge" (Bridges, 2002, p.15). In short, researchers communicate knowledge in predefined categories. According to the American Psychological Association APA: scientifically legitimate publication must contain theoretical basis for argumentation, methodological model description of argumentation and specific definition of issue/area under investigation. This study has categorized these elements as theory, methodological model and challenge topics.

These theory categories refer to constructs, which are mapped according to particular reasoning or characterized operational aspects of specific phenomenon or a specific problem with the surveyed document. In comparative education, policy studies and 'policy advice formation' discourse, there seem to be an array of constructs.

Using Gall et.al strategy for reflective conceptual rationale, this study categorized documents via specific knowledge that manifested society, system or organization theoretical constructs. Specific to this study is a differentiation between logically induced pattern theory and philosophical deduced pattern theory. The study qualified the discourse as qualitative documentary data, which is consistent with

an inductive model of thinking which Creswell states, is “a basis for comparison with other theories” (1994, p.95)

A preliminary search of discourse using keywords ‘education’ revealed the presence of key terms society, system and organization when ‘theory’ was injected into the search. No other terms resulting in the count of frequency under 50% were selected. The same instrumentation revealed typological categories of social, political, economic key words. That is to say, when search ran education, theory, and typology the results revealed associated keywords social, political and economic. As for ontological theory constructs, the search revealed either philosophy and/or governance as important descriptor. A search of specific correlated terms provided the categorical frame of each knowledge domain facet.

This database dependent research design has been increasingly referenced and follows basic on-line research and development principles of scholarship available on <http://longman.awl.com>. Other constructs such as civil, human rights, and power dynamic categories were identified but were seemingly neither theory, methodological model or challenge character knowledge facets as identified by author and/or publisher.

Theory, methodological model and challenge topics refer to the character of discourse construction evident in the science of education specific to comparative education, policy studies and ‘policy advice formation’ discourse. These constructions of discourse are based on Jürgen Schriewer’s comparative education discourse analytical structure. It is reconstructed within Michael Crossley’s, *Theory of Contemporary Challenges: Re-conceptualization and New Directions for Comparative Education*, he argues that comparative education discourse is categorized and best examined via survey of theories, methodological models and the challenges dealt with in communications. It is also noted that Jürgen Schriewer’s form of discourse analysis seems to be based on Luhmann’s

construct of discourse communications. Therefore, the TMC model is formulated with the assumption that comparative education, policy studies and 'policy advice formation' discourse is scientifically justified when exhibiting TMC characters.

Epistemological Legitimacy by Theory society knowledge domain facets is predicated on the notion that education and society are homogeneous and therefore, the categorical frame is essential to comparison across national borders. The legitimacy of a field of study that is comparative in nature seems to depend on the usage in discourse of a society construct. Or as Val Rust argues "one norm of the field of comparative education is that cross-nation studies always attend to the dynamic relationship tying education and society together" (Rust, 2000, p. 14).

While many views of society abound in discourse, this study surveys any notion of cross-national relations as society. It does not define society in a theoretical frame but rather uses the expression in discourse documents applying any cross-national reference to the 'society' facet to legitimize the knowledge presented. Thus, the epistemological aspect correlation education and cross-nation relations as a theory of knowledge is deemed society in communicative construction. Although system and society theory is linked in philosophical terms at the more practical level, specific aspects of the theory differentiate. Due to the rotating definition of theory-practice co-relationship, the core notion of system seems in some case united and in others divided. Therefore, these constructs were enveloped separately, and according to findings, not inseparable.

As concerns Epistemological Legitimacy by Methodological model only two prominent categories surfaced. That of qualitative and quantitative, while in the discourse analysis phase both appeared in description but in most cases either was selected. This structure is in keeping with both Gall et.al al. and Creswell research design models.

The Epistemological Legitimacy by Challenge Topic, with highest frequency distribution in the selection process was international, transnational and national. Note that in most cases distinctions between international and transnational were determined. These distinctions by the actors (authors) were primarily based on one construct of global or another. Each of these keywords exhibited usage frequency distributions above the required 50% and therefore, each was listed on the survey. The usage of keyword national came to attention when differentiated with various terminological for what Bray terms glocal. However, glocal had a usage frequency below the norm and was eliminated from the survey.

Categories of Typological Capacity by Theory were social, political and economic. In most cases, all three appeared in a single document but notice has to be given to the existence of one or a combination of two appearing within measurable frequency. Other optional variables such as civil, governmental, were displayed with typology however not at the required frequency when disciplinary identity terms were applied.

In much the same fashion that epistemological models of methodology qualitative or quantitative were sole identifiers, empirical and non-empirical. However, unlike this category, empirical or non-empirical were never collaborated. In the discourse, it seemed that the methodological used with either empirical or non-empirical. It must be noted that some specific forms of either category were named such as case study or efficiency effect or causal examination.

Random characterizes the keyword identifiers for Typological Capacity by Challenge Topic. Only three satisfied the frequency distribution determinant. They were network, association, and institutional. Because keyword specification by particular identifiers were more often than not referenced such as network decision makers, network ethno-graphics, network co-relations, association

grouping, association configuration, association agencies and the list goes on the include various institution identifiers. Due to the extreme diversity of identifiers in this category, the search identifies a specific term of construct description evident in the majority of discourse documents. That term was dynamics when network, association, and institutional plus either comparative education, policy studies or 'policy advice formation' discourse was searched.

In the same fashion, either philosophical or governance were evident when in search of Ontological Validity by Theory. No other high-level frequency identification was evident.

The same finding pattern was evidence form micro and/or macro analysis key word for Ontological Validity by Methodological Models determinants.

In the case of Ontological Validity by Challenge Topic, any variations on specific problems and/or solutions were evident. In most discourse documents, the author referred to a context-based analysis of either a problem or solution.

The key word identification system is predicated on the ERIC system of terminology. In this case, more than one specific term is used to identify occurrence of a construct in documentary multiple databases. For example, the synonyms for problem are difficulty, trouble, crisis, dilemma, predicament, quandary, setback, matter and others. When these synonyms are crossed with other specific terms such as epistemology, typology or ontology and disciplinary identifiers such as comparative education, policy studies and 'policy advice formation' frequency of database documents containing these keywords is distributed.

The result of the juxtaposing of ETO and TMC constructs seems to be based on uniting Luhmann's systems and Parsons' actor theories. In this case, the system

of discourse analysis is merged with the notion of author, as actor, communicative dynamics.

Through these comparative educator terms, the intersection between comparative education and policy study is considered a specialization within comparative education, other such as Samoff, Dimmock et.al and Kotthoff refer to it as a specialization with policy studies. It would seem that both comparative and policy studies educators acknowledge this discourse. On it's own intersection between comparative education and policy studies seem to belong to both independent disciplines. It can be deemed either a sub-discipline of each of the fields in its own right. Therefore, this study reasons that because it exhibits characteristics of both comparative education and policy studies, it seemingly conjoins the two distinct disciplines but has other characteristics that are not exhibited in either. The dispute over whether or not 'policy advice formation' discourse is an element of either or both comparative education and policy studies disciplines or a discipline in it's own right seems to be a matter of further discussion..

Discourse selection began with search of communicative publications/presentations based on disciplinary determinants. Discourse possessing any (or any combination) of these determinants published or presented between 2000 and 2002 were selected. The mean total was reached when 100 per disciplinary determinant with 33 in 2000 and 2002 and 34 in 2001 were selected.

Survey procedure followed a question and written response procedure in accordance with either positive or negative response to pre-construct questions. For determination of disciplinary identity, the researcher asked the question:

*To whom is the discourse directed?*

Answer Options:

Discourse directed to the scientific community

Discourse directed to educational professional

Discourse directed to policy maker

To this question the findings revealed:

Pre-determination of survey population positioned a total of 300 source articles, and symptomatically selecting 100 in each disciplinary group distinguished by 33 published or presented in 2000 and 2002 and 34 in year 2001.



### 3.02.2 CATEGORIZATION

Now days, the method of the study is based on a philosophy of quantitative assessment of qualitative knowledge presented within comparative education discourse conceptual constructs. In keeping with John Dewey conceptualization that cognitively relevant evaluation of subject matter, is consistent with Durkheim's characterization of comparative method as a "rule for the demonstration of sociological proof" (Tomlinson, 1997,p.365).

From this stance, discourse also refers to articulations of interpretative judgments on specific topics directed at specific audiences drawn from information procured using specific methodology. Thus, the philosophical base of discourse analysis is legitimized by a definition of what is meant by articulation of interpretative judgment in reference to specific topics addressed to specific audiences. The abstract parameter of this study is viewed from the assessment of qualitative data using a quantitative methodology frame utilizing 'policy advice formation' centered on educational leadership as a specific topic directed from both comparative education and policy studies disciplinary communities to form frameworks of cognitive mapping. Consideration of these determinants follows the designated of constructing a social cartography of differences within a spatial turn in comparative education, which follows the contribution of Rolland Paulston's Mapping Discourse in Comparative Education, 1993; Mark Bray and Murray Thomas levels of Comparison in Educational Studies, 1995) and UNESCO Document of Assessment Hamburg: Institute for Education 2001 (Brian Holmes). Prior to the turn of the 20th century, mapping strategies for comparative education discourse analysis were neither contextual nor based on specific constructs.

### 3.02.3 DESIGN OF STUDY

In reference to discourse assessments, the question of internal and external self-reflection seems to have been the issue and cognitive mapping was defined by neither context nor conceptual direction. It is well argued at in this early 20th century development is a more historic orientation. The redefinition of the role of international influence on national systems of education noted to have begun with the borrowing/lending of systematic processes for mass education. Therefore, discourse analysis can be seen as concept related construct hereto termed a community. Specifically, it is defined as the discourse analysis of the comparative education community and the Policy studies community to map the cognitive framework of self-reflective 'policy advice formation' discourse. A discourse analysis by general norms concerning the development of educational leadership 'policy advice formation' orientating from a merger of comparative education and educational policy studies is interpretatively analyzed from qualitative assessment to yield quantitative judgment for a mapping of substantive comparison in a global society construct.

### 3.03 RESEARCH DESIGN

Discourse analysis for constructing a cognitive map of comparative education ‘policy advice formation’ follows a principle of harmonious rationale. To bring clarity to this congruity, the method selected unites vastly different types of discourse within two disciplinary general categories for comparison of knowledge facets evident in the communicative disciplinary field formed by differentiation merger. Specifically, clarity requires a comparison of knowledge facets within comparative education and policy study disciplinary discourse against those knowledge facets evident in ‘policy advice formation’ discourse. To this end, the study seeks consistency of knowledge domain facet identification. In other words, the study frames method on the supposition that categories represent the same body of information for every data source or in this case discourse articulated in articles, books and papers from each discipline and from the communicative field. To this question of consistency, the “T” platform is utilized.

In the initial phases, self-referential indicators such as journal mission statements, university department identification and book abstract connotations formed determinant categories for comparative education, policy studies and ‘policy advice formation’ discourse. As to journal mission determinants, comparative education journals entitled *Compare*, *Comparative Education*, and *Comparative Education Review* provided the mainstay of the discourse. As to journals mission determinants, policy study journals entitled *Journal of Educational Policy*, and *Journal of Research and Development in Education*. For ‘policy advice formation’ journals include *Studies in Philosophy and Education*, *Peabody Journal of Education*, and *Harvard Education Review*. Note that other such journals publishing discourse in these selected categories are used. Books and scientific (generally university) oriented discourse take the same course of

categorization. From these sources, self-reference by author(s) for comparative education, policy studies and 'policy advice formation' is the main determinant. In the absence of self-reference, the criteria are reset to audience identification. In other words, the author(s) address specific audience(s). Comparative education discourse directed to the general scientific community falls into the general category of comparative education. Comparative education discourse directed to educational policy studies is placed in the policy studies category. Comparative education discourse directed to 'policy advice formation' is placed into the policy advice category. All discourse for this study is perceived to exist in the general science of education philosophical frameworks. In other words, the audience determinant for comparative education is discourse directed to the scientific community; for policy studies it is discourse directed to the educational professional community; for 'policy advice formation' is discourse directed to the educational policy formation community.

Once determinants are processed, discourses specifying one of the three categories either by author reference or audience addressee community undergo assessment. Discourse sources that neither address specific audience communities nor self-identify by author are not included in this study. The exclusion of these discourse sources represent the body of discourse prevalent in each field of study and support the contention that a discipline formed by merger does not diminish either comparative education or policy study discourses but produces a separate communicative discipline existent in the interstice of merging dynamics.

### 3.03.1 KNOWLEDGE FACET IDENTITY

Knowledge facet analysis rests on the presupposition that facets of knowledge in discourse analysis represent the paradigm assumptions of the discourse. In keeping with John W. Creswell's analysis of qualitative and quantitative approaches of research, discourse literature paradigms question the source of author reality, study value, co-relational dynamics, process, author language and other variables (see appendix A). Creswell terms them as ontology, epistemology, axiology, rhetoric and methodology (Creswell, 1999, p.5) variants. However, to analyze discourse by specific determinants for determination of disciplinary norms evident in a communicative discipline, not all of these knowledge facets are relevant. For this study, epistemology represents "the relationship of the researcher to that researched" (Creswell, 1999, p.5). For this study, ontology holds that the nature of "reality is objective and singular apart from the researcher" (Creswell, 1999, p.5). For this study, typology represents a combination of method, rhetoric and axiology that united knowledge formation processes by research process, intention and culture. Therefore, facets selected were knowledge domain epistemological, typological and ontological facets (ETO) because they include all author-subject co-relational aspects of discourse literature analysis.

It is then reasoned that each discourse category (comparative education, policy studies and 'policy advice formation') possesses specific characteristic of epistemological, typological and ontological knowledge facets. It is reasoned that that the frequency distribution of specific characteristic knowledge facets will be evident in the communicative field and gives validity to cognitive mapping of 'policy advice formation'. To this end, the study further differentiates each of the knowledge facets by normative agents of discourse analysis to specify knowledge

facets characteristics as displayed in discourse analysis. As Edwin Keiner, and others reason, “evaluation and evolution (change in discourse communication) of the criteria for educational research” is based on analysis of theory and method in relationship to specific challenges (Keiner, Leuven: Philosophy and History of the Discipline of Education Conference, 2001, p.27-207). While specific emphasis of these conference papers differ, the emphasis on evaluation of discipline by examination of theoretical frame, methodological direction and challenge addressed are similar. The same normative agents are present in Jürgen Schriewer and Brian Holmes *Theories and Methods in Comparative Education* (1988), Gall, Gall and Borg *Applying Educational Research specifically as concerns policy studies* as well as Kenneth N. Ross and Lars Mahlck *International Institute for Education Planning* (Creswell, 1994,p.201) ‘policy advice formation’ research. It is a process of juxtaposing epistemic, topologic and ontological knowledge facets with theory, method and challenge normative characteristics.

Comparative education and policy study discourse was chosen because it is assumed that policy advice discourse derives from a merger through differentiation processes between these two disciplines. It is therefore, entitled a communicative disciplinary discourse. Therefore, only science of education discourse fitting self-referential determinant of comparative education, policy studies and ‘policy advice formation’ are analyzed. The selection of these determinants therefore rests on the assumption that policy advice discourse is a product of merger between comparative education and educational policy studies. Self-referential determinants are therefore used to distinguish these categories. As Edwin Keiner states, the process adopts the “new talk, re-conceptualizing the challenges and make selective use of the outward claims and propositions for their very own purposes. Because of the high-resonance capacity and reformative reflection education professionals are active participants in shifting the

boundaries between politics, economy, and education” (Amos, 2002, p. 5)<sup>39</sup>... is a matter of author identification and target audience. Thus, reflections on ‘ways of seeing’ that determine ‘ways of knowing’ (Masemann, 1990) lead to more complex and sophisticated theorizing and researching. Note that when author either identifies discourse as comparative education, policy studies and ‘policy advice formation’ cataloging is consistent. When no such self-reference is made, the data source is evaluated for addressed audience. Discourse directed to the general scientific community alone is classified as comparative education. Discourse directed to educational research institutions, professional networks and other association is classified as policy study. Note that many non-self-referential data sources are directed at general comparative education and policy study audiences. It is reasoned that addressee termed, or other titles when specified, fulfill the requirement of educational policy studies. As for determinant audience for the educational ‘policy advice formation’ category, in the absence of author self-reference, discourse directed a specific subject policy formation political policy makers, professional policy makers, advisory policy review constitute the audience. Thereby, reform willing persons, policy makers or other policy advisers constitute the audiences of ‘policy advice formation’ discourse.

Differentiation of subject matter upon consideration of revision, restatement and shifting emphasis of theories and methods hinges on the notion that increased complexity of the knowledge area. In other words, disciplines of science of education differentiation from science of education formulating comparative education creating another differentiation entitle policy studies with revision, restatement and shifting of emphasis for that knowledge area. In light of new

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<sup>39</sup> Quote taken from Karin Amos/Edwin Keiner/Matthias Proske/Frank-Olaf Radtke  
Globalization: Autonomy of Education under Siege? Shifting Boundaries between Politics,  
Economy and Education

paper of presented at March 2002 Globalization Conference at Johann Wolfgang Goethe  
University, Frankfurt Germany.

subject areas formed from merger of comparative education and policy studies, a further disciplinary differentiation entitled 'policy advice formation's calls for revision, restatement and shifting of emphasis of theories and methodologies. This continued revision, restatement and shifting of knowledge area emphasis are elevated because the differentiation process of educational policy studies and comparative education as separate disciplines has lead to change in discourse communication of similar knowledge facets tantamount to a merger. In summary, the fundamental assertion reasons that the knowledge area domain has changed.



### 3.03.2 KNOWLEDGE CATEGORIZATION

It is then reasoned that this system of differentiation is caused by societal growth upon the principle of “separation between scientific system and the system of education and the interdependencies between them” (Luhmann et.al. 2000, p. 12). With reference to sociology oriented ‘society-growth’, this study based on Niklas Luhmann construction of world society poses that both endogenous and exogenous facets are components of societal growth. From this perspective, internal and external globalization processes hereby define societal growth. It is thereby reasoned that globalization lends to complexity of the knowledge area, which revise, restate and shift emphasis of theories and methods in differential scientific subject matter. It is then reasoned that the articulation of these differentiations are most evident in discourse. For analytical purpose, this study focuses on published general views under the self-referential collective (communicative theory) scope of comparative education; policy studies and ‘policy advice formation’ hereto referred to as discourse.

As to the theory of self-referential processes when applied to academia sub-discipline discourse define basic scientific methodology including acts of communication. The method of communication represents “the basic communicative acts that generate, continue and reproduce the self-regulating flow of the disciplinary communication process” (Keiner, 2001, p.2). The mode of communication for this study is scientific books, journals and academia papers. The criteria for selection are based upon self-referential cognitive affiliations, theoretical affinities and disciplinary identity. Therefore, this study seeks to ascertain knowledge facets from discourse, which identifies itself as comparative education, policy studies and ‘policy advice formation’. Note the further differentiation of policy advice by those concerned with policy implementation

and those concerned with policy formation is determined. Policy advice implementation refers to discourse self-identifies as educational reform application. 'Policy advice formation' refers to discourse self-identified as policy advice that does not address application of advisement.

As valuable as discourse that does not firmly self-identify or state audience is, these articles, books or papers are eliminated from this study. Noting that this dissertation is not designed to convey opinion or discuss topic but rather to form mapping technique for specific discourse nothing is lost with exclusion and what is conceivably suggested is that discourse requires self-reference to discipline for legitimacy. Here the age-old question of comparative education as a discipline or simply method remains apparent. It is therefore noted the in this context comparative education is viewed as a discipline with the science of education.

Once disciplinary classification is determined the discourse is analyzed for attributes. The attributes are divided by theory, method and challenges juxtaposed with epistemic, typology and ontology. The attributes are therefore termed knowledge facets of theory, method and challenge because disciplinary discourse is defined by these characteristics. To provide some sense of clarity, definition and example of knowledge domain facet constructs follow.

Empirical analysis of the nature of knowledge domain relies on identification of the frequency of specified theories, methodological models and challenges. Theories, methodological models and challenges articulated in discourse express knowledge domain facets when juxtaposed with epistemological legitimacy, typological capacity and ontological validity. All of which are taken from a general survey<sup>40</sup> of disciplinary discourse. For clarity of congruity these terms are defined

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<sup>40</sup> Note that a general survey of Comparative Education (CE) and Policy Studies (PS) discourse and thereby policy advice relevant to the issue of globalization was done in the spring of 2001 under the heading 'The Global Myth'. In this survey, the time frame of increased globalization terminology was determined to span from the mid 1990s. Present in this body of discourse were

to expel relationship of defined categorical knowledge facets by general categorical analysis separated from current thought within the science of education concerning these parameters thereby rendering a cognitive map without predisposed assumptions and notions.

Epistemology refers to the nature, sources and limits of knowledge. Legitimacy is defined as the state of being legitimate. Epistemological Legitimacy is thereby seen as a study of nature, sources and limits of comparative education, policy studies and 'policy advice formation' knowledge domains to ascertain the reasonability or logical correctness. It is hypothesized that in discourse, nature is articulated by theory, source by methodological model and limits by challenges.

Epistemological legitimacy facets of knowledge define the nature expressed as theories, sources expressed as methodological models and limits expressed through challenge consideration. An initial survey of the discourse revealed that prevalent theories (conveying the nature of the discourse knowledge) in all field discourse were society theory, systems theory and organizational theory. The prevalent methodological models (conveying the source of the discourse knowledge) were quantitative, qualitative or a mixture of these two components. The prevalent challenges, conveying the limits of the discourse knowledge, were international, transnational, and national. Thus, the epistemological legitimacy of comparative education, policy studies and 'policy advice formation' discourse rests on the frequency of society, systems, organizational theories: methodological models on quantitative and/or qualitative: challenges on international,

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epistemological validity, typological variation and ontological legitimacy. The findings held the epistemological validation increased while typology and ontology decreased but remained evident. Little to no presence was made to concerns of axiological value or rhetorical emphasis. This general survey was taken as a preliminary process for the identification of knowledge domain facets prevalent in Comparative Education (CE) and Policy Studies (PS) discourse in the global context. (More details of this survey are provided in the discussion of the Global Myth in this paper)

transnational, and/or national facets represented within discourse. (See Appendix B)

Likewise, typological represents types, symbols or symbolism. Variation is seen as the act, fact and process of varying. Thus, typological variation of knowledge domain facets prevalent in comparative education, policy studies and 'policy advice formation' discourse rests on the frequency by which types of theories; methodological models and challenges are enacted, actualized or processed. The prevalent theories of this knowledge domain are social, political and/or economic. The typological variations of methodological models denoted in previous survey were empirical or non-empirical. The typology challenge category, much alike epistemic challenge categories represent a large array of territorial components. In this case, typology refers to variations in kinds of study apparent in the discourse. In the context of the global society, typology addresses re-categorization of "traditional international relations approach that sees the state as being defined in terrestrial terms encompassing all that is contained within a particular set of borders" (Hobden, 1998, p. 20). The typological variations of limits or challenges in this knowledge domain were network dynamics, association dynamics and institutional dynamics. Note that all are assessed according to the frequency by which these facets appear in the discourse.

Ontology is defined as phenomenology within a particular theory of reality. In this case, it is the reality of knowledge in comparative education, policy studies and 'policy advice formation'. Validity represents the state of validation present in the argument. As such, the ontological validity of the knowledge domain of comparative education, policy studies and 'policy advice formation' are empirically analyzed by the frequency by which previously surveyed philosophy and/or governance theories, micro and macro methodological models and

problem analysis, solution options and solution advice limits/challenges appear in discourse<sup>41</sup>.

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<sup>41</sup> To provide a juxtaposed analytical formulas theory, methodological models and challenges are considered normative agents specifically categorized against epistemological, typological and ontological knowledge facets defined by categories previously identified in random survey of discourse.

## CHAPTER 4

### 4.00 DISCOVERIES

*Steps to be proposed in analyzing survey data...Step 1 – Indicate that information will be reported about the number of returns and non-returns of the survey. This information will be presented in table form with special attention to number of respondents and non-respondents*

John W. Creswell, 1994

Creswell's scheme for analysis of survey data (1994, p.116-191) coupled with Robert M. O'Brien's (1995, p.134-156) data measurement model produced the order of distribution and statistical analysis used in this project. This order of distribution is based on a list of survey questions, the answers to which yield of positive response or no response. The process of Creswell's scheming, identifies the frequency at which a response occurs is coupled with O'Brien's identification of facet parameters in measurement. This model assures that count of knowledge domain facets also include identification of correlated factor and includes estimate error projections. For a more detailed assessment of Creswell, Gall et.al and O'Brien methodological linkages see chapter 3 segment entitled 'Clarity of Congruity'. The discourse selection process yielded 300 survey source discourse citations published in either 2000,2001 or 2002 and self-identified by the author as comparative education, policy studies and 'policy advice formation'. The sources were examined using a question based data analysis to generate the distribution of knowledge facets by disciplinary and knowledge category. The frequencies of distribution for the 300-source citations formed co-relation of

ETO categorical knowledge domain facets juxtaposed with theory, methodological model and challenge topic categories per year.

The frequency of occurrence of particular knowledge facets was calculated using beta distribution analysis procedures as articulated by Robert M O'Brian (1995, p. 135) for the purpose of generating low margins of error.

$$\beta = [a(x_1=33 \sim y_1 = 34 \sim z_1 =33)] + [b(x_1=33 \sim y_1 = 34 \sim z_1 =33)] + [c(x_1=33 \sim y_1 = 34 \sim z_1 =33)]$$

a = Comparative Education , b= Policy Studies , c = 'policy advice formation'  
~population = 100

x = epistemic legitimacy, y = typological capacity, z = ontological validity ~  
population = 300

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T,M,C Knowledge domain facet for 22 independent categories with possible ~  
population = 300 each for 6600 total response derivative

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Frequency distribution for each knowledge facet is therefore calculated by the average occurrence of a specific category occurring within a 3-year sequence. For example: to suggest that the occurrence of society, as a theoretical construct, exhibit a differential usage patterns: one can examine the frequency at which that specific construct appears in each category of discourse sources. In other words, the frequency of occurrence provides insight into whether a specific construct is used in a specific disciplinary discourse. In this study, all facets are examined according to this formula and presented in tabular format that is followed by discussion.

From this sociological methodology frame, keywords become numbers or as Roberto Franzosi terms it, 'set theory', that he reasons, "provides the

mathematical foundation for the relational data model that can be used to store text data collected via a semantic grammar. In this fashion, set theory provides the basic tools necessary to go from word to numbers. It is this basic transformation that allows researchers to perform general kinds of quantitative analysis on such qualitative data as words” (Franzosi, 1994, p.105). From words to numbers, each knowledge domain facet is tallied via occurrence in a specific citation. The count represents how often the knowledge domain facets were present in the total discourse surveyed. Note that only one count was given to one particular source, however, a particular source could have been listed to more than one facet in a particular domain. For example, one source citation can rate positive for society and system in epistemological legitimacy-theory category. However, this source will tally only one count in each of the two facet categories. Any positive response to any question yields a listing of occurrence distribution. For example, one source might list positive occurrence in society, systems and organization. However, no source can list more than one occurrence of any facets.



RAW DATA TABLE

1.	1	2	3	4	5
2.		THEORY CE	THEORY PS	THEORYPAF	TOTAL
3.	E-SOCIETY	60	20	40	150
4.	E-SYSTEMS	60	60	80	200
5.	E-ORGANIZATION	30	40	10	80
6.	T- SOCIAL	40	70	80	190
7.	T-POLITICAL	60	40	60	160
8.	T-ECONOMIC	50	40	30	120
9.	O-PHILOSIPHICAL	50	60	40	150
10.	O-GOVERANCE	50	50	70	170
11.		.METHOD MOD.CE	METHOD MOD. PS	METHOD MOD. PAF	
12.	E-QUANTITATIVE	30	80	30	140
13.	E-QUALITATIVE	10	150	140	300
14.	T-EMPIRICAL	50	80	50	180
15.	T-NON-EMPIRICAL	70	120	110	300
16.	O-MICRO	30	90	30	150
17.	O-MACRO	70	110	120	300
18.		CHALLENGES CE	CHALLENGES PS	CHALLENGES PAF	
19.	EINTERNATIONAL	70	110	70	250
20.	ETRANSNATIONAL	20	70	40	130
21.	E-NATIONAL	40	130	110	280
22.	T-NETWORK	0	20	40	60
23.	T-ASSOCIATION	20	40	0	60
24.	T-INSTITUTIONAL	80	110	110	300
25.	O-PROBLEM ANA	40	140	120	300
26.	O-SOLUTION ANA	70	80	120	270

TABLE 4-1 RAW DATA TABLE

*This table displays the number of categorical cites all 300 sources exhibited*

{E is Epistemology, T is typology O is ontology, CE is comparative education, PS is policy studies, PAF is policy advice formation, ana is analysis, Total refers to the sum total of horizontal counts of all disciplinary categories}

The first column juxtaposed with the 1<sup>st</sup>, 2<sup>nd</sup>, 11<sup>th</sup> and 18<sup>th</sup> rows are label rows for identification of finding categories. All other columns juxtaposed with rows present numerical data and calculated outcomes of the findings.

Columns 2-4 posts raw data findings of occurrence in source citations within author identified disciplinary grouping. Rows 3-10 represent theory, 12-17 represent methodological models and 19-26 represent challenge topic facets. For example, row 3 tallies the sum total of society responses in the comparative education, policy studies and ‘policy advice formation’ source populations. As such, in comparison of tallies of society and organization categories, systems has a greater frequency of distribution.

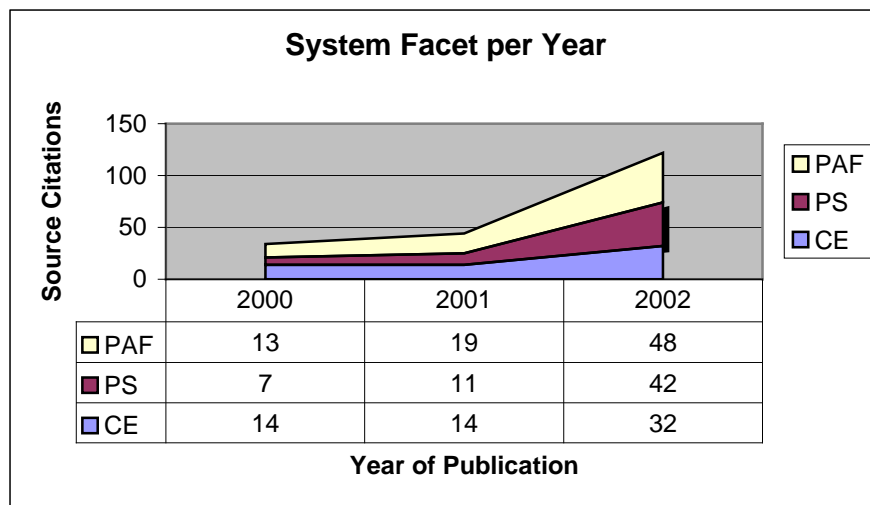


Figure 4-1: System Facet per Year

The figure maps the frequency distribution of system category responses for each disciplinary category, per year of examination. Note that these finding represent the highest ration of epistemological legitimacy theories at a count 200. In this regard, figure 4-2 represents the distribution via the total count of responses.

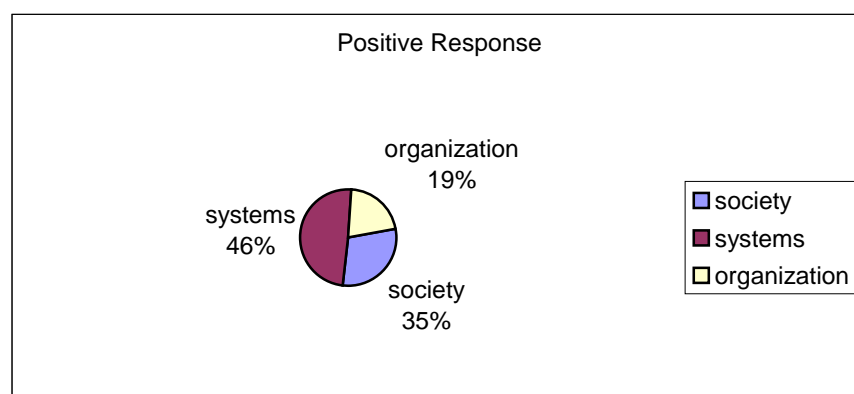


Figure 4-2 Overall Theory Facets Distribution

*In the theory domain knowledge facet distribution, 'systems' outweighed society and organization positive responses of the source citations examined.*

Column 5 in table 4-1 records respondent total and records the number of respondents yielding positive answer to knowledge facet survey questions. Therefore, non-respondents are calculated from 300 total for every knowledge facet. For example, non-respondents for society category are 150. That is 300-150. These findings conclude that more than half of the total discourse surveyed does not frame epistemological legitimacy on a society construct.

	THEORY CE	THEORY PS	THEORY PAF	TOTAL
E-SOCIETY	60	20	40	120
E-SYSTEMS	60	60	80	200
E-ORGANIZATION	30	40	10	80
	.METHODODOLOGICAL MODELS .CE	METHODODOLOGICAL MODELS PS	METHODODOLOGICAL MODELS PAF	TOTAL
E-QUANTITATIVE	30	80	30	140
E-QUALITATIVE	10	150	140	370
	CHALLENGES CE	CHALLENGES PS	CHALLENGES PAF	TOTAL
E-INTERNATIONAL	<u>70</u>	<u>110</u>	<u>70</u>	<u>250</u>
E-TRANSNATIONAL	<u>20</u>	<u>70</u>	<u>40</u>	<u>130</u>
E-NATIONAL	<u>40</u>	<u>130</u>	<u>110</u>	<u>280</u>

Table 4-2 Epistemological Count

Table 4-2 displays the total citations counts of all epistemological legitimacy for theory, methodological model and challenge topic. Vertically, the display allows for specific counts in theory, methodological model and challenge topic categories. For instance, comparative education accounts for equal epistemological legitimacy via both society and systems construct while policy studies rely mostly on systems theory. It can then be concluded that ‘policy advice formation’ discourse has derived epistemological legitimacy based on policy study construct of system theory.

#### 4.01 DATA ANALYSIS

The data analysis segment displays an analysis of the research findings for theory, methodology knowledge and challenge topic knowledge domains. The structure of this study is predicated on juxtaposing ETO with TMC according to specific knowledge categories. The selection of these categories is based two reasons. The first reasons is that each of these categories defines a general entitlement of various constructs as applied to a specific conceptualization. The second is that each category is identified by legitimate character function of discourse and therefore is measurable according to a Glassian principle of discourse analysis, which argues that theoretical composition of knowledge seems to be communicated with specific keywords, or titled by category. As such, the chart of analysis follows:

	THEORY	METHOD MODEL	CHALLENGE
EPISTEMIC LEGITIMACY	Society	Qualitative	International
	Systems	Quantitative	Transnational
	Organization		National
TYPOLOGICAL CAPACITY	Social	Empirical	Network Dynamics
	Political	Non-Empirical	Association Dynamics
	Economic		Institutional Dynamics
ONTOLOGICAL VALIDITY	Philosophical	Micro-Analysis	Problem Analysis
	Governance	Metro-Analysis	Solution Analysis

Table 4-3 Correlation of Gall/Creswell

Table 4-3 displays the structure of this study which is rooted on Creswell's Quantitative and Qualitative Paradigm Assumptions and Gall et.al al. Quantitative Educational Research Guide.

## Theory

The findings indicate that theory differential pattern displays higher levels of society and system than organization constructs in the discourse examined (See Table 4-1). They also reveal a pattern favoring system constructs for the establishment of epistemological legitimacy of theory constructs. This knowledge facet supposed that when comparative education and policy studies merge, communicative dynamics formulated policy advice formation.

The findings indicate that social constructs occur at a higher frequency than political or economic constructs (See Table 4-1). The findings also display a tendency for comparative education discourse to express political typological capacity, policy studies expresses it via social construct. It would seem that matters of policy advice formation follow policy studies in formation of theory designed to establish typological capacity norms.

The findings listed on Table 4-1 also indicate that the differential patterns of theory display higher levels of philosophical constructs in comparative education and policy studies discourse. The opposite seems valid for 'policy advice formation' discourse. Due to this finding, the study reasons that while policy advice formation may have been generated via merger between comparative education and policy studies, the discourse communicates according to an independent theory construction when establishing ontological validity. The findings indicate that 'policy advice formation' discourse displays a high level of governance theory for ontological validating of communications.

***The theory section findings indicate that differential patterns demonstrate both merger and independence for establishment of policy advice discourse.***

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## Methodological Model

The findings listed in table 4-1 indicate that differential pattern display higher level of qualitative, non-empirical macro analysis for methodological models utilized. The findings indicate that policy studies and ‘policy advice formation’ discourse expressed higher levels in all categories than comparative education. The differential pattern exhibits a greater concern with methodological model legitimacy, capacity and validity than within comparative education discourse. In all cases, the results tallied more than half for policy study and ‘policy advice formation’ as compared to comparative education in general.

These findings list on Raw Data Table 4-1 validate the association of comparative education and policy studies and provide some degree for validation of merger. A comparison of years of source publication revealed the same finding (See Table 4-4). In all three years, for all three disciplinary categories, the sources were consistently distributed.

	<b>CE</b>	2000	2001	2002	<b>PS</b>	2000	2001	2002	<b>PAF</b>	2000	2001	2002
e-quantitative	30	11	10	9	80	37	22	21	30	13	9	8
e-qualitative	10	1	3	6	150	52	49	49	140	51	46	43
t-empirical	50	18	16	16	80	39	23	18	50	19	16	15
t-non-empirical	70	28	27	15	120	63	33	24	110	56	35	19
o-Micro	30	15	8	7	90	49	24	17	30	15	11	4
o-Macro	70	27	22	21	110	52	29	29	120	40	37	43

Table 4-4 Index Count of categorical knowledge domain facet by Year

*The methodological models section findings indicate that differential patterns demonstrate merger between comparative education and policy studies discourse.*

## Challenge Topics

The findings listed on Raw Data Table 4-1 indicate that differential patterns display higher numbers of international and national knowledge domain facets in policy studies and policy advice formation than in comparative education discourse.

	CHALLENGES CE	CHALLENGES PS	CHALLENGES PAF	Total
E-INTERNATIONAL	70	110	70	250
E-TRANSNATIONAL	20	70	40	130
E-NATIONAL	40	130	110	280

Columns 18-21 of Table 4-1: Raw Data

As listed in Table 4-1, (reproduction of rows above) the count represents a lowest level of 20 positive responses from comparative education discourse pertaining to transnational challenge topics. Table 4-1 also lists a high of 130 positive responses to ‘national’ from policy studies. ‘Policy advice formation’ falls in the middle or equally low level with count of response in all categories. The high level total indicates that educational space carries a large interest in both international and national challenge topics.

The findings indicate that differential patterns display higher numbers of positive responses to the institutional knowledge facet than either network or association constructs for the establishment of typological capacity. In essence, education is viewed as an institution with a high level of typological capacity. In this domain, the distribution of positive responses appears in an extremely differential pattern. According to the Raw Data Table 4-1, comparative education discourse displays no network typological capacity while policy ‘advice formulation discourse’ displays no association typological capacity. As with methodological model facets, network and association stand at crossroads with comparative education and



policy studies at either end and policy advice formation in the middle. However, all three disciplinary discourse indexes exhibit high level positive responses in the institutional facet.

	CHALLENGES CE	CHALLENGES PS	CHALLENGES ES PAF	Total
O-PROBLEM ANA	40	140	120	300
O-SOLUTION ANA	70	80	120	270

Columns 25-26 of Table 4-1: Raw Data

The findings indicate that differential patterns display higher numbers of problem analysis than solution analysis responses. However, in this category the challenge ontological capacity of policy advice discourse seems to be fundamentally based on solution analysis. It appears that neither comparative education or policy studies discourse is a frame for this capacity. In this instance, PAF displays the highest count.

*The challenge topic section findings indicate that differential patterns demonstrate either equal lowest occurrence frequency or tally in midpoint between comparative education and policy.*

## 4.02 DATA

Discourse knowledge domain facet analysis is based on the occurrence of positive responses to survey questions. In this segment, the responses are displayed according to the year of publication.

	THEORY CE				THEORY PS				THEORY PAF				TOTAL	
	Per Year	00	01	02	T	00	01	02	T	00	01	02	T	Total
E-SOCIETY		20	30	40	90	0	5	15	20	4	15	21	40	150
E-SYSTEMS		14	14	32	60	7	11	42	60	13	19	48	80	200
E-ORGANIZATION		0	13	17	30	9	13	18	40	0	2	8	10	80
T- SOCIAL		7	12	21	40	11	23	36	70	4	26	50	80	190
T-POLITICAL		8	21	31	60	8	15	17	40	9	19	32	60	160
T-ECONOMIC		11	13	26	50	6	14	20	40	10	10	10	30	120
O-PHILOSIPICAL		10	11	29	50	14	13	33	60	7	11	22	40	150
O-GOVERANCE		27	14	9	50	2	21	27	50	1	26	43	70	170
		.METHOD MOD.CE				METHOD MOD. PS				METHOD MOD. PAF				Total
		00	01	02	T	00	01	02	T	00	01	02	T	Total
E-QUANTTTATIVE		11	10	9	30	37	22	21	80	13	9	8	30	140
E-QUALITATIVE		<b>1</b>	<b>3</b>	<b>6</b>	<b>10</b>	<b>52</b>	<b>49</b>	<b>49</b>	<b>150</b>	<b>51</b>	<b>46</b>	<b>43</b>	<b>140</b>	<b>300</b>
T-EMPIRICAL		18	16	16	50	39	23	18	80	19	16	15	50	180
T-NON-EMPIRICAL		<b>28</b>	<b>27</b>	<b>15</b>	<b>70</b>	<b>63</b>	<b>33</b>	<b>24</b>	<b>120</b>	<b>56</b>	<b>35</b>	<b>19</b>	<b>110</b>	<b>300</b>
O-MICRO		15	8	7	30	49	24	17	90	15	11	4	30	150
O-MACRO		<b>27</b>	<b>22</b>	<b>21</b>	<b>70</b>	<b>52</b>	<b>29</b>	<b>29</b>	<b>110</b>	<b>40</b>	<b>37</b>	<b>43</b>	<b>120</b>	<b>300</b>
		CHALLENGES CE				CHALLENGES PS				CHALLENGES PAF				Total
		00	01	02	T	00	01	02	T	00	01	02	T	Total
EINTERNATIONAL		21	22	27	70	26	29	55	110	2	18	50	70	250
ETRANSNATIONAL		16	3	1	20	63	4	3	70	25	11	4	40	130
E-NATIONAL		17	14	9	40	14	36	80	130	3	52	55	110	280
T-NETWORK		0	0	0	0	5	6	9	20	6	23	11	40	60
T-ASSOCIATION		11	6	3	20	29	7	4	40	0	0	0	0	60
T-INSTITUTIONAL		<b>25</b>	<b>27</b>	<b>28</b>	<b>80</b>	<b>30</b>	<b>32</b>	<b>48</b>	<b>110</b>	<b>8</b>	<b>17</b>	<b>85</b>	<b>110</b>	<b>300</b>
O-PROBLEM ANA		<b>8</b>	<b>13</b>	<b>19</b>	<b>40</b>	<b>30</b>	<b>30</b>	<b>80</b>	<b>140</b>	<b>21</b>	<b>39</b>	<b>60</b>	<b>120</b>	<b>300</b>
<b>O-SOLUTION ANA</b>		21	24	25	70	53	21	6	80	26	28	66	120	270

Table 4-5 Raw Data per Year: *This table lists the occurrence of all knowledge domain facets, within each disciplinary grouping for each year under investigation.*

*T = Total of yearly (00-2000, 01- 2002, 01-2002) positive response for each facet inquiry*  
...  
*Facets accounting at 0 are marked with red indicators.*  
*Facets totaling 300 are marked with bold indicators.*

Given that the survey population of this study is written discourse, there exist no non-respondent population. Given the limited representation of disciplinary discourse, there is no absentee source population and no limit in source population availability leaving a high rate of return and low deficiency quota. The population count, although low, fills the percentage necessary to establish full disciplinary identity constraints. Thus, the following segment analyses the frequency of occurrence of responses according to the frequency of distribution as concerns knowledge domain facets per year, followed by a tabular findings segment.

#### 4.02.1 FREQUENCY DISTRIBUTION

This segment comparatively evaluates patterns revealed in the research findings, including items with extreme positive or negative counts and co-relational construct determinants to formulate mapping for differential patterns in discourse. This count addresses knowledge domain facets as revealed in theory, methodological models and challenge topic categories. It is an examination of the flow of discourse citations within each ETO grouping as concerns overall count and year of publication flow. This examination is formatted in examination of Raw Data per Year Table 4-5 from a top down position. In this table, the T= represents the total of yearly positive responses for each facet inquiry. The symbols representing year of publication are 00 for the year 2000, 01 for the year 2001 and 02 for the year 2002. Facets totaling 300 are marked with bold and totals at the other extreme of 0, are marked in red script. Each categorical analysis is framed by pattern, extreme and construct analysis.

As Iveta Silova states, “Whereas the re-contextualization processes of the borrowed educational practices have been well document<sup>42</sup>... very few studies engage in a detailed examination of the transfer of education discourses.... Transfer of discourse and its relationship to greater social, economic and political transformation, leading to constitution, reproducing and changing systems of knowledge...”(Silova, 2002, p.90). This index evaluation of mapping differential discourse patterns aims at taking a step in this direction. The following segments of the Raw Data per Year table (See Table 4-5) represent the count of sources categorized according to response in survey. The specific categories occur out of 300 possible occurrence factors within all discourse sources examined by disciplinary identity..

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<sup>42</sup> Listed as references is Robertson & Waltman, (1993) Phillips, (1993) Halpin & Troyna, (1995) Spreng, (2001)

The examination of epistemological legitimacy via theory categories are society, systems and organization juxtaposed with comparative education, policy studies and ‘policy advice formation’ discourse published in 2000, 2001 and 2002. The functional total giving positive response in all disciplinary domains follows numbered occurrence of co-variants. It must be noted that each numeric total carries a possibility of 300 positive responses. Therefore, findings reveal the frequency of occurrence for each category in the year of publication. These results yield the pattern of knowledge differentiated by disciplinary identity. For example, Table 4-5A list 120 society category responses in the total discourses surveyed. Therefore, the frequency of distribution is an examination of 1) patterns of findings (*pattern*), 2) extremes such as 0 count and 300 count results (*extreme*), 3) the findings implications as concerns mapping communicative dynamics (*construct*).

	THEORY CE				THEORY PS				THEORY PAF				TOTAL
<i>Per Year</i>	00	01	02	T	00	01	02	T	00	01	02	T	Total
E-SOCIETY	20	30	40	90	0	5	15	20	4	15	21	40	150
E-SYSTEMS	14	14	32	60	7	11	42	60	13	19	48	80	200
E-ORGANIZATION	0	13	17	30	9	13	18	40	0	2	8	10	80

Table 4-5 A: Epistemological Legitimacy via Theory Facet

### **Pattern**

As to the epistemological legitimacy via theory category, it is clear that CE, PS and PAF hold the majority count for obtaining epistemological legitimacy from system theory. If merger conceptualization holds than ‘policy advice formation’ discourse should fall between the two extremes in an area, the results support this notion. It would seem that ‘policy advice formation’ discourse is positioned at the mid-point in all domains and mostly that systems is the dominant theoretical source for establishing epistemological legitimacy.

**Extreme**

The high rate of frequency distribution for systems theory when compared to society or organization indicates an increase in systems analysis. While all facets evidences some level of growth from 2000 to 2002, systems increased at a higher rate in all disciplinary categories. It must be noted that comparative education and ‘policy advice formation’ discourse published in 2000 evidenced null responses for organization. Policy studies discourse had the same effect for society constructs.

**Construct**

The findings in epistemological legitimacy via theory knowledge domain indicate that comparative education represent a higher reference to society constructs than either policy studies or ‘policy advice formation’. Policy advice formation tallies higher responses in systems and policy study is the highest in organization. However, most evident is the configuration of systems responses. The responses in this category were significantly higher than any other category in this domain.

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	THEORY CE				THEORY PS				THEORY PAF				TOTAL
<i>Per Year</i>	00	01	02	T	00	01	02	T	00	01	02	T	Total
T- SOCIAL	7	12	21	40	11	23	36	70	4	26	50	80	190
T-POLITICAL	8	21	31	60	8	15	17	40	9	19	32	60	160
T-ECONOMIC	11	13	26	50	6	14	20	40	10	10	10	30	120

Table 4-5 B: Typological Capacity via Theory Facet

**Pattern**

The findings of typological capacity via theory knowledge facet indicate that all CE, PAF and PS express social constructs. CE has a higher level of response in political theory. While the frequency distribution for economic theory appears sound, it has

a lower tally of occurrence than the other facets in this domain with an increasing pattern, except in PAF, for year of publication from 2000 to 2003.

### **Extremes**

As table 4-5 B shows, no extremes of 0 nor 300 appear in frequency distribution for any category. However, the tallies of count for the social facet resulted in a higher frequency than the other domains. The annual flow is more directed to increases or decreases. It also appears, from this count that co-relational aspects influence distribution in this domain. For instance, no category tallied at any extreme indicating that the field tallied even distribution of responses. CE tallied 40, 60, 50: PS tallied 70, 40, 40 and PAF tallied 80, 60, 30. The index of frequency distribution averages between 30-80 for differential margin of 50. Therefore, it is reasoned that all facets in this domain are categorically co-relevant to typological capacity via theory.

### **Construct**

The findings in the typological capacity via theory knowledge domain indicate that the highest total of responses is social categorization constructs. While political and economic constructs average in mid-range, they are significantly lower than social. Comparative education distributes a frequency of social 40, political 60, and economic 50. Policy study distributes a frequency of social 70, political 40 and economic 40. 'Policy advice formation' distributes a frequency of social 80, political 60 and economic 30. It is noted that PAF only obtains a mid-point in the economic facets while equally to comparative education in the political facet and outnumbering both CE and PS in social facet response.

\*\*\*\*\*

	THEORY CE				THEORY PS				THEORY PAF				TOTAL
<i>Per Year</i>	00	01	02	T	00	01	02	T	00	01	02	T	Total
O-PHILOSIPHICAL	10	11	29	50	14	13	33	60	7	11	22	40	150
O-GOVERANCE	27	14	9	50	2	21	27	50	1	26	43	70	170

Table 4-5 C: Ontological Validity via Theory Facet

**Pattern**

The findings of ontological validity via theory knowledge facet (see Table 4-5 C) indicate an even distribution for philosophical and governance facets. CE has a even level of response in both categories. PS has a distribution difference of less than 10 responses for count of 60 and 50. In this domain, PAF shows more response that is variable at 40 and 70. All domain facet responses fall in average ratio of response, which is between 30 and 70. However when compared the total for governance outweighs the total of responses for philosophical at 170 to 150. While the frequency distribution for philosophical theory appears sound, it has a lower tally of occurrence than governance. in this domain. An increasing pattern appears for year of publication from 2000 to 2003 for philosophy. However, the rate of response reveals decrease in governance for CE and increase for both PS and PAF.

**Extremes**

No extremes of 0 or 300 appear in frequency distribution for any category. However, the tallies of count for PS and PAF in the realm of governance in 2000 showed only very low response of 1 and 2 respectively. The level of response increased dramatically in 2001 and 2002. In 2002, the index averaged between 30-



80. The results do not indicate a mid-point index concerning PAF as related to result from CE and PS.

### Construct

The findings in the ontological validity via theory knowledge domain indicate that the highest total of responses is governance categorization constructs. While philosophical constructs average in mid-range, they are lower than governance. Comparative education distributes a frequency of philosophical 50, and governance 50 indicates even distribution of this construct. Policy study distributes a frequency of philosophical 60 and governance 50 indicating a close co-relational knowledge construct. Policy advice formation distributes a frequency of philosophical at 40 and governance at 70. It is noted that PAF only obtains 40 in the philosophical facets while obtaining a count for governance of 70. The total count of 150 for philosophical and 170 for governance as well as the increase in governance construct after 2000 indicates a flow of knowledge for PS and PAF toward governance. It also indicates a decrease in the process of establishment of ontological validity via governance theory in comparative education.

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	.METHOD MOD.CE				METHOD MOD. PS				METHOD MOD. PAF				TOTAL	
	00	01	02	T	00	01	02	T	00	01	02	T	Total	
<i>Per Year</i>														
E-QUANTITATIVE	11	10	9	30	37	22	21	80	13	9	8	30	140	
E-QUALITATIVE	1	3	6	10	52	49	49	150	51	46	43	140	300	

Table 4-5 D: Epistemological Legitimacy via Methodological Models

### Pattern

The findings of epistemological legitimacy via methodological models knowledge facet for comparative education indicate neither a dominance of quantitative or

qualitative pattern. CE has consistently low-level response totals: 1 in 2000, 3 in 2001 and 6 in 2002. On the other hand, both policy studies and 'policy advice formation' discourse revealed high counts in the qualitative facet. Policy studies totally in 150 while PAF at 140. The only discipline in the average count index for quantitative is policy study with a relatively high count of 80. It seems that comparative education has no different pattern in the facet domain. It also seems that policy study shows an increase towards qualitative methodological model to establish epistemological legitimacy. It also seems that while decreasing emphasis on both methodological models, policy studies shows the highest rate of response for qualitative methods.

### **Extremes**

A 300-response total appears in frequency distribution in the qualitative methodological model category with highest level of responses in policy studies discourse published in 2000. The flow seems to decline in each category within each consecutive year. It also appears from this count that co-relational aspects influence distribution in this domain. For instance, all facets and most disciplinary categories show decline. The distribution indicates the methodological models are less frequently utilized to establish epistemological legitimacy. CE tallied 11, 10, 9 for quantitative and 1, 3, 6 for qualitative. PS displayed a clear decline tallying for both quantitative and qualitative facets. PAF also distributed a declining pattern with quantitative at 13,9,8 and qualitative at 51,46,43. Therefore, it is reasoned that most facets in this domain are categorically co-relevant and exhibit a pattern of decline.

### **Construct**

The findings in the epistemological legitimacy via methodological model domain indicate that the highest total of responses has been qualitative analysis categorization constructs. However, it is noted that the results indicate a decline in

every category. In this domain, there is a vague middle ground between comparative education and policy studies for both quantitative and qualitative facets. Both comparative education and policy advice formation distribute a frequency of 30 with year of publication decline. However, in addition to decline, policy study discourse counts total 80. However, in the qualitative facets, policy advice formation is closer to policy study positive responses with a high level of 140. Therefore, while the overall facet is declining, epistemological legitimacy seems to be articulated in discourse via qualitative methodological models.

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	.METHOD MOD.CE				METHOD MOD. PS				METHOD MOD. PAF				TOTAL
<i>Per Year</i>	00	01	02	T	00	01	02	T	00	01	02	T	Total
T-EMPIRICAL	18	16	16	50	39	23	18	80	19	16	15	50	180
T-NON-EMPIRICAL	28	27	15	70	63	33	24	120	56	35	19	110	300

Table 4-5 E: Typological Capacity via Methodological Models

### Pattern

The findings in typological capacity via methodological modes indicate that policy studies carry a larger and more diverse range in both empirical analysis at a count of 80 and non-empirical analysis at a count of 120. A diversity, which concerns the matter of objective reality, the notion positions the point of view of the author(s) as the source of justification of argumentation. In essence, a discourse built on either empirical or non-empirical methodological models with linkage to a particular problem or phenomenon. Empirical describes data which functions in experimental or observational justification of the problem or phenomenon examined. Non-empirical describes data, which functions in all other purposes to justify problem or phenomenon examination. As such, this pattern possesses that typological capacity in policy studies mostly defined by non-empirical objective reality. The dominant

occurrence in both comparative education and policy advice formation seems to follow this trend with non-empirical out numbering empirical analysis.

### **Extremes**

The total non-empirical analyzes of knowledge facet in this domain tallied at an extreme of 300. Therefore, all disciplinary groupings revealed high counts in this facet. Comparative education discourse tallied 70, policy studies discourse tallied 120 and 'policy advice formation' discourse tallied 110. Therefore, it conveys a more distinct use of non-empirical methodological models. From this vantage point, it is clear that all disciplinary groupings hold the majority counts for obtaining typological capacity via non-empirical methodological models.

### **Construct**

The frequency distribution for typological capacity knowledge facets when compared with the 3-year time period reveals significant decline in the use of both empirical and non-empirical methodological models (See Table 4-5E). The data displays a decline in all disciplinary categories in both empirical and non-empirical knowledge facets. This decline seems gradual with comparative education positioning in empirical from 18 to 16 and non-empirical at 28 to 15 from the year 2000 to 2003. The grandest decline is noted in the non-empirical facets for both policy studies and policy advice formation. Policy studies show counts declining from 62 to 24 and policy advice formation with counts declining from 56 to 19 in a 3-year time space. These given declines seem to reflect decreasing emphasis on methodological models to establish typological capacity. In total, it seems to reflect differentiation of objective reality definition.

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	.METHOD MOD.CE				METHOD MOD. PS				METHOD MOD. PAF				TOTAL
<i>Per Year</i>	00	01	02	T	00	01	02	T	00	01	02	T	Total
O-MICRO	15	8	7	30	49	24	17	90	15	11	4	30	150
O-MACRO	27	22	21	70	52	29	29	110	40	37	43	120	300

Table 4-5 F: Ontological Validity via Methodological Models

### Pattern

The findings in ontological validity via methodological models indicate a similar pattern as with both epistemological and typological domain facets. In this respect, policy studies carry a larger and more diverse range in both microanalysis and macro-analysis at a total count of 90 and 110 respectively (See Table 4-5F).

### Extremes

There are no null tallies for this domain. The total count in the macro analysis knowledge facet in this domain tallied at an extreme of 300. Therefore, all disciplinary groupings revealed high counts in this facet. Comparative education discourse tallied 70, policy studies discourse tallied 110 and ‘policy advice formation’ discourse tallied 120. Therefore, it conveys a more distinct use of macro-analysis as methodological models. From this vantagepoint, it is clear that all disciplinary groupings hold the majorities count for obtaining ontological validity via methodology (See Table 4-5F).

### Construct

The findings in the ontological validity via methodological models knowledge domain indicate that the principle facet is macro-analysis. It also shows a decline in usage within comparative education and policy studies discourse but an increase in ‘policy advice formation’. While this disciplinary category decreased usage from 40 to 37 between 2000 and 2001. It increases from 2001 to 2002 with counts at 37 going to 43. This transition in PAF reflects a total source count of 120, which is more than double the number of responses in any disciplinary category for micro

analysis. (See Table 4-5F). This construct seems to be designed to ontologically validate methodological models presented in discourse.

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	CHALLENGES CE				CHALLENGES PS				CHALLENGES PAF				TOTAL
<i>Per Year</i>	00	01	02	T	00	01	02	T	00	01	02	T	Total
EINTERNATIONAL	21	22	27	70	26	29	55	110	2	18	50	70	250
ETRANSNATIONAL	16	3	1	20	63	4	3	70	25	11	4	40	130
E-NATIONAL	17	14	9	40	14	36	80	130	3	52	55	110	280

Table 4-5 G: Epistemological Legitimacy via Challenge Topics

**Pattern**

Challenge topic knowledge domain facet categories refer to problem or phenomenon under investigation. It is not a question of the issue under evaluation in specific discourse nor the topic discussed but rather the core frame by which that knowledge information is communicated. Epistemic legitimacy via challenge topics is therefore, a question of national, transnational and/or international frame of the issue or topic.

In this domain, the findings reveal a pattern of high response in both national and international facets within all disciplinary groups. It finds comparative education with total of 70 in international, 40 in national and only 20 in transnational. The study found 110 in international, 130 in national and 70 in transnational for policy studies. As to policy advice formation, the study found 110 in national, 70 in international and 40 in transnational. In all disciplinary groupings transnational or continental frames were the least referenced. However, the occurrence in both policy studies and policy advice formation were within the standard average of 30-70 for this study. This indicates a pattern of occurrence and implies differential pattern as concerns this facet. (See Table 4-5 G).

## **Extremes**

In this realm, the findings suggest that the discourse has a tendency to either frame the issue or topic internationally or nationally. Extreme declination is found in transnational for all disciplinary groupings with CE recording from 16 to 1, PS from 64 to 3 and PAF from 25 to 4 in the years from 2000 to 2002 (See Table 4-5G). When compared to international and national which display increases in the 3-year time space, the results indicate an extreme de-categorization of knowledge from transnational to either an international or national frame of reference.

The other extreme found that in PAF an extreme in both international from 2 to 50 and national 3 to 55 during the 3 year period under investigation. Therefore, it would seem that PAF re-positioned epistemological legitimacy by re-framing challenge topics within either national or international frames instead of transnational or continental geographic context. For example, discussion of the expansion of Europe has been re-framed within a global geographic context.

## **Construct**

A triangular distribution pattern displaying the distribution juxtaposing disciplinary grouping with epistemic legitimacy challenge topic facets. From this perspective, the overlap is more apparent. Transnational knowledge facets display an issue coupling international and national framing. It is therefore, concluded that transnational does not represent a different epistemic legitimacy facet but represents the overlap in international and national dynamics of communication. It fuses international or global and transnational or continental in communications. Thus, the findings bring the notion of transnational geographic interrelationship between two or more specific nation-states into the realm of global cultural interrelations.

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	CHALLENGES CE				CHALLENGES PS				CHALLENGES PAF				TOTAL
<i>Per Year</i>	00	01	02	T	00	01	02	T	00	01	02	T	Total
T-NETWORK	0	0	0	0	5	6	9	20	6	23	11	40	60
T-ASSOCIATION	11	6	3	20	29	7	4	40	0	0	0	0	60
T-INSTITUTIONAL	25	27	28	80	30	32	48	110	8	17	85	110	300

Table 4-5 H: Typological Capacity via Challenge Topics

### Pattern

The findings of typological capacity via challenge topic indicate the communicative dynamics in which the discourse is formatted. It indicates which communicative dynamics provide typological capacity for the examination of the problem or phenomenon under discussion.

The findings revealed that for all disciplinary groupings communicative discussion of problem or phenomenon via institutional. The comparison of network, association and institution revealed institutional had the highest count. Comparative education demonstrated 0 network dynamics in every year under investigation. CE only recorded 11 in 2000, 6 in 2001 and 3 in 2002 as concern association dynamics. Policy studies exhibited a similar pattern in association with decline from 29 to 4 within the same period. However, it shows a modest increase in network dynamics from 5 to 9, which does not fall within the average range of 30 to 70 counts. It is also noted that PAF recorded 40 occurrences for network and PS recorded 40 for association. In comparison to each of their counts the increases in network and association dynamics seems minimal (See Table 4-5 H).

### Extremes

The extremes in this domain tally 0 for every year under investigation in the category of comparative education juxtaposed with network and policy advice formation juxtaposed with association. Other counts below the average distribution were comparative education at a total of 20 for association and policy studies at a



total of 20 for network. Above the average range was the positive response tally for institute in all-disciplinary categories. Comparative education tallying 80, policy studies tallying 110 and policy advice formation tallying 110 for a overall extreme rating of 300 (See Table 4-5 H).

It is also noted that all disciplinary grouping tallied decrease within a 3-year time period in association with overall count of 60. While the overall count for network was also 60 references, the count shows gradual increase in both policy studies and policy advice formation. On the one hand, policy studies listed an increase from 5 in 2000 to 9 in 2002. On the other hand, policy advice formation listed an increase from 6 in 2000 to 11 in 2002 (See Table 4-5 H).

### **Construct**

Both association and network dynamics are, in the low levels with notice of gradual increase in network dynamics, for policy study formation. The linkage of this dominance of network dynamics and policy advice formation reveals the initiation of pattern trend. The pronounced linkage of policy studies and association dynamics also predicts this trend. The remarkable adherence of all-disciplinary fields and institutional dynamics in which problems or phenomenon occur reasoned that within the institution other dynamics are prevalent for the capacity of investigation such as networking for the formation of policy advice and association for policy study. From these found patterns and recognized extremes the construct holds that networks and association are increasing a matter of educational policy dynamics situated within a scope of institutional space.

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	CHALLENGES CE				CHALLENGES PS				CHALLENGES PAF				TOTAL
<i>Per Year</i>	00	01	02	T	00	01	02	T	00	01	02	T	Total
O-PROBLEM ANA	8	13	19	40	30	30	80	140	21	39	60	120	300
O-SOLUTION ANA	21	24	25	70	53	21	6	80	26	28	66	120	270

Table 4-5 I: Ontological Validity via Challenge Topics

### Pattern

The findings of ontological validity via challenge topic knowledge facet includes problem analysis and solution analysis constructs. The large count tally in this domain is amongst the rare occurrence results that dominate a specific domain with problem analysis totaling 300 and solution analysis totaling 270. The average total<sup>43</sup> is approximately 190 for all 22 categories. This category brings to question how specific discourse brings ontological validity to the purpose of analysis.

Validate purpose refers to the action of author(s) in discourse that relate the purpose of the discourse to the area being assessed for problem analysis and/or solution analysis. It reasons that CE, PS and PAF disciplinary objectives carry either a purpose to analysis education problem/phenomenon or frame solution to the problem and/or phenomenon. In this case, the findings are quite obviously linked to disciplinary orientation. Comparative education reveals a count in these two areas than either policy studies or policy advice formation. The main threshold for problem analysis is policy studies with a count increasing in the 3 years under investigation to a tally total of 140. Policy advice formation reveals threshold for solution analysis with a count increasing in the 3 years under investigation to a tally total of 270 (See Table 4-5I).

While solution analysis is evidently the main ontological validity focus of comparative education, it holds a consistent count of 21, 24 and 25 for 2000, 2001

<sup>43</sup> Average total is tallied by addition all total count of occurrence for every facets (row 5 on Raw Data Table 4-1) divided by the number of survey facets 22.

and 2002. In the same time period comparative education demonstrates an increase in problem analysis with counts of 8, 13, 19 from 2000 to 2003. On the other hand, policy studies had in 2000 and 2001 an average frequency distribution of 30 in problem analysis and increased dramatically to a count of 80 by 2002. It also displayed a significant decline from 53 to 6 in the area of solution analysis. However, policy advice formation displayed increase in both categories from below average at 21 and 26 in 2000 for problem and solution analysis in 2000, to 60 and 66 in 2002 respectively (See Table 4-5I).

### **Extremes**

On the one hand, no extremes of 0 appear in frequency distribution for either category. On the other hand, both categories display high frequency distribution totals. Problem analysis counts 300 and solution analysis counts 270. This result reveals a trend towards the establishment of ontological validity by either problem or solution analysis or by usage of both knowledge facets.

### **Construct**

Due to the resultant tally of both facets at average in all three disciplinary groupings, the construct seems to co-relate both knowledge facets. It seems that problem analysis has been coupled with solution analysis effecting increase in either facet within disciplinary groupings, which were low in 2000. For example, comparative education started in 2000 at a count of 8. In 2002, CE more than doubled this count. The same is evident in policy advice formation, which nearly tripled the usage of problem analysis and more than quadrupled the usage of solution analysis for establishing ontological validity. Therefore, it would seem no differential pattern exists in regards to problem analysis and solution analysis for ontological validity of knowledge in comparative education, policy study or policy advice formation discourses. All disciplines continually establish ontological validity via both solution and problem analysis.

#### 4.03 Tabular Findings

It must be noted that according to the publication listing, Carfax Publishing House represents more than half of the citation sources. In that regard, it must be noted that Carfax carries the lion's share of educational publication particularly in comparative education and policy studies journals. In the domain of books and university/conference papers publishing houses vary by distribution. Therefore, it must be stated that there may be influence by the mission and principles of publishers. To this issue, it must be noted that all Carfax journal publications are attended by differentiating editors, countries of publication and mission statements. Therefore, this study incorporated a vast selection of Carfax journal citations from Comparative Education to European journal of Education to Gender, Place and Culture publications. In essence, 31 Carfax journals were assessed according to the selected keywords. In this way, the frequency distribution tallied under a square root of 1/1000. The manipulation check is framed in accordance with the work of Berryman-Fink and Verderber (1985, pp.164-280). The internal consistency is reliable at 97 percent. Marschall and Rossman reduction and interpretation (Fink, 1989, p.116-119) the scale which reasons contextual sources like Carfax represent an consistency aspect of the discourse journal publication and provide a reliable coding function in all three disciplinary directions.

The sum distribution of knowledge facets represents a firm ratio of the number exhibiting a particular facet within a specific disciplinary grouping. It must be noted that between 2000 and 2002, the number of disciplinary direction cites in each year were sentimentally diverse. The number of comparative education citation outnumbered those of the other disciplines in 2000 but the number of 'policy advice formation' cites, in the same publishing houses out numbered both policy study and comparative education disciplinary groupings. In the end, the sum

average withheld the assumption that an average of documentation would give support for pattern analysis. The agent of a more specific determination of pattern knowledge facets would require further more detailed study.

#### 4.03.1 COMPARISON OF PERCENT

The comparison of percent recorded in table 4-6 lists both the percentage of response per category and the differential ratio of knowledge domain by TMC category for ETO facet knowledge character. The percentage of response lists the positive response percentage each character tallied with the total tallied for the category. The differential ratio lists the total positive responses as compared to the possible count of 300 responses.

			<i>Percentage of Responses per category</i>	<i>Differential Ratio</i>
Theory	E	Society	0.40	120/300
		Systems	0.67	200/300
		Organization	0.30	90/300
	T	Social	0.63	190/300
		Political	0.53	160/300
		Economic	0.40	120/300
	O	Philosophy	0.50	150/300
Governance		0.57	170/300	
Methodological Models	E	Quantitative	0.47	140/300
		Qualitative	1.00	300/300
	T	Empirical	0.60	180/300
		Non-Empirical	1.00	300/300
	O	Micro Analysis	0.50	150/300
Macro Analysis		1.00	300/300	
Challenge Topics	E	International	0.83	250/300
		Transnational	0.43	130/300
		National	0.93	280/300
	T	Network	0.20	60/300
		Association	0.20	60/300
		Institution	1.00	300/300
	O	Problem Analysis	1.00	300/300
Solution Analysis		0.90	270/300	

Table 4-6 Comparison of Percentage for frequency distribution of all knowledge facets

*Note: Ratio refers to the rate at which a specific category occurs out of 300 possible occurrences factor within all discourse sources examined. It is not framed within an absolute percentage of all epistemic theory categories and the non-compliance ratio. Each percentage represents a whole in the specific category referenced.*

Comparisons of percent categories, which count above and below the norm range of 30 to 70 percent of positive responses, are omitted. The categories that failed to reach the norm of 30% were CE – qualitative and network;; PS-society and network, as well as, PAF organization and association. It is therefore, concluded that institution is the predominant option exercised for establishment of epistemological legitimacy of challenge topics. The comparison of percent also evidences those categories, which tallied a count above the highest average of 70%. The categories are CE-institutional, PS- (all methodological model categories: quantitative, qualitative, empirical, non-empirical, micro analysis, macro analysis), national, institutional, problem analysis, solution analysis; PAF- systems, social, qualitative, non-empirical, macro analysis, national, institutional, problem analysis and solution analysis.

In general, TMC findings reveal a specific knowledge facet in each ETO domain. As concerns theory, (See Table 4-6A) the epistemological legitimacy seems to be establishing in discourse mainly via systems. In this category, the typological capacity seems to be establishing in discourse mainly via social constructs and the ontological validity mainly via governance.

Theory			<i>Percentage of Responses per category</i>	<i>Differential Ratio</i>
Theory	E 46%	Society	0.40	120/300
		Systems	0.67	200/300
		Organization	0.30	90/300
	T 52%	Social	0.63	190/300
		Political	0.53	160/300
		Economic	0.40	120/300
	O 36%	Philosophy	0.50	150/300
		Governance	0.56	170/300

Table 4-6 A: This table is a reprint of the first segment (Theory) of Table 4-6

In the theory domain, the findings were tallied for percentage out of 300 possible responses. The epistemological legitimacy category tallied 46%. The typological capacity category tallied 52%. The ontological validity category tallied 36% (See Table 4-6 A). It would seem that theory is a dynamic of discourse, which is primarily used to establish typological capacity via social construct knowledge. A comparison of these tallies against the raw data (See Table 4-6) reveal that social construct domain represents 190 (the greatest number) responses of typological capacity via theory responses. As compared to response index for all theory domain facets, typological capacity tallies 52%. Epistemology tallied 46% and ontological tallied 36% out of 300 possible responses. Systems category responses outnumbered society and organization constructs for establishment of epistemological legitimacy via theory. Governance option for the establishment of ontological validity as concerns theory, the highest response category in theory tallied at typological capacity in all three disciplinary groupings. The typological capacity via theory tallied an overall count of 470. The epistemological legitimacy via theory tallied 410 and ontological validity tallied 320.

Methodological Models	E 49%	Quantitative	0.47	140/300
		Qualitative	1.00	300/300
	T 53%	Empirical	0.60	180/300
		Non-Empirical	1.00	300/300
	O 50%	Micro Analysis	0.50	150/300
		Macro Analysis	1.00	300/300

Table 4-6 B: This table is a reprint of the middle segment (methodological models) of Table 4-6

For methodological models (See Table 4-6 B), the findings are clear at tallied within the average range in all ETO domains. It finds epistemological legitimacy via qualitative analysis, typological capacity via non-empirical analysis and ontological validity via institutional dynamics. As concerns challenge topic the findings, reveal



preferences for typological capacity via non-empirical methodological models. In the domain, typological capacity seems the clear methodological model utilized in discourse. However, the total response index demonstrates a close result with epistemological legitimacy totaling 440 and ontological validity totaling 450. This close relationship brings to question the primary reference for the either legitimacy, capacity or validity of methodological models. Disciplinary groupings are at issue as to this concern. In this domain, comparative education has a no clear preference.

The findings show decrease in every category with the highest total in 2002 below the norm of 30. In this year, comparative education shows the highest rate of response at 21 with a three-year total of 70 (see Table 4-6). Policy studies is clear in preference for the establishment of epistemological legitimacy via qualitative analysis, however, it also displays decline in this domain from 2000 to 2003. Policy advice formation also displays decline for every category except ontological validity via macro-analysis for methodological models. These findings suggest a pattern to decrease either the establishment of legitimacy, capacity or validity via methodological model. The only difference is rooted in the establishment by policy advice formation of ontological validity via macro-analysis methodological model constructs. The findings suggest that ontological legitimacy via macro-analysis is the differential pattern of methodological model specific to policy advice formation. The other two disciplinary groupings display declining interest in any justification of methodology model within discourse.

Challenge Topics	E 73%	International	0.83	250/300
		Transnational	0.43	130/300
		National	0.93	280/300
	T 47%	Network	0.20	60/300
		Association	0.20	60/300
		Institution	1.00	300/300
	O 56%	Problem Analysis	1.00	300/300
		Solution Analysis	0.90	270/300

Table 4-6 C: This table is a reprint of the last segment of Table 4-6

In the domain of challenge topics (See Table 4-6 C) the response results in a clear frequency of distribution. Every disciplinary grouping indicates the establishment of epistemological legitimacy via both international and national categories for challenge topics. The international knowledge facet tallied at 83% and the national knowledge facet tallied at 93%. The overall epistemological domain represents 73% of the 300 possible responses, while typological counted 47% and ontological counted 56%. It must be noted that although both institutional typology and problem analysis ontology counted 300 out of 300. These categories were under-represented in the final count. As to category comparison, challenge topic held the highest count of ETO generated response options. For ETO categorical responses, theory carried 1220, methodological models carried 1370 and challenge topics carried 1650.

	<b>Theory</b>	<b>Methodological Model</b>	<b>Challenge Topic</b>	<b>Total</b>
E.L.	430	440	660	1530
T.C.	470	480	420	1370
O.V.	320	450	570	1340
<b>Total</b>	1220	1370	1650	

Table 4-7: Categorical Count: The table lists the total count index for ETO juxtaposed with TMC categories.

*E.L.* = *Epistemological Legitimacy*, *T.C.* = *Typological Capacity*, *O.V.* = *Ontological Validity*

#### 4.03.2 COMPARISON OF OCCURRENCE

The comparison of occurrence is an analysis of the sum total responses from all facets for each disciplinary category. In this segment, the comparison of facets in regard to disciplinary identity is based on the occurrence frequency. Occurrence 1 is based on disciplinary category, while occurrence 2, which follows, is based on year of publication.

			CE	PS	PAF
Theory	E	Systems	60	60	80
Methodological Models	O	Macro-analysis	70	110	120
Challenge Topics	T	Institutional	80	110	110

Table 4-8 Comparison of Occurrence

The most occurring knowledge facet juxtaposed by disciplinary self-identity category by disciplinary grouping.

The finding, displayed in Table 4-8, suggests that the most frequently occurring ETO patterns are system theory, macro-analysis methodological models and institutional challenge topics. It is also noted that policy advice formation seems to have developed an independent space in the establishment of epistemological legitimacy via systems theory, social typological capacity and ontological validity governance (See Table 4-1). While this category is the primary focus for all disciplinary groupings, PAF seems to exhibit a higher frequency distribution in all dominant facets. It takes a leadership role in the methodological model and challenge topic areas of knowledge discourse. It must be noted that comparative education discourse seems to exhibit a foundation role in knowledge legitimization, capacity and validity processes, while policy studies occupies the leadership role in the majority of categories. That is with the exception of theory.

### Comparison of Occurrence (2)

The comparison of occurrence is an analysis of the sum total responses from all facets for each disciplinary category. In this segment, the comparison of facets in regard to disciplinary identity is based on the occurrence frequency. Occurrence 2, is based on year of publication.

			2000	2001	2002
Theory	E	Systems	34	44	122
	T	Social	22	61	107
	O	Governance	30	63	79
Methodological Model	E	Qualitative	104	98	98
	T	Non-Empirical	147	95	58
	O	Macro-analysis	119	88	93
Challenge Topic	E	International	48	69	132
		National	34	102	144
	T	Institutional	63	76	161
	O	Problem Analysis	59	82	159

Table 4-9 Comparison of Occurrence (2) by year in all disciplinary groupings. The most occurring knowledge facet juxtaposed by disciplinary self-identity category by year of publication. Thus, this figure maps ETO by TMC for all discourse examined juxtaposed with the year of publication.

In view of Table 4-9, it can be reasoned that epistemological legitimacy has been gradually obtained concerning the system knowledge facet. Likewise, typological capacity is obtained by social knowledge facets. In this fashion, it can be reasoned that ontological validity is obtained by governance theory knowledge facet. As concern methodological models the ETO knowledge facet display increasing decline in all facets. Challenge topic exhibits both international and national epistemological validity, institutional typological capacity and ontological validity via problem analysis.

	CE	PS	PAF	Total
T-NETWORK	0	20	40	60
T-ASSOCIATION	20	40	0	60
T-INSTITUTIONAL	80	110	110	300

Table 4-10: Typological Capacity of Challenges

The count of cites categorized by disciplinary self-identity according to existent in survey of specific knowledge domain facets.

It would seem that typological capacity theory, as an information source is most relevant in comparative education than the other disciplinary identities of this study. As to ontological validity, philosophy theory is more apparent in both policy studies and comparative education. It is not obvious to a significant degree in “policy advice formation” discourse.

The lowest facet frequency occurrence was in the category of typological capacity pertaining to network and association dynamics. The count in all-disciplinary identity (and note for all years of study) exhibited low levels.

As shown on table 4-10, there is no evidence of typological capacity of challenges for network in comparative education nor for association in ‘policy advice formation’ discourse. The low rate of return indicates that these facets are not yet relevant and may not ever become a part of the knowledge generated. However, some evidence of network typology is revealed in ‘policy advice formation’ discourse. Likewise, some evidence of association typology is revealed in policy studies. It would seem that comparative education discourse shows a low level of information concerning association dynamics and policy studies discourse concerning network dynamics.

In summary, survey questions determine the knowledge facet inventory selection for information logged into discourse knowledge domain facets. This study does not proceed in evaluation of knowledge facets but only aims at the identification of tier of knowledge facets. The epistemological legitimacy is a matter of discourse deficiency and asks why (theory), how (methodology models) and when (challenge topics). As to questions of 'where and who' of discourse for this study see the criteria for selection of disciplinary discourse identity. In short, who are comparative education, policy studies and 'policy advice formation' discourse? To the question of where: where is the answer - publication sources containing specific discourse.

The frequency distribution table links all empirical findings according to the number of knowledge facets found in each category with percentage from all 90 cites examined on the y-axis. The x-axis displays the ETO categories via chart composition with reference to MTC dynamics.

## Chapter 5

### 5.00 CONCLUSION

*“It is clear that schools are the most specialized of learning environments. In visual form schooling, education, and socialization may be thought of as concentric learning spheres in which education includes schooling and socialization includes both education and schooling.”*

Val D. Rust, 1977

The core motif of this research project was to ascertain if ‘policy advice formation’ can be a valid communicative discipline capable of discoursing educational standards using legitimate theories, methodological models and education challenge topics resulted in a positive answer. The study found ontological validity via theory conceptualization. It found methodological models seem to achieve typological capacity. It was also found that challenge topic is established via ontological validity. This finding is in keeping with the preliminary study finding that in TMC ontological validity and typological capacity are strong construction patterns as opposed to epistemological legitimacy facets. In every category, either typological capacity or ontological validity outscored epistemological legitimacy facets.

	Epistemic	Typological	Ontological
Theory	430	470	320
Methodological Models	440	480	450
Challenge Topics	380	420	570

Table 5-1 ETO-TMC; Dominant Facet Analysis

The analyses of dominate facets, which tally each ETO category of each Theory, Methodological Model and Challenge Topic facet against the total possible responses in that category. The results indicate that theory seems to be founded upon ontological validity factors as concerns all disciplinary identity categories. That is to surmise that communications in discourse is rooted on governance theory. The results also indicate that both methodological models and challenge topic frame communications in discourse on ontological validity facets. For methodological models, the core construct is non-empirical analysis. For challenge topics, the core construct is problem analysis. The findings indicate that epistemological legitimacy is outscored in responses in every facet category. These findings suggest that differential pattern in comparative education, policy studies and 'policy advice formation' discourse established ontological validity and typological capacity far more than concerns related to epistemological legitimacy of knowledge. For example, as table 5-1 exhibits, in the category of challenge topics 85% of 600 total responses categorized as ontological validity via problem analysis while only 73% of 300 total responses tallied for epistemological legitimacy and 47% tallied as Typological. The total tally count in this analysis is posed on the number of possible responses in each category. For example, The typological capacity and epistemological legitimacy categories tallied at 300 possible responses, while ontological validity tallied at 600 possible responses. The implications of difference in total response per category do not seem to have effect on the resultant percentage. In this study, it is noted that of the nine categories, four tallied at 300 and five tallied at 100. The result revealed a percent of error only .002 in comparison of response tallies. In analysis, this percent of error has no effect on the results.



To the core question, which asked ‘What are the epistemological legitimacy, typological capacity and ontological validity theories, methodological models and challenge topic parameters contained in discourse from normative comparative education and policy study that formulate policy advisement?’ The answer is yes. PAF discourse displayed epistemological legitimacy via systems, qualitative and international TMC categories with greater than 50% ranges. It also displayed typological capacity from social, non-empirical and institution determinants. PAF also displayed consistency with comparative education and policy studies concerning ontological validity with high categorical percentage in governance, microanalysis and solution advice in knowledge domain facets.

Future research becomes a matter of definition of each knowledge facet as conveyed in interdisciplinary fields of study. This recommendation is rooted in identification of differentiation patterns. For example, policy implementation differentiated from policy formation; schooling differentiated from socialization on educational agendas; humanitarian development of the individual differentiated from achievement through standardization etc. What is an international institutional system devoted to formulating policy advice for solution of social system governance challenges in a fashion that eliminates cultural and linguistic featured by qualitative, non-empirical micro-analysis? For example, an examination of dependent theory using a ‘un-certainty principal’ methodological models for assessment of borrowing, lending, reception and diffusion challenge processes is relevant for the formation of a cognitive map.

Neo-classical methodological model using macro nation satiric population studies and based upon society theory is not applicable cognitive design. As such, philosophical analysis of discourse is only evident in a small count of the current discourse and an even smaller occurrence segment in the interdisciplinary discourse. It can be reasoned that philosophy no longer provides the validity anchor for

current communications. In this case, governance theory is contained in the lion's share of specialized field discourse. It may be that philosophy remains the target ontological legitimacy communication theory of singular discipline communications as reflected in the counts for both comparative education and policy studies.

However, a calculation of the overall percentage of frequency distribution leads to a conclusive decline in philosophical theory as a tool of ontological validity with a distribution average under 25 percent for each of the contribution disciplines and significantly less for the communicative discipline. It can either be concluded that differentiated communicative disciplinary study communications seek validation of communication via governance orientation, or that communication publication houses are more inclined to publish presentations validated by governance theory, or there has been an change in discourse communicational development in educational which takes communication of its topics out of previously axiomatic philosophical validation and requires the development in governance oriented system theoretical philosophy. In other words, policy advice concerning educational challenges is formulated by global dynamics viewed from global typological variation. This construct is based upon global governance theory. 'policy advice formation' is not a matter of borrowing or lending but is a process of borrowing, lending, reception and diffusion.

The source of the advice is not a specific national context, but rather is derived from comparative analysis (generally drawn from a quantitative empirical macro-analysis method) of educational policy for solution analysis of contemporary problems. In other words, educational systems are not borrowing and lending national policy solutions, but rather formulating solution alternatives within international communities based upon research of policies existent in similar nation

states regions. This borrowing, lending, reception and diffusion<sup>44</sup> hold global social governance as the frame of education. Continued growth of this communicative disciplines echo revision and restatement of the theories and methods utilized for definition of population parameters. Webster's New World Dictionary 3<sup>rd</sup> edition, published in 1997, lists three separate definitions for borrowing, lending, reception and diffusion. The first in capital letters states 'HANDBORROW' which seems to be a frame carried by two people, each holding a pair of handles attached at either end. The second, 'wheel barrow', which is defined as 'a shallow, open box for moving a small load, having a single wheel in front forming a tripod with two legs in back, and two shafts with handles for raising the vehicles off its legs and pushing or pulling it'. The third, which is designed as chiefly British, 'a small cart with two wheels, pushed by hand'.

The next listing has two definitions. The first states, borrowing, lending, reception and diffusion is a heap of earth or rock covering a grave esp. an ancient one; tumulus'. The second states, 'a mountain: hill: now used only in English place nouns'. Such place nouns include Barrow Point, which is a nethermost point of Alaska: cape on the Arctic Ocean or Barrow-in-Furness, and a seaport in SW Cambria England, on the Irish Sea. The last listing defines barrow as 'a pig castrated before maturing'. Every definitive listing interprets 'barrow' as a noun either pertaining to the structure of transportation (a cart), an animal (a pig) or a geographical area.

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<sup>44</sup> The notion that practices of borrowing, diffusion, reception and lending policy is based on Gita Steiner-Khamsi's conceptualization of re-territorializing educational import. She argues that "research on educational transfer – educational borrowing and educational lending, educational reception and educational diffusion – constitutes a major field in international comparative education research" (Steiner-Khamsi, 2002, p.69). Although this conceptualization is squarely positioned in import-export communication dynamics centering on politician as decision making actors, the notion that knowledge communicative discourse is a field within the science of education is expressed. In this fashion she continuously interlinks policy makers and researcher with regard to educational convergence indicating that standardization is linked to globalization of reform knowledge challenge topics.

Reframing the term into a verb, borrowing, lending, reception and diffusion maintains the notion of both a structures of transportation and a geographical frame. In this fashion, 'Barrowing' unites images of borderless globalization with constructs of borrowing, lending, reception and diffusion. Borrowing, lending, reception and diffusion are thereby defined as a communicative process of knowledge distribution. The theory holds that for education, policy advice is distributive from a single source with multiple handlers throughout the world society. The borrowing, lending, reception and diffusion of educational 'policy advice formation' is neither borrowed nor lent, but produced in conjoined global/glocal relations, distributed via policy advice discourse. The diffusion and implementation of these policy advice statements is in the hands of the reception agents. The distribution is not. Borrowing, lending, reception and diffusion remains a heap of earth or rock covering a grave when it refers to historic policy from the age of mass educational institutions. In this case, new 'policy advice formation' provides the head stone putting to rest dynamics of nation specific policy development.

While legitimacy of policy adoption and implementation continues to be achieved by borrowing from other localities, the localities are only represented in the comparative analysis by empirical quantitative means. The question raised is 'Where did they borrow the policy from' and 'Who lent it to them?'. The answers are not forthcoming. The policy advice was formulated within network think tanks, association discussions, or institutional research and development projects.

As to the geographic sphere, Borrowing, lending, reception and diffusion Theory is much like Sir John Barrow's (1764 -1848), Arctic exploration. Sir Barrow explored the last undiscovered land mass of the world under the notion that the arctic panacea was not separated but firmly connected to continental structure. John Barrow discovered that oceanic disconnection of Alaska from the American

continents did not exist. Both land masses belonged to the same land mass. He also contended that in all probability, more Dead Sea exploration would dismantle the theory of a continental divide. Today there are some scientific discoveries supporting that notion. It may be that the earth's surface consists of connected landmasses and that the oceans that separate them are much like giant lakes or rivers flowing through cities. The populations on either side are not differentiated, but in most cases exhibit distinct cultural distinctions.

Whether the landmasses of the earth are actually unified is as yet unknown. However, the concept of international interconnection is a reality. Borrowing, lending, reception and diffusion theory maintains this thesis. Educational 'policy advice formation' discourse is communication about problem and solution of challenge topics examined by qualitative, empirical microanalysis of social governance systems existent within local geographic sites not entire nation-states. It achieves epistemic legitimacy via international evaluation of challenge topics by qualitative methodological models based upon systems theory. It achieves typological capacity through examination of institutional power dynamics. It achieves ontological validity through examination of problem solution options and phenomenon analysis using a microanalysis methodological model based on governance theory. In all, the cognitive map is clear. Further study of 'policy advice formation' discourse demands examination of all 10-knowledge domain facets.

## 5.01 Conclusive Discussion

“Several scholars in comparative education research have examined why and how policy analysis use references to educational reform abroad when introducing educational reform at home. In fact, research on educational transfer – educational borrowing and educational lending, educational reception and educational lending – constitutes a major field in international comparative education research”

Gita Steiner-Khamsi, 2002, p.69

.	Theory	Methodological Models	Challenges
Epistemic Legitimacy	System	Qualitative	International
Typological Capacity	Social	Empirical	Institutional
Ontological Legitimacy	Governance	Micro-Analysis	Problem Analysis Problem Solution

Table 5-2 ETO-TMC Construction

The index of most frequently occurring categorically by ETO-TMC.

In essence, discourse analysis is not a matter of either comparative education or policy study investigative parameters. It has developed its own path to address the differentiation of subject matter following growth and increased complexity of the ‘policy advice formation’ knowledge area and thus, in accordance with Walter Robinson Smith’s or the Smithsonian principle, revised, restated and shifted emphasis of knowledge domain facets. These evolved knowledge domain facets combine in a notion of internationalization of social systems in accordance with a borrowing and lending dynamic forthwith entitled borrowing, lending, reception and diffusion.

The epistemic legitimacy of borrowing, lending, reception and diffusion theory asserts a global society science of education construct. This construct positions the investigation of education in a borderless territorial domain, while positioning educational policy implementation in specific bordered regions. This is a matter of separation between formation, decision<sup>45</sup> and implementation. Borrowing, lending, reception and diffusion theory contends that in the 'handbarrow' there are three handles, not two. The handles are social, political and economic influences. The wheel of the barrow is governance. Thereby it is a process of distribution of educational policy advice developed by formation influenced by social, political and economic facets to produce governance knowledge addressing specific challenges. This as opposed to a mirrored discourse analysis perspective the likes of Luhmann or Bourdieu, borrowing, lending, reception and diffusion is a microscopic quantitative analysis of educational policy advice discourse via a cognitive map.

The cognitive map provides academic structure for disciplinary specialization justified by epistemic, typological and ontological knowledge facet frequency distribution, which provides scientific legitimacy, capacity and validity. Therefore, the notion of collaborative change in discourse communication is rooted in unification of theory and practice through disciplinary merger producing disciplinary specializations that are comparative in theory and method while possessing a policy study challenge topic orientation..

In essence, it is a re-painting of the geographic sphere to borderless composition of educational policy formation, leaving policy implementation to local regional actors. This theory denotes cultural/social as local regional components and political/economic to national agents transformed into adoption agents of international and/or transnational policy advice. Borrowing, lending, reception and

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<sup>45</sup> In this case, the typical correlation between decision and policy making is diffused. Decision is interpreted as the act of policy advice adoption and does not carry any indication of 'making'.

diffusion therefore argues that standardization of educational policies is formulated as advice from international/transnational institutions. Cognitive mapping of discourse provides a legitimate structure for interchange, knowledge production interpretation, and disciplinary specialization discourse examination.

At the start of chapter one, this study stated that ‘the primary argument forewarning communicative disciplines such as ‘policy advice formation’ discourse, reason that merger between establish disciplinary fields reframe the science of education into a practical science which does not have professional pedagogical field specific knowledge. This study has been designed to dispel this notion by framing the knowledge domain facets of established profession and practice disciplinary discourse. In this fashion, disciplinary discourse refers to the communicative dynamics by which such knowledge seems to be articulated within the educational community’. It is therefore concluded that the cognitive mapping revealed that knowledge facet patterns of comparative education and policy studies merges forming educational ‘policy advice formation’ discourse discipline developed to standardize educational practice.

It verifies the epistemic legitimacy, typological capacity and ontological validity of educational policy advice discourse discipline as both a professional and practical communicative dynamic.



## 5.02 Conclusive Remarks

### Barrowing

In the global era, the age-old dichotomy of theory and practice seems to have become blurred. Much alike the development of the general social sciences, standardization represents the adoption of applied reform in education as a dynamic of both theoretical ‘policy advice formation’ and practical ‘policy advice formation’ discourse. This process minimizes the theoretical perspective and as such the conditions by which discourse is analyzed. The formulation of a cognitive mapping to appropriately analyze discourse is grounded on the idea that a transitional change in discourse composition has occurred. A transition rooted in the convergence of knowledge traditions. As Franco Ferrarotti states:

“The European scene appears to be more complex. In the first place, history and historical consciousness play here a role much greater than anywhere else. Secondly and consequently, the past carries a decisive weight in terms of the educational process as a way to achieve the formation of the responsible individual person or, to put it more precisely, of the personality of the person. Here, as we may learn from Greek culture and Christian testimony, the conscious participation of each individual requires that the entity in which we desire to participate represent a hierarchic scheme or a symbolic concentration, whereas in utilitarian societies, participation is not in terms of systems of meaning representing the ultimate reality. These societies are interest-based and participation in them refers primarily to the process of making decisions concerning the various practical interest.”

(Ferrarotti, 2002, p.47-48)

From this perspective, membership of former eastern block nations into the European union represents a merger of theory and practice based philosophical reasoning. That is to say, knowledge expressed in discourse becomes more complex

when reflective position of the author sources display differential patterns. As such, the process of formulating policy advice in education represents differing-patterns for the establishment of epistemological legitimacy, typological capacity and ontological validity. The co-relationship of this differential pattern of knowledge domain facets for the establishment of a standard education system, where individual mobility defines population dynamics, relies on merger of theory and practice perspectives as concerns discourse.

This study contends that global standardization of education differentiates comparative education and policy studies disciplinary identity patterns thereby yielding a communicative discipline. The discourse of this educational 'policy advice formation' can be defined by differential knowledge facet patterns, which are both theoretically comparative in theory and policy formulating in practice orientations.

This differentiation represents a transition from classic state-theory of school management to global standard advice. In this light, other theory constructs, methodological models and topic challenge cognition patterns are needed to analyze the discourse. This premise suggests that discourse analysis is no longer a foray into the qualitative examination of written communication based on grounded state-theory for the investigation of national institutional problems. It has become evaluation of written, on-line, and telecommunication conferencing network communications by quantitative, empirical-based microanalysis of educational system problems and/or phenomenon-rooted situational occurrence. That is to say, standardization of educational systems have transformed from national institutional problem assessment to problem and/or phenomenon situational occurrence. It has transformed from focus on nation specific concerns about academic matters to assessment of universal academic problems or phenomenon solution. In other words, the knowledge construct of theory,

methodological models and topic challenge transforms, thus requiring a new cognitive map for discourse evaluation.

If one considers mapping as a form of knowledge navigation then if the terrain has transformed, the road map must be updated. The transformation of the knowledge terrain rests on the basic assumption that comparative education merge with policy studies when societies co-relate. Examples of global being Europeanization, Europe-Asian relations, America-Europe, African & Middle-Eastern Alliance etc.

Further, this disciplinary specialization demonstrates the change in discourse communication. This change in discourse communication patterns requires a transformation of cognitive evaluation or discourse analysis. In other words: a new cognitive map for discourse analysis. The questions become: if it is no longer a matter of nation-state theory philosophy, what is the theoretical foundation of educational discourse? If philosophy is transforming, the question becomes 'what form have methodological models has taken?' If methodological models transform, the question becomes 'what new composition of educational challenge topics?'

Survey analysis of discourse published from 2000 to 2002 reveals the presence of policy advice discourse directed at standardization dynamics. In the theoretical frame, the findings suggest that in contrast to the equal balance of society and systems theories evident in comparative education with stronghold on organizational theory in policy study discourse. Policy advice formation discourse obtains epistemic legitimacy in practical-systems theory at an unparalleled rate. Further examination of this domain indicated that the strong reliance on system theories is primarily rooted in cultural theory for establishing typological capacity. An establishment that is rooted in governance theory used for the purpose of ontological validity. As such, navigation through 'policy advice formation' discourse is theoretically vested on evaluation of social governance system theory.

The study concludes that educational policy advice discourse displays a larger number of discourses utilizing systems theory as the primary theory for establishment of epistemic legitimacy. While both comparative education and policy study discourse exhibited counts in the low 60s, 'policy advice formation' showed counts in the 80s. Neither disciplinary category exhibited a count beyond 60 in any other knowledge facet. It then becomes apparent that educational standardization adopts a systems theoretical approach for the establishment of epistemic legitimacy in 'policy advice formation' discourse. This legitimacy reframes educational systems within problem or phenomenon characteristics as opposed to power operational nation specific dynamics.

In much the same pattern, social theory dominated the count in typological capacity with 'policy advice formation' tallying 75 while all other categories (political and economic) remained in or mostly below the 60 count. It must be noted that policy studies tallying 67 may imply that either further differentiation for typological capacity of social-theory is necessary, or that this disciplinary direction is changing more rapidly. It is therefore concluded that typological capacity is more functional in social theory than in political or economic theory. It seems that political and economic theory are less descriptive of educational topics than social theories. It seems that patterning educational problem or phenomenon dynamics in social rather than political or economic constraints also yields foundational space to consider cultural variability.

Ontological validity in discourse has a dominant count in 'policy advice formation' for governance. In this knowledge domain category, comparative education equates philosophical and governance, while policy studies yields about equal distribution of frequency for the two options. The predominance of governance theory over philosophical theory as a means of establishing ontological validity in

discourse indicated that governance theory is the most evident. In this case, governance theory seems to be positioned in governance of specific challenge topics as opposed to political/economic power dynamics. It seems to be a matter of how educational standardization of a specific system dynamics. For example, 'policy advice formation' discourse asks which curricular information and instructional practices of mathematics are taught to students in specific ages or curricular levels. It is more a matter of what mathematic academic information is presented to whom for the fulfillment of a specific degree than how specific nation states should approach mathematics.

In the theory domain, it would seem that social systems of governance knowledge facets provide the most used basis for information characterized as legitimate, valid and capable means of communications. In this fashion, it would seem that educational policy is no longer primarily communicated by legitimizing theories of society or organization; no longer primarily communicated by capability theory of politics or economics; and no longer primarily communicated by validity theories of philosophy. This would suggest that 'policy advice formation' is no longer a process of transnational policy borrowing or lending by rather a process of international standardization of social elements in a universal system of education.

Further examination of knowledge domain facets sheds more light on the issue. Looking at methodological models communicated in discourse reveals dominance in qualitative, non-empirical, microanalysis knowledge facets. This pattern suggests that a grounded methodological approach to information communication with counts in the 100s is provided to establish capacity and validity of the information. This pattern follows the assumption that generalized mega-parameters analyzed in conceptual terms applicable to a variety of cultural and linguistic qualifiers are discourse objectives. That is to say, non-empirical qualitative assessment of micro

populations involved in examination of social systems of education is the paramount objective pattern of 'policy advice formation' discourse.

The examination of discourse sources reveals that international challenge topics convey epistemic legitimacy by framing challenge topics as a matter of problem solution. It is thereby contended that the challenge knowledge domain facets of 'policy advice formation' discourse obtains epistemological legitimacy from internationalizing challenge topics, establishment of typological variation from institutionalizing challenge topics and ontological validity by problem solution of challenge topics.

The core reasoning rests on the notion that what was borrowing and lending from and to other nation states has standardized education necessitate the formation of policy advice within global institutions. Thus, in answer to the prescribed questions, 'if it is no longer a matter of nation-theory philosophy, what is the theoretical foundation of educational discourse?' the answer reasons that discourse communicates a theoretical foundation of global social system governance theory. To the questions 'If philosophy has transformed, what form of methodological models have been taken?' the answer is that non-empirical qualitative methodological models are used to evaluate micro populations generally term glocal. A sub-division of local populations re-categorized upon borderless criteria. In other words, problem assessment may link two or more local or regional educational systems together across many nations. That is to say, they no longer frame populations on specific micro 'nation-state' or culture populations, but rather the issue is posed in borderless constructs of multi-national specific local or regional population structure. For example, a Israeli and Indian middle school setting which serves a community whose cultural caste systems influences decision making is likely to evoke a common policy advice than other regions in the same nation state. That raises the question that 'If methodological models transformed via population mobility and other population changes, the question becomes what

is the new composition of educational challenges?’ The challenge topics portrayed in the discourse are in need of international institutions to provide solution advice for specific educational reform for specific population determinants. The cognitive map is then clear. Discourse knowledge facet theories, methodological models and challenges provide a means to cognitively navigate through differentiation patterns. It is no longer a matter of the author’s political stance: liberal, post-modern, neo-conservative etc. It is not only a matter of motherland politics- nation state, culture or language. It is not only a matter of capitalistic, socialist or 3<sup>rd</sup> world economic construction. The communication is general in scope and applicable to problem or phenomenon challenges no matter where they exist or how they operate. The discourse, therefore, provides knowledge for the solution or management of problems or analysis of phenomena not from geo-graphic or geo-cultural/political aspects, but by challenge management.

It is therefore asserted that communicative patterns produced by differential linkage of comparative education and policy studies transfer epistemic standards from society and/or organization theory using empirical methodological models to evaluate regional or national to evaluation of cross national educational problems and phenomenon using qualitative methodological models to establish systems theory legitimacy (for example, un-certainty theory). Likewise, the typology affirms a capacity by social theory, non-empirical methodology model and institution challenge evaluation. And at the end of the day, the sources demonstrated an inclination to establish ontological validation of solution advice by analysis of micro population research methods to form governance theories.

In all, the communication displays a pattern supportive of the notion that discourse has transformed creating the need for new cognitive mapping strategies. As such, the findings support this notion that in current times comparative education is marked by an increase in educational standardization. Therefore, differentiation

pattern in comparative education has transformed to include analysis of ‘policy advice formation’ discourse. This finding is supported by a pattern scheme of knowledge domain facets. The facets define epistemic legitimacy via qualitative analysis of methodological model, typological capacity about international and national institution challenge topics and ontological validity via social theory reflective constructs.



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**APPENDIX**

**A. Research Chart**

1. Author Name \_\_\_\_\_
2. Journal Book Paper Other \_\_\_\_\_
3. Title \_\_\_\_\_  
\_\_\_\_\_
4. Publication House or Journal Source \_\_\_\_\_  
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5. Year of Publication \_\_\_\_\_
6. State/County \_\_\_\_\_
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Remarks: Disciplinary Identity

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Commentary

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Quote

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