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## Login to Learn: A Content Analysis of Southeast Asian Policies on Technology and Education

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LOYOLA UNIVERSITY CHICAGO

LOGIN TO LEARN:

A CONTENT ANALYSIS OF SOUTHEAST ASIAN  
POLICIES ON TECHNOLOGY AND EDUCATION

A THESIS SUBMITTED TO

THE FACULTY OF THE GRADUATE SCHOOL

IN CANDIDACY FOR THE DEGREE OF

MASTER OF ARTS

PROGRAM IN CULTURAL AND EDUCATIONAL POLICY STUDIES

BY

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CHICAGO, ILLINOIS

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## LIST OF ABBREVIATIONS

Association of Southeast Asian Nations	ASEAN
Canadian International Development Agency	CIDA
Information and Communication Technologies	ICT
Key Word in Context	KWIC
Non-governmental Organization	NGO
Public Private Partnership	PPP
Telecommunications and IT Ministers Meeting	TELMIN

## ABSTRACT

In the following thesis, using Aucoin's (2011) theoretical framework, I juxtapose the discourses neoliberalism and humanitarian "access" as they relate to describing the potential outcomes of ICT adoption in education. Through a content analysis, I sought to answer the research question: To what extent have the discourses of neoliberalism and "access" used in regional ASEAN policies influenced ICT policymaking at the national level of its member states? The findings demonstrated a slight difference between ICT policies published prior to the 2011 ASEAN policy, but those published "after" were all also published in 2011 which may point to forces outside of the regional acting on national policymaking, which further limits the implications of my findings.



LOGIN TO LEARN: A CONTENT ANALYSIS OF SOUTHEAST ASIAN POLICIES  
ON TECHNOLOGY AND EDUCATION

**Introduction**

The spread of globalization world-wide has inspired much research on the pervasive “sameness” that exists among seemingly different countries, cultures, and peoples. For example, many countries worldwide have embraced a goal of education for all (Ramirez, 2003), but how this concept has become so prevalent is subject to dispute. Similarly, information and communication technologies (ICTs) have become a pervasive field of interest for businesses, non-profits, and governments alike (Kahn, Hasan, & Clement, 2012). Internationally, non-governmental organizations (NGOs) as well as governmental organizations have promoted ICTs in emerging markets for their potentially beneficial outcomes (ASEAN, 2011; UNESCO, 2000). The Dakar Framework for Action (UNESCO, 2000) stated the “potential for knowledge dissemination, effective learning, and the development of more efficient education services” are inherent to the use of ICTs for education (p. 21). Both academic and journalistic literature has shown the relevance of this topic. However, my primary concern for this study is the rhetoric and discourse used to justify *why* ICTs in education are important. Because of the breadth and depth of the existent literature on this topic, I have decided to limit my perspective to one particular region: Southeast Asia. This area is of personal and academic interest to me, but also seems to be less prolifically written about in academia, especially on the policy level (as opposed to the level of implementation).

One piece of academic literature in particular, Aucoin (2011), which focuses on ICTs at the level of policy, frames much of my proposed study. Aucoin's (2011) analysis of a Canadian ICT policy, established juxtaposition between two frameworks which both seek to demonstrate the potential benefits of ICTs: neoliberalism and access to information. Whereas, Aucoin explained, neoliberal values may place importance of ICTs in private sector development and global competition, language which emphasizes the access to information would tout the way in which increased information empowers disadvantaged groups and builds development for the public good. Both of these lenses can be used to explain the potential benefits of ICTs, but there were three in particular that Aucoin focused on in his study: poverty reduction, bridging the digital divide, and capacity building. For example, in the subject area of "bridging the digital divide," neoliberal values would emphasize the public private partnerships (PPPs) which could be used to leverage private sector investment, whereas values centered in access to education would focus on the potential power which could be given to underserved groups through the dissemination of ICTs (Aucoin, 2011, pp. 5-7). (A chart illustrating this framework can be found in Appendix A.)

Using these terms organized thematically through Aucoin's framework, this study outlines a content analysis of the national ICT and national education policies of ASEAN member states to answer the primary research question: To what extent have the concepts of neoliberalism and access, used in regional ASEAN policies, influenced ICT policymaking at the national level of member states?

In the following sections, I use historical background of ASEAN, theoretical background underlying my study, and a review of current literature on ICTs to illustrate how my research and methodology attempts to answer my research question.

### **Background**

ASEAN is comprised of ten member states: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam (“ASEAN Member States,” n.d.). This area is fruitful to study based on the widely varying stages of development of its countries. For example, Singapore is classified as a high-income country and Malaysia as upper-middle income, while Cambodia and Vietnam are considered low income countries; all countries were former colonies, save for Thailand (Hong & Songan, 2011). However, as Tan (2010) points out, even countries that share a common colonial past and have borrowed similar educational policies—like Southeast Asia—may still develop in different ways (p. 465). Historically, ASEAN has empowered the nation-state members to be the most powerful agents in its regional governance (von Feigenblatt, 2012, p. 242). Therefore, though there is a regional ICT policy from ASEAN, each country maintains its own ICT and education policies that are worth individual analysis.

ASEAN was born out of tensions among the Southeast Asian nations that would one day comprise its membership. Its growth since 1967 has been marked by steady consensus building among these nations. As a regional security regime ASEAN remains a largely informal entity, though its legal and economic regime has grown since the late 2000’s as it gained cooperation of other regional economies and signed its own regional charter, resulting in the much more formal organization we know today. ASEAN’s

internal and external growth can be attributed to the establishment of a secretariat position which brought regional issues and international cooperation to the forefront of the organizations agenda (Reinalda, 2012). The ASEAN secretariat has established the region as an international actor (Reinalda, 2012) and transformed the position into a regional executive power, bringing the organization into “ASEAN 2.0” (Lallana, 2012). Though relations between member countries still rely on informal arrangements and constantly evolving trust occurring more horizontally than vertically, ASEAN has become a more powerful “agent” to its “principle” nations (Lallana, 2012; Reinalda, 2012, p. 238). Today, ASEAN is comprised of many “sectoral” bodies, including the ASEAN Telecommunications and IT Ministers Meeting (TELMIN) which demonstrates a “vertical policy coordination” to produce policies such as the ASEAN ICT Masterplan 2015 (Lallana, 2012, p. 23). Documents such as the ASEAN Blue Print for Socio-cultural Community (2009) combine regional socio-economic policy while accounting for cultural values that vary across the region (von Fiegenblatt, 2012). The sections of this blue print which combine educational goals with ICTs will be worthwhile to include as a marker for the regional rhetoric surrounding these topics.

The earliest literature on the role of ICTs in the ASEAN region was written in the mid 1980’s. Even then, studies like Rahim’s (1987) cited the quickly-changing nature of computerization in Southeast Asia and its increased use in areas of development like education and agriculture. Predictably, nations industrializing in the mid to late 1980 have experienced the fastest growth in computerization and the implications of computerization for the region’s development were significant. The most installations of computers occurred in the education sector, primarily in schools and universities, and the

use of computers for data collection in agriculture proved to be two of ASEAN's most impactful ICT projects in the 1980's (Rahim, 1987). Installation of computers in schools the ASEAN region began as an extra-curricular activity or a subject on its own, as opposed to an aided tool for teachers to use in lessons for other subjects (Talisayon, 1990). Today, ICTs in Southeast Asia are primarily used in the education and human development sectors as training for an increasing need for workers skilled in technology (von Feigenblatt, 2012). The cultural implications of ICTs, however, are not lost on ASEAN member states. Education, especially education of ICTs, is difficult to discuss as being separate of each member state due to the national and local values enmeshed in the educational system (von Feigenblatt, 2012). Further, the potential for the vast dissemination of culture, values, and information is not lost on the ASEAN member states. Most countries in Southeast Asia use some type of filtering system on the internet, except possibly the Philippines, censoring potentially sensitive or illegal information to its citizens. Nonetheless, ICTs remain important to Southeast Asia for their potential social and economic benefits (von Feigenblatt, 2012).

Though in this thesis I am primarily concerned with the transfer of ICT policies from the regional (ASEAN) to national (member state) level, there is an underlying theoretical background which seeks to explain how ideas are spread globally and shapes the way in which I view the research question I have established. World culture theory frames my perspective and narrows my study to focus purely on the policies in Southeast Asia which discuss ICTs in education, rather than on any potential issues or successes in implementation.

## **Theoretical Background**

World culture theory, also known as world polity theory (Lechner, 2001), this theory seeks to understand globalization in education through institutional isomorphism, meaning that institutions worldwide are moving toward similarity by borrowing concepts and ideas from other world actors who legitimized those ideas (Meyer, Boli, Thomas, & Ramirez, 1997). World culture theorists are critical of these homogenizing tendencies of the world's education systems toward Western ideals, but to them this movement, or dissemination, is inevitable (Lechner & Boli, World culture, 2005). This phenomenon is a central tenant of world culture theory and focuses on the transfer of knowledge from "center" to "periphery" states (Amos, Keiner, Proske, & Radtke, 2002, p. 199). "Center" and "periphery" nation-states are the primary actors of this theory. The "center" states represent the "legitimized" determiners of accepted practices or models and serve to disseminate these ideas to "periphery" countries to adopt (Lechner F. J., World Culture Theory, World Polity Theory, 2001). Further, researchers argue that these models are disseminated through institutions or structures, like systems of education or health (Amos, et al., 2002). In the case of my study, the "legitimized" determiner of accepted practices may be the regional organization of ASEAN and the adoptees may be its member states.

A recurring example seen in world culture theorists is that of the hypothetical, newly-discovered island (Meyer, et al., 1997; Ramirez, 2003). Theorists claim that if an island were newly discovered today, over time the island would begin to resemble the rest of the world through the adoption of common practices, models, and concepts (Meyer, et al., 1997). They admit that not all of these models will align with cultural or

functional practices of the adoptee country, but they feel compelled to adopt them anyway (Meyer, et. al.). Mary, Nagel, and Syder (1993) give the example that this process means “children who will become agricultural laborers study fractions, villagers in remote regions learn about chemical reactions,” (as cited in Meyer, et al., p. 149). Though it may not make practical sense, theorists argue, the tendency to follow this “script” is pervasive and “form trumps function” (Lechner & Boli, World culture, 2005, p. 44). An example in ICTs, which relates to this notion for Southeast Asia may be that of Cambodia, which despite infrequent and unreliable electricity has attempted to disseminate ICTs nation-wide across several sectors (Richardson, 2011).

Although this theory represented the best way for me to understand and attempt to answer my research question, I recognize its limitations and critiques. On the one hand, for neo-Marxists who view education as a propagation of capitalist ideals and stratification of society, world culture theory reinforces that viewpoint through the passing of models and assumptions from “center” and “periphery” nation-states, or “the haves imposing their interests on the have-nots” (Amos, et al., 2002, p.199). Caruso (2008) argues that the limitation of the theory is that it does not seek to explain the reasoning or historical process behind this movement, thus providing many “gaps” the reader must overcome (p. 838). Further, Schriewer asserted that world culture theorists are constructing their argument primarily based on “second-hand sources” such as national statistics, which can simulate an appearance of isomorphism but not reflect the actual practices (as cited in Caruso, 2008, p. 838). Anderson-Levitt (2003) attempts to combine the inherently “convergent” nature of world culture theory with the “divergent” nature of anthropology, but in the process strays from the essence of the theory (p. 3).

She admits that theorists “usually mean for their theory to address only the official model, not its implementation,” however, her book explores case studies of specific implementation of global discourses (p. 17). More recently, researchers have critiqued world culture theory’s assumptions which can mask any potential discrepancies or variances that appear or leave out transfers that may occur in different directions (not just from “legitimized” actors to a “periphery”) (Carney, Rappelaye, and Silova, 2012). Their call to revise the definitions of “agency” and “power” do not fall on deaf ears, for example, this study does not seek to define agency as a “Western-only” power but instead a regional and Eastern actor underlies the hypothesis of transfer (Carney, et al., 2012, p. 386).

This reckoning between the interactions of the specific and the overarching, the local (or regional) and the global is not resolved with world culture theory. However, its emphasis on institutional-level dissemination of concepts and ideas lends itself well to my proposed research. If ICTs have spread globally, similar to mass education, world culture theory informs my research by potentially explaining any policy transfer that has occurred between ASEAN and its member states, though they may not fit in the world culture definition of “typical” actors.

### **Review of Recent Literature**

Though it seems ICTs for development and education has been more prolifically written about in other regions of the world (Africa, in particular) there is a body of work that has emerged in recent years which adds to the discussion of ICTs for education in Southeast Asia. This recent literature sets the context for my thesis topic by refining my research question and methodology based on emergent gaps in the literature.



First, there are discrepancies (though slight in most instances) between how researchers define ICTs. For the purposes of this study, Aucoin's (2011) definition will be the one which informs my own use of the term. Aucoin (2011) explained ICTs as:

...all technological tools used to manipulate and communicate information, such as recording media (e.g., CDs/DVDs), broadcasting systems (e.g., radio, television), computing hardware and software (e.g., World Wide Web, e-mail), and mobile networks and devices (e.g., cell phones, smart phones). p. 2

Though this does not vastly differ from what other researchers have used in their definitions, it is one of the most explicit and specific, and considering that Aucoin's (2012) article informs much of my methodology his definition can ensure some consistency in language when referring to ICTs.

The rhetoric used to depict the potential benefits of ICT use varies depending on the perspective of the policymaker, researcher, or journalist, and academia has not found an agreed upon way to approach these variations. In one of the earliest sources on the subject, Hawkrigde (1990) summarized four rationales for this phenomenon: economic, social, educational, and catalytic (as cited in Peeraer & Van Petegem, 2012, p. 90), while Rosswall explained that ICTs can bring "improved quality, equity, and access in higher education" (as cited in Kahn et al., 2012, p. 62), and Lim (2007) saw more economic benefits in Singapore as ICTs sought to provide a "knowledge-based economy in sustaining economic development" (p. 91). As Kahn, Hasan, and Clement (2012) summarized, simply providing ICTs will not necessarily equal "desirable learning changes in education" (p. 69). The particular outcomes of policies are not necessarily a concern of this thesis, though this prevalent research perspective is important to showcase if only to demonstrate the lack of literature solely focused on national ICT policy analysis. Studies outlining the external and internal barriers for successful

implementation represent the bulk of research performed in Southeast Asia. Richardson (2011) who has done considerable research on the use of technology in the region, provides the example of Cambodia where not only is electricity “unstable and expensive” there are also “blackouts and institutionally imposed electricity-use restrictions” that must be contended with (p. 25). Both Richardson (2011) and Kamssu, Siekpe, and Ellzy (2004) mentioned examples of difficulty with English language keyboards and software, which prevail in the region.

Several researchers also discussed internal barriers such as teacher attitudes toward technology and how local values interacted with implementation of ICTs (Kahn et al., 2012; Lau & Winley, 2012; Peeraer & Van Petegem, 2012; Richardson, 2011). Some offered potential remedies for these barriers, like Mukama (2009) who suggested active ICT-user students should be active in the classroom to help their peers and assist potentially apprehensive teachers; many other researchers did not offer solutions. Other emergent themes regarding implementation of ICTs include the role of administrators (Singh & Muniandi, 2012), discrepancies between policies and implementation (Peeraer & Van Petegem, 2012; Tan, 2010), and how governments’ control of internet and electricity can impact implementation (Kamssu et al., 2004). I found the academic literature regarding implementation of ICTs in Southeast Asia to be primarily focused on “end users” of ICTs, as coined by Richardson (2011), like students, teachers, and administrators. This is significant to demonstrate that research dedicated solely to policy analysis of ICTs is a notable gap in the literature.

Research which analyzes ICT policies in education is considerably limited and only one of which includes ASEAN member states. In the first, Xue (2005) takes a

comparative approach to three Asian countries at varying levels of development and Internet integration—China, Malaysia, and Singapore—in order to conduct analysis of their nationwide Internet policies. Xue (2005) uses, “leapfrogging,” to describe the way in which some developing countries bypass some “older” technologies in favor of more current ones (p. 238). For example, a nation may favor a new technology like mobile phones before landlines ever became very common (Aucoin, 2011). Xue’s (2005) study also provides examples of technological diffusion in the three countries she analyzed, however, the primary goal of her analysis is to show *how* Internet policies were integrated (or not, in the case of China). In Lin, Chang, and Shen (2010), using a comparative analysis, between Ireland and Taiwan, in order to demonstrate two innovation policies of two very similar nations, illustrated the differences between top-down and bottom-up diffusion of innovation. Similar to Xue (2005), this article does not directly address education or ICT policies. Innovation policies span from technological to chemical to agricultural innovation, which forces me to conclude Lin, et al., (2010) is not applicable to the area in which this thesis focuses, though it may further illustrate the limited nature of my focus.

Two articles in particular which do not include research based on implementation and act to inform my methodology, both focus on Canadian ICT policies and the rhetoric surrounding the policies used in their studies.

### **Research Methodology**

In the following section, I will outline the literature which I expound upon in order to construct my own study, describe the process of content analysis I performed in

order to gain the raw data for my research, and the types of analysis which frame my findings.

### **Examples of ICT Policy Analysis**

Brooks (2011) analyzes the discourse of ICT policies in the region of Alberta, an internationally ranked, high-achievement education system. Though Brooks (2011) mentions in her own literature review a “considerable” group of texts that critically examine technology in education, the examples she provided were primarily focused on implementation (p. 4). However, I view her work as significant in its difference from the other literature I mentioned due to her emphasis on the way in which technology in education is discussed and rationalized in policies. She utilized a critical discourse analysis for this study and assigned discourses to four categories which framed her thematic review of the rhetoric. Brooks’ analysis is thoughtful, critical, and compelling for Alberta’s technology policy discourse, but I prefer the practical specificity of another article (Aucoin, 2011) in favor of Brooks’ philosophical approach.

Aucoin’s (2011) policy analysis is the most pertinent to my research for the areas of critical perspective and methodology. Aucoin (2011) seeks to juxtapose what he sees as a dominating rhetoric which defends ICTs on the basis of educational access for all, with policies which predominantly focus on economic outcomes and other neoliberal objectives. He uses two terms, “knowledge economy” and “knowledge society” (which, he argues, should not be used interchangeably) to illustrate this juxtaposition. The former, is focused primarily on economic outcomes, whereas the latter he defines as “any knowledge-based communities” (p. 2). Though he briefly touches on related topics like international higher education and globalization, the important aspect of his study for my

purposes is the way in which he frames this dichotomous discussion concerning the benefits to ICTs for education.

The formation of a “knowledge economy” through ICTs in education, tout the potential human capital and neoliberal outcomes, while the “knowledge society” is one in which widespread access to education is the end goal. This may be a simplification of Brooks’ (2011) philosophical critical discourse analysis, but Aucoin supports his argument of this duality through an example analysis of a Canadian policy: the Canadian International Development Agency’s (CIDA) “Strategy on Knowledge for Development through Information and Communication Technologies” (p. 5). Aucoin demonstrates two areas, poverty and the digital divide, in which CIDA favors economic, outcome-based rhetoric over humanitarian (or access-centered) rhetoric. For example, related to the digital divide, CIDA proposes a remedy to the gender and geographic digital divide could be to use “public-private partnerships to leverage private sector investors,” which shifts the perspective of the issue to economic terms (CIDA, 2006 as cited by Aucoin, 2011, p. 6).

I take issue with two aspects of Aucoin’s (2011) study, which I will use to add relevance and accuracy to my own study. First, his critique of CIDA’s policy consistently relates back to the needs of developing nations and the citizens of these emerging economies, however, Canada and its citizens are not in this situation. My study of the region of Southeast Asia, not only fits the definition of a developing region, it represents a grouping of nations (as opposed to just one) at varying levels of development which would add to the generalizability of the study. Second, Aucoin does not articulate a specific methodology in his study. Therefore in my thesis I will outline a more

methodical approach to use integrate the two categories he establishes. Though his article was helpful in framing my prospective thesis, these issues in validity and generalizability are important to address and remedy.

I will structure my methodology around Aucoin's (2011) framework for the concepts of neoliberalism and access as viewed through three areas in which he focused his study: poverty reduction, bridging the digital divide, and capacity building. ASEAN, the Association of Southeast Asian Nations, also defines poverty reduction ("economic transformation"), bridging the digital divide, and capacity building ("infrastructure development") as three priorities of their regional ICT Masterplan (ASEAN, 2011, p. 10). Through defining Aucoin's concepts of neoliberalism and access in those three areas for both ASEAN's ICT Masterplan (2011), thematically organized terms for both sets of value-systems will be compiled to organize ASEAN's regional rhetoric for explaining the potential benefits to ICTs. (A demonstration of this as applied to ASEAN's ICT Masterplan can be found in Appendix B.) The use of these thematically organized terms will be explained in the section below.

### **Content Analysis**

This methodology was informed by several sources, including Aucoin (2011), who constructs a process to frame my research. Content analysis is defined as the "systematic, objective, quantitative, analysis of message characteristics," or more specifically, designations analysis, the type of content analysis I will be performing, "provides the frequency with which certain objects are referred to" (Neuendorf, 2002, p. 1; Krippendorff, 2004, p. 45). The themes and categories which are outlined in Aucoin's (2011) article, applied to the ASEAN ICT Masterplan (2011), are the the objects which I

will determine the frequency (and use) of in the member states' policies. In content analysis, there is potential for "ambiguity of word meanings" and other threats to validity, which I hoped to ameliorate through the use of a computer program (NVivo) to provide the raw data of my research (Weber, 1990). The procedure I followed to find this data is outlined below and the framework for which is informed by Weber (1990) and Krippendorff (2004):

- I. **Defined the sampling units.** The first step in my procedure was to locate the ASEAN member states' policies for the content analysis. I searched using basic web searches and database searches to attempt to find an education policy (which discusses ICTs) and an ICT policy (which discusses education) for each member state of ASEAN. The results from this search informed the framing of my findings due to factors such as nations which lack one or both of these policies, or the policy is not available online, or the policy is not available online in English. Nations which published these policies several years in advance of the publication date of ASEAN's ICT Masterplan (2011), and nations who may have made revisions to their policies over time, regardless of the original date of publication are addressed in my discussion of the findings. There was potential to locate two policies per member state, for a total of twenty policies to be analyzed.
- II. **Defined the recording units.** The recording units for this study will be individual words categorized using Aucoin's (2011) framework, using content from the ASEAN ICT Masterplan (2011). An illustration of this is in Appendix B. These words were entered into NVivo as "nodes" for which the sample of policies will be searched. Data from these queries appeared as a list of the number of

references and the percentage of the document which contained these nodes, which NVivo calls coverage. Context units, or the phrase in which the recording unit appears, was used to assure validity in how the words found in the search query are being used, but also to contextualize the way in which policies integrated the words into their policy language for the discussion of these findings.

- III. **Defined the categories.** The recording units constructed in the prior step were categorized using Aucoin's (2011) framework, divided thematically both by the three areas which he argued benefits to ICTs are constructed (poverty reduction, bridging the digital divide, and capacity building) and by his binary juxtaposition between neoliberal and access to education systems of values. The definitions for each of the possible categorizations are illustrated in Appendix A.
- a. Semantic validity, or "when persons familiar with the language and texts examine lists of words (or other units) placed in the same category and agree that these words have similar meanings or connotations" was performed to finalize the list of categories and synonymous words by approval of another researcher (Weber, 1990).
- IV. **Tested coding on a sample of text.** After all of the recording units ("nodes") and sampling units (member states' policies) were entered into NVivo, several test queries were performed which asked the program to identify the presence, frequency, and key word in context (KWIC) for an example policy. NVivo offers varying levels of exactness to be requested for these searches and I selected for the program to not only identify the exact matches but also words that stem from



the exact search terms. For example, one of the search terms was “industry” but the number of references in a particular document would also include instances of stemmed words like “industries,” or “industrial.”

- V. **Assessed accuracy or reliability.** In this step, I analyze the outputs of the query for consistency and looked for any possible coding errors which could have occurred such as a misinterpretation of certain recording units. The option to view the key words in context identified the way in which words are used to insure the correct forms of words are found. This test of accuracy on a sample policy revealed that the program was accurate in identifying the key words and the stemmed words. Overall, the context surrounding the word was aligned with the system of values it sought to represent (neoliberal v. access) but of course subtleties like this are not determined by a search for terms and represents one limitation of this method.
- VI. **Revised the coding rules.** Only one coding error was used to revise the coding rules. In the test search I listed the terms to search for by linking them with “AND.” When it was clear that this meant only documents that included all of the terms would be included in the list of results, I switched the word linking the terms with “OR” so that if any of the words appeared, the result would appear in the final query results.
- VII. **Coded all the texts.** The query was performed for the presence of each category of words, their frequency, as well as their KWIC to produce the raw data and findings for my analysis.

- VIII. **Assessed achieved reliability or accuracy.** Based on the data produced, and using the KWIC, I assessed if the correct usage and definitions of the recording units were found in order to answer my research question and to ensure the coding rules were applied accurately. As mentioned above, though searching a document in this way is not perfectly executed to ensure exact meaning, overall the words were used in a context appropriate to the value they sought to represent. Since the use of a computer program eliminates possible human error in the process of coding, intercoder reliability was not a concern.
- IX. **Analyzed raw data.** As I have mentioned, the analysis performed on the data produced was largely determined and framed based on the types of policies originally found and the context and date in which they were published. The basic method of analysis I used was to compile the data into charts which illustrate the presence (or lack of presence) and frequency of the particular nodes for each category, for each policy. In the discussion and conclusions sections I will interpret those tables for their ability to answer my research question and sub-questions.

### **Limitations**

The limitations of this study are in generalizability and methodology. Though studying an entire region of countries carries more potential for generalizability than a single country study, the results from the study are specific to the Southeast Asian region and only the specific policies in which I will analyze (ICT and education policies). Further, this methodology and potentially the categories selected could be used in future research in other regions, but my study only applies to the most current Southeast Asian

ICT and education policies available in English and will not allow for a widespread geographic or longitudinal analysis.

Methodological limitations include the inability of my data to speak to the motivations of each country for favoring one category (neoliberalism versus access to education) over another (if that is the case). The methodology I have selected solely focuses on the presence, frequency, and use of particular themes in the context of the sentence in which it appears, but will not allow the findings to speak to larger discourses or motivations surrounding the policies themselves. Further, original intentions behind language used are impossible to determine when the mother tongues of the nations in question are not the language in which the policies are being tested.

### **Findings**

The search for each ASEAN member states' national education policies proved difficult, perhaps since my own restrictions limited my search to those published both online and in English. The search was conducted on Google as well as on each state's Ministry of Education websites and the results can be found in Table 1 below. Most member states had a national education long-term plan, but two states did not make these policies available online (Myanmar) or in English (Vietnam) and one could not be located (Singapore). The total number of education policies found was seven out of a possible ten. Three out of the seven were published prior to the publication of the regional, ASEAN ICT Masterplan.

Table 1. Results from search for ASEAN member states' national education and ICT policies.

Country	Education Policy	Date	ICT Policy	Date
Brunei	Education Strategic Plan	2012	E-Government Country Paper	2003
Cambodia	Education Strategic Plan	2009	ICT Masterplan in Education	2010
Indonesia	Education Strategic Plan	2010		
Lao P.D.R.	Education Sector Development Framework	2009		
Malaysia	Education Blueprint	2013	ICT in Malaysia	2009
Myanmar	30-Year Education Development Plan	2000	ICT Master Plan Executive Summary	2011
Philippines	Higher Education Strategic Plan	2011	Philippines Digital Strategy	2011
Singapore			iN2015	2009
Thailand	Social and Economic Dev. Plan	2012	ICT Plan	2009
Vietnam	Strategy for Education Development	2009	IC White Paper	2011

Shaded cells represent a policy that could not be located.

All of the ICT policies found for the member states were online and in English, however, an ICT policy could not be found for Indonesia and Lao P.D.R. The names of the policies more widely differed based on the goals of the policy and the ministry overseeing the telecommunications policy for the particular member state. Of the eight ICT policies found, five were published prior to the regional, ASEAN ICT Masterplan and the remaining three were published in the same year (2011).

Once compiled, the NVivo search query for neoliberal values and access-related values was performed first on the education policies and then on the ICT policies. The terms used in the search derived from the regional ASEAN ICT Masterplan (as illustrated in Appendix B) by using the framework of neoliberal versus access as established by Aucoin (as illustrated in Appendix A). The results for the education policy search can be found in Table 2. Thailand had the largest percentage of the neoliberal search terms in their Social and Economic Development Plan at 1.14% coverage whereas Cambodia contained the largest percentage of the access-related search terms in their Education Strategic Plan at 3.67%. Lao P.D.R. and Malaysia each had the lowest percentage of neoliberal and access values at .29% and 1.72% respectively. Overall, the search terms related to access occurred more frequently in the education policies at 2.8% average coverage versus the neoliberal terms which had an average coverage of .49% in the policies.

Table 2. Results from search queries performed on ASEAN member states' education policies.

Country	Education Policy	Date	<i>Neoliberalism</i>		<i>Access</i>	
			References	Coverage	References	Coverage
Brunei	Education Strategic Plan	2012	62	0.33%	535	2.99%
Cambodia	Education Strategic Plan	2009	188	0.32%	2000	3.67%
Indonesia	Education Strategic Plan	2010	149	0.37%	1484	3.40%
Lao P.D.R.	Education Sector Development Framework	2009	117	0.29%	1162	3.04%
Malaysia	Education Blueprint	2013	857	0.46%	3282	1.72%
Myanmar	30-Year Education Development Plan	2000				
Philippines	Higher Education Strategic Plan	2011	81	0.51%	402	2.73%
Singapore						
Thailand	Social and Economic Dev. Plan	2012	1219	1.14%	2098	2.02%
Vietnam	Strategy for Education Development	2009				
Average:			381.86	0.49%	1,566.14	2.80%

The ICT policies were searched using the same terms and methodology as the education policies. The results from this search can be found in Table 3. Myanmar's ICT Master Plan, published in the same year as the ASEAN ICT Masterplan, had the highest number of coverage of the neoliberal search terms at 2.19%. At 2.96% Thailand's ICT Plan, published prior to the ASEAN ICT Masterplan, had the highest coverage of the access-related search terms. The lowest coverage of neoliberal search terms was found in Cambodia's ICT Masterplan in Education, published prior to the ASEAN ICT Masterplan, at .17% . The lowest coverage of access search terms was Vietnam's IC White Paper, published in the same year as the ASEAN ICT Masterplan, at .65%. Overall, as with the education policies, the search terms related to access occurred more frequently in the education policies at 1.83% average coverage versus the neoliberal terms which had an average coverage of .72% in the policies.

Table 3. Results from search queries performed on ASEAN member states' ICT policies.

Country	ICT Policy	Date	<i>Neoliberalism</i>		<i>Access</i>	
			References	Coverage	References	Coverage
Brunei	E-Government Country Paper	2003	64	0.59%	131	1.48%
Cambodia	ICT Masterplan in Education	2010	31	.17%	405	2.52%
Indonesia						
Lao P.D.R.						
Malaysia	ICT in Malaysia	2009	34	0.55%	140	1.92%
Myanmar	ICT Master Plan Executive Summary	2011	118	2.19%	123	2.27%
Philippines	Philippines Digital Strategy	2011	889	1.25%	1220	1.83%
Singapore	iN2015	2009	792	0.99%	860	1.05%
Thailand	ICT Plan	2009	564	1.03%	1425	2.96%
Vietnam	IC White Paper	2011	147	0.40%	255	0.65%
Average:			329.89	0.72%	532.38	1.83%



A summary of the averages found between both sets of search terms and both sets of policies can be found in Table 4. Education policies had approximately triple the number of references to the access search terms than the ICT policies while neoliberal search terms in both sets of policies were about equal. Though the number of references of both sets of search terms in the ICT policies did not differ considerably, from this result I decided to further differentiate the ICT policies by date of publication to see if any differences could be revealed in how they discuss the benefits to ICTs.

Table 4. Summary of average results from all search queries performed.

	<i>Neoliberalism Averages</i>		<i>Access Averages</i>	
Policies	References	Coverage	References	Coverage
EDU	381.86	0.49%	1,566.14	2.80%
ICT	329.89	0.72%	532.38	1.83%

The date-specific results of this search can be seen in Table 5 and 6. The search terms remained the same as in prior searches, but all ICT policies published prior to the 2011 publication of the ASEAN ICT Masterplan were separated from all ICT policies published in the same year or after 2011 (all “post-2011” policies happened to be published in 2011).

Table 5. Results of search query on ICT policies prior to 2011 publication of ASEAN policy.

Country	ICT Policy	Date	<i>Neoliberalism</i>		<i>Access</i>	
			References	Coverage	References	Coverage
Brunei	E-Government Country Paper	2003	64	0.59%	131	1.48%
Cambodia	ICT Masterplan in Education	2010	31	0.17%	405	2.52%
Malaysia	ICT in Malaysia	2009	34	0.55%	140	1.92%
Singapore	iN2015	2009	792	0.99%	860	1.05%
Thailand	ICT Plan	2009	564	1.03%	1425	2.96%
Average:			297	0.67%	592.2	1.99%

Table 6. Results of search query on ICT policies published in the same year as ASEAN policy.

Country	ICT Policy	Date	<i>Neoliberalism</i>		<i>Access</i>	
			References	Coverage	References	Coverage
Myanmar	ICT Master Plan Executive Summary	2011	118	2.19%	123	2.27%
Philippines	Philippines Digital Strategy	2011	889	1.25%	1220	1.83%
Vietnam	IC White Paper	2011	147	0.40%	255	0.65%
Average:			384.67	1.28%	532.67	1.58%

Though the results seem very similar when divided based on publication year, Table 7 illustrates a summary of the average results from the two different time periods. In the policies published *prior* to the 2011 ASEAN ICT Masterplan, the search terms related to access were slightly more frequently seen than those related to neoliberalism. As for the policies published in 2011, though the number of references seems to be significantly different, the percentage of coverage is similar. The difference between the coverage of the two values is greater in the policies published prior to 2011 than those published in 2011.

Table 7. Summary of results of publication date-specific search query of ICT policies.

	<i>Neoliberalism Averages</i>		<i>Access Averages</i>	
Policies	References	Coverage	References	Coverage
ICT Pre-2011	297	0.67%	532	1.99%
ICT 2011	384.67	1.28%	532.67	1.58%

Over all policies, published in all time periods, the number of times these search terms are referenced are small in comparison to the total length of the policies. It is worth noting that all policies contained at least some instances of the search terms, though the number of references ranged from 30 to 3,000. The small percentage of both sets of terms does not speak to a pervasiveness of the ASEAN regional policy language, however, comparing their presence may answer my research question to determine to what extent the discourses of neoliberalism and access used in ASEAN's 2011 policy influenced ICT policymaking at the national level of its member states?

## **Discussion**

There are two primary relationships in my findings which are worth highlighting in this section to discuss a potential answer to my research question. The first is the relationship between the member states' education policies and ICT policies in number of references to the access-related search terms. While neoliberal terms were used in near-equal numbers in both sets of policies, the access terminology was referenced three times more often in the education policies than the technology policies. This implies to some degree that the benefits to education are written about differently than the benefits to ICTs in these policies.

The second relationship I will discuss in this section is between the difference in terminology used in member state ICT policies published before and after the regional, ASEAN ICT Masterplan. By dividing my findings in this way, there may be implications for demonstrating a change between the two time periods which, if attributable to the regional policy, could point to the extent to which ASEAN dictates national policies.

### **Access in Education Versus ICT Policies**

The higher frequency of access terms in the education policies versus the ICT policies may represent a values-system across the ASEAN region. Of course there are limitations to the original findings. The numbers merely represent an average and do not account for the large difference in amount of coverage and number of references to the access terms in individual member states. For example, the Philippines had 402 references to these terms whereas Malaysia had 3,282 references, but these references represented 2.73% of the Philippine policy and 1.72% of the Malaysian policy. Further, one of the access terms used in the search included the root word "education," which

would have been recognized by NVivo as a reference each time it was used in any form in the document. In a policy *about* education, this will likely skew the findings.

If, however, the findings are taken as accurately depicting the atmosphere surrounding how member states discuss education and ICTs, they would imply that the policies tout the benefits of access to education more often than the benefits of access to technology. This would further imply that ICTs are more often discussed based on their neoliberal merits than education may be. This would be an opportunity for further research to be conducted to look at each instance of the neoliberal and access terminology to determine which is given more weight in each set of policies.

### **Pre- Versus Post- Regional Policy Implications**

The second relationship seen in the findings is between the different dates of publication of the member states' ICT policies. The data illustrates that prior to the regional policy publication the access terminology was favored slightly more than the neoliberal in the member state policies (1.99% coverage of access terms and 0.67% coverage of neoliberal terms). When the remaining three policies (published in 2011, the same year as the regional policy) were searched for the same terms, neoliberal and access terminology were used in nearly equal measure (1.28% and 1.58% for neoliberal and access terms respectively). This may signal a shift in thinking of members states upon the release of the regional ICT policy, but there are many factors worth considering in an attempt to explain this relationship.

The exact publication dates of the three member states' policies published in 2011 are difficult to be certain of. The ASEAN ICT Masterplan was published from the 10<sup>th</sup> ASEAN TELMIN (Telecommunications and IT Ministers Meeting) which occurred in

January 2011. Myanmar and the Philippines both published their policies in summer 2011, though it goes undetermined how long they had been working on the policy and to what degree they may have been influenced by the January release of the regional policy. Vietnam's policy was released in 2011 but may have been finalized in 2010.

There are other ways to explain the transfer of ideas than from between the regional to the national level. Pressure to produce these policies may have come from an international source, or from fellow nation states. In my research I found several researchers that were critical of world culture theory and its assertions (which underlie this research), and also supplied other possible explanations for how and why policy transfer occurs. In an article by Gita Steiner-Khamsi (2004) she asserts several reasons why a country might adopt a policy from another country. She excludes the world culture theory idea of transfer occurring from "center" to "periphery" counties leading to an isomorphic phenomenon (p. 203). Instead, one possible reason for the import of policies, she explains, is that during times of political upheaval and change, reform becomes crucial to restructuring and adds legitimacy to policy transfer (pp. 203-204). Several of the ICT policies of the ASEAN member states mentioned global competitiveness as a reason for implementing ICT policies, which could include actors outside of the regional organization ASEAN.

Steiner-Khamsi's idea of "import for certification" is one way that ASEAN member states may be seeking policies from outside their region if they truly do want to be globally competitive. Steiner-Khamsi (2004) explains that legitimacy is needed not only by the countries in which policies are being imported, but by the international organizations doing the exporting. Formulating "best practices" and "pre-packaged"

models and programs can ensure easy dissemination and adoption of international organizations' policies, further adding legitimacy to their particular cause (p. 205-206). The Dakar Framework for Action, published in 2000, touted the benefits to ICTs in education; it's possible for international initiatives like it to be another potential driver toward developing these policies since it is in the best interest of both the nation state and the international organization.

Another potential explanation for the changes in frequency of the terms used in these policies could be simply that pressure was also felt internally, within a nation state. Author Stephen Ball (1998) described the formation of policies as a combination, or "bricolage," of imported policies as well as the local interpretations, "locally tried and tested approaches," and "national ideologies" (p. 126). Several other researchers asserted similar claims of a "mish-mash" of the local with the global. In Marston, Woodward, and Jones' (2007) article they use the example of Nollywood (located in Nigeria) as a way in which ideas that are prevalent globally (Hollywood, in their example) are still reckoned with on the local level in a way that is specific to that area. They demonstrate in their article that besides the borrowing of a portion of the name, Nollywood remains very distinct from Hollywood with their own ways of filming, themes of films, and distribution of films (pp. 54-56). Jonathan Friedman (2007) summarizes this metaphor of Nollywood well when he states that any changes that take place within a county are "local articulations of global processes rather than the movement of models and ideas around the world" (p. 122). Their descriptions of a reckoning between external policies and internal or local contexts should not be discounted in this instance when wealthier



nations like Singapore and Malaysia do have the internal infrastructure to carry out many of the ICT policies they propose while many others in the region do not.

Lesley Bartlett (2003) makes the distinction in her writing between what we may see as “enduring social structures” like capitalism, and the ways in which they are “grappled with, engaged in, and remade in unique ways in different situations” (p. 188). Therefore, though information and communications technology may be seen as a social structure pervasive throughout our global economy and systems of education, the individual member states’ ICT policies may mirror local reckonings which are not reflected in my findings. The findings illustrate a more equal distribution of terminology related to neoliberal and access occurring over time, but the forces contributing to this change cannot with absolutely certainty be attributed to the regional publication of the ASEAN ICT Policy. The similarity in publication dates between all of the ICT policies (most were published between 2009-2011) may point to a larger, global force incentivizing the passage of these policies or, simply a local reckoning of an international trend. This cannot be explained through the findings at hand.

### **Conclusions**

The analysis of my findings through the lens of the two primary relationships represented in the data reflected an indeterminate atmosphere surrounding the publication of many of these policies. Though my findings show a slight change in rhetoric after the publication of the regional policy, the publication dates are so closely together in 2011 that any differences seen in the language used between pre- and post- the regional policy cannot be attributed purely to the regional policy. As Carney, Rappleye, and Silova (2012) explain, at times world culture theory can use its “assumptions, closures, and

omissions” to “*produce*” [emphasis in original] evidence of a world culture (p. 368). It would be a mistake to continue to apply world culture theory to the findings produced from my research since many of the nation states may be acting on national-to-national or NGO-to-national pressures to produce their policies, as opposed to simply international-to-national or regional-to-national.

If these connections cannot be drawn from my findings and we cannot assume, as world culture theorists do, that policies are converging toward sameness based on regional and international pressures, what are the alternatives? Urs Staheli (2003) uses the example of MTV who, in order to maintain their worldwide audience, must indulge in some local particularities. He concludes: “there are no purely global processes that do not require local negotiations and adaptations...[the local and global] constitute two different perspectives that can relate to the same phenomenon” (Staheli, 2003, p. 9,18). Therefore, I conclude that while world culture theory may have been well-suited as a framework through which to conduct my study, it does not necessarily explain the findings in a way that accounts for the discrepancy in terminology used of the policies published in the same year as the regional policy.

Future research related to my findings may use a similar framework in different sectors to gauge the extent to which ASEAN’s regional policy affects national policies in an area besides ICTs which is relatively new compared to other sectors like defense. A wider selection of national policies published over a wider span of time would also reveal potential influences of ASEAN on the member states’ policies, especially when compared to their rise to importance in the region. Lastly, a critical discourse analysis which focused more on the exact language being used in the national policies to describe

the benefits of ICTs (as opposed to simply terms to search for) may give a more comprehensive understanding of how the Southeast Asian region approaches this large sector of global society which has developed quickly. Accounting for the vast variances in wealth across the region would be revealing as well, since many of the countries geographically close are far apart concerning infrastructure and capacity building.

APPENDIX A  
AUCOIN'S FRAMEWORK FOR ANALYSIS  
AND CATEGORICAL DEFINITIONS

Concepts	Neoliberalism	Access
Poverty Reduction	Knowledge as gaining economic competitiveness	Increased choice in gaining knowledge valuable especially for disadvantaged groups
Bridging the Digital Divide	Leveraging private sector investments to aid the widespread use of ICTs (PPPs)	Promote equal/widespread sharing of knowledge because knowledge is power
Capacity Building	Private sector development	Public sector development

APPENDIX B  
AUCOIN'S FRAMEWORK AS APPLIED TO  
ASEAN ICT MASTERPLAN

Concepts	Neoliberalism	Access
Poverty Reduction	Economic transformation, Competitiveness	Underserved communities, Quality of life
Bridging the Digital Divide	Global investments, Public Private Partnerships	Awareness, Empowerment
Capacity Building	Industry, Entrepreneurship, Enterprises,	Nation building, Public education, Community development

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