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# Investigation of Alignment between Goals of Schooling Relevant to Georgia and the Georgia Performance Standards

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ACCEPTANCE

This dissertation, INVESTIGATION OF ALIGNMENT BETWEEN GOALS OF
SCHOOLING RELEVANT TO GEORGIA AND THE GEORGIA PERFORMANCE
STANDARDS, by ANISSA LOKEY VEGA, was prepared under the direction of the
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in partial fulfillment of the requirements for the degree Doctor of Philosophy in the
College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chair, as
representatives of the faculty, certify that this dissertation has met all standards of
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ABSTRACT

INVESTIGATION OF ALIGNMENT BETWEEN GOALS OF SCHOOLING
RELEVANT TO GEORGIA AND THE GEORGIA
PERFORMANCE STANDARDS
by
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Since the American Revolution free public education has been a discussion of

political debate. The purpose that such an institution should play in society is a debate

fervently argued when the founding fathers wanted to build a republic based on

meritocracy. The problem this study addresses is the undefined relationship between the

goals of schooling relevant to Georgia and the Georgia Performance Standards (GPS)

which is a critical piece to creating a complete systemic view of public schooling in

Georgia. The purpose of this study is to investigate the alignment between the GPS and

schooling goals. The guiding question and sub-questions are: How well are the GPS, or

the intended curriculum of Georgia schools, and each of the various stated goals of

schooling aligned? How relevant are the eighth-grade GPS to the latent themes of each of

the stated goals of schooling? How balanced are the latent themes of each of the stated

goals of schooling in the eighth-grade GPS?

Through a historical investigation of the literature and current policy the author

establishes the currently relevant goals of schooling which serve as the latent goals for

which the method will seek to find evidence within the Georgia Performance Standards.

The study employs a quantitative content analysis of a significant section of the Georgia

Performance Standards (GPS) looking for themes associated with various stated goals of schooling as indicated by the literature review. The manifest themes, developed from the latent goals of schooling, are incorporated as the dependent variables in the study, while the GPS serve as the independent variable. Neuendorf's (2001) framework for content analysis is used to develop a new method for investigating the goal-curriculum alignment relationship through new measures of Curricular Balance, Curricular Relevance, and Manifest Theme Presence. This study presents a new visual model to compare a curriculum's alignment to multiple goals of schooling called the Goal-Curriculum Alignment Measures (G-CAM) model. This study finds that the GPS are strongly aligned to the goals of Americanization, high student test scores, post-secondary enrollment, and national gain, while poorly aligned to democratic participation and social justice. Evidence for these conclusions are discussed and related to the current socio-political literature.

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A Dissertation

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possibilities for myself.

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LIST OF ABBREVIATIONS

GaDOE            Georgia Department of Education

G-CAM            Goal-Curriculum Alignment Measures

GPS              Georgia Performance Standards

CHAPTER 1: STATEMENT OF THE PROBLEM

Introduction

Since the American Revolution, free public education has been a topic of political debate. The purpose that such an institution should play in society is a debate fervently argued since the founding fathers wanted to build a republic based on meritocracy. The "sorting machine" of public education continues to be driven by a momentum of contradicting directions (Spring, 1989). However, in the 1980s as political parties drew alliances, the discussion of purpose was covered by a rhetoric of international competition and test scores. Success became defined by a test score rather than a life-long outcome for the student.

The debate surrounding the organization and division of subject matter within the curriculum ended with Sputnik. Following Sputnik, international competition and the nature of industrial knowledge solidified textbook, teacher, and testing specialties into categories of English language arts, mathematics, science, and social studies. This curriculum structure remains unchanged today. Yet since that time, the United States has seen eight economic recessions, a civil rights movement, the end of the Cold War, inauguration of ten presidents, a mass adoption of the home computer, the explosion of the Internet, and reception of pictures sent by robots from Mars. The nature of knowledge, and thus media and labor, has been changed by fast international information networks. Today, the labor market can no longer support the number of blue-collar and

service-industry workers currently available, while white-collar jobs require a new expertise and flexibility not seen in the twentieth century. Despite all these changes within society since Sputnik, the curriculum structure in the United States has remained relatively unchanged, and the relationship between the curriculum and the goals of schooling remains covert (Hargreaves, 2003). The current goal of schooling in the United States is unclear, and more specifically, the alignment relationship between the stated goals of schooling and the curriculum intended for each student in the state of Georgia remains unknown.

### Problem

Systems inquiry is a school of thought that has been applied by instructional design researchers and practitioners in the fields of business, information technology, healthcare, engineering, and environmental studies. Yet, in education, the systems inquiry domain is "under-conceptualized and under-utilized" (Banathy & Jenlink, 2006, p. 47). Banathy and Jenlink (2006) state that "systemic educational change will become possible only if the educational community will develop a systems view of education, if it embraces the systems view, and if it applies the systems view in its approach to change" (p. 47). According to Banathy and Jenlink (2006), components of developing a systems view require the exploration, understanding, and description of

> Characteristics of the 'embeddedness' of educational systems operating at several interconnected levels (e.g. institutional, administrational, instructional, learning experience levels);…Relationships, interactions, and mutual interdependencies of systems operating at those levels within educational systems; purposes, goals, and the boundaries of educational

systems as those emerge from an examination of the relationship and mutual interdependence of education and the society;…Dynamics of interactions, relationships, and patterns of connectedness among the components of systems. (p. 47)

The problem this study addresses is that the alignment between the various stated goals of schooling relevant to Georgia and the Georgia Performance Standards (GPS) is undefined. Understanding of this curricular relationship is a critical piece to creating a complete systemic view of public schooling in Georgia. For this study, alignment is defined as the "the degree to which different components of an educational system work together to support a common goal" (Maritone & Sireci, 2009, p. 24). This relationship will be described using two measurable attributes including balance and relevance. Relevance is the level of support provided by a curriculum for a given goal. Balance is a measurement of consistency among levels of support in a curriculum for a given goal.

The GPS are a critical component of the public schooling system in Georgia as they are a system component that touches all stakeholders. These standards are intended to articulate and prioritize the acquired learning for each public school student within the system. These standards should be tied to the expected outcomes or goals of participating in the Georgia public schooling system (Spring, 2009). The undefined relationship between the GPS and the goals of schooling is apparent when one compares best practice in instructional design with the curriculum-making process implemented by the authors of the GPS.

Initially the Georgia Department of Education (GaDOE) website stated its vision as "leading the nation in improving student achievement by functioning as a service-oriented, policy-driven agency that meets the needs of school systems" (Georgia

Department of Education, 2009b). In January 2009, the Department revised this vision

and the strategic map. The vision was simplified to state that Georgia will "lead the

nation in improving student achievement" (Georgia Department of Education, 2009c).

The six supporting goals to achieve this stated mission are as follows:

> increase high school graduation rate, decrease high school dropout rate,
> and increase postsecondary enrollment; strengthen teacher quality,
> recruitment, and retention; improve workforce readiness skills; develop
> strong education leaders especially at the building level; improve the SAT,
> ACT, and achievement scores of Georgia students; make policies that
> ensure maximum academic and financial accountability. (Georgia
> Department of Education, 2009c)

The importance of the curriculum-making process used for the GPS will become

apparent when compared with a generic instructional design model, revealing an

undefined alignment relationship between the GPS and goals of schooling. The

curriculum-making process of the Georgia curriculum as described by GaDOE is

systematically different from what is described as best practice in the instructional design

literature (Carr, 1997; Cleaver & Taylor, 1989; Dick, Cary & Carey, 2005; Johnson,

1981; Reigeluth, 1993; Turner & Naumer, 1983; Tyler, 1949; Wiggins & McTighe,

2005). A synthesis of the development of schooling goals and curriculum in Georgia is

illustrated in Figure 1, based on information provided by the GaDOE website.

*Figure 1*

Georgia Department of Education GPS Curriculum-Making-Process



Institutional Level Curriculum-Making Process Order in Georgia

**1 — Standardized Tests**
- Subjects Tested established prior to 2004
- Written by testing company
- Informs step 2

**2 — GPS**
- Written between 2004-2008; currently applicable
- Informed by standardized tests in step 1
- Written by Georgia educators & subject experts

**3 — Adjust Standardized Tests**
- Conducted 2005-2009
- CRCT, EOCT, and GHSGT
- Same subjects tested as prior to 2004
- Currently applicable
- Terminology "adjust" or "re-align" included

**4 — Current GaDOE Goals**
- Written in Jan.2009
- Written by Georgia DOE
- Process & reason for creation unknown
- Key point: Improve student achievement
- 6 sub-goals

Causal/informed relationship as described September 15, 2008 at http://www.georgiastandards.org

http://public.doe.k12.ga.us/strategicPlan.aspx

*Figure 1. Synthesis of the development of the schooling goals and curriculum in Georgia developed from multiple pages on the Georgia Department of Education website.*

As seen in Figure 1, the curriculum-making process as described by the GaDOE for the current intended curriculum and goals statements began with content-area tests that had been written prior to 2004. Between 2004 and 2008, the Department wrote the GPS at the programmatic level (see Appendix A). Next, the Department wrote adjustments to the content-area tests used in the design of the GPS. Finally, the process ended with the writing and revising of the schooling goals for the state of Georgia.

Institutional-level changes to the traditional structure of the subject areas were not considered, as the previous tests pre-defined divisions between content areas.

The process of curriculum-making as described by the Department can be summarized in the following four steps: write tests, write curriculum, adjust tests, and write goals. This process of curriculum-making is very different from what is recommended in the field of instructional design. Instructional design requires a clear understanding of the context and goals of the learning institution prior to development of a curriculum. The ADDIE model, a generic instructional design framework organized by five processes components, reflects this relationship best (Spector & Ohrazda, 2004). As seen in Figure 2, the ADDIE model of instructional design includes the following five process components: analysis, design, development, implementation, and evaluation (Reigeluth, 1993). Initially, in the first phase of ADDIE, the designer analyzes the context and needs, which may include broad needs that the proposed learning should fulfill. Next, the designer will actually design the intended curriculum and any materials which may be used when enacting the curriculum. Following the design phase, the designer will develop the instructional materials to be used in the enacted curriculum. After the development phase, the designer or an instructor will implement the instructional plans using the developed materials. Finally, the instructor will use formative and summative evaluations to determine the quality of instruction and acquired learning. This instructional design model provides clear systematic steps to designing purposeful curriculum and instruction around a given goal, set of learners, and context.

*Figure 2*

ADDIE Instructional Design Model
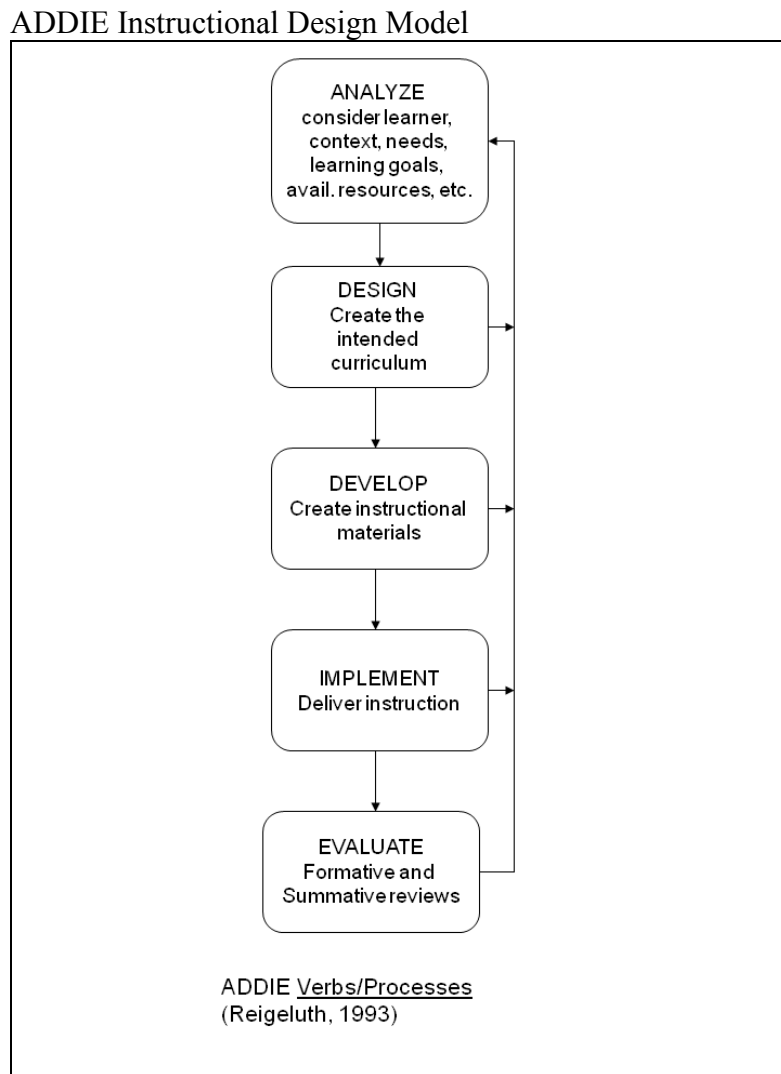


*Figure 2. From Reigeluth (1993).*

The ADDIE model reveals a difference in the steps of best instructional design practice and the practice implemented by the GaDOE. Although this study is not intended to be a critique or investigation of curriculum-making practices of the GaDOE, these practices contribute to the justification of this study and revelation of the problem. The alignment between the goals of schooling in Georgia and the GPS is unclear since the

model of curriculum-making used by the GaDOE does not resemble models of instructional design (Carr, 1997; Cleaver & Taylor, 1989; Dick, Carey & Carey, 2005; Johnson, 1981; Reigeluth, 1993; Turner & Naumer, 1983; Tyler, 1949; Wiggins & McTighe, 2005).

The goals and values of the intended curriculum should shape its contents and influence action in the classroom (Connell, 1985). Without a best-practices model of curriculum-making, the alignment between the GPS and the various stated schooling goals cannot be assumed, and a systems view of the public schooling system in Georgia remains incomplete.

## Purpose

The purpose of this study is to investigate the relationship between the GPS and the stated schooling goals relevant to Georgia. The 10th Amendment to the United States Constitution decrees education as a responsibility of the state, but still subject to federal regulations and laws. This study, therefore, investigates schooling in Georgia within the context of educational policy in both Georgia and the United States. Due to the roles that both the state and the federal government play in schooling, the goals relevant to this study include the goals stated by the GaDOE, goals stated in Secretary Arne Duncan's blog post (Duncan, 2009), *A Nation at Risk* (National Commission on Excellence in Education, 1983), and the No Child Left Behind Act of 2001. These selections are further justified through a review of the literature in chapter two.

Theoretical Framework

Steven Lukes' (2005) Three-Dimensional View of Power serves as a basis for the theoretical foundation of this study. This study investigates whether the alignment between the various stated goals of education and the intended curriculum reveals a conflict of interests as outlined by Lukes' third dimension of power within his Three-Dimensional View of Power.

Lukes (2005) argues that power is a concept that is deeply intertwined with value systems. He also argues that many other concepts of power that address observable conflict omit the complexity of power relations. In Lukes' Three-Dimensional View of Power, Lukes acknowledges the forces of power in three dimensions; however, Lukes' view of power agrees with and builds upon other traditions of power understanding. His theory is intended to be a complete view of three different modes of power exercise. First, Lukes recognizes the pluralistic view of the first overt dimension of power, which is based upon the views of democracy and government. This view states that A is as powerful as he can get B to do something A desires. Lukes does not argue that this dimension does not exist, but that it is not alone in the means by which a group may exercise power. This view is considered the first dimension of Lukes' power model.

To trust only this view is considered a one-dimensional view of power. Next, Lukes Two-Dimensional view of power builds on the work of Bachrach and Baratz (1962). This second dimension recognizes and asserts the existence of the one-dimensional view but expands into a second dimension to build on his multi-faceted theory of power. This second dimension states that A's observable conflict with B's

interests is still overcome by A, through A's influence over B's decision-making. Still,

Lukes (2005) does not perceive the theory up to this point to be complete:

> The first two dimensions of power shows up in cases of actual conflict, it follows that actual conflict is necessary to power. But this is to ignore the crucial point that the most effective and insidious use of power is to prevent such conflict from arising in the first place. (p. 27)

Finally, in the statement above, Lukes adds his third dimension, which makes his

theory a Three-Dimensional View of Power. This third dimension once again recognizes

the first and second views of power as legitimate but incomplete, due to covert or latent

influence of the powerful over the perceptions of those individuals influenced. The third

dimension states that A influences the perceptions of B and changes the true desires of B

towards a false preference in order to act in a means compliant with A's desires. Each of

these dimensions of power is described in Lukes' Three Dimensions of Power as seen in

Table 1. This investigation is framed by Lukes' third dimension in that it looks for

potential latent conflict within the alignment relationship between the GPS and the goals

of schooling.

Table 1

*Lukes' Three Dimensions of Power*

| Description | Focus |
|---|---|
| One-Dimensional View of Power | (a) Behavior<br>(b) decision-making<br>(c) key issues<br>(d) observable (overt) conflict<br>(e) subjective interests, seen as policy preferences revealed by political participation |
| Two-Dimensional View of Power | (a) decision-making and non-decision making<br>(b) issues and potential issues<br>(c) observable (overt or covert) conflict<br>(d) subjective interests, seen as policy preferences or grievances |
| Three-Dimensional View of Power | (a) decision-making and control over political agenda (not necessarily through decisions)<br>(b) issues and potential issues<br>(c) observable (overt or covert), and latent conflict<br>(d) subjective and real interests |

*Note. Taken from Lukes (2005) page 29.*

An example of this use of the third dimension of power, which Lukes describes as preventing conflict from arising, exists in the document *A Nation at Risk* (National Commission on Excellence in Education, 1983). This document suggests that the nation already agrees on the purposes of schooling as it states that "our society and its educational institutions seem to have lost sight of the basic purposes of schooling" (¶ 4). The document then provides a complex and long list of possible goals and purposes of schooling including the following:

> To develop individual powers of mind and spirit,…to develop the talents of all to their fullest,…to attain mature and informed judgment needed,…to secure gainful employment,…to keep and improve on the slim competitive edge we still retain in world market,…to progress of society,…to participate fully in our national life,…to a free, democratic society,…to the fostering of a common culture,… reach some common understandings on complex issues,…to create a Learning Society,…to formalize schooling in youth because it is the essential foundation for learning throughout one's life, …to apply the ideal of academic excellence as the primary goal of schooling. (Commission on Excellence in Education, 1983, ¶ 1)

By the authors of *A Nation at Risk* telling the nation that these schooling goals are in all children's "own interest but also [for] the progress of society itself" (National Commission on Excellence in Education, 1983, ¶ 1), they provide an example of what Lukes (2005) calls "agenda control"(p.111). Members of society may not vote on the goals of schooling, but rather they are led to believe that their best interests are being met when decision makers prevent the conflict, or issue from arising. Although this brief analysis could become an investigative study on its own, it shows the magnitude of power controls within the education system controlling purpose. Lukes (2005) further elaborates on this dimension of power:

> Is it not the supreme and most insidious exercise of power to prevent people, to what-ever degree, from having grievances by shaping their perceptions, cognitions and preferences in such a way that they accept their role in the existing order of things, either because they can see or imagine no alternative to it, or because they see it as natural and unchangeable, or because they value it as divinely ordained and beneficial? (pg. 28)

This third dimension of power is also illustrated in Figure 1 as previously presented, the author's representation of the curriculum-making method conducted by the GaDOE. In this process of curriculum-making, subject-matter experts were used to create the Georgia

Performance Standards (GPS) at the programmatic level. The significance of this process lies in the omission of the potential issue of questioning curriculum organization according to the traditional subjects. Had the authors of the GPS first brought the question of what the goal of schooling should be in Georgia, overt conflict could have ensued. The authors controlled the agenda by hiding the potential issue of deciding a goal of schooling and any institutional-level changes to curriculum structure.

Curriculum theorizing has historically focused on the content rather than the form or purpose of the curriculum. The "obsession with subject content" continues beyond the school curriculum to the knowledge base required for teaching, also known as pedagogical content knowledge (Goodson, 1992, p. 68). Teachers are prepared according to their subject focus. This subject content focus is also seen in textbook development. Form and organization of curricular content have not been questioned (Goodson, 1992; Deng, 2007). According to Goodson (1992) "social scientists, who traditionally have been more attuned than most to the ideological and political struggles that underpin social life, largely accept the *givenness* of the school curriculum" (p. 66). This trust of curriculum structure and content is concerning to Connell (1985), who claims that "it dominates most people's ideas of what real learning is about…its logic has the most powerful influence on the organization of the school and of the education system generally" (p.87).

This recognition of the power associated with curriculum supports the importance of investigating curriculum structure and content as a site of additional instances of the third dimension of power in exercise. More specifically, the societal institution or people

in power "limit decision-making to relatively non-controversial matters, by influencing community values and political procedures and rituals, notwithstanding that there are in the community serious but latent power conflicts" (Lukes, 2005, pg. 6). This reasoning and theoretical framework, which identifies latent conflict as significant, frames the guiding questions of the study.

<div align="center">Guiding Questions</div>

This study employed a content analysis of a significant section of the Georgia Performance Standards (GPS) to look for themes associated with various stated goals of education as indicated by this study's literature review. The guiding question and sub-questions are:

How well are the GPS and each of the goals of schooling aligned?

a.  How relevant are the eighth-grade GPS to the latent themes of each of the stated goals of schooling?

b.  How balanced are the latent themes of each of the stated goals of schooling in the eighth-grade GPS?

<div align="center">Significance</div>

Understanding the relationship between the purpose of schooling and the curriculum structure is a necessary step towards facilitating systemic change. Spring (2009) claims that the "goals of public schools determine what is taught and how it will be taught" (p.3). These goals are laden with the political, social, and economic contexts surrounding the schools. The dynamic history of the goals of schooling further jumble the aims of schools today by creating a lengthy list of ways schools are intended to mold

people and society. Understanding in what ways a school system intends to change people and society requires an investigation of the intended curriculum as well as other system structures (Spring, 2009). The goals of any particular system, such as the Georgia public school system, should be evident within the intended curriculum as well as other curricular components. The goals of schooling being addressed through the curriculum may be hidden in view by allied political parties, as discussed later in chapter two. Investigation of the relationship between a given curriculum, such as the GPS, and the goals of schooling should uncover conflict between ideologies. One way to investigate such a relationship is through a description of alignment. Alignment is "a means for understanding the degree to which different components of an educational system work together to support a common goal" (Martone & Sireci, 2009, p. 24). Curricular alignment is currently limited to components of the system that exclude the goal of schooling; however, expansion of such understanding may contribute to systemic understanding necessary for change.

Fullan (2001) states that there are five mutually dependent forces for positive systemic change including moral purpose, understanding change, relationship building, knowledge creation, and coherence-making. The first of these forces, moral purpose, is the common agreement of a system goal to make lives better; however, such purpose must be accompanied by strategies and structures necessary for realizing such purpose. The goal of schooling must define how schooling will make lives better. By articulating, or uncovering the goal, leaders can plan what this requires of the given system. By articulating the goal of schooling, curriculum content and structures can better serve the

system members to meet the common purpose. This alignment of goals and curriculum structures is what Fullan refers to as coherence-making. Coherence-making guides the system in achieving the moral purpose at the classroom level. Conflict between curriculum structures and the goal of schooling can prevent deep and sustainable change.

By exploring and describing the alignment relationship between the goals of schooling and the curriculum in the Georgia public education system, this study contributes to a systemic view of schooling in Georgia. This systemic view of the Georgia public education system is especially important to remain viable because "most of our systems are out of sync with the new realities, particularly since we crossed the threshold into a new millennium" (Banathy & Jenlink, 2006, p. 50). If a schooling system continues without challenge, "there are no controlling purposes; the momentum of the educational machine keeps it running..[as an] inherited system, good for its time, when held to after its day, hampers social progress" (Bobbitt, 1997, p.10). By investigating the purposes of schooling as evidenced in the curriculum, the system as a machine of momentum is put into question.

Consistency between goals of schooling and curriculum design has proven to be important to other countries with a national curriculum. For example, the Education Reform Act of 1988 in the United Kingdom established a stated schooling goal of pupil development and preparation for life experiences. This act defines a consistent mandatory national curriculum and mandates child services aligned with that goal (United Kingdom Parliament, 2009). Also, in China, it is well known among citizens that schooling has a primary goal of teaching self governance in order to serve the national over-population

dilemma. The structure and various curricular components correspond with this national goal. By bringing to light this need for an overt public schooling goal and a corresponding curriculum, this study may contribute to the discussion about schooling among Georgia educators.

Assumptions and Limitations

Certain assumptions of the study are necessary.

1. The Georgia Performance Standards are influential and powerful to the process of schooling in Georgia.

2. The Secretary of Education, Arne Duncan, is an influential and powerful figure for schooling in the United States, including Georgia.

3. The No Child Left Behind Act (2001) is influential to the process of schooling in the United States, including Georgia.

4. *A Nation at Risk* (National Commission on Excellence in Education, 1983) is a currently relevant document to education in the United States, including Georgia.

5. The GaDOE provides accurate and up-to-date information on their websites, including www.gadoe.org and www.georgiastandards.org.

Prior to implementation of the methods of this study, a key limitation requires disclosure. For reasons of time, state and national laws, human resources, and reasonable sample selection, the scope of the GPS that will be analyzed is necessarily limited to eighth-grade English/Language Arts, Math, Science, and Social Studies. The

rationalization for using the eighth-grade English/Language Arts, Math, Science, and Social Studies curriculum will be explained in chapter four.

<u>Terms and Definitions</u>

For this study, it is important to define those terms which are frequent and influential in effectively communicating the argument presented. These terms follow.

1. Alignment is the "means for understanding the degree to which different components of an educational system work together to support a common goal" (Martone & Sireci, 2009, p. 24).

2. Balance is the measurement of consistency among levels of support in a curriculum for a given goal.

3. Conservative politics tend to idealize the past through tradition and common cultural values (Engel, 2000).

4. Curriculum is the aggregate or assemblage of particulars at the institutional level, of a course of study, or of all subjects over all years, given in a school (Marsh & Willis, 2003).

5. Curriculum evaluation is the value judgment of the intended, enacted, acquired, and/or assessed curriculum (Porter & Smithson, 2001).

6. Curriculum standards include the intended programmatic learning objectives and content that makes up the school subject (English & Steffy, 2001).

7. Education is the compilation of all learning experiences over one's lifetime (Dewey, 1938).

8. Globalization is the ability of labor and communication to interact globally (Tuomi, 2007).

9. Goal of schooling refers to the expected outcome(s) or end result(s) of participating in the public K-12 institution of schooling (Spring, 2009).

10. Goals include the institutional-level intended and expected outcomes or end results of a program of study (Spring, 2009).

11. Knowledge society is a society where knowledge, creativity, and latent capacity of the human mind are the primary source of economic trade. Knowledge society is located anywhere connected through global broadband networks, and includes white-collar workers of the middle and upper classes (Hargreaves, 2003).

12. Liberal politics tend to idealize the future through understanding of historical inequities and injustices (Engel, 2000).

13. Neo-conservative politics tend to idealize the past through tradition and common cultural values like conservatives, but also put heavy trust in using market ideology to make decisions (Engel, 2000).

14. Neo-liberal politics tend to idealize the future through understanding of historical inequities and injustices, but also put heavy trust in using market ideology to make decisions (Engel, 2000).

15. Relevance is the level of support provided by a curriculum for a given goal.

16. Schooling, for this study, refers to the public K-12 institution established as free for participants and mandatory for specific age groups in the United States (Spring, 2009).

Conclusion

The discontinued discourse among curriculum theorists regarding the goal of schooling in the United States started with Sputnik and failed to re-emerge following dramatic societal changes over the past fifty years. This lack of discourse is seen in the curriculum-making process in Georgia. Lukes' third dimension of power states that conflict of interests can be latent in order for power holders to avoid conflict and maintain agenda control. This use of power suggests that when schooling goals and curriculum decisions are not debated, power is exercised. Luke's third dimension of power is evident in the curriculum-making process employed by the GaDOE when writing the GPS. This process failed to follow instructional design models which begin with analysis of the context and goals for schooling. This failure to use such a design model reveals that the alignment between the GPS and the relevant schooling goals is unknown. Yet, understanding this relationship is a critical component of a systems view of schooling in Georgia which is necessary for effective systemic reforms. In order to contribute to this systemic view, this study proposes to investigate the alignment relationships between the GPS and various stated goals of schooling which will inform Georgia educational leaders and other stakeholders in decisions and processes regarding state curriculum.

The following chapters outline this study as introduced by this initial chapter. Chapter two serves multiple purposes. First, chapter two uses a historical analysis of social context and educational policy to trace the goals of schooling in the United States beginning with the Antebellum period and leading up to the No Child Left Behind Act of

2002. Next, chapter two uses current socio-political context and educational policy literature to identify which of the historical goals continue to influence contemporary policies and leaders in Georgia. The resulting list of relevant goals of schooling from chapter two are critical to the methods of this study as they serve as the latent goals of schooling.

Chapter three uses the curriculum evaluation literature to expose the need for a new model to investigate the goal-to-curriculum alignment relationship in question. Next, chapter three uses evaluation models outside of curriculum evaluation to inform the development of the new model. Chapter four outlines the content analysis model designed to investigate the alignment between the goals of schooling and the GPS. This chapter also breaks down the latent goals of schooling from the historical analysis in chapter two into more visible concepts which will be referred to as the manifest themes. Chapter five reports the findings of this study in empirical terms of balance and relevance. Finally the last chapter, chapter six, provides a discussion that situates the findings within the broader literature.

CHAPTER 2: REVIEW OF THE INFLUENTIAL CONTEXT AND EDUCATIONAL
POLICY LITERATURE

Introduction

The United States education system has an overwhelming role to play in individual lives and society as evidenced by this historical analysis. This review of the history of schooling in the United States makes one fact clear: consensus on the purpose of public schooling has never been reached, leading to a glut of expectations for the public school systems (Spring, 2009). Identifying the most influential schooling goals requires a review of the historical context and policies associated with public schools in the United States. Such a historical socio-political description of schooling in the United States provides evidence to establish the list of schooling goals in the United States applicable to this study (Kliebard, 1986, Vinovskis, 1999).

The first part of this chapter traces the emergence of schooling goals in their historical context. The resulting collection of historically applicable schooling goals provides a framework for the second part of this chapter that describes current contexts and policies influencing schooling goals of Georgia. By juxtaposing historical evidence of schooling goals to evidence of current schooling goals and their surrounding context, this chapter identifies the latent goals of schooling relevant to Georgia today.

<div align="center">Historical Context and Policy</div>

*Antebellum America*

Prior to the American Revolution, education was perceived to be impractical for the average citizen and was primarily directed at cultivating the soul of the elite. Literary and religious content dominated education as a subject-centered curriculum incorporating subjects such as Latin, Greek, logic, and rhetoric. During this period and throughout the entirety of the 19th century, pedagogy was unborn and educators practiced the science of phrenology. Phrenology is a theory that portrays the brain as a muscle requiring repetitious exercise of its over-thirty sections (Kliebard, 1986; Urban & Wagoner, 2009).

The founding fathers of the United States had differing views on the importance of a public education system in the new republic. Thomas Jefferson was the most outspoken on the role and value of a free public education system. Following the establishment of independence from Great Brittan, Jefferson focused his attention on the constitution and resulting government in Virginia. Few disagreed with the importance of the freedom of the press; however, Jefferson articulated the relationship between the press and a free public schooling system:

> The people are the only censors of their governors; and even their errors will tend to keep these to the true principles of their institution. To punish these errors too severely would be to suppress the only safeguard of the public liberty. The way to prevent these irregular interpositions of the people, is to give them full information of their affairs through the channel of public papers, and to contrive that those papers should penetrate the whole mass of the people. The basis of our government being the opinion of the people, the first object should have a government without newspapers, or newspapers without a government, I should not hesitate a moment to prefer the latter. But I should mean that every man should

receive those papers and be capable of reading them. (Pangle & Pangle, 1993, p. 111)

Jefferson perceived the relationship between schooling, mass literacy, and the free press to be critical to a nation ruled by its people. Additionally, Jefferson also made comments to indicate that he saw the education of the brightest white-male Americans to be necessary to build meritocracy and overcome aristocracy. In Jefferson's defense, Pangle and Pangle (1993) argue that Jefferson wanted to seek a balance between a patriotic citizenry with a collection of contemplative government leaders from various levels in social upbringing. Jefferson stated that the major goal of schooling in the republic was "to enable every man to judge for himself what will secure or endanger his freedom" (Pangle & Pangle, 1993, p. 108). Although many free public schools were established in Virginia under Jefferson's influence, free public education was not put into law in Virginia during his lifetime. Still this original purpose of schooling in the United States possibly influences perceptions today.

*Common School Movement*

Although states such as Virginia offered some children free public education following the American Revolution, it was not yet a right of children nationwide. In 1837 Horace Mann became the secretary of the Massachusetts Board of Education. Mann's appointment to this position is often marked as the beginning of the common school movement (Bowles & Gintis, 1976; Vinovskis, 1999). During Mann's life he saw a heavy influx of immigrants enter the country. He saw the varying religions, cultural morals, and languages as seeds to the problems of crime and poverty affecting nineteenth-century

America. By using Massachusetts schools as a tool to promote a common culture and morals among the youth of the nation, Massachusetts could solve its "need to assimilate culturally diverse immigrants into mainstream American life" (Urban & Wagoner, 2009, p. 116). This new Americanizing purpose of schools began with this common school movement which promoted an equal education for members of society funded by the government. Curriculum at this time did not reform past the traditional subject-focused curriculum which had shaped understanding of schooling. In fact, the premise of Mann's Americanizing curriculum required that all students receive free access to an identical curriculum which avoided religion, but promoted a common code of ethics and behavior.

Initially, the common schools were rural and controlled locally by district boards in the agrarian communities. However, as industry emerged in the mid-eighteen hundreds, another flood of immigrants arrived from China and Eastern Europe to fill the growing urban districts with factory laborers. During this industrial boom, the common schools evolved to run more like factories in an efficiency movement. This efficiency movement within the common schools required centralized state boards of education governing the schools and graded classrooms as a common application of industrial principles (Vinovskis, 1999). Around the same period, common examinations began to be implemented to assure uniformity among schools and programs. Compulsory education laws began to be enforced in many states. Americanization as the goal of schooling was at its height of acceptance and purposeful implementation.

*College Board*

Near the end of the 19th century, more students were applying for college than ever expected. In 1893 the National Education Association (NEA) published a report written by the association's Committee of Ten that argued the benefit of preparing all high school students for college through a common college-bound curriculum. This committee was led by Charles William Eliot, the president of Harvard University. Eliot viewed the purpose of high school to be college preparation (Reese, 2005). College entrance as the goal of schooling had made its policy-supported appearance by means of this committee report.

As record numbers of students were applying to college, a new conundrum emerged. Individual students were varied in their collegiate choices, requiring them to take multiple exams for each college application. To remedy the variation and cost in entrance exams for each college, a new board was established by President Eliot of Harvard and his colleague, Nicholas Murray Butler of Columbia University. The College Entrance Examination Board, now the College Board, created a single common entrance examination. The resulting exam, also known at the time as the College Boards, was first implemented in nearly one thousand high schools in the summer 1901. By the 1950s the College Board reinvented itself through a merge with Educational Testing Services. This new College Board presented the Scholastic Aptitude Test, or SAT, as the new standard in uniform entrance examinations (Urban &Wagoner, 2009). The influence of Charles Eliot and the College Entrance Examination Board on the curriculum and the purpose of schools became a chief concern for many in the field of education.

*Progressive Movement*

In response to Charles W. Eliot's influence on the curriculum through the College Boards, debates led by progressives emerged regarding the usefulness of preparing every high school student for college when the industrial and agricultural economy of the early twentieth century required a willing labor force. The term "progressive" has a broad meaning in relation to education of the early twentieth century. Progressives wanted a school that prepared students based on individual needs. However, the progressives could not agree on what this meant (Urban & Wagoner, 2009). To some progressives, such as Franklin Bobbitt, progress in education meant preparing students efficiently for various categories of economic life through vocational education programs. In the literature, this group of progressives is referred to as the administrative progressives. In contrast, the curricular progressives, such as John Dewey, wanted to prepare the individual for communal life through student-led curricular experience. In both cases, progressivism influenced the curriculum of the early twentieth century by providing an opposing set of views found in the normalizing purpose of the common schools (Kliebard, 1986; Urban & Wagoner, 2009).

Between 1890 and 1930, secondary school attendance rose six-fold. This jump in student enrollment is attributed to the long-term effects of the common school movement, technological advancement, urbanization, and continuing immigration patterns. Education leaders could not ignore the "dramatic rise in secondary school enrollments" (Kleibard, 1986, p. 9). Students from all classes of society and all environments, urban and rural, were attending school. Progressives were making strides in preparing individuals according the society need of various labor levels based on aptitude test

scores. In 1917 Congress passed the Smith-Hughes Act, which established funding for formal agricultural and vocational education in public high schools. This law intended to address concerns that Germany and England were surpassing the United States in industry and manufacturing manpower of the new Industrial Age (Kleibard, 1986).

Following Black Thursday in October of 1929, as unemployment lines grew, criticism of child-centered progressivism and the social efficiency movement led by the administrative progressives took hold. George Counts (1930), a progressive educational theorist but critic of child-centered progressivism, was first to include in his critiques an argument against social efficiency as employed at the time, claiming it was

> Efficiency without purpose, an efficiency of motion [supported by] the feverish and uncritical fashioning of tests in terms of the existing curriculum and in the name of efficiency has undoubltedly served to fasten upon the schools an archaic program of instruction and a false theory of the nature of learning. (p. 147-148)

In response to the changes in society, an eclectic curriculum emerged in the schools addressing both social re-constructionist views like those belonging to George Counts, and child-centered progressive views like those belonging to John Dewey. Soon life adjustment education entered the schools (Kleibard, 1986). Life adjustment education intended to replace traditional subjects with functional areas of living relevant to youth. Until the 1957 launch of Sputnik, progressive and positivistic scholars struggled for influence over curriculum in schools, making it increasingly eclectic. Later critics referred to this period of curriculum eclecticism as anti-intellectual in nature and eventually accused it of leading to the early failures of the space race (Urban & Wagoner, 2009).

*Sputnik*

In 1957 the Russians launched Sputnik. This launch was viewed as a success of the Russian school system and a failure of schools in the United States. Following this pivotal event, Congress passed the National Defense Education Act in 1958 (Spring, 1989). This piece of legislation was a response to the concern that the Russians were using advanced scientific innovation for military gain. This act declared education as a matter of national security during the Cold War. It also established the value of scientific disciplines by announcing them as the national priority. The first paragraph of the National Defense Education Act of 1958 as cited by Kleibard (1986) reads as follows:

> The Congress hereby finds and declares that the security of the Nation requires the fullest development of the mental resources and technical skills of its young men and women. The present emergency demands that additional and more adequate educational opportunities be made available. The defense of this Nation depends upon the mastery of modern techniques developed from complex principles. (p. 266)

Through the National Defense Education Act of 1958, the United States confirmed national competitiveness as the new rhetoric of schooling. Over the next few decades, scientific innovation became a means to both national military and national economic strength as the Industrial Age developed into an Information Age. The national appetite for power, economic wealth, and prestige during the mid-twentieth century established national gain as a significant goal of schooling for the United States (Spring, 1989).

*Civil Rights*

Equality across racial lines has been a source of conflict in the United States throughout its history. Up until the mid-twentieth century, racial segregation was legally

supported through the Jim Crow laws and upheld by the Supreme Court ruling in Plessy

v. Ferguson (1896), which stated that public facilities could legally be "separate but

equal." The Civil Rights movement of the mid-twentieth century marked an effective

struggle towards greater equality and improved social justice for racially diverse citizens

(Engl, Permuth, & Wonder, 2004). In efforts to bring equality to African-Americans

throughout the United States through education, William Edward Burghardt DuBois led

the discussion regarding equality through education. DuBois wanted a classical education

for the African-American man in order to fully educate and develop the "Talented Tenth"

of African-American males (Urban & Wagoner, 2009). Critical to the Civil Rights

movement, this man was influential in the establishment of the National Association for

the Advancement of Colored People (NAACP).

In order to use the legal system to dismantle segregation, the NAACP legal

defense and education fund used segregation in schools as the center of the debate for

racial justice. The NAACP legal defense and education fund pushed for legally-supported

social reform. Building up to *Brown v. Board of Education, Topeka* (1954), a landmark

Supreme Court case in social justice, the lawyers of the NAACP legal defense and

education fund brought a string of cases fighting racial segregation in graduate schools

across the United States. By carefully arguing against portions of the laws supporting

segregation one case at a time, the NAACP lawyers slowly built a collection of

successful suits that would provide the judicial support to throw out the legality of

"separate but equal" (Plessey v. Ferguson, 1896). A key landmark in their success is

evidenced in Justice Warren's opinion statement in the ruling of *Brown v. Board of*

*Education, Topeka* (1954):

Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms….To separate them from others of similar age and qualifications solely because of their race generates a feeling of inferiority as to their status in the community that may affect their hearts and minds in a way unlikely ever to be undone….We conclude that, in the field of public education, the doctrine of "separate but equal" has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated for whom the actions have been brought are, by reason of the segregation complained of, deprived of the equal protection of the laws guaranteed by the Fourteenth Amendment. (Para. 11)

Although implementation of the integration of schools took more time and persistent struggle, Justice Warren's opinion statement in the ruling of *Brown v. Board of Education, Topeka* (1954) marked a new purpose of schools as a necessary equalizing mechanism in the social order within the United States.

During the 1960s the effects of racial prejudice and related poverty led to an increase in civil protests in cities across the United States. Increased desire to understand and rectify these inequities was the impetus for the Elementary and Secondary Education Act of 1965 (ESEA), legislation that tied federal money to compliance with civil rights legislation. This legislation was intended as President Johnson's educational effort to bring about a War on Poverty (Spring, 1989; Ladson-Billings & Brown, 2008). From this legislation Head Start and Title I programs emerged, targeting poor and minority

communities (Spring 2009). Despite the eight billion dollars a year ESEA was sending to schools of poor and minority students up until 2000, the lack of equality for schools serving predominately poor and minority students continues to today (Jossey-Bass Inc., 2001; No Child Left Behind Act of 2001).

*Outcomes-Based Movement*

Today, the outcomes-based movement in education influences currently enacted policy. Marzano and Kendall (1997) claim that the report, *A Nation at Risk*, was the impetus of the outcomes-based education movement of the 1980s and 1990s in the United States. This report was written by the National Commission for Excellence in Education (1983), a committee created by the Reagan administration. This report accused the United States education system of failing students. More specifically, the report declared that "the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people" (1983, ¶ 2). *A Nation at Risk* dramatically changed the rhetoric of education in the United States, returning the focus to international competitiveness (Marzano & Kendall, 1997; Lefkowits & Miller, 2005).

In September of 1989, in response to *A Nation at Risk*, President George H. W. Bush met with state governors in Charlottesville, Virginia, for an Education Summit. At this summit, the governors set goals for academic achievement among United States students to be reached by 2000. The National Council of Teachers of Mathematics (NCTM) responded to this summit by publishing the *Curriculum and Evaluation Standards for School Mathematics* (National Council of Teachers of Mathematics, 1989).

Promptly following this lead by NCTM, various national educational associations wrote curriculum standards for most subjects.

Unfortunately, the collection of curriculum standards, written by the national associations, as a whole was too large to implement. This forced states to begin writing their own curriculum standards (Marzano & Kendall, 1997). Georgia was one of the first to implement the state-mandated curriculum. The *Quality Basic Education Act* was Georgia legislators' response to the outcomes-based education movement and *A Nation at Risk* (Davis, 1986). As a requirement of this law, the *Georgia Quality Core Curriculum* standards were established in 1985.

In further response to the outcomes-based education movement, federal legislators started drafting bills that required states receiving federal aid for education to have academic standards and tests administered in certain grades. States such as Georgia began implementing standards-based testing in the 1980s and 1990s. Immediately upon taking office, President George W. Bush pushed the educational legislation No Child Left Behind Act of 2001 (NCLB) in order to increase accountability of school systems in closing the gap in achievement test scores among disadvantaged students, promote school choice among parents, improve teacher quality, and allow states to influence uses of federal funds. The purpose of NCLB is "to close the achievement gap with accountability, flexibility, and choice, so that no child is left behind" (p.1). Throughout this legislation, the purpose is described as improving student achievement.

Recently the U.S. Department of Education (2008) published a brief titled *A Nation Accountable: Twenty-Five Years after A Nation at Risk*. In this brief, Secretary Margaret Spellings of the George W. Bush administration provided mixed commentary

on national progress. Spellings claimed that although no significant difference was

evident, NCLB has provided a means for improvement in the future.

> Many people—elected officials, administrators, teachers, parents, and students—have been hard at work since this report was released to make sure that we aren't caught off guard again. States developed content standards and tests that allow us to know how well our students are doing. The No Child Left Behind Act of 2001 expanded the grades to be tested and strengthened the accountability attached to test results. While we are still a nation at risk, we are also now a nation informed, a nation accountable, and a nation that recognizes there is much work to be done. (p. 8)

According to Spellings, the goal of student achievement has not been met by schools to

the level demanded by NCLB or *A Nation at Risk* (U.S. Department of Education, 2008).

Although this goal of academic achievement on standardized tests may have originated

nearly thirty years ago in *A Nation at Risk*, it continues to influence our schools through

the NCLB legislation. Whether or not student achievement on standardized tests should

be a goal of schooling in the United States has been heavily discussed by critics of

NCLB. Through NCLB, high-stakes testing has created a regulatory system over schools,

which dominates the discussion regarding schooling outcomes (Apple, 2004). By limiting

the discourse by a simplistic argument for student achievement or against it, the

standardized test scores have become a simplistic means to judge the quality of schools

(Apple, 2004; Hinchey, 2001; Hursh, 2001).This over-emphasis of test scores as

measures of school success has led to test scores becoming an influential goal of

schooling. This goal of schooling and the other historically influential goals of schooling

are organized in Table 2.

Table 2

*Historical Common Goals of Schooling*

| Goal of Schooling | Emergence Timeline | Driving Events |
| --- | --- | --- |
| Democratic Participation | 1770s-1850s | American Revolution |
| Americanization | 1840s-1900 | Common School Movement |
| Post-Secondary Enrollment | 1890s-1920s | Committee of Ten/College Boards |
| Individual Development | 1900s-1950s | Progressive Movement |
| National Economic Gain | 1950s-1960s | Sputnik/National Defense Education Act |
| Social Justice | 1950s-1960s | Civil Rights Movement/*Brown v. Board of Education, Topeka* |
| High Test Scores | 1980s-2000s | *A Nation at Risk*/No Child Left Behind Act of 2001 |

*Note. Table created by the author.*

<u>Current Context and Policy Surrounding Schools</u>

The list of the historically influential goals of schooling in the United States build a framework for identifying those goals that still influence the rhetoric of currently relevant goals of schooling in the United States and Georgia. According to Bowles and Gintis (1976), changes in schooling have paralleled the changes seen in economics and production; thus, changes in educational policy cannot be fully understood without first understanding socio-economic contexts surrounding the education system (Vinovskis, 1999). In order to achieve this purpose, the rest of this chapter will describe the current socio-political context of the United States and Georgia, followed by the currently relevant policies and statements of schooling goals in Georgia.

*Political Context*

The influence of political ideologies on school curriculum cannot be contained into past and present as party ideologies have conflicted and blended in continually adjusting alliances since the Antebellum Period. Two particular groups, however, have consistently conflicted in political values. First, conservative groups tend to idealize the past through tradition and common cultural values, while liberals tend to idealize the future through understanding of historical inequities and injustices. Today, these groups are further divided by market ideologies. Factions of both the conservative and liberal ideologies in the United States also trust market ideologies. These two groups are referred to as neo-conservatives and neo-liberals. Market ideology is based on four assumptions related to capitalism, or the "ongoing and unrestricted exchange of goods and services among producers and consumers in competition with each other" (Engel, 2000, p.19). The four assumptions include

> (1) Human nature is a more or less unchangeable assortment of basic character traits; (2) Society is best understood as an aggregation of individuals, and the social structure is best understood as the net result of individual choices, (3) self-interest is the primary motivator of these choices, and personal material reward is the primary goal; and (4) protecting and maximizing the range of individual freedom choice must be the primary purpose of any form of social organization. (p.18)

This market ideology unites neo-conservatives and neo-liberals into a form of bipartisanship that has resulted in the federal education legislation of The No Child Left Behind Act 2001 (Apple, 2004). Bipartisanship became evident as neo-liberals from the Democratic Party, the more-liberal political group, began supporting conservative legislation based on market ideology during the Reagan administration (Kumashiro, 2008). Within the education literature, this political union of the neo-liberals and neo-

conservatives has created a common grouping of neo-liberals, neo-conservatives, and conservatives as the anti-democratic position working in direct conflict with liberals (Kohn, 2000; Kumashiro, 2008; Apple, 2009; Spring, 2009). The alliance between these non-liberal groups and their control over both the Democratic and Republican parties has led to the lack of discussion regarding what the goal(s) of schooling should be (Apple, 2004; Spring, 2009). Current non-liberal education political agenda items include standardized tests, mandated curriculum, school choice, and accountability of schools and teachers.

*Workforce, Technology, and Information*

In the early twentieth century, 40 percent of the workforce was in agriculture and industrial settings. Now, during the early 21st century the percentage of agricultural and industrial workers in the United States is barely six percent combined. The majority of the 21st century workforce works in job categories that did not exist one hundred years ago. The change from an agrarian workforce is related to mechanization, urban development, and the development of intensive farming techniques. Furthermore, the change from an industrial workforce is related to computer-assisted production, just-in-time production, and offshore manufacturing (Kurzweil, 2005).

Today, the dominating labor market in the United States is the knowledge economy. The knowledge economy emerged following two major changes in society. First, the development of new technologies in the late 1960s incorporated knowledge coming from disciplines of the sciences and humanities (Drucker, 2000). Second, with the invention of the microprocessor and the semiconductor, information became readily

available leading to the Information Age. This new age brought an overabundance of information and knowledge, while increasing the complexity of markets (Perez, 2002; Tuomi, 2007). As the economy shifted in response to these developments, focus moved from producing things to ideas, communication, and services (Bell, 1976). The key source of economic growth was no longer capital and labor, but latent human capacity for innovation, ingenuity, and creativity (Tuomi, 2007).

> Not only is the economic situation changing, but the rate of change is escalating fast. Employers need people who are able to produce creative and innovative ideas because if they fail to respond to new challenges, businesses will quickly be overtaken by their competitors. There is also a need for individuals to be flexible, given the fact that they can expect to change companies and even career paths several times in the course of their working lives. (Sharp & Le Metais, 2000, p.13)

A new demand of innovativeness among knowledge workers as described by Sharp and Le Metais (2000) began to take hold. However, this has not been a demand for the product inventor, but instead a systems inventor who can create new processes and ideas that generate further innovation by users and adopters (Tuomi, 2007).

Analyzing these changes in society, Hargreaves (2003) synthesized the knowledge economy into three dimensions. First, the knowledge economy exists in an expanded technical, vocational, and educational realm, no longer divided by barriers of industrial disciplines as seen in the twentieth century. Second, as information is in overabundance, organizations have complex methods of processing and disseminating information and knowledge. Last, corporations function as learning organizations in order to perpetuate innovation. These dimensions of the knowledge economy have changed the focus of learning from a process of information and knowledge acquisition as seen in the

industrial age to a more informal process that has a greater need for the generic skills of learning (Chen & Bradshaw, 2007; Kurzweil, 2005).

*Globalization*

The impact of the knowledge economy on education includes new demands on the labor force, as well as increased competition among laborers across the globe. Globalization, the corporate and government capability to coordinate labor over time and space, has grown in its capacity to influence various labor markets in the United States over the past fifty years. It first began in the 1940s with the invention of jet airplanes and transatlantic telephones. In the 1990s businesses became able to exchange rich context documents overseas easily. Recently these broadband international networks opened a world of labor forces from across the globe to serve both international and domestic customers (Tuomi, 2007). As access to international information networks and the associated skills to access that technology increase, industrialized and the developing societies are no longer divided by political boundaries, but rather these societal types exist within all nations depending on where the Internet is available or not available (Hargreaves, 2003).

Globalization reiterates the key difference between the industrial worker of the twentieth century and the knowledge worker of the 21st century. The industrial worker was a necessary source of subject-specific information, whereas the international information networks are used by the knowledge worker to access information on demand. This dividing characteristic makes technology access and the generic

capabilities for learning a key to economic competitiveness in the knowledge economy (Hargreaves, 2003).

*Growing Disparity in Wealth*

When comparing wealth disparities among the classes, researchers have not always agreed. Although income is easy to trace by examining tax records, other forms of wealth are difficult to estimate (Kopczuk & Saez, 2004). Studies agree (Kennickell, 2006; Kopczuk & Saez, 2004) that the wealthiest members of the population control a large proportion of the economic power; however, studies often disagree on the magnitude of the wealth. Wealth and net worth refer to the total amount of assets beyond liabilities (Kennickell, 2006). At the beginning of the 20th century, the wealthiest one percent of the United States population held about 40 percent of national net worth. Following the Great Depression, the New Deal, and World War II, the wealthiest Americans lost, or hid, much of their fortunes in response to efforts intending to distribute the wealth more evenly. Following the New Deal and up until the 1970s, the wealthiest held approximately 20 percent of the national net worth (Kopczuk & Saez, 2004).

In recent decades, wealth of the top one percent has been growing, thus creating a larger divide between the wealthy class and the middle and lower classes. Kennickell (2006) found that due to a dramatic increase in executive salaries in the mid-1990s, the wealthiest citizens acquired over 35 percent of the national wealth. Unfortunately, while the wealthiest citizens have been increasing their net wealth over the past few decades, crediting practices led to the poorest 20 percent of citizens dropping into negative net

worth. These practices have broadened the gap between the classes. Kennickell found the magnitude of this gap to be greatest among poor non-white and Hispanic groups.

The great changes society has experienced over the past fifty years include changes in leading political ideologies, labor needs, competition, and growing class gaps. Schooling institutions must revise structures and curricula based on societal changes (Bobbitt, 1997; Spring, 2009). For example, this analysis has shown that schooling for an industrial economy requires different skill sets than schooling for a globalized knowledge economy. The new context, as described, informs how the goals of schooling are supported through a curriculum.

Current Policies and Statements

Based on the literature reviewed and the assumptions of the study, the goals statements relevant to the Georgia Performance Standards, and therefore relevant to this study, come from the following: those stated by *A Nation at Risk*; NCLB; the United States Secretary of Education, Arne Duncan; and the Georgia Department of Education (GaDOE). The reasons these goal statements are identified as relevant include (a) those stated in *A Nation at Risk* directly led to the development of the *Georgia Quality Core Curriculum*, the predecessor to the Georgia Performance Standards (Davis, 1986; Georgia Department of Education, 2009b), (b) those stated by NCLB establish the requirement for academic standards and standardized tests including those that were used to write the GPS (Georgia Department of Education, 2009b), (c) those goals stated by Secretary Duncan, the current Secretary of Education, represent current national-level

political views of the goal of schooling, and (d) since the GaDOE is responsible for

authoring the GPS, its goal statements are relevant to this study.

*A Nation at Risk*

The influence of *A Nation at Risk* on the outcomes-based movement in education

is apparent through the resulting federal legislation of NCLB. This means that *A Nation*

*at Risk* is critical to current policies in action within the United States and Georgia. The

authors of *A Nation at Risk* (National Commission on Excellence in Education, 1983)

state several goals of schooling in the United States. Including the following:

1. To "…develop individual powers of mind and spirit" (¶ 1)

2. To "…attain the mature and informed judgment needed to secure gainful

   employment" (¶ 1)

3. To ensure the "progress of society" (¶ 1)

4. To "keep and improve on the slim competitive edge we still retain in world

   markets" (¶ 8)

5. To "participate fully in our national life" (¶ 9)

6. To foster "a free, democratic society" (¶ 9)

7. To foster a "common culture" (¶ 9)

8. To "reach some common understandings on complex issues" (¶ 10)

9. To "develop the talents of all to their fullest" (¶ 25)

10. To create "a Learning Society" (¶ 27)

11. To achieve "the ideal of academic excellence as the primary goal of schooling" (¶

    28).

Although this list is lengthy, consolidation is possible as many of these goals fit under a

shared historical goal of schooling.

*No Child Left Behind Act of 2001*

As a reauthorization of the 1965 Elementary and Secondary Education Act, No

Child Left Behind Act of 2001 targets schools that fail poor, minority children. Failing

schools are defined as those schools where standardized test scores indicate lack of

proficiency. NCLB makes four recommendations to address failing schools including

> Stronger accountability for student academic results; greater flexibility for
> states, school districts, and schools in the use of federal funds; more
> choices for parents of children from disadvantaged backgrounds; and an
> emphasis on teaching methods that have proven scientific effectiveness.
> (Ladson-Billings & Brown, 2008, p.163)

This law's most prominent feature is the requirement for annual tests in reading,

mathematics, and science for grades three through eight. This mandate has received a

wealth of criticism from a variety of theorists and researchers who oppose testing

attached to accountability actions (Phelps, 2004). The requirement for highly qualified

teachers also brought criticism of NCLB because attracting and keeping highly qualified

teachers put an additional burden on poor and low-performing school districts (Spring,

2009). Funding tied to test performance has also come under great scrutiny as teacher and

principal salaries are affected along with school autonomy, as failing schools can be

closed for repeated failures. Despite these critiques, the law has heavily influenced

curriculum through testing and accountability mandates (English & Steffy, 2001; Council

of Chief State School Officers, 2002; Spring, 2009).

The No Child Left Behind Act of 2001 offers limited goals of schooling. Whether reading about technology in education or school choice, two very similar goals are repeated throughout the document including (a) to improve the academic achievement of the disadvantaged, including low income, limited English proficient students, immigrant students, Indian, Native American, Alaska Native, minority races, and special needs, and (b) to improve academic achievement. These goal statements closely resemble one another; however, the inclusion of a focus on minorities reflects Horace Mann's focus on poor immigrant families for the goal of Americanization. This distinction will allow for greater interpretation among the list of historically relevant goals of schooling.

*Georgia Department of Education*

In late January 2009 the GaDOE changed its goals. Prior to January, the goals were organizationally focused on the outcomes to be achieved by the Department, stating what the members of the Department of Education were to achieve, such as making policies to enforce school accountability. State Superintendent Kathy Cox stated the reason for changing the goals was because the Department had met most of the previous goals (Cox, 2009). The new goals include both organizational goals and goals for schooling in Georgia. The vision was simplified to state that they will "lead the nation in improving student achievement" (Georgia Department of Education, 2009c). Not all six supporting goals refer to the goal of schooling or specifically address the benefits of completing K-12 public schooling in Georgia as some remain organizationally focused. However, the four supporting goals that address student outcomes include (a) improving workforce readiness skills, (b) increasing post-secondary enrollment, (c) improving SAT

and ACT scores, and (d) improving student achievement (Georgia Department of

Education, 2009b).

*United States Secretary of Education*

As a new presidential administration took office, President Barack Obama

appointed Arne Duncan as his Secretary of Education. *The White House Blog* posted

"How Our Schools Should Be" a video of Secretary Duncan (2009) stating that

> Our children have got one chance at a quality education and if we don't provide it,
> I think we perpetuate poverty and we perpetuate social failure. So this is an
> extraordinary opportunity. But this is a fight to me,…about a lot more than
> education; it's really a fight for social justice. It's the right thing to do for
> children. It's the right thing to do for our economy. If we want to continue to
> grow as a country, we need an educated workforce. And so this is a huge
> opportunity, but I want to work with a huge sense of urgency and to do everything
> we can to get better as fast as we can. Our children need and deserve it and our
> country needs it. (Video transcription, ¶ 7)

Based on this video-taped statement, Duncan (2009) states the two goals of schooling are

(a) to enhance economic interests through workforce readiness and (b) to obtain social

justice. Duncan's current leadership role in the education system in the United States

makes his perception of the goals of schooling critical to this study.

Many of the relevant goals stated are closely related or lack mutual exclusivity

within the literature. The historical goals of schooling are still relevant today in Georgia

based on the policy analysis above. Table 3 synthesizes each goal of schooling with the

historical goals listed on the left and the supporting policy statements listed to the right of

each historical goal. For the sake of clarity, Table 3 will consolidate these goals

statements within a framework established earlier by the historical analysis of relevant

goals of schooling.

Table 3

*Statements of Schooling Purpose/Goals Relevant to Georgia*

| Historical Common Goals | Georgia Department of Education | Secretary Duncan | No Child Left Behind Act (2001) | *A Nation at Risk* |
|---|---|---|---|---|
| 1. Democracy | | | | Democratic Participation |
| 2. Americanization | | | Minimum proficiency by disadvantaged subgroups including Low SES, Rural, Migrant, Non-white races, ESOL | Fostering a common culture; reach consensus |
| 3. Post-Secondary Enrollment | Post-Secondary Enrollment; SAT & ACT scores | | | |
| 4. Develop the Individual | | | | Develop individual talents |
| 5. National Gain | Workforce readiness | Economic interests; educated workforce | | Acquire employment; international competitive edge; Progress of society |
| 6. Social Justice | | Social justice | | |
| 7. High Test Scores | Improve student achievement | | Close achievement gap; minimum proficiency on academic standards and tests | Academic excellence |

*Note. Includes statement of schooling purpose and goals from multiple sources relevant to Georgia schooling. Compiled by author from Georgia Department of Education (2009c), Duncan (2009), No Child Left Behind Act (2001), and National Commission on Excellence in Education (1983).*

Conclusion

 This chapter is critical to setting the stage for an analysis of the Georgia Performance Standards. In order to fulfill its role in this study, this chapter established the currently relevant goals of schooling in Georgia and the context in which these goals are surrounded. These currently relevant goals of schooling will serve as the latent themes for which the method will seek to find evidence within the Georgia Performance Standards. Also, the socio-political context surrounding schooling today will serve to inform the manifestation of these goals in chapter four. The seven latent themes, or goals of schooling, are further discussed in the chapter four as a component of the method.

CHAPTER 3: RATIONALE FOR A NEW METHOD BASED ON THE
CURRICULUM EVALUATION LITERATURE

Introduction

This study defines the alignment relationship between the GPS and various stated schooling goals. Initially, one might assume curriculum evaluation models should provide a clear means to evaluate and describe the alignment between the stated schooling goals and the intended curriculum. However, popular curriculum evaluation models fail to question the institutional level curriculum-making processes; therefore, these models cannot provide a means to describe the alignment between the GPS and the goals of schooling. This lack of a sufficient curriculum evaluation model is a subsequent problem which this chapter examines.

Before diving into the curriculum evaluation literature, it is important to understand the difference between *educational goals* and *instructional objectives* in relation to a curriculum. The terminology within the curriculum evaluation field is often interchanged (Marsh & Willis, 2003). In fact, the meaning of curriculum is often debated (Kleibard, 1986; Klein, 1991; Lewy, 1977; Marsh & Willis, 2003). For the purpose of this study, curriculum is defined as the assemblage of particulars used in the dissemination, enactment, learning, and assessment of a course of study given in a school. This definition suggests that instructional objectives are contained within the intended curriculum even if referred to as goals. These objectives are sub-goals in the

sense that they are the individual particulars within the larger course of K-12 schooling. In contrast, an educational goal or goal of K-12 schooling is the expected end result of achieving all the particular sub-goals, courses, or instructional objectives. In fact, curriculum evaluation appears to study only those components comprising the particulars within a curriculum and actions following the curriculum, not the expected results of completion of all curricula within an institutional program.

This chapter is a review of the curriculum evaluation and instructional design literature that will contribute to the study. An account of the levels of curriculum design precedes an analysis of the literature regarding degrees of evaluation research. Next, a history of curriculum evaluation traces the major accomplishments of the field over the past sixty years. Then a comparison of the summative curriculum evaluation literature juxtaposes a key theory in instructional design in order to build an argument for an absent component of curriculum evaluation. Finally, based on this argument and a collection of tangential evaluation models, key characteristics of an effective evaluation model to serve this study emerge.

<div align="center">Levels of Curriculum Design</div>

Since goals of a school subject may also confuse the concept of goals of schooling, the author employs Doyle's description of curriculum design to assist in discrimination between concepts. Doyle (1992) differentiates between institutional, programmatic, and classroom levels of subject matter, instructional objectives, and sub-goals as exhibited in Table 4.

Table 4

*Doyle's Three Levels of Curriculum Design*

| Level of Concern | Question to be Considered | Required Expertise to Answer Question |
|---|---|---|
| Institutional level | What constitutes a school subject? | Depends on conception of schooling; requires attending to the interplay between schooling, culture, and society |
| Programmatic level | What components should make up a particular school subject? | Pedagogy; understanding planning and developing curriculum |
| Classroom level | How should a teacher enact a curriculum? | Transformation of given curriculum to make it applicable to the context of the classroom and connect with the experiences of the student |

*Note. Author adapted table from Doyle (1992).*

When looking at the Georgia curriculum-making process (see Figure 1), one can see that educators and subject specialists participated in writing at the programmatic level rather than the institutional level.

## Levels of Evaluation

In addition to studying levels of curriculum design, understanding levels of evaluation contributes to defining the method required by this study. According to Scriven (2003) formative evaluation is conducted by all curriculum workers, as any curriculum worker, whether instructor or curriculum director, makes judgments of the enacted, learned, or assessed curriculum. These judgments lead to changes in practice,

materials, or environment due to a value judgment on the part of the curriculum worker. In this role, curriculum evaluation influences the form of the curriculum, or what it looks like in action, or field-testing. This is very different from summative evaluation. Summative evaluation is often conducted by an external professional evaluator; although, it can be done by an internal evaluator as well.

Summative evaluation is the value judgment of the overall curriculum or program. Summative evaluation serves to offer broad value statements, recommendations, or "explicit evaluative conclusions" (Scriven, 2003). A formative evaluation cannot be conducted on a completed program of planning, as in the case of the GPS. Since the GPS are in their terminal state, evaluation to serve in the process of formation cannot be conducted at this time. This study seeks a method capable of summative evaluation of the institutional level curriculum; therefore, the study employs an investigation of the literature of summative curriculum evaluation within the broader literature basis of curriculum evaluation. In addition, this chapter investigates models tangential to summative curriculum evaluation which serves to inform a model for this study.

<p style="text-align:center">History of Curriculum Evaluation</p>

Curriculum evaluation is the value judgment of the intended, enacted, acquired, and/or assessed curriculum (Marsh & Willis, 2003). A quick look at popular summative evaluation models over time can shed light on the incongruence between authoritative curriculum documents and currently available evaluation models. In 1949, Tyler published his Objectives Model [Figure 3] for curriculum evaluation.

> This model is based on a strict ends-means rationale. It begins by determining and then stating objectives in terms of student behaviors. Tyler insists that objectives

be derived from students, contemporary society, and subject specialists and that they pass through the screens of educational philosophy and the psychology of learning. The task of the evaluator is not to inquire into the merits of such curriculum objectives but to determine the extent to which the student behaviors stipulated in the objectives are realized in practice. (Marsh & Willis, 2003, p. 305)

Although this model is linear and uses testing of the learning objectives as a primary data source, Tyler's (1949) model did not enable the evaluator to make judgments about the curriculum objectives. According to Marsh and Willis (2003) such activity has been viewed by the field as outside the role of an evaluator. Although reasoning for this distinction is unclear, it is possible that curriculum evaluation typically occurs during and after curriculum enactment rather than during curriculum designing, a process often already completed by individuals who are no longer involved with the curriculum once evaluation begins.

*Figure 3*

Tyler's Objectives Model
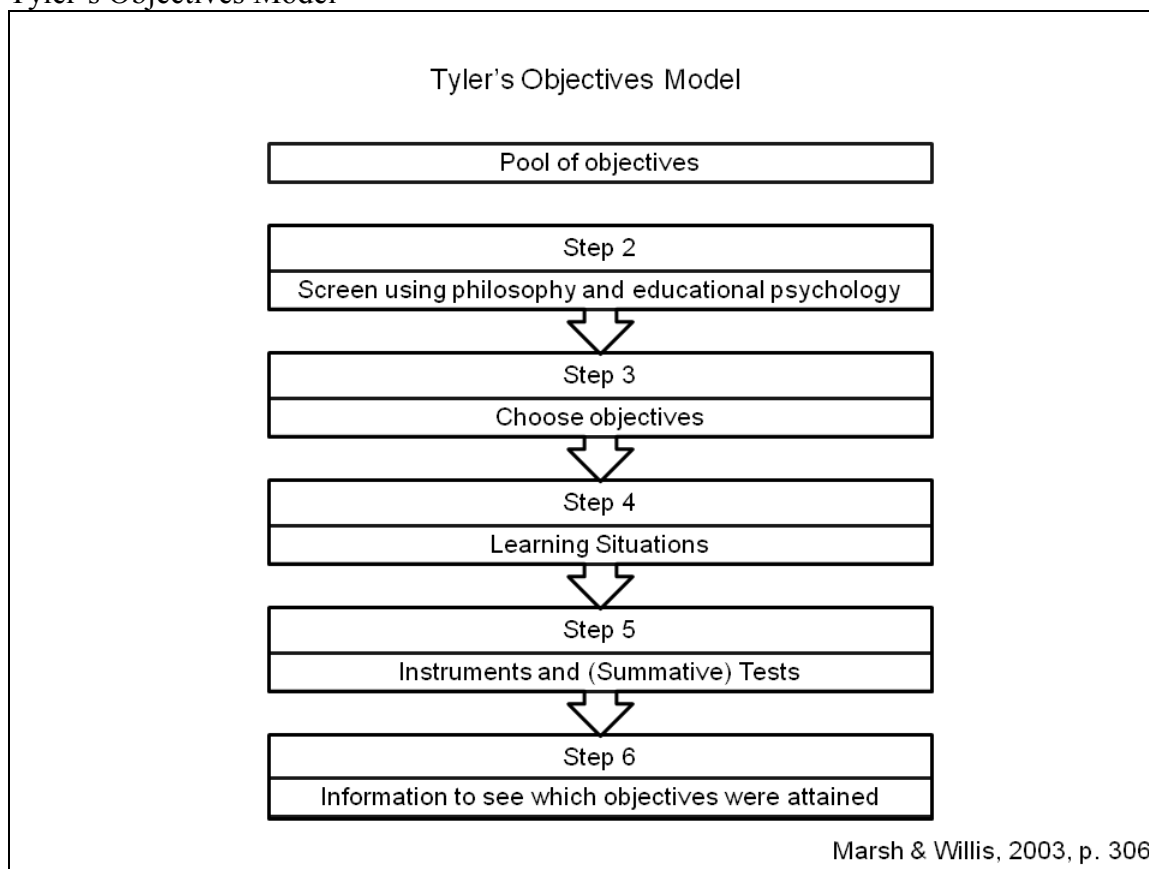


*Figure 3*. Taken from Marsh & Willis (2003) page 306.

Tyler's model was most famously implemented in his Eight-Year Study which was conducted from 1933 to 1941. This evaluation study followed two groups of students through their four high school years and four college years. The two groups were divided according to attendance in a traditional secondary school and attendance in a progressive, more student-centered high school. Outcomes indicated that students who attended the progressive school did slightly better academically than their counterparts in college. As one might expect from Tyler's Objectives Model of evaluation, the primary critique of the study was that it focused on evaluation of curricular outcomes (Kridel, Bullough, &

Goodlad, 2007; Marsh & Willis, 2003). However, despite this critique, contemporary

curriculum evaluations include outcomes-based evaluations. For example, the Third

International Mathematics and Science Study, now referred to as the Trends in

International Mathematics and Science Study (TIMSS), is a repeated international

comparative assessment of student math and science knowledge. Today this assessment is

used as the basis for multiple evaluative studies (National Center for Educational

Statistics, 2009).

Following Tyler, Stake (1967) developed a Countenance Model (Figure 4) to

distinguish between descriptions and judgments of the evaluator. Although the model

investigated the learning objectives, this model did not look at "the overall goals or

provide specific guidelines about how standards are to be derived or how competing

values between different participants can be analyzed" (Marsh & Willis, 2003, p. 312).

*Figure 4*

Stake's Countenance Model
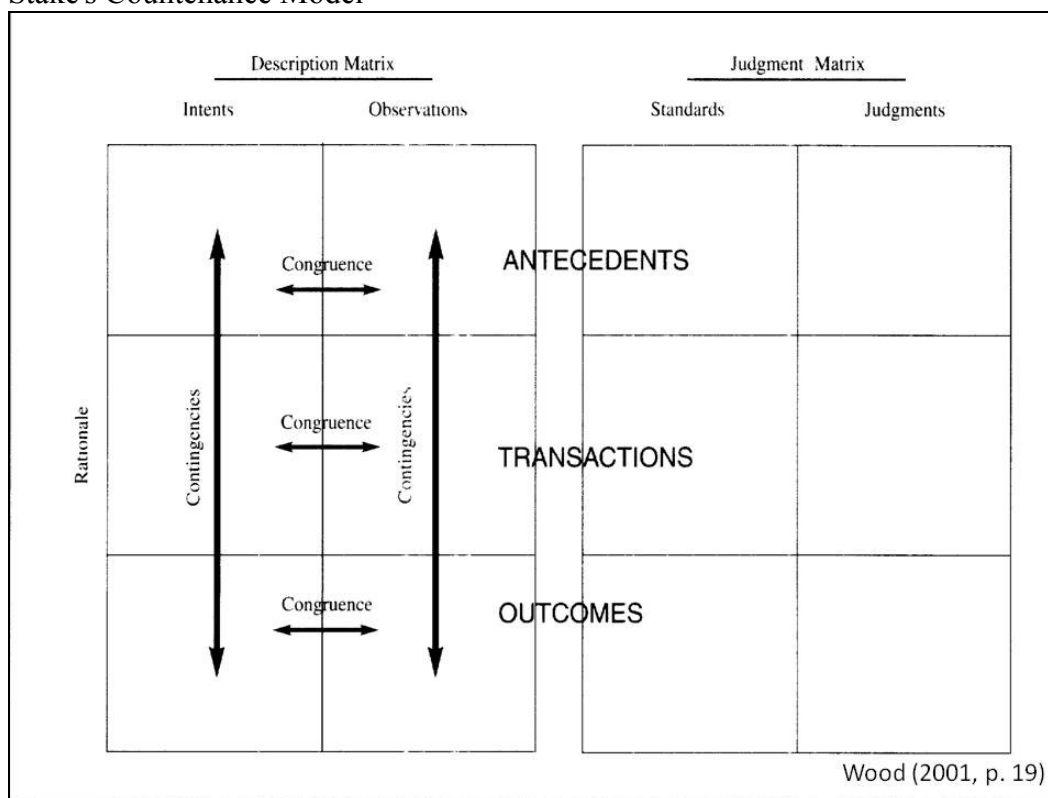


*Figure 4*. Taken from Wood (2001) page 19.

This model attempted to become more democratic by separating the curriculum

evaluator's personal judgments from the observed data. Stake did this in order to elicit

conversation that challenged the values of the evaluator; however, critics claim it is

idealistic and impossible to attain (Marsh & Willis, 2003).

In the Countenance Model, the evaluator wrote statements on an evaluation form

during a classroom observation that described the preceding learning conditions, or

*antecedents*, the actions of instruction, or the *transactions*, and the *outcomes* of

instruction (Stake, 1967). This evaluation model allowed evaluators to compare the

intended instruction to the actual implemented instruction. Although this model did not

investigate schooling goals, it did expand on Tyler's positivistic data sources to incorporate more qualitative sources such as informal observations and questionnaires (Marsh & Willis, 2003). Later, Stake moved away from the model because of its difficulty in implementation. However, Stake's model serves a significant advancement toward embracing and understanding the evaluator's personal biases in the process of evaluation.

In the early 1970s, Parlett and Hamilton (1972) developed the Illuminative Model (Figure 5), which separated the curriculum objectives from how the curriculum actually worked in action. From this approach, the actualized learning, even the unintended actualized learning, or hidden curriculum, could be illuminated. This evaluation model resembles ethnographic research in that it is adaptable to unique situations and learning milieus. The evaluator nonlinearly implements observations, surveys, interviews, and participant investigation to dig into the setting for better understanding. Although this approach to curriculum evaluation provides valuable information in regard to student experience and actualized learning, it still does not investigate the intended values being imposed on the population (Marsh & Willis, 2003).

*Figure 5*

Parlett and Hamilton's Illuminative Model



Parlett and Hamilton's Illuminative Model

Observing

Methods include anthropological interaction; directed observation; interviews; surveys

Seeking General Principles

Inquiring
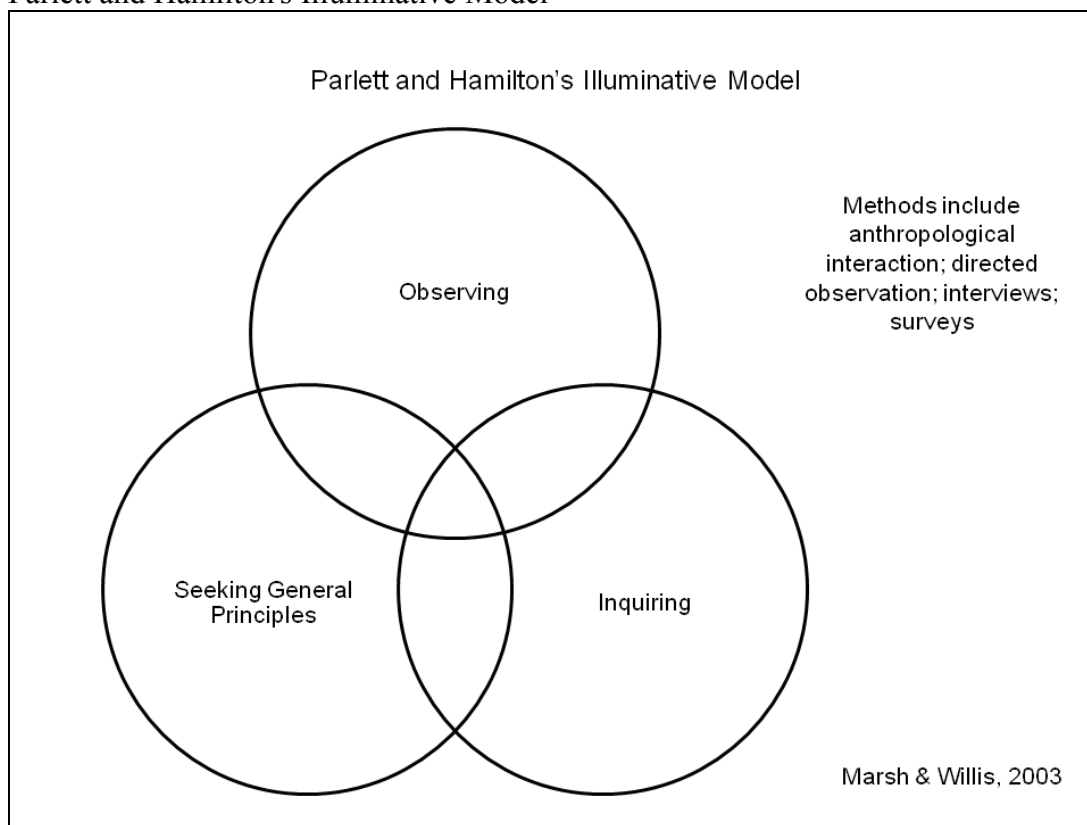
Marsh & Willis, 2003

*Figure 5.* Author created from description of model in Marsh & Willis (2003).

_____

The illuminative model appears to have been influenced by anthropology studies in education that allow the investigator to become an observer-participant in the educational setting. As a key example of this anthropological style in education, Peter McLaren (1998) published his evaluation of the unintended curriculum in *Life in Schools*. This study, according to McLaren, illuminated the hidden curriculum which grooms the economically disadvantaged toward failure. This and similar studies which look at the unintended learned curriculum blur the line between evaluation research and anthropology. Still, when value judgments of the curriculum are made, curriculum evaluation has occurred, and these investigations of the hidden curriculum certainly

apply. Unfortunately, this model does not fit the requirements of this study either, since

it, too failed to investigate the formative goals and values of the intended curriculum.

<div align="center">Comparing Summative Curriculum Evaluation to Instructional Design</div>

When considering summative curriculum evaluation models as explored above, it

is important to understand the four end-products of curriculum in K-12 education. These

products include the intended curriculum, the enacted curriculum, the learned or acquired

curriculum, and the assessed curriculum as seen in Figure 6. According to Porter and

Smithson (2001) all curriculum evaluation models review some, or all, of these four

curriculum end products (Figure 6).

*Figure 6*

Porter and Smithson Curriculum Model
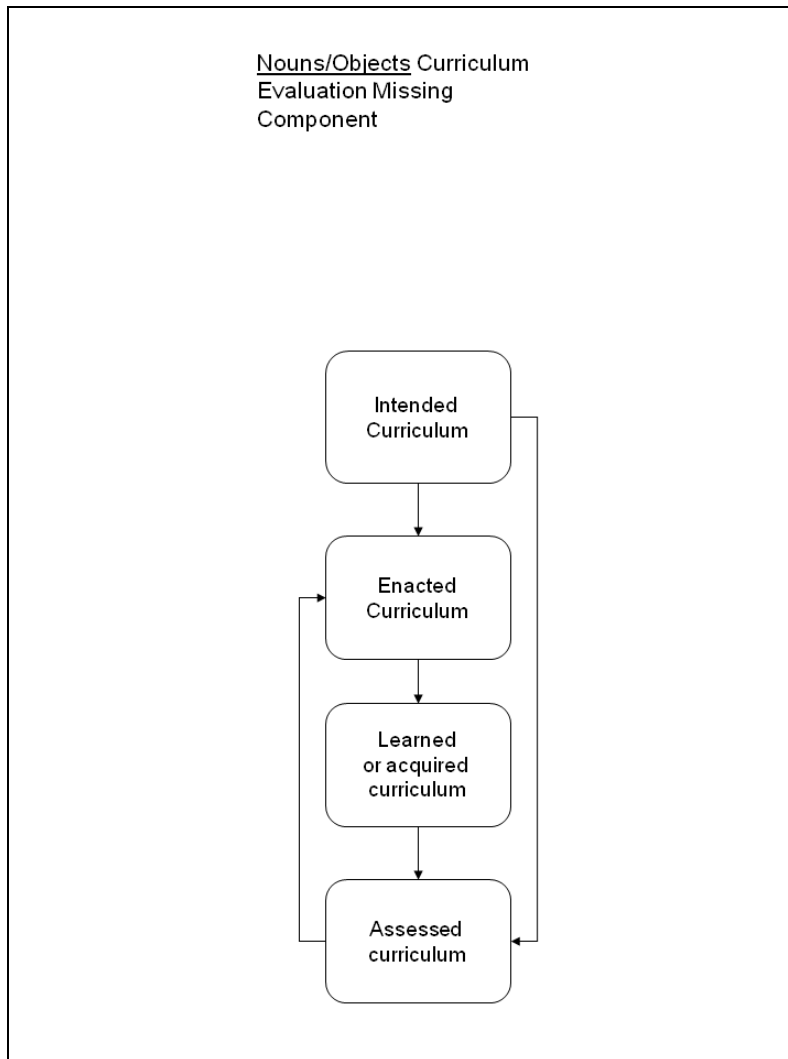


*Figure 6.* Author created from the four components of curriculum evaluation as synthesized by Porter & Smithson (2001).

The intended curriculum in Figure 6 includes syllabi, or perhaps a state curriculum set of standards. It is the collection of explicitly stated learning objectives, but not the broad goals of schooling. Next, the enacted curriculum includes the intended curriculum as carried out in the form of textbooks, worksheets, lectures, etc. The hidden curriculum, the collection of learned content that occurs due to unplanned structures and

experiences, and the achieved learning objectives are included in the learned curriculum. Identifying what was actually learned is usually the purpose of the assessed curriculum. However, the learned curriculum may include several components which are not included in the assessed curriculum. The assessed curriculum includes those learning objectives which are tested, often through standardized tests, unit quizzes, etc. Curriculum evaluators will look at these components and the processes that occur between them to evaluate a curriculum (Porter & Smithson, 2001). Curriculum evaluation is "about teachers, students, and their interactions with a curriculum or syllabus within a particular setting" (Marsh & Willis, 2003, p. 279). It is important to note that this statement by Marsh and Willis omits those institutional level processes and products which lead up to the intended curriculum (Figure 7). To illustrate the argument for this study, in Figure 7 the author adds the missing component to Figure 6, the box with mission, purpose, and goals as well as the circled relationship arrow. Curriculum evaluation does not question the intended curriculum, curriculum writers, or the value systems which lead to the structure, organization, and content of a given curriculum. Also, the curriculum evaluation model in Figure 6 does not distinguish between institutional and programmatic levels of instructional design. Because of this lack of questioning, the curriculum evaluation model fails to expose the relationship between the mission, purpose, and goals of schooling to the intended curriculum.

*Figure 7*

Missing Component of Curriculum Evaluation
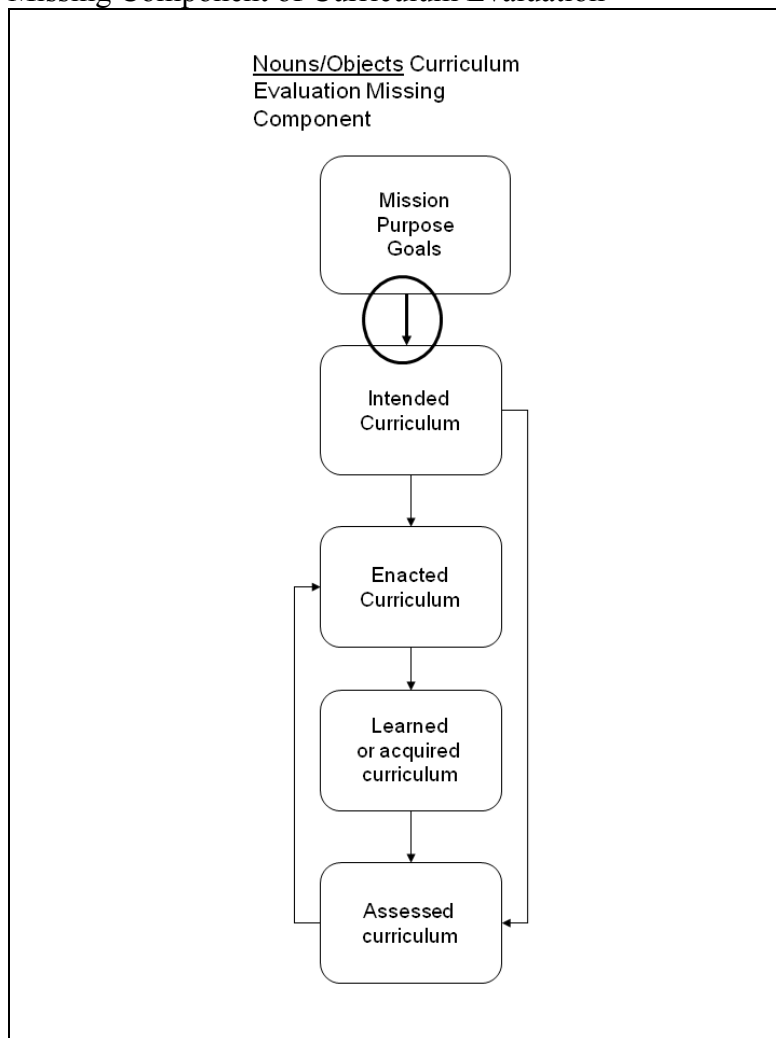


*Figure 7. Author created from synthesis of curriculum evaluation as presented by Porter & Smithson's (2001) and the institutional products that lead up to the intended curriculum as described by Doyle (1992).*

A model of instructional design can inform and contrast the models of curriculum evaluation previously investigated. This contrast supports the claim that curriculum evaluation models need to add the missing component of Mission, Purposes, Goals as done for this study in Figure 7 in order to investigate a relationship between institutional-level schooling goals and intended curriculum. In the field of instructional design,

intended curriculum is one product which results from a flow of linear and reiterative

processes, rather than a starting point as seen in the curriculum evaluation model (see

Figure 6). When placed side by side, the relationship between Porter and Smithson's

curriculum evaluation model with the added component of Mission, Purpose, and Goals

and the ADDIE model support the claim of a missing product component as previously

mentioned (Figure 2) and now represented in Figure 8.

*Figure 8*

Curriculum Evaluation and Instructional Design Comparison
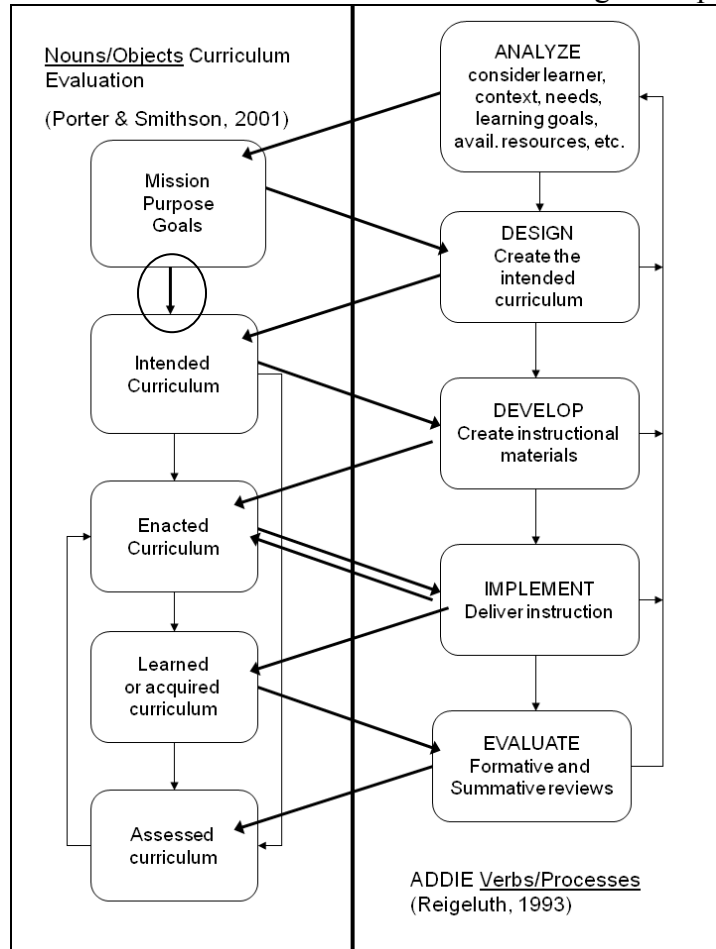


*Figure 8. Comparative figure created using Porter & Smithson's (2001) synthesis of
curriculum evaluation with an added component of Mission, Purpose, and Goals and
Reigeluth's (1993) instructional design model. The relationship sought in this study is
indicated by a circle.*

Following Analyze of ADDIE on the right side of Figure 8, the product missing

from the curriculum evaluation model on the left is the one that should indicate the goals,

context, or purpose of schooling for which the intended curriculum is a collection of

particulars. Doyle's institutional level curriculum-making questions and expertise

resemble the Analyze component of ADDIE. The product of analysis would include a

mission, goals statement, or curriculum-purposes document. Once a product of analysis is

established using ADDIE, the curriculum design can begin to take place. This second

process, Design, results in the intended curriculum. Once an intended curriculum is

established, development of instructional materials, such as textbooks, worksheets,

media, delivery environment and so forth, can take place in the Develop phase. As

implementation begins, the enacted curriculum can be observed. The Implement phase

results in the learned curriculum. Finally, the Evaluate phase of the curriculum results in

the assessed curriculum as seen in ADDIE (Reigeluth, 1993). Both models have feedback

loops, allowing for processes of formative evaluation and revision to occur. Still, the

products of the analysis are not apparent in the curriculum evaluation models. The small

arrow circled in Figure 8 represents the relationship this study seeks to investigate.

Qualitative and quantitative data sources relevant to the curriculum evaluation

model on the left of Figure 8 may include classroom observations, questionnaires,

textbooks, student samples, syllabi, test scores, testing materials, or portfolios (Marsh &

Willis, 2003). Despite this variety of data sources, the curriculum evaluation model does

not include formative texts, process, or discourses from institutional level curriculum

designers. For this reason, the author of this study sees a gap, as previously illustrated

(Figure 7) in the paradigm of curriculum evaluation. As seen in this gap, curriculum

evaluation does not allow for critical analysis of the intended curriculum. Since all other curriculum evaluation components are linearly and reiteratively influenced by the intended curriculum and have "the most powerful influence on the organization of the school and…education system" (Connell, 1985, p. 87), an evaluation of any curriculum is incomplete if it does not consider the goals, learner needs, purposes, shaping value systems, structures of power, and understood contexts apparent in the discourse regarding the intended curriculum.

This broad exclusion of formative and organizational aspects of schooling as a component of curriculum evaluation has been partially overcome by critical pedagogues such as Willis (1977), McLaren (1998), and Kincheloe (2008). These critical scholars have investigated how social structures are maintained and legitimized through schooling. However, as discussed earlier, their investigations look at the unintended, hidden curriculum that is experienced by students and teachers (McLaren, 1998). These pedagogues recommend how an intentional curriculum of critical pedagogy might be used to break down the social structures. Still, these studies are not investigations of explicit schooling goals. The gap that Goodson (1992) has identified in curriculum evaluation still exists; however, it is smaller, as the unintended curricular goals have been evaluated, while the intended curricular goals remain covert.

### Building a Well-Informed Model

Deng (2007) further supports Goodson's claim that curriculum discourse fails because of its pedagogical focus, or focus at the programmatic and classroom levels:

> School subjects are uniquely purpose-built educational enterprises, designed with and through an educational imagination towards educative ends…informed and

enhanced by curriculum theories. By this account, construing transforming the subject matter as merely a pedagogical task narrows the territory of curriculum discourse….Instead of addressing the broad curriculum question of what constitutes the subject matter of the school subject, they have focused the epistemic question of what it means to know the subject matter of the academic discipline. (p. 291)

When considering Goodson's concern for the lack of focus on the institutional level goal in the field of curriculum evaluation, it is important to extend this investigation past the boundaries of summative curriculum evaluation in order to look for contributory models. Although none of the following models offers the means to evaluate the alignment relationship between the goals of schooling and the GPS, such a model would contribute to strengthening the following models and possibly merge to build a new model for summative institutional-level curriculum evaluation.

*CIPP Model*

CIPP is a program evaluation model. The acronym CIPP stands for Context, Input, Process, and Product evaluation. Stufflebeam developed this model "in the late 1960s to help improve and achieve accountability for U.S. school programs, especially those keyed to improving teaching and learning in urban, inner city school districts" (Stufflebeam, 2003, p. 31). Stufflebeam (2003) offers a concise description of this model:

> Context evaluations assess needs, problems and opportunities within a defined environment; they aid evaluation users to define and assess goals and later reference assessed needs of targeted beneficiaries to judge a school program, course of instruction, counseling service, teacher evaluation system, or other enterprise. Input evaluations assess competing strategies and the work plans and budgets of approaches chosen for implementation; they aid evaluation users to design improvement efforts, develop defensible funding proposals, detail action plans, record the alternative plans that were considered, and record the basis for choosing one approach over the others. Process evaluations monitor, document, and assess activities; they help evaluation users carry out improvement efforts and maintain accountability records of the execution of action plans. Product

evaluations identify short-term, long-term, intended, and unintended outcomes. They help evaluation users maintain their focus on meeting the needs of student or other beneficiaries; assess and record their level of success in reaching and meeting the beneficiaries' targeted needs; identify intended and unintended side effects; and make informed decisions to continue, stop or improve the effort. (p. 31)

In relation to this study, one of the strengths of the CIPP model is the recognition of the role the context plays in defining goals for a program. In context analysis, a literature review takes place in order to define the context of the program; however, this model makes a leap of independent creativity and judgment when the evaluator is expected without any standard measurement protocol to "judge whether goals and priorities sufficiently reflect the assessed needs" (Stufflebeam, 2003, p. 40). By providing a recipe for assisting an evaluator in systematically evaluating that relationship between goals and the GPS, adoption within the CIPP model might offer a more specific quantitative means to support expert judgments and inferences of the alignment between program goals and assessed needs.

*IIEP Model*

The International Institute for Educational Planning (IIEP) designed a curriculum-making model that incorporates formative evaluation at each stage of curriculum-making (Lewy, 1977). IIEP argues that institutional level goals of schooling are most often defined by the key government policies; therefore, they are of great political significance and should provide the orientation for all institutional curriculum planning. The IIEP Model extends over six stages of curriculum development. The stages begin with (a) the determination of general aims or goals, (b) planning or outlining instructional objectives and materials, (c) the tryout, or a small contained pilot study, (d) the field-trial of a

modified program, (e) the implementation stage of the curriculum in all classrooms, and ends with (f) the quality control stage where recommendations for broad changes are made (Lewy, 1977).

Throughout these stages of development, formative evaluation serves to shape changes in order to increase the likelihood of success. This first stage of the model determines the general aims and goals making it critical to this study. At the formative stage, the IIEP model depends on questionnaires answered by stakeholders to determine if the curriculum relates well to the general aims and goals. IIEP admits that reliability of this process is low and a weakness. However, IIEP contributes to this study by defining the alignment relationship characteristics between goals of schooling and curriculum. According to IIEP, these two characteristics of curriculum are *relevance*, which describes how the curriculum corresponds to an existing need in the society, and *balance* which describes how the curriculum developers have weighted the importance of each need or general goal within the curriculum. Balance and relevance as key descriptors of curriculum alignment are employed in this study. By developing a more reliable means of measuring and comparing these characteristics, the formative IIEP model could be strengthened and also serve to contribute to a summative evaluation model.

The importance of the IIEP curriculum development model is seen in the work of the IIEP through UNESCO. The IIEP was charged with restructuring the curriculum in Rwanda following the 1994 civil war and genocide. The Ministry of Education in Rwanda believed that the content and processes within the schooling system prior to 1994 contributed to the development of conflict between ethnic groups. The country was in a state of educational emergency, and the IIEP worked to design a curriculum with a

goal of schooling for peace, inclusion, and mutual respect among Rwandans. This socio-political goal was crucial to directing the development of the curriculum. Curriculum content and processes within the system eliminated the ethnic classification of teachers and learners as Hutu, Tutsi, or Twa. Curriculum designers temporarily eliminated Rwandan history as a school subject, in order to discourage teaching of ethnic classification until a unified Rwandan culture can be adopted. Curriculum designers have been criticized for focusing on civic and moral education and weighting less on math and science; however, this focus is believed to have had a reductive impact on ethnic conflict (Obura, 2003). The strength of this study shows the significant influence the general goals of schooling can have on educational outcomes if the curriculum is relevant and balanced to the societal needs and goals (Lewy, 1977).

*Curriculum Alignment*

Curriculum alignment research emerged as a response to the outcomes-based movement. Multiple models of curriculum evaluation research exist, but most are limited to investigating the intended, enacted/taught, and assessed/tested curriculum (Anderson, 2002; Council of Chief State School Officers, 2002; Ananda, 2003; Martone & Sireci, 2009). The exclusion of the student experience through the learned or acquired curriculum from the list of investigated components sets this genre of research apart from curriculum evaluation. Curriculum alignment research has a specific purpose of informing change of the intended, taught, and tested curriculum in order to optimize the match between these components focused on increasing student test scores. Several models of curriculum alignment research are available for curriculum decision-makers.

The Webb method is popular with state-level education departments, and offers

quantitative measures to compare curricula to one another (Council of Chief State School

Officers, 2002). However, the Georgia curriculum has twice been tested for alignment

using English's (2001) Curriculum Audit. Both models fit into the broad alignment

model as represented in Figure 9.

*Figure 9*

Curriculum Alignment Model
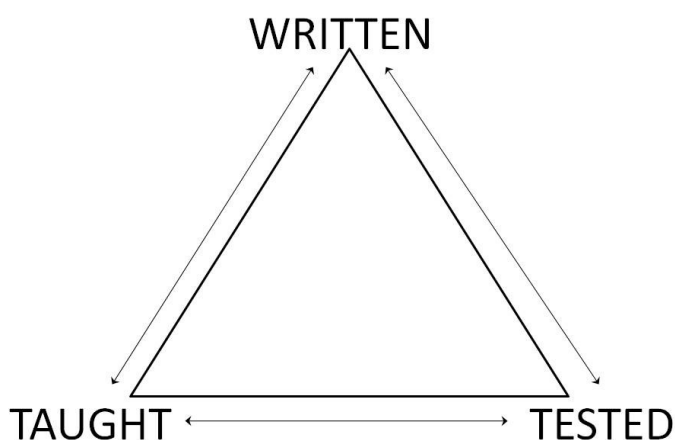


*Note. Curriculum alignment model (English & Steffy, 2001, p. 88; Squires, 2009, p. 8)*

The Curriculum Audit is widely implemented in school systems across the United

States (Phi Delta Kappan, 2009). Fenwick English developed the Curriculum Audit in

1988 by expanding the corporate practice of management auditing. The Curriculum Audit

"reflects standard operating procedure rather than something extraordinary in the way of

good practice" (p. 3). The Curriculum Audit serves as a tool for quality control

resembling the last stage of the CIPP model. The audit serves to describe the state of

curriculum implementation by evaluating the relationship between the written, taught,

and tested curriculum. The secondary purpose of the Curriculum Audit, following description, is to provide suggestions for improvement in system curriculum processes.

In this design, evaluators rate curriculum processes against key standards in order to improve validity and trustworthiness of the audit process and product. Those key standards require that the school district (a) demonstrate its control of resources, programs, and personnel; (b) establish clear and valid objectives for students; (c) document how the programs were consistently developed, implemented, and conducted; (d) use the results from assessments to adjust, improve, or terminate ineffective practices; and (e) be able to improve productivity.

Curriculum auditing specifically seeks to evaluate the alignment or mutual interactive nature of the relationship between the intended, taught, and tested curriculum, but not the general goals of schooling as required by this study. In fact, English equated reading such goals as "trying to read tea leaves" (English, 1988, p. 54). He claims that they are "not intended to be operational statements that influence practice...rather, symbolic statements which shield the hidden curriculum from public view…such high sounding statements are never referenced in such decisions and are never used to change the internal organization…within a school" (English, 1988, p. 54). Such a statement is a surrender to failure easily challenged with a counter example as seen in the previously discussed study of schooling in Rwanda post-1994 (Obura, 2003).

Still the investigation of the alignment relationship between the three traditional components of institutional curriculum is valid to this study. In fact, the curriculum in Georgia has twice been audited by a Phi Delta Kappa International division, the International Curriculum Management Audit Center (2004). The first audit in 2001

spurred a massive revision of the Georgia Quality Core Curriculum (QCC) because it was

"unclear, failed to clearly articulate across grade levels, did not align with national

standards consistently, and lacked rigor compared to other states…the QCC also was too

bulky and awkward for easy use in Georgia's classrooms" (Phi Delta Kappa

International, 2004, p. 20). This evaluation stirred the incoming superintendent to begin

the process of rewriting the curriculum, which led to the creation of the GPS. As a

formative evaluation, the Georgia Partnership for Excellence in Education funded an

audit of the GPS prior to implementation in 2004. This second audit was a unique one in

that it was the first time that Phi Delta Kappa International conducted an audit of the

intended curriculum. The Curriculum Audit process was not designed to evaluate an

intended curriculum alone, thus forcing Phi Delta Kappa International (2004) to alter the

auditing process to fit the new need:

> Consequently, this preliminary curriculum audit was limited to the following
> tasks: (a) determination of the scope, coverage, or range of standards across all
> grade levels in reading/language arts, mathematics, social studies, and science, (b)
> identification of the quality of the standards in terms of direction and technical
> structure, (c) determination of congruity of the standards with national standards
> and content area referents, (d) categorization of the cognitive levels (percentages)
> of standards for each content area, (e) identification of perspectives and concerns
> of the top leadership involved in the curriculum development process, (f)
> evaluation of critiques from Georgia citizens submitted online and identification
> of relevant recommendations on the comments, and (g) provision of a "formative"
> critique and review for use by the state department staff in continued curriculum
> development and design, including recommendations for revision, retention,
> addition or removal of standards. (p. 11)

This feedback from Phi Delta Kappa International influenced the early development of

the new GPS. At the time of writing the GPS, the GaDOE wrote five goals for the new

curriculum that appears to be heavily influenced by the 2001 audit. The new curriculum

goals, which do not appear in any other documentation other than the audit report itself,

include (a) set high expectations for all students; (b) align to national level standards; (c) increase rigor; (d) guide teaching and learning; and (e) align assessments and accountability to curriculum. Unfortunately, these goals do not include a purpose or broad goal of schooling for Georgia students; instead, they are a description of the desired learning standards.

The results of the audit found that the GPS is "most assuredly a step on a path headed in the right direction" (Phi Delta Kappa International, 2004, p.165). The auditors found a different approach to curriculum-making occurring at the GaDOE than what is previously discussed in chapter one of this text.

> Most states have developed their curriculum in a back-loading fashion to align with one or more high stakes tests. The Georgia process will produce what is commonly referred to as a front-loaded curriculum which is measured by assessment tools that are developed specifically to alignment with the curriculum objectives (Phi Delta Kappa International, 2004, p. 165).

Although this appears contradictory to the information discussed in the first chapter, the issue is not so black and white. If the curriculum-making process was influenced by a high-stakes test, and any revision, or realignment, of that test takes place following the development of the curriculum, is this not a grey area between front- and back-loading?

In any case, the third finding in the 2004 audit is most relevant to this study of the GPS. In this portion of audit, the auditors conducted a content analysis to investigate the relationship between the GPS and a taxonomy of educational objectives according to cognitive difficulty. This was not an investigation of the goals of schooling in Georgia, but rather a level of difficulty. The quality of this data analysis has not been challenged. Although this method does not investigate the goal of schooling, it does inform

researchers wishing to serve the department with significant influential studies of the evaluative language spoken and heard by the policy makers in the GaDOE. Content analysis used for inferential evaluative statements was sought out and used by the GaDOE. This study attempts to speak in these terms.

Although current summative curriculum evaluation models do not provide a method that fits the needs of the study at hand, a content analysis of the GPS informed by tangential models are be developed. The three tangential evaluative models, the CIPP Model, IIEP Model, and the Curriculum Audit, have provided valuable information for developing a model for summative evaluation of the institutional schooling goals alignment relationship to an intended curriculum. First, the CIPP Model provides a rationale for the value of a literature review in analysis of context and the importance of understanding context when defining goals. Second, the IIEP Model shows the influence that the goal of schooling can have on curricular outcomes and provides a means to describe goal-curriculum alignment relationship analysis through the characteristics of balance and relevance. Third, the Curriculum Audit from the curriculum alignment research has informed the necessary research terminology to make a study of the GPS audible to the GaDOE. Although these models are not within the tightly defined field of summative curriculum evaluation, they inform this study of the GPS.

## Conclusion

Through this investigation of the curriculum evaluation literature, it is clear that the curriculum evaluation paradigm lacks a model which summatively evaluates the relationship of institutional level schooling goals to an intended curriculum. Based on this

analysis, this study employs a method of investigation that allows the researcher to analyze the alignment relationship of the institutional level schooling goals and the intended curriculum as informed by evaluative models outside of summative curriculum evaluation. Chapter four explains this process further in detail.

Since this study addresses the need for a new research method, the significance is expanded. In addition to Georgia education stakeholders, this study will contribute to the curriculum evaluation field by expanding the current cache of evaluation methods to include content analysis. Additionally, this study expands the curriculum alignment research by offering a method to include the goals of schooling. The method that this study outlines and demonstrates serves as a means for summatively investigating the intended curriculum and any influential goals in existence prior to curriculum design.

CHAPTER 4: METHODOLOGY

Introduction

This study seeks to investigate evidence of various schooling goals in the state of

Georgia through a content analysis of the Georgia Performance Standards (GPS) which

were developed by the GaDOE. This study employs quantitative content analysis of

themes evident in the GPS for inferential purposes. Neuendorf (2002) describes the nine

steps to human-coded content analysis. This chapter uses Neuendorf's steps to outline the

method by describing (1) the methods and rationale; (2) conceptual decisions; (3)

operational measures; (4) data organization and generation; (5) sampling; (6) coder

training; (7) coding; (8) measures of reliability; and (9) reporting plans.

Methods and Rationale

Content analysis is "the systematic, objective, quantitative analysis of message

characteristics" (Neuendorf, 2002, p. 1). Content analysis can be applied to written and

transcribed text, verbal and physical interactions, visual images, or any other type of

message. Content analysis of the written text, as required by this study, is the most

traditional application of content analysis in use since the early twentieth century. The

most prominent methodologists of content analysis include Harold Lasswell of Lasswell,

Leites, and Associates (1965), Klaus Krippendorf (1980), and Kimberly Neuendorf

(2002). All three methodologists' work contributes to this study design. Lasswell's work

defines the nature of the data generated as a test of multiple hypotheses (Lasswell, Leites, and Associates, 1965). Krippendorf's (1980) work provides a frame for conceptualizing content analysis of written text. Neuendorf (2002) provides the accessible structure for planning and, most importantly, variable collection using theory and research. By consulting the work of the most prominent content analysis methodologists, this study conforms to best practices in rigid a priori design.

The content to be analyzed for this study includes all eighth-grade GPS in English/Language Arts, Science, Social Studies, and Math that are assessed using the state standardized tests (Appendix B). Three reasons exist for selecting the eighth-grade curricula for this study. First, the eighth grade is the last year all curricula are in common among students prior to entering high school. Following eighth grade, diploma types influence the curriculum required, i.e. Secondary School Credential, High School Diploma, High School Certificate, and Special Education Diploma (O.C.G.A. §160-4-2-.48, 2007). Second, according to Georgia law regarding mandatory education, students are only required to attend school up to age sixteen, which does not require high school graduation testing or completion of various diploma requirements (O.C.G.A. §20-2-690.1, 2007). Third, the last mandatory academic testing of all children in Georgia across all common curricular areas include the eighth-grade tests as stated by law (O.C.G.A. §160-3-1-.07, 2008).

> Local systems shall assess all eighth grade students with the Georgia-developed Grade 8 Writing Assessment, and the Criterion-Referenced Competency Tests in reading, English/language arts, mathematics, science, and social studies annually according to a schedule established by the State Board of Education. (p. 6)

These laws work together to make the eighth-grade curriculum the last guaranteed common and tested curriculum for all current Georgia public school students. These laws make the eighth-grade curriculum outcomes the most generalizable outcomes of attending Georgia public schools.

Before embarking on a detailed plan of content analysis, it is important to disclose the role of the researcher in this study. The researcher plays a prominent role throughout the planning, implementation, and reporting processes of this study. As a K-12 educator certified in Georgia and a Ph.D. candidate in Instructional Design and Technology at a research university, this study depends on the researcher to be the primary expert in outlining the method, coding the data, testing all potential coders, training an additional coder, data analysis, funding of research materials, and research reporting. While it would be ideal for multiple researchers or even an institution to oversee every research project at every level, as a dissertation study, these roles often fall on the researcher as seen in this case. In the final chapter, the researcher discloses limitations that become apparent during the research process to build trustworthiness of the study given the heavy role of the researcher.

<div align="center">Conceptualization Decisions</div>

An important part of planning a content analysis is determining the nature of the data that shape the variables selected and informs the development of the codebook. This process was full of hours of invention, reinvention, and repeated failures. First, the latent goals of schooling required manifestation through the available theory and research (Neuendorf, 2002). Then various methods of content analyses that resembled the needs of

this study were attempted, as described later in this chapter, resulting in an ideal method. Hypothesis-testing is presented as the content analysis method that meets the needs of this study.

*Manifesting the Latent Goals*

Neuendorf (2002) states that when embarking on content analysis identifying the variables for study is critical. Variable collection is often done through application of theory and research. Earlier, chapter two presented the goals of schooling relevant to Georgia public education as latent themes in Tables 2 and 3. These latent goals include (a) democratic participation; (b) Americanization; (c) post-secondary enrollment; (d) develop the individual; (e) national economic gain; (f) social justice; and (g) high student test scores. By describing these goals as latent themes, this suggests they are difficult to identify within messages. Neuendorf (2002) solves this problem by dividing the latent goals into more readily apparent manifest themes. The breakdown of latent goals into manifest themes requires a brief review of the applicable research and theory.

While breaking these latent goals of schooling into manifest parts, the policies and context surrounding schooling in Georgia and the United States must be taken into account. The political landscape, knowledge economy, globalization, growing disparities in wealth, *A Nation at Risk*, NCLB, and current policy-maker statements serve to frame the manifestation of the latent goals.

*Democratic participation*. The current socio-political context influences schooling for democracy in a knowledge economy. According to Hargreaves (2003) critical skills are necessary in education for democracy. Critical literacy is the development of an interpretive, analytical, reflective, dialogical and practical social being aware of his/her

place in the global society. Critical and media literacy are both competencies needed for

participation in democratic processes. These literacies are supported by basic language

literacy and numeracy needed to access the information. Although the acquisition of

media and critical literacy does not solely depend on access to the Internet, one's ability

to share and obtain alternative messages and products make technology access a necessity

of a democratic citizen participating in the knowledge economy (Bergsma, 2000;

Damarin, 2000; Michelson, 2001).

Online media tools have changed the meaning of being politically engaged.

Bennett's (2008) study cites several examples of new online political activity including

political campaigning, protests, and group formation.

> We know that digital media provide those young people who have access to it an
> important set of tools to build social and personal identity and to create the on-
> and offline environments in which they spend their time. However,…many young
> people live online, but they may lack the skills to communicate their common
> concerns in effective ways to larger (public) audiences. [Bennett and others]
> suggest building a public communication digital media skill set. (p. 8)

Expansion of the digital social realm reinforces the effect of globalization on schooling

for democracy. Globalization has inspired an additional skill set for secondary education

including civic literacy (World Bank, 2009). This skill set appears in many works that

express a concern for compassion and ethics among citizens of the 21st century. Civic

literacy is the active participation in government through civic activities of decision-

making and an understanding of the local and global implications of those decisions

(Partnership for 21st Century Skills, 2007). According to Hargreaves (2003) these ethical

understandings and skills are necessary in an economy that stretches the globe. Because

democracy and labor activities now require access to the same international information

networks, many of skills for democracy now overlap with the skills of the knowledge worker.

*Americanization.* Schooling as a means of establishing a common culture, common language, and common views on issues is the normalization of minority, non-English speaking, and low socio-economic families (Spring, 2009). By standardizing the curriculum and establishing a minimum proficiency level, students are pushed to conform to the stated social norms. This assumption, that a standardized curriculum imposed on all Georgia students is a process of normalization, is inversely related to an argument for the omission of the pedagogical progressive view of individual development as a goal in this study. Dewey (1938) claims that development of the individual requires the individual's participation in the creation of the content, based on individual experiences. In contrast, standardization and imposition of curriculum content is the opposite of individualism, conformity. Dewey's view on the theoretical mutual exclusivity of development of the individual and imposition of content from above is based on his understanding of variability of individual experience (Dewey, 1938). By standardizing the curriculum and requiring conformity in language and knowledge acquisition, schooling in Georgia becomes a normalization process. Testing for standardization among the GPS is unlikely to show variability, since the document is an expression of the standards themselves. However, seeking evidence of western philosophies, English-language learning, and content culturally specific to the west would contribute to determining whether the enforced conformity is specific to western and American norms.

*Post-secondary enrollment.* Post-secondary enrollment as a goal of schooling is a rather direct aim. This goal, with a criterion of enrollment, only includes entrance into

post-secondary education, not continued success in a post-secondary institution (Georgia

Department of Education, 2009c). College entrance exams are not dependent upon the

curriculum or curriculum goals in K-12 schooling as seen in the following statement

made by the College Board.

> With the College Board's revolutionary development of common entrance
> examinations—later known as the SAT® Program or Scholastic Assessment
> Tests—students could apply to a number of institutions without having to sit for
> entrance examinations at each one. The new assessments also had another
> democratizing benefit: individuals could provide evidence of their credentials
> without regard to their family backgrounds and despite inconsistent grading
> systems and curriculum standards throughout the nation's high schools. (The
> College Board, 2009, ¶ 2)

Both the ACT and the SAT test English language literacy skills of reading and writing.

Also, they both test numeracy skills of arithmetic, algebra, and geometry. In addition, the

ACT also tests trigonometry and science content (The College Board, 2009).

*Individual development*. John Dewey is one of the most famous curricular

progressives in education. He believed education should develop the intellectualism of

the individual. Dewey's (1938) work suggests that a standardized curriculum is

contradictory to a goal of schooling that focused on the individual, as education must be

based on each learner's inevitably variable life-experiences.

> Because the studies of the traditional school consisted of subject-matter that was
> selected and arranged on the basis of the judgment of adults as to what would be
> useful for the young sometime in the future, the material to be learned was settled
> upon outside the present life-experience of the learner. (Dewey, 1938, p. 76)

Since life-experiences are not standard in nature, Dewey argues a standard curriculum for

all students to be contradictory.

> A single course of studies for all…schools is out of the question; it would mean
> abandoning the fundamental principle of connection with life-experiences,…A

certain amount of uncertainty and of laxity in choice and organization of subject-matter is, therefore, what was to be expected. (Dewey, 1938, p. 78)

For Dewey's reasons for a need of uncertainty in the content of the curriculum, a standardized curriculum cannot meet the needs of such a construction of individuality. He claims that "imposition from above is opposed expression and cultivation of individuality" (p. 19).

Although the curricular progressives' view of individual development may contradict this study; the use of an administrative progressive view of individual development will contribute to the discussion. To teach for individual development according to the administrative progressive view of Franklin Bobbitt (1997) is to teach toward "the shortcomings of the individuals" (p. 12). These shortcomings are defined to exist within the "habits, skills, abilities, forms of thought, valuations, ambitions…necessary for effective performance of their vocational labors" in adult life (p. 11). Teaching for individual development is also "to develop the good-will, the spirit of service, the social valuations, sympathies, and attitudes of mind necessary for effective group-action" (p.10). Since Bobbitt's text *Scientific Method in Curriculum Making* proposed a precursory model of modern learning standards, this definition of individual development fits well into this investigation of the GPS.

The first portion of this individual development definition relates specific to vocational participation. According to the previously presented context analysis of the knowledge economy, globalization, and growing disparities in wealth, the majority of the workforce will work in vocations not in existence one hundred years ago. Over 90 percent of the workforce requires knowledge economy skills. These technical skills

require creativity, digital literacy, information literacy, interpersonal participation in a learning society, intrapersonal life-long learning, literacy, media literacy, numeracy, problem-solving, and systems thinking (Hargreaves, 2003; Partnership for 21st Century Skills, 2007; Royal Society for the Encouragement of Arts, Manufactures, and Commerce, 2009). The skills necessary for the limited industrial and agricultural jobs would be best served in a follow-up study investigating the GPS targeting those professions (Georgia Department of Education 2009d). Therefore those skill sets are deemed outside the scope of this study.

When considering the second portion of Bobbitt's definition of teaching for individual development, this definition is inclusive of the social skills necessary to achieve vocational preparation. The second part of the definition of individual development is the teaching of "good-will, the spirit of service, the social valuations, sympathies, and attitudes of mind necessary for effective group-action" (Bobbitt, 1997). This suggests that in the new globalized society the skills necessary for interpersonal participation in a learning society are required for individual development, making this manifest theme especially important to the goal of individual development set in the contemporary context of the knowledge economy.

*National economic gain.* The knowledge economy and globalization heavily influence the research and theory on what it means to educate for economically-focused national gain. Whether referring to them as 21st century skills (Ely, 2002; Partnership for 21st Century Skills, 2007), high skills (Payne, 2002), or knowledge economy skills (Hargreaves, 2003; World Bank, 2009), these skills all build on a common theme of life-long learning (Luke, 1997; Partnership for 21st Century Skills, 2007 Royal Society for

encouraging the Arts Manufactures and Commerce, 2009). Although English language

literacy and numeracy are valued skills among advocates of the skills for the 21st

century, the generic competencies for life-long learning build on other concepts of

learning that address a knowledge-based economy (Hargreaves, 2003; O'Driscoll, 2003;

Organisation for Economic Co-Operation and Development, 2004; Partnership for 21st

Century Skills, 2007 Payne, 2002; Royal Society for the Encouragement of Arts,

Manufactures and Commerce, 2009; Spring, 2008; Tuomi, 2007). Lanham (2007)

presents an Economics of Attention theory, which further supports the need for ongoing

learning in the knowledge economy. Lanham's theory states that with the overabundance

of information demanding human attention, mastery is impossible making anytime,

anywhere, any situation learning an inevitable necessity for the knowledge worker.

According to the Commission of the European Communities (2000), lifelong learning is

"all purposeful learning activity, undertaken on an ongoing basis with the aim of

improving knowledge, skills, and competency" (p. 3).

     The first set of skills that support life-long learning include personal skills, both

intrapersonal for self-monitoring of learning and interpersonal for collaboration in

problem-solving and knowledge construction (Hargreaves, 2003; Partnership for 21st

Century Skills, 2007; Royal Society for encouragement of the Arts, Manufactures, and

Commerce, 2009). Enculturation into an interpersonal group for knowledge construction,

also referred to as a learning society, is becoming an important focus for students today

(Dudziak, 2006; Matheson & Matheson, 2000). Participation in knowledge building

through a learning organization includes working in teams with other people, accessing

outside information, and communicating well, while generating and applying ideas together.

The second set of skills that support life-long learning includes those that enable the acquisition and management of information (Organisation for Economic Co-operation and Development, 2004; Royal Society for the Encouragement of Arts, Manufactures and Commerce, 2009). The literacies required to acquire and manage information include information literacy, media literacy, and digital literacy. These literacies support one another through the practice of receiving, processing, and responding to communications. Such capabilities are imperative to learning new knowledge in an environment of information overabundance. The information-literate individual can identify needed information, effectively search for that information, judge the validity of information, synthesize information, interpret information, and prioritize it.

The complex methods of processing and disseminating information and knowledge in the knowledge economy have led to a media-saturated society. Media messages are becoming increasingly customizable. This characteristic makes critical analysis imperative to exercising both political and consumer consciousness. This critical awareness of the media is referred to as media literacy, or the creation and analytical interpretation of messages found in the media. Digital literacy, a competency to interact with hard technologies in order to manipulate various software tools, is important to support media literacy because it promotes the access of alternative information and media (Berger, 2006).

Although life-long learning appears in the literature as the most widely agreed upon skill-need for future economic participation (National Commission on Excellence in

Education, 1983; Chen & Bradshaw, 2007; Payne, 2002; Partnership for 21$^{st}$ Century

Skills, 2007; Royal Society for Encouragement of the Arts, Manufacturers, and Sciences,

2009; Spring, 1998), many educational experts also argue that problem-solving skills are

necessary for the dynamic and constantly changing environment of the knowledge

worker (Spring, 1998; Partnership for 21$^{st}$ Century Skills, 2007). According to the

Partnership for 21$^{st}$ Century Skills (2007), skills that support problem-solving include

critical reasoning and an understanding of dynamic systems. The systematic procedure of

problem-framing, analysis, and solution development is believed to be as necessary in

problem-solving as the flexible processes of creativity and innovativeness (Hargreaves,

2003; Partnership for 21$^{st}$ Century Skills, 2007).

    *Social justice.* Schooling for social justice is a concept laden with values. For the

purpose of this study, social justice is constructed as the praxis of transforming one's

situation out of an oppressive state through action and reflection as described by Freire in

*Pedagogy of the Oppressed* (1970). Freire used critical theory to design a means for

educating for social justice through literacy study. Freire would argue that the creation of

standards, such as the Georgia Performance Standards, is contrary to creating a critical

consciousness. Critical consciousness is necessary for social justice and should always be

student- and situation-driven (Freire, 1970).

> Preoccupation with the content of dialogue is really preoccupation with the
> program content of education,…For the anti-dialogical banking educator, the
> question of content simply concerns the program about which he will discourse to
> his students; and he answers his own question, by organizing his own program. (p.
> 93)

    Despite Freire's (1970) likely distaste for a standardized curriculum as another

form of banking education, Freire's book provides some valuable themes for this study

relevant to schooling for social justice. These themes include (a) education that focuses on student problem-posing or asking the question "why" cannot serve oppressive forces, (b) cooperative dialogical knowledge creation, like that of the Learning Society, is a reinvention of reality thus a component of changing the situation, (c) the processes of action and reflection make up praxis that transform situations, and (d) critical consciousness is considered the "deepening of an attitude of awareness" (Freire, 1970, p.109). For this study, critical consciousness will be constructed as equal to critical literacy, a contemporary term for some of Freire's pedagogical content.

*High student test scores.* Although the ACT and SAT scores are important to college entrance, standardized test scores influence student progression through the K-12 curriculum and are considered a goal of schooling. Standardized student test scores include data collected from curriculum-specific exams. According to Georgia Department of Education (2009a)

> The assessment program includes customized criterion-referenced tests at the elementary, middle, and high school levels; the National Assessment of Educational Progress in grades 4, 8 and 12; and an optional norm-referenced test. These mandatory state assessments include the Criterion-Referenced Competency Tests (CRCT), End-of-Course Tests (EOCT), Georgia High School Graduation Tests (GHSGT), Georgia Writing Assessments (¶ 2).

Still, just as indicated in the analysis of schooling for post-secondary enrollment, outside of testing skills themselves, these exams do not specify the goals of the curriculum tested. In the United States some proof of completion of a secondary school curriculum is required to enter most post-secondary education programs. This diploma requirement for post-secondary entrance does not contribute to this study, since certificate of curriculum completion does not specify the goals of the given curriculum.

However, a high school diploma in Georgia not only requires the completion of a prescribed curriculum organized by course units, but it also requires a passing grade on various achievement tests, such as end-of-course exams and the Georgia High School Graduation Test (Georgia Department of Education, 2009a). To assist individual students in attaining this goal of schooling, supplemental test preparation programs are being offered in Georgia by private providers such as Sylvan Learning (2009) and C2 Education Centers (2009).

Recall, the latent themes originated from the goals of schooling relevant to Georgia as established in chapter two. Unfortunately, such themes are not readily visible in a content standard. Neuendorf (2002) offers a solution to this problem. The latent themes were separated further into concepts more readily visible in the content standards. These concepts are referred to as the manifest themes. These manifest themes emerge from this analysis of how to school for each of the goals given the contemporary context surrounding schooling. For the sake of clarity the goals of schooling, now expressed as latent themes are organized with the supporting manifest themes in Table 5.

Table 5

*Manifest Themes*

| Latent Goals of Schooling or Latent Themes | Manifest Themes |
|---|---|
| Democratic participation | Civic literacy |
| | Critical literacy |
| | English language literacy |
| | Information literacy |
| | Media Literacy |
| Americanization | Culturally specific to the US |
| | English language literacy |
| | Philosophically western |
| Post-secondary enrollment | English language literacy |
| | Numeracy |
| | Science |
| | Test-taking |
| Individual development | Creativity |
| | Digital literacy |
| | English language literacy |
| | Information literacy |
| | Interpersonal participation in learning society |
| | Intrapersonal skills of life-long learning |
| | Media literacy |
| | Numeracy |
| | Problem-solving |
| | Systems thinking |
| National economic gain | Creativity |
| | Digital literacy |
| | English language literacy |
| | Information literacy |
| | Interpersonal participation in learning society |
| | Intrapersonal skills of life-long learning |
| | Media literacy |

| Latent Goals of Schooling or Latent Themes | Manifest Themes |
|---|---|
| | Numeracy |
| | Problem-solving |
| | Systems thinking |
| | |
| Social justice | Action and reflection |
| | Critical literacy |
| | English language literacy |
| | Interpersonal participation in learning society |
| | |
| High student test scores | English language literacy |
| | Numeracy |
| | Science |
| | Test-taking |

*Note. (Table spread over two pages.) Manifest themes established by the author through theory and research. Many manifest themes overlap in the latent themes; however, because each latent theme will be measured separately for alignment with the GPS, repeat testing and double reporting of manifest themes will not occur.*

This study employs the manifest themes to investigate the GPS for evidence of the latent goals of schooling in Georgia. This collection of manifest themes is critical to the success of this study. Articulating the meaning of these manifest themes consistently to the coders is the role of the codebook. These manifest themes outline the Codebook (Appendix D) that will be discussed later in this chapter. Notice that many manifest themes overlap across latent themes; however, because each latent theme will be measured separately for alignment with the GPS, repeat testing and double reporting of manifest themes will not occur. The overlap occurs due to the relative nature of the contemporary context surrounding each latent theme. For example, information and media literacies support democratic participation, individual development, and national

gain. This repeated theme occurs because messages now appear on the Internet, no longer bound to specific disciplines and contexts, but blended through personal, political, and economic environments of human life today. Such a phenomenon is a post-modern context.

*Identifying a Content Analysis Model*

Content analysis is a long-practiced and flexible method of analyzing text. A challenge with content analysis is identifying the best model to employ for each study. For this study, the process of model identification began with an analysis of verbs as done in the 2004 curriculum audit of the Georgia Performance Standards (Phi Delta Kappa International, 2004). By using a taxonomy of verbs found in each unit as defined by the educational researcher Benjamin Bloom (1956), the researcher attempted to categorize each unit of analysis in a way that would contribute to this study. However, many verbs such as "explain" appeared within multiple categories of Bloom's taxonomy, thus requiring additional coding to determine the appropriate category. For example, a unit of analysis from the eighth-grade-science GPS states "S8P1.a Distinguish between atoms and molecules" (Appendix B). The verb "distinguish" can indicate two categories within Bloom's taxonomy including comprehension or analysis. While trying to identify how this unit should be coded, it was clear the coder needed to know more about what the student does to distinguish. The data generated from this model was highly unreliable and likely speaks to a weakness of the 2004 curriculum audit of the GPS. When repeated by the same coder, the process resulted in codes that were frequently different from coding conducted before. This lack of intra-coder reliability forced the researcher to abandon this model of content analysis and look for a new one.

Krippendorf (1980) suggested using decision schemes to differentiate between the meanings of confusing categories. He cited a study that investigated the content of comic strips through the use of a decision scheme to differentiate between the terms "earth" and "contemporary". In attempts to assimilate this method to the study at hand, the author created and implemented a decision scheme (Appendix C). The decision tree began by determining if the unit represented tacit or explicit knowledge. By answering a series of questions, the coder arrives at a code to assign the unit. Unfortunately, the data generated was moderately unreliable even with a single coder.

By interacting with the data, the unusual nature of the data became apparent. In search of a better method, the researcher continued to read examples of content analysis. A study conducted nearly fifty years ago showed promise although the context of the data were markedly different. Lasswell, Leites, and Associates (1965) conducted simulation of hypothesis testing on a body of newspaper articles from World War II that implemented what they called the consistency test. In this 1965 study, the coders judged each unit or statement from the text as either consistent or inconsistent with one or more of four specific goals of the Nazi propaganda campaign. Frequency tables permitted inferences as to which newspapers were most sympathetic with the Nazi party. This study showed promise because the nature of the research question resembled the research question posed in this study about the GPS. The 1965 study approached the units of analysis with an assumption of an existing a priori stated goal. Krippendorf (1980) calls this method of content analysis hypothesis testing. Hypothesis testing fits the data in this study best.

*Simulation of Hypothesis Testing*

This study employed simulation of hypothesis testing (Krippendorf, 1980).

According to Krippendorf (1980)

> Generally, a hypothesis is a statement whose truth is rejected by counter example, by disproof, or by statistical evidence in favor of the contrary. As a recording strategy, the simulation of hypothesis testing demand of a coder that he cognitively-logically link each verbal recording unit with any one of several mutually exclusive hypotheses and ascertain to which it pertains and sometimes how strongly it supports or rejects either alternative. (p. 79)

Mutually exclusive hypotheses require a relationship with the research question to ensure validity. The guiding research questions were stated earlier, which contributed to hypothesis development. The guiding questions include the following:

a. How well are the GPS and each of the goals of schooling aligned?

b. How relevant are the eighth-grade GPS to the latent themes of the stated goals of schooling?

a. How balanced are the each of the latent themes of the stated goals of schooling and the eighth-grade GPS?

From these guiding questions, the manifest, more concrete, themes, and the review of the literature developed a null hypothesis and seventeen test hypotheses to be investigated through this proposed content analysis.

The null hypothesis is followed by seventeen hypotheses:

$H_0$: The relationship between the eighth-grade GPS curricula and each manifest theme is strongly positive; therefore, no conflict exists between the GPS and the latent goals of schooling.

H1: The eighth-grade GPS curricula show evidence of strongly supporting action and reflection.

H2: The eighth-grade GPS curricula show evidence of strongly supporting the development of civic literacy.

H3: The eighth-grade GPS curricula show evidence of strongly supporting the development of creativity.

H4: The eighth-grade GPS curricula show evidence of strongly supporting the development of critical literacy.

H5: The eighth-grade GPS curricula show evidence of strongly supporting a culture specific to the United States and/or other English-speaking countries.

H6: The eighth-grade GPS curricula show evidence of strongly supporting the development of digital literacy.

H7: The eighth-grade GPS curricula show evidence of strongly supporting the development of English language literacy.

H8: The eighth-grade GPS curricula show evidence of strongly supporting the development of information literacy.

H9: The eighth-grade GPS curricula show evidence of strongly supporting interpersonal participation in a learning society.

H10: The eighth-grade GPS curricula show evidence of strongly supporting the development of intrapersonal skills of life-long learning.

H11: The eighth-grade GPS curricula show evidence of strongly supporting the development of media literacy.

H12: The eighth-grade GPS curricula show evidence of strongly supporting the development of numeracy.

H13: The eighth-grade GPS curricula show evidence of strongly supporting the development of problem-solving skills.

H14: The eighth-grade GPS curricula show evidence of strongly supporting the acquisition of science knowledge.

H15: The eighth-grade GPS curricula show evidence of strongly supporting systems thinking.

H16: The eighth-grade GPS curricula show evidence of strongly supporting the skills of test-taking.

H17: The eighth-grade GPS curricula show evidence of strongly supporting the acquisition of western philosophies.

<div align="center">Operational Definitions of Variables</div>

Eighteen variables will be investigated in this study. The first variable is the unit of analysis and the independent variable of the study. This variable includes the recording unit of the GPS (Appendix B). Unit differentiation was copied from the unitization published by the GaDOE in the GPS. Since this investigation hopes to infer intentions, it is important to use the original authors' organization, or unitization of the content as a means to strengthen the validity of the data.

The first dependent variable coordinates with H1, which states that the eighth-grade GPS curricula show evidence of strongly supporting action and reflection; therefore, this variable is measured using the title *action and reflection*. This dependent

variable will be the first test variable for each unit of analysis. Action and reflection is operationalized as learning activity that requires the learner to both reflect and act upon life situations specific to the learner.

The dependent variables emerge directly from the manifest themes (see Table 5) and the stated hypotheses. The variable descriptions below include variable names and each operational definition.

Variable 1: *Action and reflection* is learning activity that promotes reflection and action upon life situations specific to the learner.

Variable 2: *Civic literacy* is learning activity that promotes active participation in government through civic activities of decision-making and an understanding of the local and global implications of those decisions.

Variable 3: *Creativity* is learning activity that promotes originality of thought. Additionally, it requires interest of the student, challenge, artistic skills of all forms such as dance and drama, opportunity for choice, risk-taking, teamwork, autonomy, experimentation, and encouragement of perseverance.

Variable 4: *Critical literacy* is affective learning activity that promotes deepening an attitude of awareness of situation. Additionally, it promotes posing personally and situationally relevant problems and *why* questions.

Variable 5: *Culturally specific to US/English-speaking countries* is learning content or activity containing culturally relevant knowledge of society in the United States or other English-speaking countries, including but not limited by, historical events, attitudes, values, arts, and language.

Variable 6: *Digital literacy* is learning activity that specifies interaction with hard technologies in order to manipulate various software tools.

Variable 7: *English language literacy* is learning activity that encompasses reading, writing, and a variety of social and intellectual practices that call upon the voice as well as the eye and hand. It is only specific to English language.

Variable 8: *Information literacy* is learning activity that specifies participation in identification of needed information, effective search for that information, judgment of the validity of information, synthesis of information, interpretation of information, and/or prioritization of information.

Variable 9: *Interpersonal participation in a learning society* is learning activity that is cooperative or involves working in teams, communicating well with others, while generating and applying ideas together.

Variable 10: *Intrapersonal skills of life-long learning* is learning activity that promotes skills of learning, whether how to find learning opportunities or the ability to teach one's self throughout the duration of life. It is learning activity that specifies the demands of meta-cognitive awareness and strategies.

Variable 11: *Media literacy* is learning activity that promotes the creation and analytical interpretation of messages found in the media, where media refers to mass media and popular media.

Variable 12: *Numeracy* is learning activity that promotes quantitative thought and expression. It also includes learning activity that promotes thinking and reasoning mathematically and a useful base of mathematical knowledge and skills needed in any walk of life.

Variable 13: *Problem-solving* is learning activity that promotes use of cognitive processes to confront and resolve real, cross-disciplinary situations where the solution is not immediately obvious, and where the literacy domains or curricular areas that might be applicable are not within a single domain of mathematics, science, or reading.

Variable 14: *Science* is learning activity or content promoting the acquisition of the body of knowledge related to the physical and biological world and with the processes of discovering and validating this knowledge in a positivistic manner.

Variable 15: *Systems thinking* is learning that involves synthetic thinking, which is where the learner first views the entity as a whole made up by parts rather than parts that make up a whole. It is also learning activity that involves emergence of new knowledge, involves expansionism, which is where the learner knows ultimate understanding can never be reached, but should be sought, and teleology, which is the act or awareness of individual will, choice, function, and purpose beyond immediate reward.

Variable 16: *Test taking* is learning activity that promotes acquisition of tips, techniques and strategies to pass a test. It is also understood as knowing what to expect on the state test and having testing confidence.

Variable 17: *Western philosophies* is learning activity or content that promotes specific western ideologies including classical Greek philosophy, empiricism, which is roughly the gaining of knowledge through sensory experience of phenomena; Judeo-Christianity; and scientific reductionism, which is the focus beginning on the parts of a whole before investigating the whole.

Data Organization and Generation

Each unitization was defined and recorded in the Microsoft® Office Access

(2007) database, Content_Analysis.accdb under the column heading GPS_element.

Neuendorf does not suggest that data organization necessarily be electronic. In fact, data

generation for human coding is often conducted by hand on paper using a custom paper

form (Neuendorf, 2009). Microsoft® Office Access database was chosen because of the

researcher's ability to create an electronic form that automated data organization into the

Access database (Appendix D). Also, Microsoft® Office Access is able to import and

export from Microsoft® Office Excel (2007), which is often compatible with many

software tools including SPSS® (SPSS, Inc., 2004). Microsoft® Office Excel allowed

confident manipulation of the data using custom-created formulas and charts for

inferential and data reporting purposes.

Each of the units of analysis was defined in the GPS by a unique left-to-right

alphanumeric code where the first group of capital letters indicated the subject area, the

first number indicated the grade level, the second group of letters indicated the

concentration area, the number immediately left of the decimal defined a knowledge or

skill set in a concentration area, and the last letters and numbers to the right of the

decimal further differentiated the skills and knowledge according to the GaDOE

(Appendix B). Each unique code and the corresponding text, an element, was considered

a unit of analysis. According to the GaDOE (2007) elements are part of the standard that

identify specific learning goals associated with the standard. In order to maintain the

contextual validity of each unit of analysis, coders used any other unit for further

clarification as long as the alphanumeric code to the left of the decimal was exactly the

same as the unit of analysis. This similarity indicated an elemental family of skills and

knowledge within the GPS, or a standard. For the purpose of this study each unique unit

and its GPS alphanumeric code were also given a unique database identification number,

the ID key. This ID key was a unique number that helped the researcher quickly

differentiate between the elements within the database across tables, forms, and queries.

After a few attempts at data analysis, the author needed to expand the hypothesis

test method beyond its binary data generation. In order to increase intra-coder reliability,

an additional measure was necessary beyond a judgment of consistency/support (score=1)

or lack of support (score=0) for each of the hypotheses. An ordinal metric of 2, 1, and 0

indicated a level of support. A score of 2 indicated that the hypothesis was strongly

supported by the unit of analysis. A score of 1 indicated that the hypothesis was

somewhat supported by the unit of analysis. Finally, a score of 0 indicated that the

hypothesis was not supported or possibly even hindered by the unit of analysis. This

differentiation for each dependent variable was included in the Codebook (Appendix D).

Further ordinal differentiation between not supported, somewhat hindered, and hindered

was found by the researcher to negatively influence coder reliability without contributing

to the rejection status of each hypothesis. This alteration to the original method as

employed by Lasswell, Leites, and Associates (1965) still met Krippendorf's (1980)

categorical requirements of exhaustive and mutually exclusive categories.

In order to facilitate reliability of coding practices, the Codebook was used by

each coder to guide data generation. This codebook provides concrete descriptions of

each level of support within each variable. The Codebook also provides instructions on

using the Codebook and the database form during coding practices such that all coding practices were consistent among all coders.

Each coder used the Microsoft® Office Access database form to record the data. Two coders coded the recording units required by the study. Ten percent of the recording units were analyzed two times, once by each of the coders. This is the number of coders minimally required by Krippendorf's (1980) test-test reliability requirement. This repeated testing of the data allowed for the calculation of the reliability measure. Although Krippendorf recommends, but does not require, that the author not be a coder, this was not possible for this study. The author was responsible for the complete coding of the data following an acceptable reliability measure.

Development of the codebook required considerable thought and effort. The codebook for this study brought consistency to the coding process (see Appendix D). The hypothesis testing method used the Codebook results in perfect intra-coder reliability by the author-coder. The codebook first outlined the process the coder followed to generate reliable data. Second, the codebook operationalized each possible measure of support for each variable. Lastly, the codebook included a screenshot of the database form on which the process was enacted.

<div align="center">Sampling</div>

Data sampling was not necessary, as the corpus data belonging to the eighth-grade GPS in English/Language Arts, Science, Social Studies, and Math did not extend past 500 units. By using the data corpus, sampling validity was eliminated as a concern for the researcher, giving the study inferences greater validity (Krippendorf, 1980).

<u>Coder Training</u>

The researcher and one additional individual served to code the data. The testing of additional coders was based on similarity in education to the author. Before identifying the additional coder, the researcher tested two other potential coders through training and simultaneous reliability calculations. Neither of these two individuals had experience with K-12 curriculum standards, which may have contributed to the incompatibility of their raw data when paired with the researcher's. The selected additional coder has completed her course work for a Ph.D. in instructional design and technology and has experience teaching K-12 curriculum standards. Training took place in two instances over six hours in quiet meeting rooms. The process of coder training follows below.

1. Prepared the coder training manual that includes hardcopies of the Codebook, a screenshot of the electronic form, all GPS to be analyzed, and a flash drive with electronic copy of database for data entry.

2. Introduced coders to the research in chapters one through three.

3. Introduced the coders to the GPS content to be analyzed.

4. Defined content analysis.

5. Described the hypothesis testing method of content analysis.

6. Defined the dependent variables and the levels of support for each dependent variable.

7. Demonstrated coding of a unit of analysis using the electronic form as provided on the flash drive within the coder training kit.

8. Coded several different units together discussing how codes are selected. Discussed any discrepancies in understanding between coders.

9. Reached consensus of variable definitions in relation to codes and the process of coding.

10. Explained which units of data that each coder would analyze.

<div align="center">Coding</div>

The Codebook was designed to help the coder in the process of coding the eighth-grade GPS. Each variable as defined for this study appeared in italics in the codebook. The coder referred only to these definitions while coding for this study. Even if the coder was aware of other definitions for these words, those concepts did not apply to this study. In addition, the coder was expected to code the GPS units based on the instructions that followed. The coders have previous experience in coding for research, but because each study is different, each coder coded only according to these instructions that were provided in the Codebook as part of the coder training manual (Appendix D).

1. At the top of the database code form, enter the metadata, which includes your Coder ID and the Date.

2. Read the recording unit provided on the database form in the field GPS_element. If you need clarity in understanding the recording unit you may refer to any other recording units that have the same GPS_ID, the alpha-numeric code, to the left of the decimal.

3. For each dependent variable defined below, read the levels of support. Judge which level best describes the recording unit according to the defined levels of support for that variable.

4. On the database form provided, use the drop-down arrow to select the level you identified to best describe the recording unit for each of the seventeen variables.

5. Be sure to make and record the codes for all seventeen variables on the form.

6. When you are done save your work and close the application. Notify the researcher.

<u>Analyzing the Data</u>

The process of data coding was uneventful and went according to plan. The author served as Coder 1. Coder 1 had qualifications to conduct coding of K-12 curriculum. Coder 1 was a doctoral candidate in the field of instructional design and technology with a focus in the K-12 environment. She was certified in the state of Georgia to teach math, social studies, and language arts in grades kindergarten through eight. Coder 1 was least familiar with the GPS in the social studies category and this served as a limitation of the study. Coder 2 was also a doctoral student in the same program and focus as Coder 1. Coder 2 was certified in the state of Georgia to teach Modern Language Spanish in grades pre-kindergarten through twelve. She was most familiar with the subject category English Language Arts. Both coders were familiar with the concept of state and national curriculum standards, and have used curriculum standards to plan instruction for K-12 students. The coders have twenty years of teaching experience combined as well as additional K-12 leadership certifications.

The coders identified a time and location where coding of ten percent of the data could be completed over two sessions. Coder 1 prepared a blank copy of the Microsoft® Office Access (2007) database, Content_Analysis.accdb. Coders 1 and 2 used a random

sample technique to select ten percent of the eighth-grade English/Language Arts GPS (n=15), ten percent of the eighth-grade Mathematics GPS (n=9), ten percent of the eighth-grade Science GPS (n=7), and ten percent of the Social Studies GPS (n=13). Together, ten percent of the eighth-grade GPS included forty-four units of analysis. The resulting raw data were used to test for reliability using Pearson's *r*. Prior to coding, training took place according to the list of six instructions found in the codebook (see Appendix D). Initially, coders worked together to code a portion of the data for each tested dependent variable, or manifest theme, in order to establish agreement on the definitions provided for each level of support for each dependent variable. Once agreement was established, coding of the rest of the ten percent was conducted independently. Immediately following initial coding, Coder 1 calculated Pearson's *r* using SPSS® for each dependent variable to determine if any re-coding was required as indicated by r<0.70 (SPSS, Inc., 2004). Re-coding was determined to be unnecessary, as the reliability requirements as outlined in chapter four were met.

Participation of Coder 2 was discontinued once reliability was established using Pearson's *r* with ten percent of the data. Coder 1 continued to code the remaining ninety percent of the data. Coder 1 found coding to be easiest when she coded all independent variables for a single dependent variable, or manifest theme, first. Then she coded all independent variables again for a new dependent variable. By testing all 438 units for each of the seventeen dependent variables, Coder 1 recorded nearly 7,500 individual units of generated data. This process required over sixty hours of dedicated time. Once coding was completed, the database was backed up on multiple digital storage sources.

Following coding and data backup, all data were exported into Microsoft® Office Excel (2007) to calculate the score frequencies.

<center>Correlation Measure of Reliability</center>

Reliability of data in content analysis measures the trustworthiness of the generated data. According to Krippendorf (2009), in order for reliability to be measured following training, coders must work independently with the units of analysis and the codebook rather that cooperatively. Also, the cells within data tables must be distinctly coded independently of one another in order for them to be countable for the required measurements. Neuendorf (2002) describes this further for instances of human coding in content analysis when she defines inter-coder reliability as "the amount of agreement or correspondence among two or more coders" (p.141).

Krippendorf's $\alpha$ is a measure of inter-coder reliability specifically for content analysis. Krippendorf's rationale for using $\alpha$ rather than other popular reliability measures such as Cohen's kappa, is that $\alpha$ measures "treat coders interchangeable and define chance as the statistical independence of the set of phenomena—the recording units under consideration—and the categories collectively used to describe them," although the other measure does not (Krippendorf, 2009, p. 5). However, Krippendorf's $\alpha$ only accommodates for measures that are categorical in nature, not differentiating between levels across categories.

The data collected falls under the metric of ordinal in that it ranks a level of support for each variable and unit. This metric is not supported by either Cohen's kappa or Krippendorf's $\alpha$. In order to measure reliability and accommodate for ordinal data, a

covariate measure of reliability is necessary. Pearson's correlation coefficient $r$ assesses

the degree of agreement between two coders' data pairs that is ordinal or metric in nature.

This measure was calculated for each variable in ten percent of the data, all of which was

coded by two independent coders. It is important to note that Pearson's $r$ does not provide

inferential data. This measure only investigates multiple coders' ability to reliably use the

method designed to generate similar data over and over again. Therefore, it was not

necessary that the reliability measure be calculated for all of the data, but a pre-defined

representative proportion of ten percent (Krippendorf, 2009b, Neuendorf, 2002).

 Since Pearson's $r$ is easily calculated by SPSS® (SPSS, Inc., 2004), a statistical

software tool that is a commonly accepted in the social sciences, the calculations of

reliability for this study were made using exported queries from the Microsoft Access®

database into SPSS® software. Then Pearson's $r$ measurement was calculated using the

SPSS® Pearson's $r$ function. Researchers agree that a minimum level of acceptable

covariant reliability be set at $r$ greater than or equal to $r=0.70$ (Huck & Cormier, 1996,

Neuendorf, 2002). The researcher calculated Pearson's $r$ at a standard of $r=0.70$ or

greater for a collection of all variables using the common data generated by the two

coders. In the case that $r < 0.70$, the codebook was expected to be revised prior to

repeating the coding process, and the researcher would have to recalculate Pearson's $r$.

Then the coders would have coded a new ten percent of the data.

 Pearson's $r$ is the measure of reliability required by this study. Pearson's $r$ reports

on the level of correlation between two coders' raw data pairs. To be determined as a

strong-positive relationship acceptable for this study, Pearson's $r$ must be calculated

between $r=0.70$ and $r=1.00$ for all dependent variables. However, this benchmark is not

always set at $r=0.70$. Other statisticians set the minimum standards of these correlation-based reliability measures differently. For example, Salkind (2005) suggests that a strong relationship of agreement exists if $r=0.60$ or $r>0.60$, while a very strong relationship of agreement exists if $r=0.80$ or $r>0.80$. Such measures are a matter of context.

Pearson's $r$ for each dependent variable was calculated to determine coder agreement for each dependent variable as an additional measure to ensure reliability of each dependent variable construct. These scores are reported in Table 6.

Table 6

*Pearson's r Measurements of Reliability between Coder 1 and Coder 2*

| Variables Tested | Pearson's *r* value |
| --- | --- |
| All Dependent Variables | 0.931 |
| Action and Reflection | 0.753 |
| Civic Literacy | 0.847 |
| Creativity | 1.000 |
| Critical Literacy | 0.855 |
| Culturally Specific to US or English Speaking Countries | 0.939 |
| Digital Literacy | 1.000 |
| English-Language Literacy | 0.944 |
| Information Literacy | 0.860 |
| Interpersonal Participation in a Learning Society | 1.000 |
| Intrapersonal Skills of Life-Long Learning | 0.855 |
| Media Literacy | 0.847 |
| Numeracy | 0.983 |
| Problem-Solving | 0.855 |
| Science | 0.796 |
| Systems Thinking | 1.000 |
| Test Taking | 1.000 |
| Western Philosophies | 0.882 |

*Note. Pearson's r is calculated to define the correlation between the agreement of Coder 1 and Coder 2 responses in ten percent of total units for each dependent variable, n=44. To test for overall reliability, agreement was tested between Coder 1 and Coder 2 responses in ten percent of total units counted collectively for all seventeen variable, n=748. For the purpose of this study, Pearson's r correlation measure is used to describe reliability at r=0.70 or r>0.70. Measures include inter-coder reliability of all dependent variables for all subjects including English/language arts, math, science, and social studies in the eighth-grade GPS.*

The results of the inter-coder reliability measure, Pearson's r, indicate that all dependent

variables have acceptable levels of agreement between the two coders. The overall

agreement score is r=0.931, while the dependent variable scores ranged from r= 0.753 to

r=1.00. The coding procedures enacted and the raw data stand reliable as indicated by the inter-coder reliability measures reported here.

## Validity

Neuendorf (2002) states that validity is "the extent to which a measuring procedure represents the intended, and only the intended, concept" ( p.112). If this content analysis measurement contributes to the formulation of answers to the guiding questions, then it is a valid study. First, general frequency tables allow for inferential answers to the two sub-questions. Frequency data of the corresponding manifest themes were collected to answer which latent goals are most/least evident within the GPS to determine the relevance, as asked in the guiding questions. Such tables permit inferences regarding how balanced the GPS and the latent goals of schooling are. The results of the two sub-questions inform discussion regarding the alignment between the GPS and the goals of schooling. Since the data collected serves to answer the research questions, validity was achieved.

## Reporting

Although Pearson's *r* measure of covariant reliability was important, it is not the reason for entering into this study. The purpose of gathering and analyzing the data is so that inferences can be made for answering the guiding questions and informing hypotheses rejection status. In order to use the analyzed data for inferential purposes, frequency tables are presented in the next chapter to synthesize findings. The primary table of inference is a table indicating the frequency of support for each of the manifest themes. Such a table reports scores referred to as the Manifest Theme Presence Measures.

These measures are reorganized and recalculated to report the relevance of each latent theme of schooling.

As discussed earlier, using the inferences that answer the sub-questions and through discussion with the literature, a response to the broader guiding question emerges. Through such inferential data description and discussion of the alignment relationship between the GPS with each of the goals of schooling, the response includes a discussion of empirical measures of curricular relevance and curricular balance. To measure balance, a variance score is used by calculating the square of the standard deviation of the GPS. Also, relevance is calculated using a ratio of presence or frequencies of levels of support. The formulation of the key measures that are used to report alignment is expanded upon in following chapter, which reports and organizes the alignment relationships using measures for balance, relevance, and manifest theme presence.

<div align="center">Conclusion</div>

This chapter outlined the process for using a hypothesis testing method of content analysis. A rationale was provided for using the data corpus of the eighth-grade GPS in this empirical analysis. The literature informed the manifestation of the latent goals of schooling, from which the variables of the study transpired. Operational definitions were supplied for all variables being investigated. The codebook designed for this study was introduced to improve reliability of content analysis. Data analysis was reported as relatively uneventful, yet time consuming. This chapter also identified Pearson's *r* as the best means of measuring reliability. This measure of reliability indicated that the coding

process, codebook, and coder responses reported are reliable. This text plans to answer two of the guiding questions using frequency tables and inferential statistics to describe the sought alignment relationship in terms of balance and relevance. The following chapter reports the empirical data addressing the sub-questions, which makes an answer to the broad guiding question possible in the final chapter of this study.

CHAPTER 5: FINDINGS

Introduction

This chapter reports the findings from the implementation of the research method

outlined in chapter four. The aim of this chapter is to prove or disprove the null

hypothesis and the seventeen test hypotheses. Also, this chapter aims to generate the

inferential data necessary to answer the two guiding sub-questions of the study. Prior to

reporting the data, this chapter outlines the coding process as experienced by the author.

Next, the hypotheses are accepted or rejected using frequency tables to report the data for

the dependent variables. Frequencies of maximum-level-of-support scores for each of the

dependent variables tested are reported. These scores are critical to calculations required

in the following section. Next, this chapter reports measures of curricular balance and

curricular relevance for each latent theme. Finally, a Goal-Curriculum Alignment

Measurement (G-CAM) model is presented as a means to compare the results of the

curricular relevance and curricular balance measures for each latent theme.

Manifest Themes

The test hypotheses presented in chapter four require the reporting of frequency

data for each of the manifest themes. A report of the frequency of scores describes the

distribution of support levels by the GPS for each of the dependent variables. Recall, a

score of 2 indicates that the dependent variable is supported by the GPS unit tested. A

score of 1 indicates that the dependent variable is somewhat supported by the GPS unit

tested, while a score of 0 indicates that the dependent variable is not supported or

hindered by the GPS unit tested. Table 7 organizes the frequencies according to

frequency of 2s, frequency of 1s, and frequency of 0s for each of the seventeen dependent

variables, or manifest themes.

Table 7

*Manifest Theme Level-of-Support Frequencies*

| Manifest Theme | Frequency of 2s | Frequency of 1s | Frequency of 0s |
|---|---|---|---|
| Action and reflection | 0 | 12 | 426 |
| Civic literacy | 0 | 73 | 365 |
| Creativity | 0 | 2 | 436 |
| Critical literacy | 2 | 12 | 424 |
| Culturally relevant to US/English-speaking countries | 88 | 86 | 264 |
| Digital literacy | 3 | 8 | 427 |
| English language literacy | 139 | 21 | 278 |
| Information literacy | 106 | 105 | 227 |
| Interpersonal participation in a learning society | 7 | 4 | 429 |
| Intrapersonal skills of life-long learning | 7 | 9 | 422 |
| Media literacy | 19 | 71 | 348 |
| Numeracy | 102 | 17 | 319 |
| Problem-solving | 4 | 15 | 419 |
| Science | 65 | 9 | 364 |
| Systems thinking | 1 | 13 | 424 |
| Test-taking | 0 | 436 | 2 |
| Western philosophies | 315 | 81 | 42 |

*Note. The number of tested units for each of the dependent variables, or manifest themes is n=438. The table reports the frequency data of 2s (supports), 1s (somewhat supports), and 0s (does not support) for each of the dependent variables tested.*

According to the data presented in Table 7, the frequencies of 2s among the dependent variables range from 0 to 315. The frequencies of 1s among the dependent variables range from 2 to 436, while the frequencies of 0s also range from 2 to 436. In order to accept or reject the test hypotheses based on the data presented in Table 7, a proportional measure of manifest theme presence are reported. Measures of Presence are

defined by the author as calculated proportions which indicate the amount of support or lack of support the curriculum evidences for each of the manifest themes. Three proportions make up the Measures of Presence including the Manifest Theme Presence score, the Manifest Theme Non-Absence score, and the Manifest Theme Absence score. The Manifest Theme Presence score, $P$, is calculated as,

$$P = \frac{s}{n}$$

where $s$ is the frequency of 2s and $n$ is the total number of units tested for a manifest theme. The Manifest Theme Non-Absence score, $NA$, is intended to serve as an absolute opposite to the Manifest Theme Absence score. $NA$ is calculated as,

$$NA = \frac{s + v}{n}$$

where $s$ is the frequency of 2s, $v$ is the frequency of 1s, and $n$ is the total number of units tested for a manifest theme. The Manifest Theme Absence score, $A$, is calculated as,

$$A = \frac{d}{n}$$

where $d$ is the frequency of 0s and $n$ is the total number of units tested for a manifest theme.

For example, science received a frequency of 2s score of $s=65$. Dividing this frequency score by $n=438$ gives the data presented in Table 8 as science Manifest Theme Presence score of $P=0.1484$. This value reported as the Manifest Theme Presence measures the proportion of the GPS that supported the science theme at a level of 2. For science, the Manifest Theme Non-Absence score is $(s + v)$, or $(65 + 9)$, divided by $n=438$,

or *NA*= 0.1689. The Manifest Theme Absence score is the measure of failure of the

independent variable to minimally support the dependent variables, or manifest themes.

To continue the science example, the frequency of 0s, *d*=364, is divided by *n*=438,

resulting in a Manifest Theme Absence score of *A*=0.8311. These Measures of Presence

provide data for inferring which manifest themes the curriculum strongly supports and is

failing to support. Table 8 lists the Measures of Presence for each of the manifest themes

and the tested GPS units. Each ratio is rounded to the nearest ten thousandth for

readability.

Table 8

*Manifest Theme Presence Measures*

| Manifest Theme | Manifest Theme Presence (*P*) | Manifest Theme Non-Absence (*NA*) | Manifest Theme Absence (*A*) |
|---|---|---|---|
| Action and Reflection | 0.0000 | 0.0274 | 0.9726 |
| Civic Literacy | 0.0000 | 0.1667 | 0.8333 |
| Creativity | 0.0000 | 0.0046 | 0.9954 |
| Critical Literacy | 0.0046 | 0.0320 | 0.9680 |
| Culturally Specific to US/English-Speaking Countries | 0.2009 | 0.3973 | 0.6027 |
| Digital Literacy | 0.0068 | 0.0251 | 0.9749 |
| English Language Literacy | 0.3174 | 0.3653 | 0.6347 |
| Information Literacy | 0.2420 | 0.4817 | 0.5183 |
| Interpersonal Participation in a Learning Society | 0.0160 | 0.0251 | 0.9749 |
| Intrapersonal Skills of Life-Long Learning | 0.0160 | 0.0365 | 0.9634 |
| Media Literacy | 0.0434 | 0.2055 | 0.7945 |
| Numeracy | 0.2329 | 0.2717 | 0.7283 |
| Problem-Solving | 0.0091 | 0.0434 | 0.9566 |
| Science | 0.1484 | 0.1689 | 0.8311 |
| Systems Thinking | 0.0023 | 0.0320 | 0.9680 |
| Test-Taking | 0.0000 | 0.9954 | 0.0046 |
| Western Philosophies | 0.7192 | 0.9041 | 0.0959 |

*Note. Manifest Theme Presence score is calculated by dividing the frequency of 2s (supports) by the total number of units, n=438. Manifest Theme Non-Absence score is calculated by summing the frequency of 2s (supports) and the frequency of 1s (somewhat supports), then dividing by the total number of units, n=438. The Manifest Theme Absence score is calculated by dividing the frequency of 0s (does not support) by the total number of units, n=438.*

Using the inferential data presented in Table 8, decisions regarding the rejection

of the seventeen hypotheses is facilitated. As an introductory study investigating the

alignment between the goals of schooling and a curriculum, the researcher has given

maximum statistical benefit to the authors of the GPS by setting two criteria for

establishing the minimum benchmark for *P* when rejecting a hypothesis. The first

criterion requires a hypothetical assumption that each GPS unit tested strongly supports at

least one manifest theme, implying no GPS unit was irrelevant. The second criterion

requires failure to reject as many test hypotheses as possible with a minimum benchmark

score that still meets the first criterion. This criterion requires an assumption of no

overlap among the GPS units tested for manifest theme strong. More specifically, in

order to reject a hypothesis, the associated dependent variable must indicate a level of

strong support as hypothesized in chapter four. Based on the two criteria set forth, the

formula for determining *P*, a proportion of the tested curriculum, is

$$P = \frac{1.00}{q}$$

where q is equal to the number of dependent variables investigated. *P* defines the

benchmark that indicates strong support of a manifest theme when compared to each

Manifest Theme Presence score. For this study, since *q* is equal to17, *P* is equal to 1.00

divided by 17, or *P*=0.0588; therefore for this study, in order for a manifest theme to be

considered evident at a strong level of support *P* must be equal to or less than 0.0588.

The failure to reject or reject status of each test hypotheses is listed below in Table 9.

Table 9

*Test Hypotheses Rejection Status*

| Hypothesis | Statement | Manifest Theme Presence (*P*) | Accept or Reject |
|---|---|---|---|
| H1 | The eighth-grade GPS curricula show evidence of strongly supporting action and reflection. | 0.0000 | Reject |
| H2 | The eighth-grade GPS curricula show evidence of strongly supporting the development of civic literacy. | 0.0000 | Reject |
| H3 | The eighth-grade GPS curricula show evidence of strongly supporting the development of creativity. | 0.0000 | Reject |
| H4 | The eighth-grade GPS curricula show evidence of strongly supporting the development of critical literacy. | 0.0046 | Reject |
| H5 | The eighth-grade GPS curricula show evidence of strongly supporting a culture specific to the United States and/or other English-speaking countries. | 0.2009 | Failure to Reject |
| H6 | The eighth-grade GPS curricula show evidence of strongly supporting the development of digital literacy. | 0.0068 | Reject |
| H7 | The eighth-grade GPS curricula show evidence of strongly supporting the development of English-language literacy. | 0.3174 | Failure to Reject |
| H8 | The eighth-grade GPS curricula show evidence of strongly supporting the development of information literacy. | 0.2420 | Failure to Reject |
| H9 | The eighth-grade GPS curricula show evidence of strongly supporting interpersonal participation in a learning society. | 0.0160 | Reject |
| H10 | The eighth-grade GPS curricula show evidence of strongly supporting interpersonal skills of life-long learning. | 0.0160 | Reject |
| H11 | The eighth-grade GPS curricula show evidence of strongly supporting the development of media literacy. | 0.0434 | Reject |

| H12 | The eighth-grade GPS curricula show evidence of strongly supporting the development of numeracy. | 0.2329 | Failure to Reject |
| H13 | The eighth-grade GPS curricula show evidence of strongly supporting the development of problem-solving skills. | 0.0091 | Reject |
| H14 | The eighth-grade GPS curricula show evidence of strongly supporting the acquisition of science knowledge. | 0.1484 | Failure to Reject |
| H15 | The eighth-grade GPS curricula show evidence of strongly supporting systems thinking. | 0.0023 | Reject |
| H16 | The eighth-grade GPS curricula show evidence of strongly supporting the skills of test-taking. | 0.0000 | Reject |
| H17 | The eighth-grade GPS curricula show evidence of strongly supporting the acquisition of western philosophies. | 0.7192 | Failure to Reject |

*Note. A hypothesis is not rejected if the Manifest Theme Presence score meets or exceeds the benchmark for Pas indicated by P=1.00/q, where q is equal to the number of dependent variables tested. For this study, with q=17, the benchmark is set at P=0.0588 or P>0.0588. A hypothesis is rejected if the Manifest Theme Presence score is P<0.0588.*

As evidenced by the table above, six hypotheses could not be rejected including (1) hypothesis five regarding manifest theme culturally specific to US/English-speaking countries, (2) hypothesis seven regarding manifest theme English-language literacy, (3) hypothesis eight regarding manifest theme information literacy, (4) hypothesis twelve regarding manifest theme numeracy, (5) hypothesis fourteen regarding manifest theme science, and (6) hypothesis seventeen regarding manifest theme western philosophies. All other twelve test hypotheses were rejected due to a Manifest Theme Presence score of $P<0.0588$. The null hypothesis states that the alignment relationship between the eighth-grade GPS curriculum and each manifest theme is strongly positive; therefore no conflict exists between the GPS and the latent goals of schooling. Since this study rejected more

than zero test hypotheses, the null hypothesis is also rejected. Through report of the

Measures of Presence the testing of the hypotheses resulted in a variation of findings.

<p align="center">Latent Themes</p>

The research questions of this study required the calculation and report of the

balance and relevance in order to describe the alignment relationship between the GPS

and the latent themes. Alignment is "the degree to which different components of an

educational system work together to support a common goal" (Martone & Sireci, 2009).

Given this definition of alignment, this study used two key measures to describe the

degree to which the GPS work together to support each of the latent themes, or goals of

schooling including balance and relevance. Three Measures of Relevance provide a

general description of a curriculum's relevance to a given goal including Curricular

Relevance, Partial Relevance and Curricular Irrelevance. The first measure, Curricular

Relevance, is the level of direct curriculum support for a given goal. Curricular

Relevance, $R$, is calculated as follows

$$R = \frac{a}{n}$$

where $a$ is the frequency of 2s as the maximum score for each unit tested for among the

manifest themes related to a given latent theme, and $n$ is the total number of units tested.

Maximum scores are used instead of average scores in order to maintain comparability of

data.  Since measures for each latent theme is made up from scores of different numbers

of manifest themes, averages would change the weight of scores between latent themes.

For example, democratic participation has five manifest themes as compared to the ten

manifest themes contributing to national economic gain. If averages were used instead of maximum scores, scores of 2 for democratic participation would have greater weight than scores of 2 for national gain; thus, maximum scores are a means to preserve comparability of findings.

The second measure, Non-Irrelevance is the proportion of the curriculum that minimally supports the goal (latent theme). By using the modifier, "non," in front of the quality "irrelevant," the term becomes an absolute opposite of the term irrelevance; whereas, "relevant" is gradable and would not fit the following mathematical formula (McNalley & Kennedy, 2008). Non-Irrelevance, *NI*, is calculated as

$$NI = \frac{a+b}{n}$$

where *a* is the frequency of 2s as the maximum score for each unit tested among the manifest themes related to a given latent theme, *b* is the frequency of 1s as the maximum score for each unit tested among the manifest themes related to a given latent theme, and *n* is the total number of units tested. The third Measure of Relevance is Curricular Irrelevance, which is the proportion of the curriculum that does not support the given goal, or latent theme. Curricular Irrelevance, *I*, is calculated as

$$I = \frac{c}{n}$$

where *c* is the frequency of 0s as the maximum score for each unit tested for all of the manifest themes related to a given latent theme, and *n* is the total number of units tested.

For the sake of clarity, an explanation of how *a*, *b*, and *c* are found for the above formulas is necessary. Initially, a spreadsheet for each latent theme was created using

Microsoft® Excel (2007). The raw data that was exported from Microsoft® Access

(2007) into the Excel spreadsheet included all dependent variables (manifest themes) that

inform each goal (latent theme). For example, in Figure 10, the latent theme analyzed is

democratic participation. This latent theme requires the analysis of the dependent

variables civic literacy, critical literacy, English-language literacy, information literacy

and media literacy. Next, the data were consolidated to the maximum score provided by

each individual GPS unit as highlighted by the black outlined cells in Figure 10. A single

GPS unit is considered a relevant unit, if any of the scores among the dependent variables

for that latent theme receive a level-of-support score of 2. This consolidation was

necessary to give the individual standard a weight that indicated relevance, while

identifying individual standards that were irrelevant, as they hindered or failed to support

the latent theme among all of the applicable dependent variables. In Figure 10, the unit of

analysis, S8CS1.b, was coded for the five dependent variables necessary to inform the

latent theme democratic participation. The scores among the dependent variables for unit

S8CS1.b were 0, 0, 0, 1, and 0. The maximum level of support for this unit in regards to

democratic participation is 1, indicating that the unit is somewhat supportive of the

dependent variable and somewhat supportive of the latent theme. This score of 1 and the

maximum levels of support for all other units are used to calculate the Measures of

Relevance.

*Figure 10*

Example: Maximum Score Spreadsheet for Democratic Participation

| | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|
| 1 | GPS_ID | Civic Litera | Critical Lite | English La | Information | Media Literacy | | Max in Range | |
| 152 | S8CS1.a | 0 | 0 | 0 | 0 | 0 | | 0 | |
| 153 | S8CS1.b | 0 | 0 | 0 | 1 | 0 | | 1 | |
| 154 | S8CS2 | 0 | 0 | 0 | 0 | 0 | | 0 | |
| 155 | S8CS2.a | 0 | 0 | 0 | 0 | 0 | | 0 | |
| 156 | S8CS2.b | 0 | 0 | 0 | 0 | 0 | | 0 | |
| 157 | S8CS2.c | 0 | 0 | 0 | 0 | 0 | | 0 | |
| 158 | S8CS3 | 0 | 0 | 0 | 0 | 0 | | 0 | |
| 159 | S8CS3.a | 0 | 0 | 0 | 2 | 0 | | 2 | |
| 160 | S8CS3.b | 0 | 0 | 0 | 2 | 0 | | 2 | |
| 161 | S8CS3.c | 0 | 0 | 0 | 0 | 0 | | 0 | |

*Note. Raw data from eighth-grade science GPS and maximum scores as shown in Microsoft® Excel (2007).*

The list of possible maximum scores is 2, 1, and 0. For each latent theme these maximum scores are counted as frequencies as seen in Table 10.

Table 10

*Latent Theme Maximum Score Frequencies*

| Latent Themes | Dependent Variables Maximum Score=2 | Dependent Variables Maximum Score=1 | Dependent Variables Maximum Score=0 |
|---|---|---|---|
| Democratic Participation | 175 | 130 | 133 |
| Americanization | 381 | 39 | 18 |
| Post-Secondary Enrollment | 299 | 139 | 0 |
| Individual Development | 270 | 73 | 95 |
| National Gain | 270 | 73 | 95 |
| Social Justice | 147 | 27 | 264 |
| High Student Test Scores | 299 | 139 | 0 |

*Note. Total score frequencies for each latent theme is equal to n=438. A maximum score represents the presence of support or lack of support for each independent variable tested for multiple dependent variables, or manifest themes, that make up the individual latent themes.*

According to Table 10, Americanization had the highest frequency of maximum scores of 2, while social justice has the lowest frequency of this score. Post-secondary enrollment and high student test scores had no maximum frequencies of 0, compared to 264 instances identified in social justice. Post-secondary enrollment and high student test scores also had the highest occurrence of maximum scores of 1.

These frequencies of maximum scores are used in three ratios to describe relevance. For example, the Curricular Relevance of the GPS to the latent theme, democratic participation, is calculated as $a$=175 divided by $n$=438, or $R$=0.39954337. For the sake of easy reference and easy comparison, the relevance measures will be rounded to the nearest hundredth. The Measure of Non-Irrelevance takes into account both the frequencies of maximum scores 2 and 1. This combination is intended to isolate the proportion of the GPS that are not irrelevant to the latent theme. For example, the Non-Irrelevance of the GPS to the latent theme, democratic participation, is calculated as (175+130) divided by $n$=438, or $NI$=0.70. The Measure of Irrelevance is calculated as the frequency of maximum scores of 0 divided by the total number of independent variable units tested, or  $c$=133 divided by $n$=438, or $I$=0.303652968. Once rounded, the Measure of Irrelevance for the GPS in regards to the latent theme, democratic participation is $I$=0.30. Since these Measures of Relevance are reported as proportions, the resulting values will always exist between 0 and 1. Later, this consistency in possible values will be useful in comparing the relevance and balance in a new organizational model. All seven latent theme Measures of Relevance are reported in Table 11.

Table 11

*Measures of Relevance*

| Latent Theme | Measure of Relevance | Measure of Non-Irrelevance | Measure of Irrelevance |
|---|---|---|---|
| Democratic Participation | 0.40 | 0.70 | 0.30 |
| Americanization | 0.87 | 0.96 | 0.04 |
| Post-Secondary Enrollment | 0.68 | 1.00 | 0.00 |
| Individual Development | 0.62 | 0.78 | 0.22 |
| National Gain | 0.62 | 0.78 | 0.22 |
| Social Justice | 0.34 | 0.40 | 0.60 |
| High Student Test Scores | 0.68 | 1.00 | 0.00 |

*Note. Curricular Relevance measure is found by dividing frequency of maximum scores of 2, a, by n, where n=438 is the total number of independent variables tested. Non-Irrelevance measure is found by adding the frequency of maximum scores of 2, a, and the frequency of maximum scores of 1, b, and dividing the sum by n, where n=438 is the total number of independent variables tested. Irrelevance measure is found by dividing frequency of maximum scores of 0, c, by n, where n=438 is the total number of independent variables tested.*

As proportions, the measures of relevance results resemble the latent theme maximum score frequencies. Americanization had the highest measure of relevance, while social justice has the lowest measure of relevance. Post-secondary enrollment and high student test scores had measures of irrelevance equal to zero, compared to social justice with had an irrelevance measure of 0.60. Post-secondary enrollment and high student test scores also had the highest scores for measures of non-irrelevance.

Curricular Balance is defined as the measurement of consistency among levels of support in a curriculum for a given goal, or latent theme. As a score of consistency, it is important to note that this measure does not indicate which level of support is most prominent throughout the data, but serves a distribution descriptor. In order to calculate

the Curricular Balance, each of maximum level-of-support score must first be divided by the range of possible level-of-support scores. This adjustment to the scores is done to preserve the three levels of support while bounding the standard deviation and variance between 0 and 1. In order to calculate the Curricular Balance the standard deviation and variance describe the variation among the maximum level-of-support scores. Salkind (2005) presents the standard deviation ($\sigma$) formula as

$$\sigma = \sqrt{\frac{\sum_{i=1}^{\infty}(\chi_i - m)^2}{n - 1}}$$

where $m$ is the mean of $\chi_i$, $n$ is the number of units tested, and $\chi_i$ is

$$\chi_i = \frac{j}{G}$$

where $j$ is the maximum-level-of-support scores for all dependent variables that collectively make up each latent theme, and $G$ is the level-of-support score range, where $G=2$ for this study.

The standard deviation and its square, the variance, are not the ultimate measures needed to describe balance. This study calculates Curricular Balance as one minus the variance of the maximum levels of support for all dependent variables, or manifest themes, for a given latent theme divided by the range. For example, earlier in Figure 10, the maximum-level-of-support scores for the latent theme, democratic participation, were calculated using a spreadsheet. To analyze the Curricular Balance each maximum-level-of-support score, $j$, is divided by the levels-of-support score range, $G=2$. The standard deviation for democratic participation is $\sigma=0.42$ and the variance is $\sigma^2=0.17$. Since the

variance is a measure of the variation, while balance describes the consistency or the lack

of variation, the calculated variance is subtracted from the total possible variance of 1.

Thus, the Curricular Balance, $B$ is calculated as one minus the variance, $\sigma^2$, or $B$=0.83 for

democratic participation. The standard deviation, variance and Curricular Balance for

each latent goal rounded to the nearest hundredth are displayed in Table 12. This

Curricular Balance measure, $B$, along with the corresponding Curricular Relevance

measure, $R$, will be used to describe the alignment relationship between the latent themes

and the independent variables.

Table 12

*Curricular Balance of GPS for the Latent Themes*

| Latent Theme | Standard Deviation $\sigma$ | Variance $\sigma^2$ | Curricular Balance $1-\sigma^2$ |
|---|---|---|---|
| Democratic Participation | 0.42 | 0.17 | 0.83 |
| Americanization | 0.24 | 0.06 | 0.94 |
| Post-Secondary Enrollment | 0.23 | 0.05 | 0.95 |
| Individual Development | 0.41 | 0.17 | 0.83 |
| National Economic Gain | 0.41 | 0.17 | 0.83 |
| Social Justice | 0.47 | 0.22 | 0.78 |
| High Student Test Scores | 0.23 | 0.05 | 0.95 |

*Note. To calculate $\sigma$, the list of maximum scores was first divided by the range of possible scores, G=2. Then the standard deviation, $\sigma$, was calculated. This standard deviation was squared to calculate the variance, $\sigma^2$. Finally, 1- $\sigma^2$ was calculated to establish the Curricular Balance for each of the Latent Themes. Each calculation is rounded to the nearest hundredth.*

As seen in Table 12, all latent themes had relatively low variances ranging from

$\sigma^2$=0.05 to $\sigma^2$=0.22. These low scores resulted in Curricular Balance scores ranging from

$B$=0.78 to $B$=0.95. As a score of consistency in support among the GPS,

Americanization, post-secondary enrollment, and high student test scores appear to be the most consistent levels of support among the goals of schooling, while the variation, or lack of consistency in levels of support, is highest for social justice.

<div align="center">Goal-Curriculum Alignment Measurement Model</div>

In order to empirically describe and compare the relationship between the GPS and each of the goals of schooling, the author developed a Goal-Curriculum Alignment Measurement (G-CAM) model which makes use of the findings presented in this chapter. This model uses a simple XY axis. Each axis ranges from 0 to 1 in order to organize and compare the Curricular Relevance and Curricular Balance of each latent theme. The G-CAM model was designed to report and compare the alignment relationship between a single curriculum and multiple goals, or multiple curricula and a single goal. By making the relationships between the curriculum and the goals of schooling overt in the G-CAM model, exercise of Lukes' (2004) third dimension of power, which requires hidden conflict to serve as a controlling force, is diminished through overt display of the relationship between the goals of schooling and the GPS.

In this case, G-CAM model reports in Figure 11 the relationship between the eighth-grade GPS and multiple goals of schooling. The Curricular Relevance measure is plotted on the X axis of the model, titled Curricular Relevance, while the Curricular Balance measure is plotted on the Y axis, titled Curricular Balance. Each latent theme is also assigned a capital letter to identify it on the model.

*Figure 11*
Goal-Curriculum Alignment Measurement (G-CAM) Model
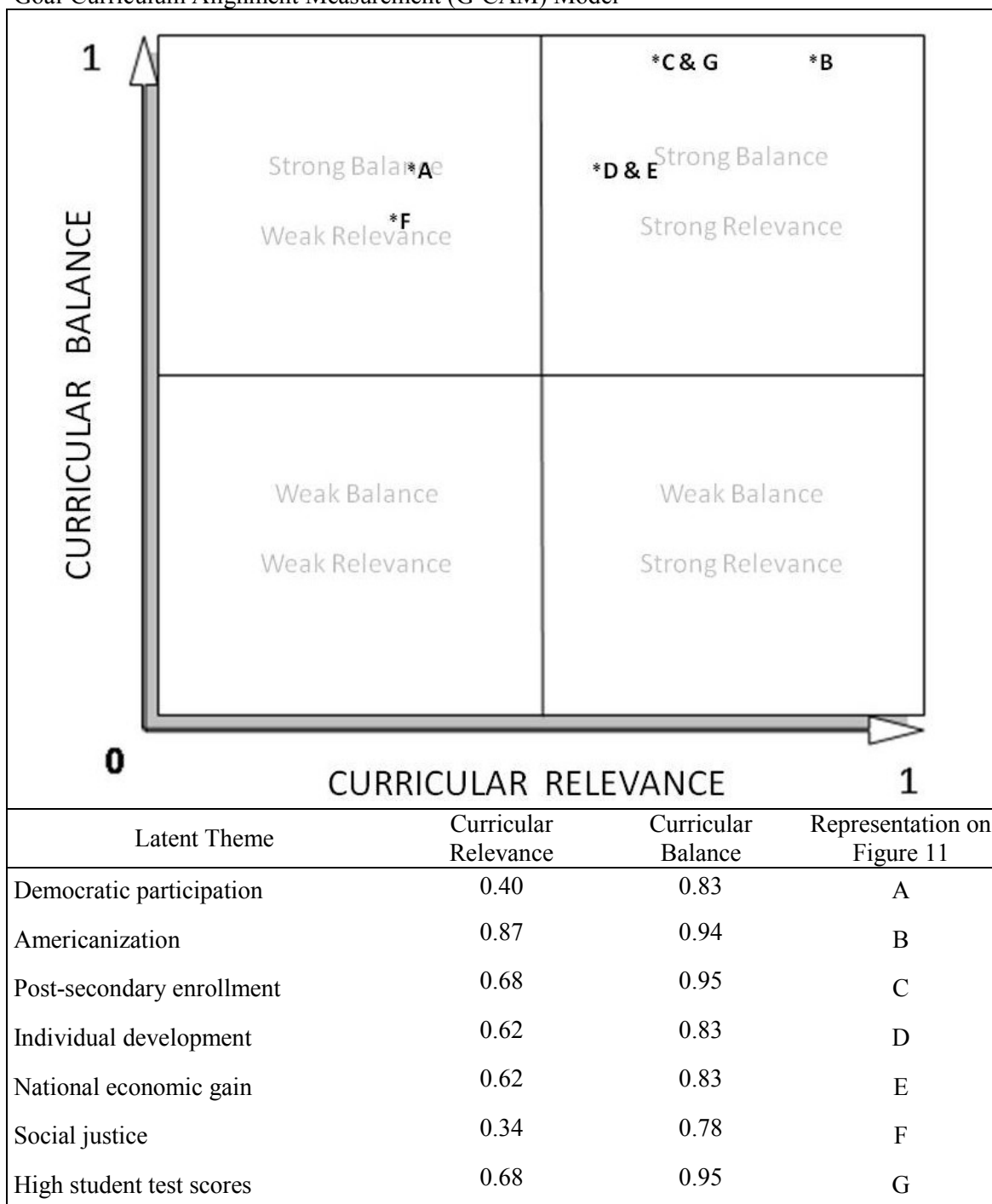


| Latent Theme | Curricular Relevance | Curricular Balance | Representation on Figure 11 |
|---|---|---|---|
| Democratic participation | 0.40 | 0.83 | A |
| Americanization | 0.87 | 0.94 | B |
| Post-secondary enrollment | 0.68 | 0.95 | C |
| Individual development | 0.62 | 0.83 | D |
| National economic gain | 0.62 | 0.83 | E |
| Social justice | 0.34 | 0.78 | F |
| High student test scores | 0.68 | 0.95 | G |

*Note. This figure was created to visually report the alignment of the various stated goals of schooling to the GPS. The Curricular Relevance Measure is plotted on the X axis titled Relevance Score, while the Curricular Balance Measure is plotted on the Y axis titled Balance Score. Each latent theme is then assigned a capital letter to denote which dot is plotted for each latent theme.*

The upper right quadrant is the area of the model that indicates the strongest alignment relationship between the GPS and the stated goals of schooling. The lower left quadrant indicates the poorest alignment relationship between a curriculum and the stated goals of schooling. In this analysis, the model indicates that the GPS is best aligned to the latent theme Americanization. Also, according to Figure 11 the GPS is well aligned to post-secondary enrollment and high student test scores, while the GPS is aligned weakest to the goal of social justice.

<div align="center">Conclusion</div>

This chapter reported the findings of the hypothesis-testing content analysis of the GPS, investigating evidence of support for various goals of schooling as planned in chapter four. Using frequency scores of the levels of support for each of the dependent variables, six test hypotheses could not be rejected, stating that those themes were strongly supported by the GPS. However, the other twelve test hypotheses had to be rejected due to inadequate Manifest Theme Presence scores. This resulted in the rejection of the null hypothesis as well, stating that the GPS did not strongly support each of the manifest themes.

The raw data testing the dependent variables were collected according to their contribution to the latent themes. The maximum-level-of-support scores were calculated to determine the Curricular Relevance of the GPS for each of the latent themes. Then the maximum-level-of-support scores were altered and used to calculate the Curricular Balance of the GPS for each of the latent themes. This inferential data were then organized in a new model to represent the goal-curriculum alignment relationship. This

new model, the G-CAM model, uses an XY coordinate plane to report and compare the

alignment between the GPS and each of the latent goals of schooling. The G-CAM

model indicated that the GPS is most closely aligned to the goals of Americanization,

post-secondary enrollment and high student test scores, while the GPS is least aligned to

the goal of social justice. Additionally, the Manifest Theme Presence scores were

reported to facilitate the discussion of these alignment relationships in chapter six.

CHAPTER 6: DISCUSSION

Introduction

Thus far, this dissertation has outlined the need for an investigation of the Georgia

Performance Standards. It has also provided the contributory literature, a rationale for

developing a new method, a description of a best fit method for the investigation, and the

findings of the study based on the implementation of the research method outlined. Here,

in the closing chapter, the author relates the content of all preceding chapters to one

another by answering the over-arching research questions and discussing the findings.

After an explanation of findings, additional limitations of the study discovered through

the research process are disclosed. To connect this study to the broader body of literature,

the major contributions offered through this investigation are presented to the reader.

Finally, this chapter ends with recommendations for future research.

Explanation of Findings

The over-arching research question posed by this study asks how well the GPS

and each of the goals of schooling are aligned. Based on the findings presented in the

previous chapter, the GPS are well aligned to Americanization, post-secondary

enrollment, national economic gain, high student test scores, and the administrative

progressives' view of individual development. The GPS are poorly aligned to schooling

for democratic participation and social justice. The first sub-question requires report of

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the relevance of the GPS for each goal of schooling. According to the findings, the most relevant goal to the GPS was Americanization; while post-secondary enrollment, individual development, national gain, and high student test scores were also strongly relevant to the GPS. Social justice and democratic participation were found to be irrelevant to the GPS. The answer to the second sub-question is more deceiving. All of the latent themes were found to be balanced among the GPS; however, since democratic participation and social justice are not relevant to the GPS this is a balance of the irrelevance.

An explanation of these findings requires further discussion of the two sub-questions which is best facilitated by the Manifest Theme Presence Measures table and the G-CAM model. The table displaying Manifest Theme Presence Measures was first presented in chapter five. This table provides a quantitative description of the presence of each of the manifest themes in the GPS as shown again in Table 13.

Table 13

*Manifest Theme Presence Measures*

| Manifest Theme | Manifest Theme Presence (*P*) | Manifest Theme Non-Absence (*NA*) | Manifest Theme Absence (*A*) |
|---|---|---|---|
| Action and Reflection | 0.0000 | 0.0274 | 0.9726 |
| Civic Literacy | 0.0000 | 0.1667 | 0.8333 |
| Creativity | 0.0000 | 0.0046 | 0.9954 |
| Critical Literacy | 0.0046 | 0.0320 | 0.9680 |
| Culturally Specific to US/English-Speaking Countries | 0.2009 | 0.3973 | 0.6027 |
| Digital Literacy | 0.0068 | 0.0251 | 0.9749 |
| English Language Literacy | 0.3174 | 0.3653 | 0.6347 |
| Information Literacy | 0.2420 | 0.4817 | 0.5183 |
| Interpersonal Participation in a Learning Society | 0.0160 | 0.0251 | 0.9749 |
| Intrapersonal Skills of Life-Long Learning | 0.0160 | 0.0365 | 0.9634 |
| Media Literacy | 0.0434 | 0.2055 | 0.7945 |
| Numeracy | 0.2329 | 0.2717 | 0.7283 |
| Problem-Solving | 0.0091 | 0.0434 | 0.9566 |
| Science | 0.1484 | 0.1689 | 0.8311 |
| Systems Thinking | 0.0023 | 0.0320 | 0.9680 |
| Test-Taking | 0.0000 | 0.9954 | 0.0046 |
| Western Philosophies | 0.7192 | 0.9041 | 0.0959 |

*Note. Manifest Theme Presence score is calculated by dividing the frequency of 2s (supports) by the total number of units, n=438. Manifest Theme Non-Absence score is calculated by summing the frequency of 2s (supports) and the frequency of 1s (somewhat supports), then dividing by the total number of units, n=438. The Manifest Theme Absence score is calculated by dividing the frequency of 0s (does not support) by the total number of units, n=438.*

The Goal-Curriculum Alignment Measurement (G-CAM) model first presented in chapter five provides a visual representation of the Curricular Balance and Curricular Relevance for each of the latent goals of schooling. This model is repeated in Figure 12.

*Figure 12*
Goal-Curriculum Alignment Measures (G-CAM) model
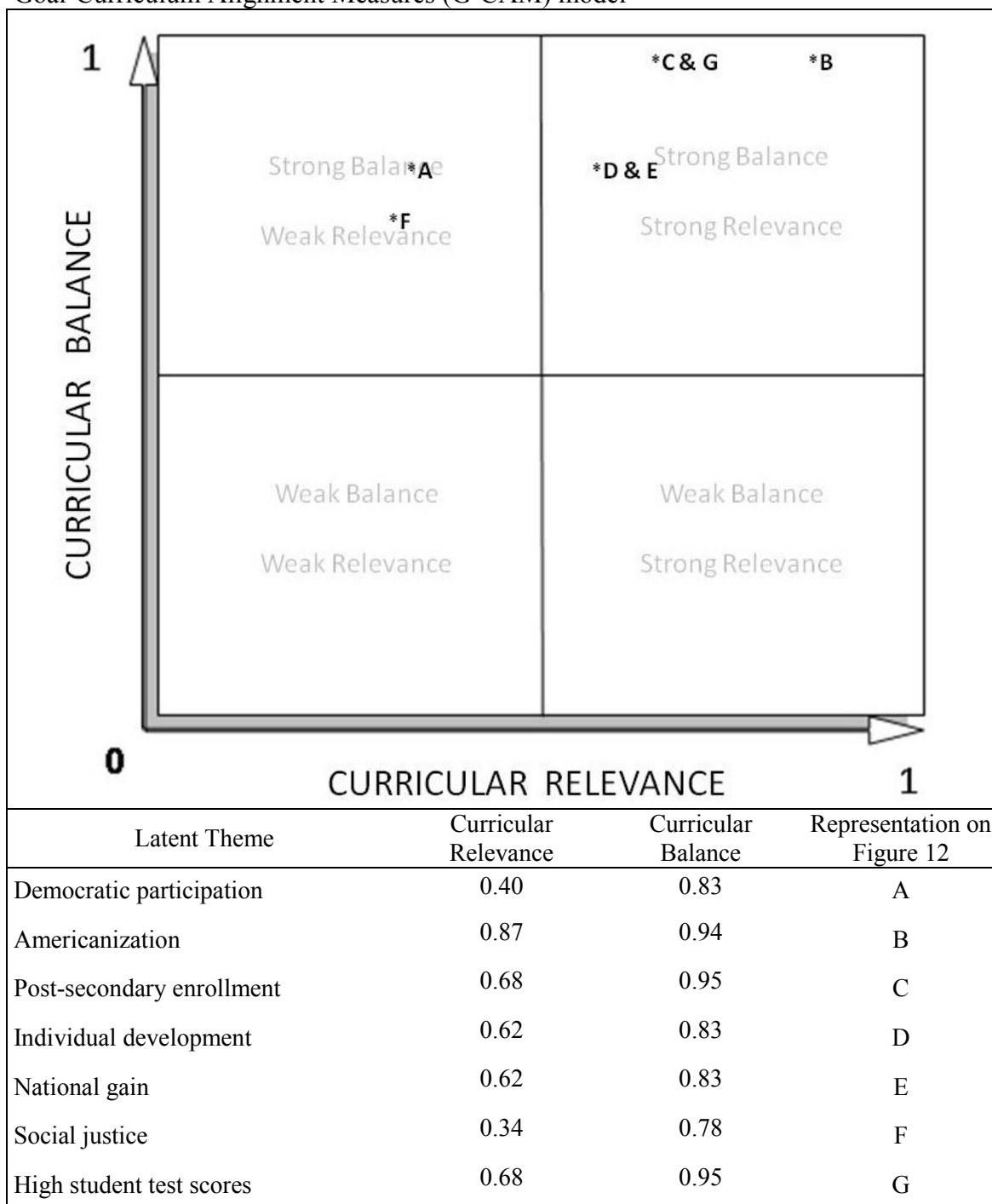


| Latent Theme | Curricular Relevance | Curricular Balance | Representation on Figure 12 |
|---|---|---|---|
| Democratic participation | 0.40 | 0.83 | A |
| Americanization | 0.87 | 0.94 | B |
| Post-secondary enrollment | 0.68 | 0.95 | C |
| Individual development | 0.62 | 0.83 | D |
| National gain | 0.62 | 0.83 | E |
| Social justice | 0.34 | 0.78 | F |
| High student test scores | 0.68 | 0.95 | G |

*Note. This figure was created to visually report the alignment of the various stated goals of schooling to the GPS. The Curricular Relevance Measure is plotted on the X axis titled Relevance Score, while the Curricular Balance Measure is plotted on the Y axis titled Balance Score. Each latent theme is then assigned a capital letter to denote which dot is plotted for each latent theme.*

Rather than discussing the results of each of the latent themes in chronological order of emergence as done in chapter two, the discussion is framed according to Spring's (2009) three categories of schooling purposes, including political, economic, and social. According to Spring, the political purposes of schooling include those goals and purposes that contribute to the survival of current government systems. Economic purposes are those that perpetuate or elevate the financial stability of the nation or its people, while social purposes are those that shape and control the behavior of young people in ways that benefit the larger society.

*Political Purposes: Democratic Participation and Americanization*

*Democratic participation*. According to the G-CAM model reported, the GPS show poor evidence of relevance to the latent goal of democratic participation. Unfortunately, the high Curricular Balance indicates a consistency in irrelevance to schooling for democracy. According to the supporting table (see Table 13), the reason for the consistency in irrelevance is related to a low Measure of Presence in three of the five manifest themes contributing to this latent theme. According to the Manifest Theme Presence score for civic literacy, the GPS did not strongly support the skills of civic literacy at all. Still, according to the Manifest Theme Absence and Manifest Theme Non-Absence scores, a small portion of the eighth-grade GPS somewhat provide support to civic literacy. In addition to civic literacy, critical literacy and media literacy are not evidently supported in the eighth-grade GPS. This manifest theme of critical literacy fares a bit better in being somewhat supported by the GPS with a smaller Manifest Theme Absence score.

The goal of schooling for democracy is not completely undetectable in the GPS, as information literacy and English language literacy are both strongly supported. English language literacy is the most evident of the manifest themes in the goal of democracy. These results suggest that in the case that a revision of the GPS occurs in the future, a greater emphasis on civic literacy, critical literacy, and media literacy would improve the alignment of the GPS with the schooling goal of democracy. It is necessary to remind readers that these results do not definitively define whether democracy is being taught in the schools through other components of the system such as instructional methods, rituals, or organizational structures. These findings do suggest that democracy is not currently a key component of the intended curriculum in the Georgia public school system.

Georgia may not be alone in this poor alignment relationship. Curriculum theorists argue that educating for democracy may not be possible through a standardized curriculum (Spring, 2009; Hinchey, 2001). The conception of democracy investigated in this study is what Hinchey (2001) refers to as "genuine democracy" (p. 756) where the citizenry is informed on issues, critical of political decisions, and accepts an active role in their government. This genuine form of democracy is considered one of Spring's (2000) political goals of schooling. These political goals are those goals that are required to maintain a democratic government; however different views on what this means exist. Another conception of democracy, as pointed out by Hinchey (2001), is education for patriotism, or the cultivation of "loyalty to the existing system of government and its leaders" (p. 748). Hinchey argues that this goal of schooling is synonymous with Americanization and politically an opposing view to genuine democracy. This study

provides empirical support to Hinchey (2001) and Spring's (2009) theories on the dichotomy between educating for a genuine democratic citizenry and educating for a common patriotic American culture. This dichotomy is evident as this study finds the latent goal of schooling, democracy, to be weakly aligned to the GPS, while the latent goal of Americanization, is found to be the most strongly aligned goal to the GPS.

*Americanization.* Americanization as a goal of schooling is well aligned with the GPS according to the findings of this study. In fact, on the G-CAM model reported in Figure 12, Americanization is the goal with the highest combination of Curricular Relevance and Curricular Balance, indicating the strongest relationship with the GPS above all the other goals of schooling tested. All three manifest themes including culturally specific to the U.S. or other English-speaking countries, English-language literacy, and western philosophies were strongly supported. These high Manifest Theme Presence scores indicate that the GPS require little or no alteration to serve as an Americanizing curriculum.

Bankston and Caldas (2009) provide a compelling argument of how the common school movement thrust schools across the country into a purpose of Americanization. More specifically, Bankston and Caldas liken this adoption of a common ideology to a civic religion that has persisted to control schools throughout the nineteenth, twentieth, and current centuries through common rituals and curricular content. Bankston and Caldas point out that those policymakers of the common school movement

> sought to employ the schools to reshape the behavior of Americans according to an ideal image of what the unified nation would become, giving special attention to the assimilation of immigrants and children of immigrants (Bankston & Caldas, 2009, p. 168).

They also point out that as a new nation, Horace Mann advocated for a common political ideology to appear in the curriculum of the common schools, stating that the curriculum should include "those articles in the creed of republicanism, which are accepted by all, believed by all, and which form the common basis of our political faith, shall be taught to all" (Mann, 1957, as quoted by Bankston & Caldas, 2009, p.32). Engel (2000) argues that Americanization as a goal has prevailed in schools by masking itself as education for democracy; however, instead of being a participatory version, it promotes a passive ideology ruled by the market economy.

Liberal authors are exceptionally critical of an Americanizing, or any other normalizing, goal of schooling (Bankston & Caldas, 2009; Engel, 2000; Kumashiro, 2008). Curriculum theorists argue that the neo-conservative political agenda is the force behind the success of the Americanizing curriculum today. This political purpose is intended to return the country to a common culture (Apple, 2004). These liberal theorists also argue that the misunderstood dichotomous relationship between a goal of democracy and a goal of Americanization is purposefully manufactured by neo-conservative groups. Whether true or not, this misunderstanding may be rooted, or facilitated by the terminology used by our founding fathers. "Republicanism" (Pangle & Pangle, 2003, p. 1) appears to be the dominant term used by the founding fathers to refer to both of these political goals of schooling investigated in this study. Pangle and Pangle (1993) build a case to explain the founding fathers' role in creating a duality in the political goals of schooling, which ultimately led to "how uncertain Americans have become as to what the proper goals of education are" (p. 6). Pangle and Pangle describe education for republicanism to be schooling aimed at

> An extraordinary degree of public-spiritedness, self-restraint, and practical wisdom in…citizens. To form such virtues of heart and mind, an especially intense and carefully supervised moral education of the young is essential. But such education, and the remarkable character traits at which it aims, represent a rare and fragile achievement, one that is bound to be easily undermined or corrupted. (p.1)

Pangle and Pangle are concerned that the duality of political reasons are likely to end in corruption or misdirection over time. They also argue that theorists today try to over-simplify the founding fathers' views of republicanism to suit their arguments, and that many of the founding fathers, including Thomas Jefferson, sought a balance between the genuine democracy advocated by contemporary liberals and the type of patriotic Americanization that promotes a reverence for the law that is required to protect the individual being and maintain liberties. Based on the findings of this study and the literature about the political goals of schooling, previously covert conflict, as discussed in Lukes' (2005) definition of power, is now evident within the GPS. More specifically, it appears that the GPS authors have likely over-simplified the political purposes of schooling toward a form of republicanism that touches on, but then undermines, the intentions of many founding fathers. This creates a clear conflict with the liberal political agendas.

*Economic Purposes: National Gain and Social Justice*

*National gain.* Although national gain as a latent theme may have historical roots in both economic and military stability, today schooling for national gain is considered an economic priority (Spring, 2009). National gain as an economic purpose of schooling is rather well-aligned with the GPS according to the G-CAM model (Figure 12). To increase the relevance score of the GPS to national gain, the GPS would need to be

altered to include additional focus on the manifest themes that received poor Manifest

Theme Presence scores. These weakly-supported manifest themes include creativity,

digital literacy, interpersonal participation in a learning society, intrapersonal skills of

life-long learning, media literacy, problem-solving, and systems thinking. Although these

seven manifest themes failed to be strongly supported by the GPS, the high level of

presence of the other three manifest themes appear to have boosted the Curricular

Relevance score associated with this goal into the upper right quadrant of the G-CAM

model (see Figure 12). The three manifest themes that indicated strong support toward

national gain include information literacy, English-language literacy, and numeracy. This

suggests that the GPS may be aiming to address the national workforce needs, but would

require additional focus on the seven absent manifest themes in order to create a

workforce as demanded by the current knowledge-economy market profile. Still, by

aligning relatively well to the GPS, the goal of national gain through preparation of a

labor force appears to be valued by curriculum leaders in Georgia.

The view that an institution of schooling should create competitive individuals to

fit the market needs is a neo-liberal perspective that depends on a belief that individual

effort and merit will be economically rewarded by the free market (Apple, 2004). This

strong alignment relationship between the GPS and the latent theme of national gain

clearly benefits the neo-liberal political agenda by targeting the financial stability of a

nation over the financial stability of the individual.

Social justice is another economic purpose of schooling. Educating for social

justice serves the liberal agenda by cultivating individuals aware of the inequities of

society and actively moving the oppressed out of economic poverty (Engel, 2000; Kohn,

2004). This liberal view of the economic purpose of schooling targets the financial stability of the individual over the financial stability of a nation. Unfortunately for any oppressed poverty-stricken students in Georgia, the GPS share a poor alignment relationship with the latent goal of social justice. Social justice proved to be the weakest-aligned goal to the GPS as compared to all other latent themes tested. In fact, the only manifest theme that is strongly supported by the GPS for social justice is English-language literacy. The other three manifest themes, action and reflection, critical literacy, and interpersonal participation in a learning society, indicated low Manifest Theme Presence scores. The Curricular Balance score shows the consistency in irrelevance of the GPS to social justice. The empirical findings that indicate a lack of alignment between social justice and the GPS support the theorists who claim that educating for social justice is in direct conflict with educating to market demands (Apple, 2004; Hursh, 2001; Spring, 1949). Based on these findings, it appears that theorists such as Apple (2004), Hursh (2001) and Spring (1949) are correct, and the neo-liberal political agenda has overcome the liberal ideal in regards to influencing the economic role of public schooling.

*Social Purposes: Individual Development*

The social purposes of schooling are those that shape the student to fit specified social roles. Prior to the progressive movement, schooling for social control was primarily achieved through extra-curricular activities such as school dances, religious clubs, and athletics (Spring, 2009). Curricular focus on the social purposes of schooling really became apparent during the progressive movement. Spring (2009) elaborates through the examples offered by the life-adjustment curriculum of the administrative

progressive movement. This curriculum was intended to sort and prepare white middle-class students for distinct roles in masculine professions and household management. Girls were tracked into the social roles of domestic experts, teachers, nurses, and child developers, while boys were directed into paths of agrarian and industrial vocations. Determining which individuals would be developed for which social roles based on which value systems is where disagreement on education for social purposes stems.

*Individual development: Pedagogical progressives*. Previously, when defining individual development in chapter four as a manifest theme for investigation, John Dewey's conception of schooling for individual development was found to be incompatible with curriculum standards. As a social purpose of schooling, Dewey's pedagogically progressive education sought to make the child responsible for deciding his/her own future social roles, a liberal view of the social purpose of schooling. A pre-determined curriculum, like the GPS, takes the decisions out of the student's control. This aspect of progressive education is in direct conflict with the view of the administrative progressives, a neo-liberal view of social purpose of schools (Hursh, 2001). The GPS do not support a liberal view of social purpose; however this conflict may not be considered to be so covert due to the inability of the researcher to test the GPS for a pedagogically progressive definition of individual development.

*Individual development: Administrative progressives*. Individual development according to the administrative progressives requires teaching student the habits, attitudes, and skills necessary for specified roles in society. This definition of individual development is supported by the GPS for the contemporary context. In fact, according to the G-CAM model (Figure 12), the administrative progressives' conception of individual

development as a goal of schooling is well-aligned to the GPS. This social purpose of schooling is identical to the latent theme, national economic gain, because of its specification of which societal roles, especially which economic roles, the student will fulfill in his/her future. Despite the alignment of the GPS with this latent goal, according to the associated Manifest Theme Presence scores alterations would need to be made to the GPS to assure strong support in the areas of creativity, digital literacy, interpersonal participation in a learning society, intrapersonal skills of life-long learning, media literacy, problem-solving, and systems thinking. As seen in national economic gain, English-language literacy, information literacy, and numeracy are all well supported in the GPS.

An investigation of other potential roles currently supported by the GPS could enhance this discussion. Since the definition of the administrative progressives' individual development is accommodated for a knowledge society, the potential for greater insight could come from data describing the alignment relationship between the GPS and individual development for an industrial society and individual development for an agrarian society. By comparing the alignment relationships of the GPS to these various levels of societal roles, this study could have broadened the discussion by specifying the targeted social and vocational roles of the GPS. Still, it is clear through this empirical investigation that social purposes proposed by the administrative progressives and the pedagogical progressives exist in a dichotomous and mutually exclusive pattern within the GPS. This investigation shows that, once again, the liberal view did not succeed in influencing the Georgia curriculum. This one-sided support of the curriculum further

supports claims that a conflict between the neo-liberal and liberal view of curriculum exists within the GPS (Hursh, 2001; Kohn, 2004; Kumashiro, 2008).

*High Student Test Scores and Post-Secondary Enrollment*

Placing the latent themes of post-secondary enrollment and high student test scores becomes difficult when framed around Spring's (2009) three categories of schooling purpose including political, social, and economic. As discussed earlier, post-secondary enrollment as a goal of schooling does not imply college degree completion or vocation preparation, but it likely includes the writing of college application(s) and passing scores on college entrance examinations in the subjects of math, language, and science. Plenty of theorists on both liberal and conservative sides argue the existence of the political, social, and economic implications associated with high-stakes testing and the ACT/SAT scores required for post-secondary enrollment (Apple, 2004; Frase & Streshley, 2000; Hinchey, 2001; Levin, 2008; Phelps, 2004). According to Phelps (2004), an advocate of standardized tests, since the 1960s positive public opinion of the virtues of standardized testing has never swayed. Critics of SAT and ACT tests argue them to be discriminatory based on race, ethnicity, language, gender, and class. These arguments are based on the military origin of these exams and the distribution of past and current scores across the nation (National Center for Fair and Open Testing, 2010; Spring, 1972). In addition, standardized tests are promoted by both the neo-conservative and neo-liberal political agendas in efforts to implement a regulatory system over schools (Apple, 2004). Through such regulation ACT/SAT scores as well as other standardized tests become the measure of school success, and are used to form public opinion about individual schools

and school systems. By regulating the schools through standardized testing, the key neo-liberal and neo-conservative agenda item of school choice continues to gain momentum and popularity (Apple, 2004).

Kohn (2004) argues that this capitalistic use of SAT/ACT and standardized test scores has dominated the discourse of the schooling outcomes since the 1980s. Kohn also argues that due to the over-emphasis of school comparison based on standardized test scores, the country has allowed test scores to become a prominent goal of schooling. By limiting the discourse to statements like *for student achievement or against it*, the neo-liberal and neo-conservative political agendas have used standardized test scores as a simplistic means to confuse or mislead the public in the purpose of schooling (Apple, 2004; Hinchey, 2001; Hursh, 2001). However, advocates of standardized testing argue that well-designed tests that assess student learning of a front-loaded curriculum, or a curriculum designed prior to the tests, offer a level and fair playing field for students who are culturally different (English & Steffy, 2001). Still, no matter one's perspective on the value of post-secondary enrollment and high student test scores as goals of schooling, the GPS have a strong alignment relationship to these statements.

The GPS alignment relationship to the latent goals of high student test scores and post-secondary enrollment are identical because these two latent themes emulate each other in their testing focus on math, language, and science. In fact, the investigation of these latent goals results in identical alignment relationships due to the collection of identical manifest themes. The GPS showed evidence of strongly supporting English-language literacy, numeracy, and science. Although test-taking did not receive a presence score high enough to be considered strongly supportive, the Manifest Theme Absence

score was the lowest of all seventeen manifest themes, indicating that the majority of the GPS provided partial support of test-taking. Although Americanization has a slightly stronger alignment relationship with the GPS, high student test scores and post-secondary enrollment are two latent themes that are very evident in the GPS, indicating that whether they are the purpose of schooling in Georgia or not, they have a great influence on this intended curriculum.

The guiding question of this study required a description of the relationship between the GPS and the goals of schooling. As previously stated, the GPS are well aligned with the goals of Americanization, post-secondary enrollment, national economic gain, high student test scores, and the administrative progressives' view of individual development; the GPS are poorly aligned to schooling for democratic participation, social justice, and pedagogical progressives' view of individual development. An explanation of this answer is dynamic. These findings empirically support liberal theorists' arguments, which claim that the neo-liberal and neo-conservative political agendas control the system of public education, including Georgia's, through curriculum content management. The apparent influence over the curriculum by neo-liberal and neo-conservative groups indicates a conflict between market-driven values and liberal perspectives. However, unlike many liberal theorists, this study does not claim that an intended curriculum cannot become increasingly balanced to include more liberal goals of schooling. Instead, this study has simply employed an empirical method to evaluate the existing alignment relationship between an intended curriculum and a goal of schooling.

Still the lack of presence of the manifest themes necessary for national economic gain in a knowledge economy puts into question how well neo-liberal views are being supported in the curriculum. According to this study of the GPS, it appears that the collaboration of political ideologies as presented in chapter two is benefiting the neo-conservatives most as the neo-liberals have less influence than their allies as seen in the strong alignment relationship of the GPS with Americanization. This concern for greater emphasis on the neo-conservative political agenda reveals a covert conflict within the GPS and these political allies.

<u>Implications</u>

Implications of this study exist at the state and national levels. At the state level, since the GaDOE has stated workforce skills as a goal of public schooling in Georgia, potential changes to the GPS specific to achieving this goal are well informed by the under-represented manifest themes of national economic gain. Also, through discussion of these results, an overt public discussion surrounding the purpose of public schools in Georgia is facilitated which may enhance electoral processes related to education. Elections of the Georgia state superintendent of schools could be influenced by a debate on the goals of schooling and how each candidate plans to address those goals. This information is likely to be of great interest to large businesses across Georgia who are invested in workforce skill development.

At both the state and national level, new national curriculum standards are being drafted by the National Governors Association (National Governors Association, 2009). Several liberal authors such as Apple (2004), Hargreaves (2003), Kohn (2004), and

Spring (2009) have presented theories which claim that the liberal agenda for education is not being met in American schools. This study has provided a means to investigate these claims empirically which could be useful to other educational entities outside the state of Georgia. By implementing the method presented in this study, investigation of the alignment of national goals of schooling and these new standards is possible. Results from such a study may facilitate state adoption decisions and illuminate influential political agendas.

## Study Contributions

This study makes a few important contributions to the literature. First, it developed and demonstrated a method to investigate the alignment relationship between an intended curriculum and a goal of schooling, referred to as the goal-curriculum alignment relationship. This relationship has expanded the meaning of alignment between a goal and a curriculum beyond previously unclear or opinion-based descriptions. Now, through this study, the goal-curriculum alignment relationship includes empirical measures of Curricular Balance, Curricular Relevance, and Manifest Theme Presence. These new measures facilitate the evaluation of the relationship between a single curriculum to multiple goals, as demonstrated in this study. Also, these measures potentially facilitate the comparison of the relationships of multiple curricula to a single goal. This information has the potential of being used by decision-makers and curriculum leaders assigned the task of altering a curriculum, designing a new curriculum, selecting a previously written curriculum, or speaking to the strengths and weaknesses of a given curriculum.

Second, this study expands on current methods in curriculum planning and curriculum evaluation. By investigating a curriculum already in place, this method provides a summative means to evaluating a curriculum which does not require access to the other components of the system. In fact, the method presented provides a means to incorporate the purposes or goals of schooling currently excluded from the four components investigated in curriculum evaluation including the intended, the enacted, the learned, and the assessed curriculum. If used in tandem with the Curriculum Audit or another summative curriculum alignment tool this new method expands the capabilities of curriculum research to provide a more systemic picture of curriculum and schooling. Additionally, this study provides a means to empirically investigate a developing curriculum formatively. When formatively used, such an investigation provides detailed feedback for specific alterations through Manifest Theme Presence measures. This use of the presented method may be useful to the International Institute for Educational Planning to strengthen the portion of the curriculum planning model that is considered weak by the organization's own admission, the surveys of the ability of a curriculum to serve a specific goal of schooling.

Third, this investigation began with a rationale that was supported by theories in instructional design. Often the context of the instructional designer's work dictates the expected roles he/she will fulfill (Seels & Richey, 1994). In the corporate, medical, and military contexts instructional designers serve as the key system and curriculum experts by determining the learning needs, designing curricula, developing instruction, managing instruction, and assessing learning. However, in the K-12 setting, instructional designers are often limited to working with the instructional technology or technology-related

professional development needs of the K-12 institution. By taking on a larger role in the design of institutional-level curriculum, instructional designers can serve as a systems expert for K-12 schooling, too. As indicated in this study, K-12 education is certainly a very political institution; therefore, it may be naive to assume that instructional designers can take full responsibility for institutional curriculum processes. However as exemplified in this study, instructional designers have the expertise and cross-field respect to serve as key consultants for institutional-level curriculum design processes, content, and evaluation in the K-12 setting.

Finally, this study also contributes a slice to the overall systemic view of public schooling in Georgia by uncovering the specific goals influencing the intended curriculum. Through the findings of this investigation a greater understanding of how well the GPS are aligned to the seven goals tested has been possible. More specifically, the results have shown that the GPS are well-aligned to the three goals stated by the GaDOE including post-secondary enrollment, workforce readiness, and high student test scores; however, the GPS are most closely aligned to Americanization and are failing to target many of the skills necessary for participation in the knowledge economy given the Manifest Theme Presence scores. This broader understanding of how the GPS relate to the purposes of schooling, if taken to be of value by members of the GaDOE, could serve to inform specific alterations to the GPS and facilitate the communication of moral purpose behind schooling in Georgia, which according to Fullan (2001) is vital to building coherence in leading for change.

Additional Limitations

Additional limitations of this study became apparent during the processes of data analysis and interpretation of findings. Clear disclosure of these limitations informs study interpretations and future investigations. The first limitation of implementing this hypothesis-testing content analysis is the qualifications and the number of coders. When seeking coders for this study, it quickly became apparent that coders must have knowledge and experience with K-12 curriculum standards and in particular, they must have knowledge of the curriculum standards being testing. This requirement is critical to effective and consistent coding practices. In the implementation of this study, two potential coders were initially trained to generate the data. Although trained educators, these individuals have limited experience with K-12 curriculum standards. During the training process these coders tended to code beyond the definitions of the dependent variables for each curriculum statement. Instead these individuals coded according to how they imagined instruction of the curriculum statements would be experienced. This created inconsistent inter-coder agreement measures during initial training. For these reasons coding with these individuals was discontinued. The two official coders selected for this study both have K-12 teaching and research coding experience.

Alignment studies that investigate the curriculum to test relationship, or curriculum-test alignment studies, suggest that coders also be restricted to coding curriculum content associated with their subject-specific teaching qualifications in order to ensure sufficient reliability scores (Martone & Sireci, 2009). This requirement was not fully met by the coders in this study; however this limitation did not appear to affect the inter-coder reliability measures. This study was limited by the two coders' qualifications

and experience with coding for educational research. While content analysis requires a minimum of two coders (Neuendorf, 2002), Porter, Polikoff, Zeidner, and Smithson (2008) found that curriculum-test alignment studies employing five coders or more were generalizable. This suggestion is not within the requirements of the new method presented in this study, nor is it feasible for a dissertation study. However, future studies would benefit from complying with this recommendation. Nonetheless, smooth and consistent coding procedures with high inter-rater reliability scores made generation of the data simple and uneventful as reported in chapter five.

Another limitation of the study includes the definitions used to define each level of support for each dependent variable. Agreement between the stakeholders and coders of the appropriate definitions will be critical to future investigations. In this study, the definitions heavily influenced the data generated, as they were referenced by both coders frequently to decipher appropriate levels of support for each unit of raw data generated. This constant reference to the definitions is what caused the coding process to be lengthy, yet the consistency between coder data pairs can likely be attributed to this dependence on the definitions.

The third limitation of the study is related to the need for the researcher's knowledge of the curriculum standards. In this study, the researcher decided to code 438 units from the eighth-grade English/Language Arts, math, science, and social studies curricula. The researcher could have divided the units differently, but reasoned that 438 equally weighted units were appropriate to the unique structure of the GPS. The GPS are organized around key standards that are each further elaborated on using a collection of sub-statements referred to as elements. The researcher of this study decided to weight the

standards equally to the elements in order to maximize the language available to coders in deciphering levels of support. When investigating other curricula, this equal weighting may or may not be appropriate, and would need to be determined by a researcher with extensive knowledge of the curriculum in question.

The benchmark set to indicate reliability of the study is yet another limitation of this investigation. Huck and Cormier (1996) state that an inter-rater reliability score of Pearson's $r$ is sufficient at r=0.70. However, other statisticians set the minimum standards of these correlation-based reliability measures differently. For example, Salkind (2005) suggests that a strong relationship of agreement exists if r=0.60 or r>0.60, while a very strong relationship of agreement exists if r=0.80 or r>0.80. Such measures are a matter of context. In the case that a similar investigation is done in the future, the appropriate measure of inter-rater reliability should be determined based on statistical reasoning, the fit with the given investigation, and should be agreed upon by the key decision-makers.

Fifth, due to the historical origins behind the goals of schooling for national gain and individual development from the administrative progressive view, these goals began in the study as two distinctly different purposes of schooling. However, as the socio-political contexts changed, these two goals of schooling came to have similar meaning, which resulted in identical collections of manifest themes. These two goals of schooling could have been combined into one goal; however, the researcher's intent to uncover potential covert conflicts led her to maintain them as distinctly separate until the discussion. Similar reasoning led to the distinction between post-secondary enrollment and high student test scores, which also tested identical manifest theme collections. This testing of identical manifest themes is an additional limitation of the study.

Finally, the last limitation disclosed is the benchmark indicating strong support of the manifest themes of a Manifest Theme Presence score of $P$=0.0588. This benchmark is calculated by dividing 1.00 by the number of dependent variables tested. Still, in other investigations this benchmark will need to be calculated at a score deemed appropriate for the purposes of the study and the context surrounding the curriculum. This limitation and the previously disclosed limitations are intended to provide greater understanding for individuals interpreting the findings of this study and especially for individuals planning similar investigations in the future.

<div align="center">Future Research</div>

When considering future research associated with this method, initial investigations should focus on testing the repeatability of the method. A new study should be conducted in order to investigate the theory that this method should be able to investigate not only the relationship between a single curriculum and multiple goals, but also the relationship between multiple curricula and a single goal. In such a study, a particular goal of schooling would be tested for evidence of alignment with multiple similar-level curricula. A second investigation to test the method would be to investigate a curriculum and a goal of schooling relevant to a context culturally divergent from the author's background. By testing the method in a new setting, the objectivity and generalizability of the method could be further supported and grant greater trustworthiness to the results of other studies that use this same method.

Following further testing of this method, future research should expand the method as currently employed. First, by expanding the calculations and use of the

Manifest Theme Measures, empirical descriptions of breadth and depth of a curriculum

for a given goal of schooling is possible. Another way to expand the method

demonstrated in this study is represented in Figure 13.

*Figure 13*

Common Curriculum Alignment Model vs. Potential Curriculum Alignment Model
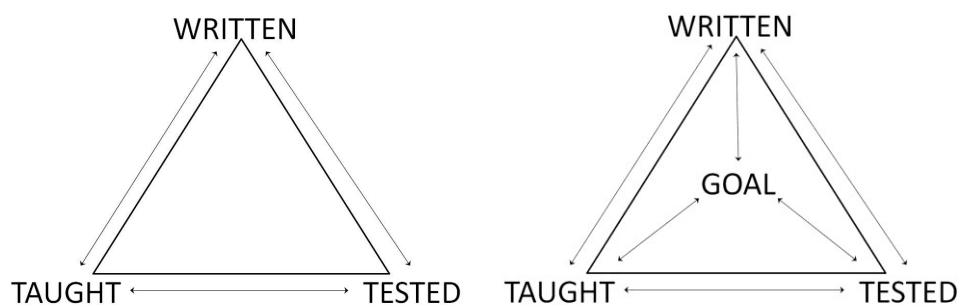


*Note. Left drawing is compiled by the author from current models of curriculum alignment (English & Steffy, 2001, p. 88; Squires, 2009, p. 8). Right drawing is created by the author as an expansion of the left. Model is intended to suggest further research and model development.*

The triangle on the left-hand side represents current relationships investigated in

the field of alignment research. In contrast, the triangle on the right represents the

expansion of the model on the left to include the method used in this study as shown by

the arrow connecting the written curriculum and the goal. By developing new research

methods or revision of the method presented in this text, the other two new relationships

of goal-taught and goal-test alignment could potentially be investigated. Through such

expansion of the current model, curriculum alignment as a field could better fit the

definition provided by Martone and Sireci (2009) which states that "alignment is a means

for understanding the degree to which different components of an educational system

work together to support a common goal" (p.24). Lukes' (2005) Third Dimension of

Power requires such control over political agendas as seen in the latent conflict of schooling goals. Since the goal of schooling has been covered by the rhetoric of high student test scores for some time, expanding the current curriculum alignment model to include additional relationships with the goals would serve to breakdown power structures that control the curriculum by hiding the disruptive debate of why students attend public schooling. The right-hand side of Figure 13 represents this new potential curriculum alignment model presented by the researcher which includes the goal of schooling as a central aligning component. While this is not a currently true model, it is the hope of the author that future research may enhance the current conception of curriculum alignment to include the method demonstrated in this study.

Conclusion

This dissertation has empirically shown that the Georgia Performance Standards are most closely aligned to a goal of schooling for Americanization. Also, this dissertation has shown that the GPS are in conflict with a goal of social justice, as this goal demonstrated an empirically weak alignment relationship with the curriculum. To come to these conclusions, this study initially rationalized the need for such an investigation in chapter one. Then chapter two presented the historically and currently applicable goals of schooling worth investigating. Prior to outlining a new method as seen in chapter four, chapter three provided a rationale for the development of a new method claiming that no fit method existed prior to this study. Chapter five reported the findings of the study via new empirical measures of balance and relevance as well as the Goal-Curriculum Alignment Measurement model (see Figure 11 & 12), a visual model

intended to describe and compare the alignment relationship of a curriculum to goals of

schooling. In closing, this chapter has offered an explanation for these findings and

related them to the current socio-political literature. Finally, this chapter has outlined the

contributions this study offers to curriculum practitioners and researchers. It is the hope

of the author that further research will be inspired from this study.

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APPENDIXES

APPENDIX A

## Georgia Performance Standards
(Proposed Curriculum Revision Process)

1/14/05

Team Members Consisted of GDOE Curriculum Staff, Local LUA Curriculum Specialists, OSR and BOR

Members Comprised of Teacher Teams, NCEE Resources and GDOE Staff.

Formulate Team to Begin Creation of Broad Content Standards for a Complete PK-14 Curriculum.

Iterative Meetings to Create Broad Content Standards for PK-14

Document Containing Broad Content Standards

Formulate Teacher Teams to Construct New Curriculum

Iterative Meetings to Create New Curriculum Content;

Teams Correlate with National Standards

Teams Adapt from other states with good curriculum

Document Containing Draft Curriculum Standards

Begin Development of Manual for Differentiated Instruction

Contract with NCEE to Provide Professional Curriculum Resources

Post Draft Curriculum Standards to Georgia Learning Connection (GLC)

Public Review and Comments on Draft

Development of Instructional Packets for Awareness Session

Conduct Awareness Sessions
1/1/04-3/31/04

Establish Criteria for Feedback Analysis

Analysis of Feedback by Content Specialists

Recommend Science Teacher Team for Revision of the GPS

Provide Update to SBOE on GPS Progress & Processes
2/19/04

Reconvene Teacher Teams for Revision of GPS Based on Comments
3/8/04–3/12/04

3/1/04-6/1/04 Phi Delta Kappa (PDK) Independent Validation/ Verification of GPS Draft

3/1/04 Provide Update to SBOE on GPS Progress, Process & PDK Engagement

4/1/04-4/30/04 Recommend Teacher Teams for Revision of GPS Based on Comments From Public, BOR, GACIS & Others

4/13/2004 Provide Update & Inform SBOE of Proposed Revisions to GPS based on 3/04 Teacher Team Revisions

4/15/2004 Post Revised GPS to GLC for Review/ Comments based on 3/04 Teacher Team Revisions

5/3/04 Inform SBOE of Proposed Final Revisions to GPS Based on April Teacher Team Revisions

5/5/04 Post Final Revision of GPS to GLC for Review/ Comments based on 4/04 Teacher Team Revisions

5/13/04 Submit Final Draft of GPS Standards & Elements (ELA grades 4-12, Science K-12 and Math K-12) to State Board for Review and Posting to Web

June–Sept 2004 Development of Instructional Packets for Content Specific Training

Late–June 2004 Submit Draft of GPS Standards & Elements for ELA K-3 to SBOE at Called Meeting for Review and Posting to Web

Jun–Aug 2004 Intensive Work on Task Development & Student Work Collection for ELA K-12, Science K-12 and Math K-12

7/8/04 Submit GPS Standards & Elements (ELA grades 4-12, Science K-12 and Math K-8) to State Board for Final Approval

8/1/04 Submit Draft of GPS Standards & Elements for Social Studies K-12 and ELA K-3 to State Board for Review and Posting to Web

9/9/04 Submit GPS Standards & Elements (ELA grades K-3) to State Board for Final Approval

Oct 2004 Post Final GPS ELA K-12, Science K-12 and Math K-8

10/14/2004 Submit GPS Standards & Elements Social Studies K-12 to State Board for Final Approval

Nov 2004 Post Final GPS for Social Studies K-12

March, 2005 Submit Draft of GPS Standards & Elements for Math 9-12 to State Board for Review and Posting to Web

May, 2005 Submit GPS Standards & Elements for Math 9-12 to State Board for Final Approval

May, 2005 Post Final GPS Mathematics 9-12

Continue Development of Manual for Differentiated Instruction

Iterative Development of Tasks, Student Work & Teacher Commentary during Year 1 of Implementation

Professional Learning for Specific Content Areas: Fall/Winter 04-05 Summer 05 Fall/Winter 05-06

Professional Learning for Specific Content Areas: Summer 05, Fall/Winter 05-06 Summer 06, Fall/Winter 06-07

Professional Learning for Specific Content Areas: Summer 06, Fall/Winter 06-07 Summer 07, Fall/Winter 07-08

Professional Learning for Specific Content Areas: Summer 07, Fall/Winter 07-08, Summer 08, Fall/Winter 08-09

Test Alignment of CRCT, EOCT, GHSGT for 06-07 Administration of Math K-2, 7, Science 3-5

Test Alignment of CRCT and EOCT for 07-08 Administration of Math 3-5, 8, Science K-2, 8, Social Studies 6-12

Test Alignment of CRCT, EOCT, GHSGT for 05-06 Administration of ELA K-12, Math 6, and Science 6, 7 & 9-12

Test Alignment of GHSGT for 08-09 Administration of Math 9-12, Social Studies K-5

Georgia Department of Education • Kathy Cox, State Superintendent of Schools

APPENDIX B

*Georgia Performance Standards as Divided According to Elements*

Alphanumeric code    GPS element representing a datum for analysis

ELA8R1           The student demonstrates comprehension and shows evidence of a
                 warranted and responsible explanation of a variety of literary and
                 Informational texts.

ELA8R1.1         For literary texts, the student identifies the characteristics of various
                 genres and produces evidence of reading that:

ELA8R1.1a        Identifies the difference between the concepts of theme in a literary
                 work and author's purpose in an expository text.

ELA8R1.1b        Compares and contrasts genre characteristics from two or more
                 selections of literature.

ELA8R1.1c        Analyzes a character's traits, emotions, or motivations and gives
                 supporting evidence from the text(s).

ELA8R1.1d        Compares and contrasts motivations and reactions of literary characters
                 from different historical eras confronting similar situations or conflicts.

ELA8R1.1e        Evaluates recurring or similar themes across a variety of selections,
                 distinguishing theme from topic.

ELA8R1.1f        Evaluates the structural elements of the plot (e.g., subplots, climax), the
                 plot's development, and the way in which conflicts are (or are not)
                 addressed and resolved.

ELA8R1.1g        Analyzes and evaluates the effects of sound, form, figurative language,
                 and graphics in order to uncover meaning in literature:

ELA8R1.1gi       Sound (e.g., alliteration, onomatopoeia, internal rhyme, rhyme
                 scheme, meter)

ELA8R1.1gii      Figurative language (e.g., simile, metaphor, personification, hyperbole,
                 symbolism, imagery).

ELA8R1.1h        Analyzes and evaluates how an author's use of words creates tone and
                 mood and provides supporting details from text.

ELA8R1.2         For informational texts, the student reads and comprehends in order to
                 develop understanding and expertise and produces evidence of reading
                 that:

ELA8R1.2a        Analyzes and evaluates common textual features (e.g., paragraphs, topic

| | |
|---|---|
| | sentences, concluding sentences, introduction, conclusion, footnotes, index, bibliography). |
| ELA8R1.2b | Applies, analyzes, and evaluates common organizational structures (e.g., graphic organizers, logical order, cause and effect relationships, comparison and contrast). |
| ELA8R1.2c | Recognizes and traces the development of an author's argument, point of view, or perspective in text. |
| ELA8R1.2d | Understands and explains the use of a complex mechanical device |
| ELA8R1.2e | Uses information from a variety of consumer, workplace, and public documents (e.g., job applications) to explain a situation or decision and to solve a problem |
| ELA8R2 | The student understands and acquires new vocabulary and uses it correctly in reading and writing. |
| ELA8R2.a | The student Determines pronunciations, meanings, alternate word choices, parts of speech, or etymologies of words. |
| ELA8R2.b | Determines the meaning of unfamiliar words in content and context specific to reading and writing. |
| ELA8R2.c | Demonstrates an initial understanding of the history of the English Language. |
| ELA8R3 | The student reads aloud, accurately (in the range of 95%), familiar material in a variety of genres, in a way that makes meaning clear to listeners. |
| ELA8R3.a | The student Uses letter-sound knowledge to decode written English and uses a range of cueing systems (e.g., phonics and context clues) to determine pronunciation and meaning. |
| ELA8R3.b | Uses self-correction when subsequent reading indicates an earlier miscue (self-monitoring and self-correcting strategies). |
| ELA8R3.c | Reads with a rhythm, flow, and meter that sounds like everyday speech |
| ELA8R4 | The student acquires knowledge of Georgia authors and significant text created by them. |
| ELA8R4.a | The student Identifies a variety of Georgia authors both male and female. |
| ELA8R4.b | Identifies authors' connections to Georgia through a variety of materials Including electronic media. |
| ELA8R4.c | Identifies award winning Georgia authors. |
| ELA8R4.d | Examines texts from different genres (e.g. picture books, poetry, short stories, novels, essays, informational writing, and dramatic literature) created by Georgia authors. |
| ELA8R4.e | Relates literary works created by Georgia authors to historical settings and or events. |
| ELA8R4.f | Explains how Georgia is reflected in a literary work through setting, characterization, historical context, or current events. |
| ELA8R4.g | Evaluates recurring or similar themes across a variety of selections written by Georgia authors, distinguishing theme from topic. |
| ELA8RC1 | *The student reads a minimum of 25 grade-level appropriate books or book equivalents (approximately 1,000,000 words) per year from a |

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| | Variety informational and fictional texts in a variety of genres and modes of discourse, including technical texts |
| ELA8RC2 | The student participates in discussions related to curricular learning in all subject areas. |
| ELA8RC2.a | Identifies messages and themes from books in all subject areas. |
| ELA8RC2.b | Responds to a variety of texts in multiple modes of discourse. |
| ELA8RC2.c | Relates messages and themes from one subject area to those in another area. |
| ELA8RC2.d | Evaluates the merits of texts in every subject discipline. |
| ELA8RC2.e | Examines the author's purpose in writing. |
| ELA8RC2.f | Recognizes and uses the features of disciplinary texts (e.g., charts, graphs, photos, maps, highlighted vocabulary). |
| ELA8RC3 | The student acquires new vocabulary in each content area and uses it correctly. |
| ELA8RC3.a | The student Demonstrates an understanding of contextual vocabulary in various subjects. |
| ELA8RC3.b | Uses content vocabulary in writing and speaking. |
| ELA8RC3.c | Explores understanding of new words found in subject area texts. |
| ELA8RC4 | The student establishes a context for information acquired by reading across subject areas. |
| ELA8RC4.a | The student Explores life experiences related to subject area content. |
| ELA8RC4.b | Discusses in both writing and speaking how certain words and concepts Relate to multiple subjects. |
| ELA8RC4.c | Determines strategies for finding content and contextual meaning for Unfamiliar words or concepts. |
| ELA8W1 | The student produces writing that establishes an appropriate organizational structure, sets a context and engages the reader, maintains a coherent focus throughout, and signals a satisfying closure |
| ELA8W1.a | Selects a focus, organizational structure, and a point of view based on purpose, genre expectations, audience, length, and format requirements. |
| ELA8W1.b | Writes texts of a length appropriate to address the topic or tell the story. |
| ELA8W1.c | Uses traditional structures for conveying information (e.g., chronological order, cause and effect, similarity and difference, and posing and answering a question). |
| ELA8W1.d | Uses appropriate structures to ensure coherence (e.g., transition elements, parallel structure). |
| ELA8W1.e | Supports statements and claims with anecdotes, descriptions, facts and statistics, and specific examples. |
| ELA8W2 | The student demonstrates competence in a variety of genres. |
| ELA8W2.1a | Student produces a narrative that a. Engages readers by establishing and developing a plot, setting, and point of view that are appropriate to the story (e.g., varied beginnings, standard plot line, cohesive devices, and a sharpened focus). |
| ELA8W2.1b | Student produces a narrative that Creates an organizing structure appropriate to purpose, audience, and context. |

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| ELA8W2.1c | Student produces a narrative that Relates a clear, coherent incident, event, or situation by using well-chosen details. |
| ELA8W2.1d | Student produces a narrative that Reveals the significance of the writer's attitude about the subject. |
| ELA8W2.1e | Student produces a narrative that Develops complex major and minor characters using standard methods of characterization |
| ELA8W2.1f | Student produces a narrative that Includes sensory details and concrete language to develop plot, setting, and character (e.g., vivid verbs, descriptive adjectives, varied sentence structures, and specific narrative action). |
| ELA8W2.1g | Student produces a narrative that Excludes extraneous and inappropriate information. |
| ELA8W2.1h | Student produces a narrative that Uses a range of strategies (e.g., suspense, figurative language, dialogue, expanded vocabulary, flashback, movement, gestures, expressions, foreshadowing, tone, and mood). |
| ELA8W2.1i | Student produces a narrative that Provides a sense of closure appropriate to the writing. |
| ELA8W2.2 | The student produces writing (multi-paragraph expository composition |
| ELA8W2.2a | Engages the reader by establishing a context, creating a speaker's voice, |
| ELA8W2.2b | Develops a controlling idea that conveys a perspective on the subject. |
| ELA8W2.2c | Creates an organizing structure appropriate to purpose, audience, and context. |
| ELA8W2.2d | Develops the topic with supporting details. |
| ELA8W2.2e | Excludes extraneous and inappropriate information. |
| ELA8W2.2f | Follows an organizational pattern appropriate to the type of composition. |
| ELA8W2.2g | Concludes with a detailed summary linked to the purpose of the composition. |
| ELA8W2.3 | The student produces technical writing (business correspondence: letters Of application and letters of recommendation, résumés, abstracts, user guides or manuals, web pages). |
| ELA8W2.3a | Creates or follows an organizing structure appropriate to purpose, audience, and context. |
| ELA8W2.3b | Excludes extraneous and inappropriate information. |
| ELA8W2.3c | Follows an organizational pattern appropriate to the type of composition. |
| ELA8W2.3d | Applies rules of Standard English |
| ELA8W2.4 | The student produces a response to literature |
| ELA8W2.4a | Engages the reader by establishing a context, creating a speaker's voice, or otherwise developing reader interest. |
| ELA8W2.4b | Demonstrates an understanding of the literary work. |
| ELA8W2.4c | Supports a judgment through references to the text and personal knowledge. |
| ELA8W2.4d | Justifies interpretations through sustained use of examples and textual Evidence from the literary work. |
| ELA8W2.4e | Supports a judgment through references to the text, references to other |

| | works, authors, or non-print media, or references to personal knowledge. |
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| ELA8W2.4f | Produces a judgment that is interpretive, analytic, evaluative, or Reflective (orally, graphically, in writing). |
| ELA8W2.4g | Anticipates and answers a reader's questions. |
| ELA8W2.4h | Provides a sense of closure to the writing. |
| ELA8W2.5 | The student produces a multi-paragraph persuasive essay |
| ELA8W2.5a | Engages the reader by establishing a context, creating a speaker's voice, And otherwise developing reader interest. |
| ELA8W2.5b | States a clear position or perspective in support of a proposition or proposal. |
| ELA8W2.5c | Creates an organizing structure that is appropriate to the needs, values, And interests of a specified audience, and arranges details, reasons, and examples. |
| ELA8W2.5d | Includes appropriate relevant information and arguments. |
| ELA8W2.5e | Excludes information and arguments that are irrelevant. |
| ELA8W2.5f | Provides details, reasons, and examples, arranging them effectively by anticipating and answering reader concerns and counter-arguments. |
| ELA8W2.5g | Supports arguments with detailed evidence, citing sources of information as appropriate |
| ELA8W2.5h | Anticipates and addresses reader concerns and counter-arguments. |
| ELA8W2.5i | Provides a sense of closure to the writing. |
| ELA8W2.6 | The student produces a piece of writing drawn from research |
| ELA8W2.6a | Poses relevant and tightly drawn questions about the topic. |
| ELA8W2.6b | Engages the reader by establishing a context. |
| ELA8W2.6c | Conveys clear and accurate perspectives on the subject. |
| ELA8W2.6d | States a thesis. |
| ELA8W2.6e | Records important ideas, concepts, and direct quotations from significant information sources, and paraphrases and summarizes all perspectives on The topic, as appropriate. |
| ELA8W2.6f | Uses a variety of primary and secondary sources and distinguishes the Nature and value of each. |
| ELA8W2.6g | Organizes and displays information on charts, maps, and graphs. |
| ELA8W2.6h | Provides a sense of closure to the writing. |
| ELA8W2.6i | Documents resources (bibliography, footnotes, endnotes, etc.). |
| ELA8W3 | The student uses research and technology to support writing. |
| ELA8W3.a | Plans and conducts multiple-step information searches by using computer networks and modems. |
| ELA8W3.b | Achieves an effective balance between researched information and original ideas. |
| ELA8W3.c | Avoids plagiarism |
| ELA8W4 | The student consistently uses the writing process to develop, revise, and evaluate writing. |
| ELA8W4.a | Plans and drafts independently and resourcefully. |
| ELA8W4.b | Revises writing for appropriate organization, consistent point of view, And transitions between paragraphs, passages, and ideas. |

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| ELA8W4.c | Edits writing to improve word choice, grammar, punctuation, etc. |
| ELA8C1 | The student demonstrates understanding and control of the rules of the English language, realizing that usage involves the appropriate Application of conventions and grammar in both written and spoken formats. |
| ELA8C1.a | Declines pronouns by gender and case, and demonstrates correct usage in sentences. |
| ELA8C1.b | Analyzes and uses simple, compound, complex, and compound-complex Sentences correctly, punctuates properly, and avoids fragments and run-ons. |
| ELA8C1.c | Revises sentences by correcting misplaced and dangling modifiers. |
| ELA8C1.d | Revises sentences by correcting errors in usage. |
| ELA8C1.e | Demonstrates appropriate comma and semicolon usage (compound, complex, and compound-complex sentences, split dialogue, and for clarity). |
| ELA8C1.f | Analyzes the structure of a sentence (basic sentence parts, noun-Adjective adverb clauses and phrases). |
| ELA8C1.g | Produces final drafts/presentations that demonstrate accurate spelling and the correct use of punctuation and capitalization. |
| ELA8LSV1 | The student participates in student-to-teacher, student-to-student, and group verbal interactions. |
| ELA8LSV1.a | Initiates new topics in addition to responding to adult-initiated topics. |
| ELA8LSV1.b | Asks relevant questions. |
| ELA8LSV1.c | Responds to questions with appropriate information. |
| ELA8LSV1.d | Confirms understanding by paraphrasing the adult's directions or suggestions. |
| ELA8LSV1.e | Displays appropriate turn-taking behaviors. |
| ELA8LSV1.f | Actively solicits another person's comments or opinions. |
| ELA8LSV1.g | Offers own opinion forcefully without domineering. |
| ELA8LSV1.h | Responds appropriately to comments and questions |
| ELA8LSV1.i | Volunteers contributions and responds when directly solicited by teacher Or discussion leader. |
| ELA8LSV1.j | Gives reasons in support of opinions expressed. |
| ELA8LSV1.k | Clarifies, illustrates, or expands on a response when asked to do so. |
| ELA8LSV1.l | Employs a group decision-making technique such as brainstorming or a problem-solving sequence (e.g., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution). |
| ELA8LSV1.m | Develops a plan of action or agenda for written and/or verbal follow-up. |
| ELA8LSV2.1 | When responding to visual and oral texts and media (e.g., television, radio, film productions, and electronic media) |
| ELA8LSV2.1a | Interprets and evaluates the various ways in which visual image makers |
| ELA8LSV2.1b | Analyzes oral communication by paraphrasing a speaker's purpose and Point of view, and asks relevant questions concerning the speaker's content, delivery, and purpose. |
| ELA8LSV2.2 | When delivering and responding to presentations |

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| ELA8LSV2.2a | Gives oral presentations or dramatic interpretations for various purposes. |
| ELA8LSV2.2b | Organizes information (e.g., message, vocabulary) to achieve particular Purposes and to appeal to the background and interests of the audience. |
| ELA8LSV2.2c | Shows appropriate changes in delivery (e.g., gestures, expression, tone, pace, visuals). |
| ELA8LSV2.2d | Uses language for dramatic effect. |
| ELA8LSV2.2e | Uses rubrics as assessment tools. |
| ELA8LSV2.2f | Responds to oral communications with questions, challenges, or affirmations. |
| ELA8LSV2.2g | Uses multimedia for presentations. |
| S8CS1 | Students will explore the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works. |
| S8CS1.a | Understand the importance of—and keep—honest, clear, and accurate records in science. |
| S8CS1.b | Understand that hypotheses can be valuable even if they turn out not to be completely accurate. |
| S8CS2 | Students will use standard safety practices for all classroom laboratory and field investigations. |
| S8CS2.a | Follow correct procedures for use of scientific apparatus. |
| S8CS2.b | Demonstrate appropriate techniques in all laboratory situations. |
| S8CS2.c | Follow correct protocol for identifying and reporting safety problems and violations. |
| S8CS3 | Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations. |
| S8CS3.a | Analyze scientific data by using, interpreting, and comparing numbers in several equivalent forms, such as integers, fractions, decimals, and percents. |
| S8CS3.b | Find the mean, median, and mode and use them to analyze a set of scientific data. |
| S8CS3.c | Apply the metric system to scientific investigations that include metric to metric conversions (i.e., centimeters to meters). |
| S8CS3.d | Decide what degree of precision is adequate, and round off appropriately. |
| S8CS3.e | Address the relationship between accuracy and precision. |
| S8CS3.f | Use ratios and proportions, including constant rates, in appropriate problems. |
| S8CS4 | Students will use tools and instruments for observing, measuring, and manipulating equipment and materials in scientific activities utilizing safe laboratory procedures. |
| S8CS4.a | Use appropriate technology to store and retrieve scientific information in topical, alphabetical, numerical, and keyword files, and create simple files. |
| S8CS4.b | Use appropriate tools and units for measuring objects and/or substances. |
| S8CS4.c | Learn and use standard safety practices when conducting scientific investigations. |

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| S8CS5 | Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters. |
| S8CS5.a | Observe and explain how parts can be related to other parts in a system such as the role of simple machines in complex machines. |
| S8CS5.b | Understand that different models (such as physical replicas, pictures, and analogies) can be used to represent the same thing. |
| S8CS6 | Students will communicate scientific ideas and activities clearly |
| S8CS6.a | Write clear, step-by-step instructions for conducting scientific investigations, operating a piece of equipment, or following a procedure. |
| S8CS6.b | Write for scientific purposes incorporating information from a circle, bar, or line graph, data tables, diagrams, and symbols. |
| S8CS6.c | Organize scientific information in appropriate tables, charts, and graphs, and identify relationships they reveal. |
| S8CS7 | Students will question scientific claims and arguments effectively. |
| S8CS7.a | Question claims based on vague attributions (such as "Leading doctors say...") or on statements made by people outside the area of their particular expertise. |
| S8CS7.b | Identify the flaws of reasoning in arguments that are based on poorly designed research (e.g., facts intermingled with opinion, conclusions based on insufficient evidence). |
| S8CS7.c | Question the value of arguments based on small samples of data, biased samples, or samples for which there was no control. |
| S8CS7.d | Recognize that there may be more than one way to interpret a given set of findings. |
| S8CS8 | Students will be familiar with the characteristics of scientific knowledge and how it is achieved. |
| S8CS8.a | When similar investigations give different results, the scientific challenge is to judge whether the differences are trivial or significant, which often requires further study. |
| S8CS8.b | *When new experimental results are inconsistent with an existing, well-established theory, scientists may pursue further experimentation to determine whether the results are flawed or the theory requires modification. |
| S8CS9 | Students will understand the features of the process of scientific inquiry |
| S8CS9.a | Student will apply the following: Investigations are conducted for different reasons, which include exploring new phenomena, confirming previous results, testing how well a theory predicts, and comparing different theories. |
| S8CS9.b | Scientific investigations usually involve collecting evidence, reasoning, devising hypotheses, and formulating explanations to make sense of collected evidence. |
| S8CS9.c | Scientific experiments investigate the effect of one variable on another. All other variables are kept constant. |
| S8CS9.d | Scientists often collaborate to design research. To prevent this bias, scientists conduct independent studies of the same questions. |

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| S8CS9.e | Accurate record keeping, data sharing, and replication of results are essential for maintaining an investigator's credibility with other scientists and society. |
| S8CS9.f | Scientists use technology and mathematics to enhance the process of scientific inquiry. |
| S8CS9.g | The ethics of science require that special care must be taken and used for human subjects and animals in scientific research. Scientists must adhere to the appropriate rules and guidelines when conducting research. |
| S8CS10 | Students will enhance reading in all curriculum areas |
| S8CS10.ai | Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas. |
| S8CS10.aii | Read both informational and fictional texts in a variety of genres and modes of discourse. |
| S8CS10.aiii | Read technical texts related to various subject areas. |
| S8CS10.bi | Discuss messages and themes from books in all subject areas. |
| S8CS10.bii | Respond to a variety of texts in multiple modes of discourse. |
| S8CS10.biii | Relate messages and themes from one subject area to messages and themes in another area. |
| S8CS10.bvi | Evaluate the merit of texts in every subject discipline. |
| S8CS10.bv | Examine author's purpose in writing. |
| S8CS10.bvi | Examine author's purpose in writing. |
| S8CS10.ci | Demonstrate an understanding of contextual vocabulary in various subjects. |
| S8CS10.cii | Use content vocabulary in writing and speaking. |
| S8CS10.ciii | Explore understanding of new words found in subject area texts. |
| S8CS10.di | Explore life experiences related to subject area content. |
| S8CS10.dii | Discuss in both writing and speaking how certain words are subject area related. |
| S8CS10.diii | Determine strategies for finding content and contextual meaning for unknown words. |
| S8P1 | Students will examine the scientific view of the nature of matter. |
| S8P1.a | Distinguish between atoms and molecules. |
| S8P1.b | Describe the difference between pure substances (elements and compounds) and mixtures. |
| S8P1.c | Describe the movement of particles in solids, liquids, gases, and plasmas states. |
| S8P1.d | Distinguish between physical and chemical properties of matter as physical (i.e., density, melting point, boiling point) or chemical (i.e., reactivity, combustibility). |
| S8P1.e | Distinguish between changes in matter as physical (i.e., physical change) or chemical (development of a gas, formation of precipitate, and change in color). |
| S8P1.f | Recognize that there are more than 100 elements and some have similar properties as shown on the Periodic Table of Elements. |

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| S8P1.g | Identify and demonstrate the Law of Conservation of Matter. |
| S8P2 | Students will be familiar with the forms and transformations of energy. |
| S8P2.a | Explain energy transformation in terms of the Law of Conservation of Energy. |
| S8P2.b | Explain the relationship between potential and kinetic energy. |
| S8P2.c | Compare and contrast the different forms of energy (heat, light, electricity, mechanical motion, sound) and their characteristics. |
| S8P2.d | Describe how heat can be transferred through matter by the collisions of atoms (conduction) or through space (radiation). In a liquid or gas, currents will facilitate the transfer of heat (convection). |
| S8P3 | Students will investigate relationship between force, mass, and the motion of objects. |
| S8P3.a | Determine the relationship between velocity and acceleration. |
| S8P3.b | Demonstrate the effect of balanced and unbalanced forces on an object in terms of gravity, inertia, and friction. |
| S8P3.c | Demonstrate the effect of simple machines (lever, inclined plane, pulley, wedge, screw, and wheel and axle) on work. |
| S8P4 | Students will explore the wave nature of sound and electromagnetic radiation. |
| S8P4.a | Identify the characteristics of electromagnetic and mechanical waves. |
| S8P4.b | Describe how the behavior of light waves is manipulated causing reflection, refraction diffraction, and absorption. |
| S8P4.c | Explain how the human eye sees objects and colors in terms of wavelengths. |
| S8P4.d | Describe how the behavior of waves is affected by medium (such as air, water, solids). |
| S8P4.e | Relate the properties of sound to everyday experiences. |
| S8P4.f | Diagram the parts of the wave and explain how the parts are affected by changes in amplitude and pitch. |
| S8P5 | Students will recognize characteristics of gravity, electricity, and magnetism as major kinds of forces acting in nature. |
| S8P5.a | Recognize that every object exerts gravitational force on every other object and that the force exerted depends on how much mass the objects have and how far apart they are. |
| S8P5.b | Demonstrate the advantages and disadvantages of series and parallel circuits and how they transfer energy. |
| S8P5.c | Investigate and explain that electric currents and magnets can exert force on each other. |
| SS8H1 | The student will evaluate the development of Native American cultures and the impact of European exploration and settlement on the Native American cultures in Georgia. |
| SS8H1.a | Describe the evolution of Native American cultures (Paleo, Archaic, Woodland, and Mississippian) prior to European contact. |
| SS8H1.b | Evaluate the impact of European contact on Native American cultures; include Spanish missions along the barrier islands, and the explorations |

of Hernando DeSoto.

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| SS8H1.c | Explain reasons for European exploration and settlement of North America, with emphasis on the interests of the French, Spanish, and British in the southeastern area. |
| SS8H2 | The student will analyze the colonial period of Georgia's history. |
| SS8H2.a | Explain the importance of James Oglethorpe, the Charter of 1732, reasons for settlement (charity, economics, and defense), Tomochichi, Mary Musgrove, and the city of Savannah. |
| SS8H2.b | Evaluate the Trustee Period of Georgia's colonial history, emphasizing the role of the Salzburgers, Highland Scots, malcontents, and the Spanish threat from Florida. |
| SS8H2.c | Explain the development of Georgia as a royal colony with regard to land ownership, slavery, government, and the impact of the royal governors. |
| SS8H3 | The student will analyze the role of Georgia in the American Revolution |
| SS8H3.a | Explain the immediate and long-term causes of the American Revolution and their impact on Georgia; include the French and Indian War (i.e., Seven Years War), Proclamation of 1763, Stamp Act, Intolerable Acts, and the Declaration of Independence. |
| SS8H3.b | Analyze the significance of people and events in Georgia on the Revolutionary War; include Loyalists, patriots, Elijah Clarke, Austin Dabney, Nancy Hart, Button Gwinnett, Lyman Hall, George Walton, Battle of Kettle Creek, and siege of Savannah |
| SS8H4 | The student will describe the impact of events that led to the ratification of the United States Constitution and the Bill of Rights. |
| SS8H4.a | Analyze the strengths and weaknesses of both the Georgia Constitution of 1777 and the Articles of Confederation and explain how weaknesses in the Articles of Confederation led to a need to revise the Articles. |
| SS8H4.b | Describe the role of Georgia at the Constitutional Convention of 1787; include the role of Abraham Baldwin and William Few, and reasons why Georgia ratified the new constitution. |
| SS8H5 | The student will explain significant factors that affected the development of Georgia as part of the growth of the United States between 1789 and 1840. |
| SS8H5.a | Explain the establishment of the University of Georgia, Louisville, and the spread of Baptist and Methodist churches. |
| SS8H5.b | Evaluate the impact of land policies pursued by Georgia; include the headright system, land lotteries, and the Yazoo land fraud. |
| SS8H5.c | Explain how technological developments, including the cotton gin and railroads, had an impact on Georgia's growth. |
| SS8H5.d | Analyze the events that led to the removal of Creeks and Cherokees; include the roles of Alexander McGillivray, William McIntosh, Sequoyah, John Ross, Dahlonega Gold Rush, Worcester v. Georgia, Andrew Jackson, John Marshall, and the Trail of Tears. |
| SS8H6 | The student will analyze the impact of the Civil War and Reconstruction |

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|          | on Georgia.                                                                                                                                                                                                                                                                            |
| SS8H6.a  | Explain the importance of key issues and events that led to the Civil War; include slavery, states' rights, nullification, Missouri Compromise, Compromise of 1850 and the Georgia Platform, Kansas-Nebraska Act, Dred Scott case, election of 1860, the debate                         |
| SS8H6.b  | State the importance of key events of the Civil War; include Antietam, Emancipation Proclamation, Gettysburg, Chickamauga, the Union blockade of Georgia's coast, Sherman's Atlanta Campaign, Sherman's March to the Sea, and Andersonville.                                             |
| SS8H6.c  | Analyze the impact of Reconstruction on Georgia and other southern states, emphasizing Freedmen's Bureau; sharecropping and tenant farming; Reconstruction plans; 13th, 14th, and 15th amendments to the constitution; Henry McNeal Turner and black legislator                         |
| SS8H7    | The student will evaluate key political, social, and economic changes that occurred in Georgia between 1877 and 1918.                                                                                                                                                                   |
| SS8H7.a  | evaluate the impact the Bourbon Triumvirate, Henry Grady, International Cotton Exposition, Tom Watson and the Populists, Rebecca Latimer Felton, the 1906 Atlanta Riot, the Leo Frank Case, and the county unit system had on Georgia during this period.                                 |
| SS8H7.b  | Analyze how rights were denied to African-Americans through Jim Crow laws, Plessy v. Ferguson, disenfranchisement, and racial violence.                                                                                                                                                 |
| SS8H7.c  | Explain the roles of Booker T. Washington, W. E. B. DuBois, John and Lugenia Burns Hope, and Alonzo Herndon.                                                                                                                                                                            |
| SS8H7.d  | Give reasons for World War I and describe Georgia's contributions.                                                                                                                                                                                                                     |
| SS8H8    | The student will analyze the important events that occurred after World War I and their impact on Georgia.                                                                                                                                                                              |
| SS8H8.a  | Describe the impact of the boll weevil and drought on Georgia.                                                                                                                                                                                                                          |
| SS8H8.b  | Explain economic factors that resulted in the Great Depression.                                                                                                                                                                                                                        |
| SS8H8.c  | Discuss the impact of the political career of Eugene Talmadge.                                                                                                                                                                                                                          |
| SS8H8.d  | Discuss the effect of the New Deal in terms of the impact of the Civilian Conservation Corps, Agricultural Adjustment Act, rural electrification, and Social Security                                                                                                                    |
| SS8H9    | The student will describe the impact of World War II on Georgia's development economically, socially, and politically.                                                                                                                                                                  |
| SS8H9.a  | Describe the impact of events leading up to American involvement in World War II; include Lend-Lease and the bombing of Pearl Harbor.                                                                                                                                                   |
| SS8H9.b  | Evaluate the importance of Bell Aircraft, military bases, the Savannah and Brunswick shipyards, Richard Russell, and Carl Vinson.                                                                                                                                                       |
| SS8H9.c  | Explain the impact of the Holocaust on Georgians                                                                                                                                                                                                                                       |
| SS8H9.d  | Discuss the ties to Georgia that President Roosevelt had and his impact on the state.                                                                                                                                                                                                   |
| SS8H10   | The student will evaluate key post-World War II developments of Georgia from 1945 to 1970.                                                                                                                                                                                              |
| SS8H10.a | Analyze the impact of the transformation of agriculture on Georgia's growth.                                                                                                                                                                                                            |

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| SS8H10.b | Explain how the development of Atlanta, including the roles of mayors William B. Hartsfield and Ivan Allen, Jr., and major league sports, contributed to the growth of Georgia. |
| SS8H10.c | Discuss the impact of Ellis Arnall. |
| SS8H11 | The student will evaluate the role of Georgia in the modern civil rights movement. |
| SS8H11.a | Describe major developments in civil rights and Georgia's role during the 1940s and 1950s; include the roles of Herman Talmadge, Benjamin Mays, the 1946 governor's race and the end of the white primary, Brown v. Board of Education, Martin Luther King, Jr. |
| SS8H11.b | Analyze the role Georgia and prominent Georgians played in the Civil Rights Movement of the 1960s and 1970s; |
| SS8H11.c | Discuss the impact of Andrew Young on Georgia. |
| SS8H12 | The student will explain the importance of significant social, economic, and political developments in Georgia since 1970. |
| SS8H12.a | Evaluate the consequences of the end of the county unit system and reapportionment |
| SS8H12.b | Describe the role of Jimmy Carter in Georgia as state senator, governor, president, and past president. |
| SS8H12.c | Analyze the impact of the rise of the two-party system in Georgia. |
| SS8H12.d | Evaluate the effect of the 1996 Olympic Games on Georgia. |
| SS8H12.e | Evaluate the importance of new immigrant communities to the growth and economy of Georgia. |
| SS8G1 | The student will describe Georgia with regard to physical features and location. |
| SS8G1.a | Locate Georgia in relation to region, nation, continent, and hemispheres |
| SS8G1.b | Describe the five geographic regions of Georgia; include the Blue Ridge Mountains, Valley and Ridge, Appalachian Plateau, Piedmont, and Coastal Plain. |
| SS8G1.c | Locate and evaluate the importance of key physical features on the development of Georgia; include the Fall Line, Okefenokee Swamp, Appalachian Mountains, Chattahoochee and Savannah Rivers, and barrier islands. |
| SS8G1.d | Evaluate the impact of climate on Georgia's development. |
| SS8G2 | The student will explain how the Interstate Highway System, Hartsfield-Jackson International Airport, and Georgia's deepwater ports help drive the state's economy. |
| SS8G2.a | Explain how the three transportation systems interact to provide domestic and international goods to the people of Georgia. |
| SS8G2.b | Explain how the three transportation systems interact to provide producers and service providers in Georgia with national and international markets. |
| SS8G2.c | Explain how the three transportation systems provide jobs for Georgians |
| SS8CG1 | The student will describe the role of citizens under Georgia's constitution. |

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| SS8CG1.a | Explain the basic structure of the Georgia state constitution. |
| SS8CG1.b | Explain the concepts of separation of powers and checks and balances. |
| SS8CG1.c | Describe the rights and responsibilities of citizens. |
| SS8CG1.d | Explain voting requirements and elections in Georgia |
| SS8CG1.e | Explain the role of political parties in government. |
| SS8CG2 | The student will analyze the role of the legislative branch in Georgia state government. |
| SS8CG2.a | Explain the qualifications, term, election, and duties of members of the General Assembly. |
| SS8CG2.b | Describe the organization of the General Assembly, with emphasis on leadership and the committee system. |
| SS8CG2.c | Trace the steps in the legislative process for a bill to become a law in Georgia. |
| SS8CG3 | The student will analyze the role of the executive branch in Georgia state government. |
| SS8CG3.a | Explain the qualifications, term, election, and duties of the governor and lieutenant governor. |
| SS8CG3.b | Describe the organization of the executive branch, with emphasis on major policy areas of state programs. |
| SS8CG4 | The student will analyze the role of the judicial branch in Georgia state government. |
| SS8CG4.a | Explain the structure of the court system in Georgia including trial and appellate procedures and how judges are selected. |
| SS8CG4.b | Explain the difference between criminal law and civil law. |
| SS8CG4.c | Describe the adult justice system, emphasizing the different jurisdictions, terminology, and steps in the criminal justice process. |
| SS8CG4.d | Describe ways to avoid trouble and settle disputes peacefully. |
| SS8CG5 | The student will analyze the role of local governments in the state of Georgia. |
| SS8CG5.a | Explain the origins, functions, purposes, and differences of county and city governments in Georgia. |
| SS8CG5.b | Compare and contrast the weak mayor-council, the strong mayor-council, and the council-manager forms of city government. |
| SS8CG5.c | Describe the functions of special-purpose governments. |
| SS8CG6 | The student will explain how the Georgia court system treats juvenile offenders. |
| SS8CG6.a | Explain the difference between delinquent behavior and unruly behavior and the consequences of each |
| SS8CG6.b | Describe the rights of juveniles when taken into custody. |
| SS8CG6.c | Describe the juvenile justice system, emphasizing the different jurisdictions, terminology, and steps in the juvenile justice process. |
| SS8CG6.d | Explain the seven delinquent behaviors that can subject juvenile offenders to the adult criminal process, how the decision to transfer to adult court is made, and the possible consequences. |
| SS8E1 | The student will give examples of the kinds of goods and services |

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| | produced in Georgia in different historical periods. |
| SS8E2 | The student will explain the benefits of free trade. |
| SS8E2.a | Describe how Georgians have engaged in trade in different historical time periods |
| SS8E2.b | Explain Georgia's role in world trade today. |
| SS8E3 | The student will evaluate the influence of Georgia's economic growth and development. |
| SS8E3.a | Define profit and describe how profit is an incentive for entrepreneurs. |
| SS8E3.b | Explain how entrepreneurs take risks to develop new goods and services to start a business. |
| SS8E3.c | Evaluate the importance of entrepreneurs in Georgia who developed such enterprises as Coca-Cola, Delta Airlines, Georgia-Pacific, and Home Depot. |
| SS8E4 | The student will identify revenue sources and services provided by state and local governments. |
| SS8E4.a | Trace sources of state revenue such as sales taxes, federal grants, personal income taxes, and property taxes. |
| SS8E4.b | Explain the distribution of state revenue to provide services. |
| SS8E4.c | Evaluate how choices are made given the limited revenues of state and local governments. |
| SS8E5 | The student will explain personal money management choices in terms of income, spending, credit, saving, and investing. |
| SS8RC1 | Students will enhance reading in all curriculum areas |
| SS8RC1.ai | Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas. |
| SS8RC1.aii | Read both informational and fictional texts in a variety of genres and modes of discourse. |
| SS8RC1.aiii | Read technical texts related to various subject areas. |
| SS8RC1.bi | Discuss messages and themes from books in all subject areas. |
| SS8RC1.bii | Respond to a variety of texts in multiple modes of discourse. |
| SS8RC1.biii | Relate messages and themes from one subject area to messages and themes in another area. |
| SS8RC1.biv | Evaluate the merit of texts in every subject discipline. |
| SS8RC1.bv | Examine author's purpose in writing. |
| SS8RC1.bvi | Recognize the features of disciplinary texts |
| SS8RC1.ci | Demonstrate an understanding of contextual vocabulary in various subjects. |
| SS8RC1.cii | Use content vocabulary in writing and speaking. |
| SS8RC1.ciii | Explore understanding of new words found in subject area texts. |
| SS8RC1.di | Explore life experiences related to subject area content |
| SS8RC1.dii | Discuss in both writing and speaking how certain words are subject area related. |
| SS8RC1.diii | Determine strategies for finding content and contextual meaning for unknown words |
| SS8MG01 | use cardinal directions |

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| SS8MG02 | use intermediate directions |
| SS8MG03 | use a letter/number grid system to determine location |
| SS8MG04 | compare and contrast the categories of natural, cultural, and political features found on maps |
| SS8MG05 | use inch to inch map scale to determine distance on map |
| SS8MG06 | use map key/legend to acquire information from, historical, physical, political, resource, product and economic maps |
| SS8MG07 | use map key/legend to acquire information from, historical, physical, political, resource, product and economic maps |
| SS8MG08 | draw conclusions and make generalizations based on information from maps |
| SS8MG09 | use latitude and longitude to determine location |
| SS8MG10 | use graphic scales to determine distances on a map |
| SS8MG11 | compare maps of the same place at different points in time and from different perspectives to determine changes, identify trends, and generalize about human activities |
| SS8MG12 | compare maps with data sets (charts, tables, graphs) and /or readings to draw conclusions and make generalizations |
| SS8IPS01 | compare similarities and differences |
| SS8IPS02 | organize items chronologically |
| SS8IPS03 | identify issues and or problems and alternative solutions |
| SS8IPS04 | distinguish between fact and opinion |
| SS8IPS05 | identify main idea, detail, sequence of events, and cause and effect in a social studies context |
| SS8IPS06 | identify and use primary and secondary sources |
| SS8IPS07 | interpret timelines |
| SS8IPS08 | indentify social studies reference resources to use for a specific purpose |
| SS8IPS09 | construct charts and tables |
| SS8IPS10 | analyze artifacts |
| SS8IPS11 | draw conclusion and make generalizations |
| SS8IPS12 | analyze graphs and diagrams |
| SS8IPS13 | translate dates into centuries eras, or ages |
| SS8IPS14 | formulate appropriate research questions |
| SS8IPS15 | determine adequacy and or relevancy of information |
| SS8IPS16 | check for consistency of information |
| SS8IPS17 | interpret political cartoons |
| M8N1 | Students will understand different representations of numbers including square roots, exponents, and scientific notation. |
| M8N1.a | Find square roots of perfect squares. |
| M8N1.b | Recognize the (positive) square root of a number as a length of a side of a square with a given area. |
| M8N1.c | Recognize square roots as points and as lengths on a number line. |
| M8N1.d | Understand that the square root of 0 is 0 and that every positive number has two square roots that are opposite in sign. |
| M8N1.e | Recognize and use the radical symbol to denote the positive square root |

|         |                                                                                              |
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|         | of a positive number.                                                                        |
| M8N1.f  | Estimate square roots of positive numbers.                                                   |
| M8N1.g  | Simplify, add, subtract, multiply, and divide expressions containing square roots.           |
| M8N1.h  | Distinguish between rational and irrational numbers.                                         |
| M8N1.i  | Simplify expressions containing integer exponents.                                           |
| M8N1.j  | Express and use numbers in scientific notation.                                              |
| M8N1.k  | Use appropriate technologies to solve problems involving square roots, exponents, and scientific notation. |
| M8G1    | Students will understand and apply the properties of parallel and perpendicular lines and understand the meaning of congruence. |
| M8G1.a  | Investigate characteristics of parallel and perpendicular lines both algebraically and geometrically. |
| M8G1.b  | Apply properties of angle pairs formed by parallel lines cut by a transversal.               |
| M8G1.c  | Understand the properties of the ratio of segments of parallel lines cut by one or more transversals. |
| M8G1.d  | Understand the meaning of congruence: that all corresponding angles are congruent and all corresponding sides are congruent. |
| M8G2    | Students will understand and use the Pythagorean theorem.                                    |
| M8G2.a  | Apply properties of right triangles, including the Pythagorean theorem.                      |
| M8G2.b  | Recognize and interpret the Pythagorean theorem as a statement about areas of squares on the sides of a right triangle. |
| M8A1    | Students will use algebra to represent, analyze, and solve problems                          |
| M8A1.a  | Represent a given situation using algebraic expressions or equations in one                  |
| M8A1.b  | Simplify and evaluate algebraic expressions.                                                 |
| M8A1.c  | Solve algebraic equations in one variable, including equations involving absolute values     |
| M8A1.d  | Solve equations involving several variables for one variable in terms of the others.         |
| M8A1.e  | Interpret solutions in problem contexts.                                                     |
| M8A2    | Students will understand and graph inequalities in one variable.                             |
| M8A2.a  | Represent a given situation using an inequality in one variable.                             |
| M8A2.b  | Use the properties of inequality to solve inequalities.                                      |
| M8A2.c  | Graph the solution of an inequality on a number line.                                        |
| M8A2.d  | Interpret solutions in problem contexts.                                                     |
| M8A3    | Students will understand relations and linear functions.                                     |
| M8A3.a  | Recognize a relation as a correspondence between varying quantities.                         |
| M8A3.b  | Recognize a function as a correspondence between inputs and outputs where the output for each input must be unique. |
| M8A3.c  | Distinguish between relations that are functions and those that are not functions.           |
| M8A3.d  | Recognize functions in a variety of representations and a variety of contexts.               |

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| M8A3.e | Use tables to describe sequences recursively and with a formula in closed |
| M8A3.f | Understand and recognize arithmetic sequences as linear functions with Whole number input values. |
| M8A3.g | Interpret the constant difference in an arithmetic sequence as the slope of the associated linear function. |
| M8A3.h | Identify relations and functions as linear or nonlinear. |
| M8A3.i | Translate among verbal, tabular, graphic, and algebraic representations of functions. |
| M8A4 | Students will graph and analyze graphs of linear equations and inequalitites. |
| M8A4.a | Interpret slope as a rate of change. |
| M8A4.b | Determine the meaning of the slope and y-intercept in a given situation. |
| M8A4.c | Graph equations of the form y = mx + b. |
| M8A4.d | Graph equations of the form ax + by = c. |
| M8A4.e | Graph the solution set of a linear inequality, identifying whether the solution set is an open or a closed half-plane. |
| M8A4.f | Determine the equation of a line given a graph, numerical information that defines the line or a context involving a linear relationship. |
| M8A4.g | Solve problems involving linear relationships |
| M8A5 | Students will understand systems of linear equations and inequalities and use them to solve problems. |
| M8A5.a | Given a problem context, write an appropriate system of linear equations or inequalities |
| M8A5.b | Solve systems of equations graphically and algebraically, using technology as appropriate. |
| M8A5.c | Graph the solution set of a system of linear inequalities in two variables |
| M8A5.d | Interpret solutions in problem contexts |
| M8D1 | Students will apply basic concepts of set theory. |
| M8D1.a | Demonstrate relationships among sets through use of Venn diagrams |
| M8D1.b | Determine subsets, complements, intersection, and union of sets. |
| M8D1.c | Use set notation to denote elements of a set. |
| M8D2 | Students will determine the number of outcomes related to a given event. |
| M8D2.a | Use tree diagrams to find the number of outcomes. |
| M8D2.b | Apply the addition and multiplication principles of counting. |
| M8D3 | Students will use the basic laws of probability |
| M8D3.a | Find the probability of simple independent events. |
| M8D3.b | Find the probability of compound independent events. |
| M8D4 | Students will organize, interpret, and make inferences from statistical data |
| M8D4.a | Gather data that can be modeled with a linear function. |
| M8D4.b | Estimate and determine a line of best fit from a scatter plot. |
| M8P1 | Students will solve problems (using appropriate technology) |
| M8P1.a | Build new mathematical knowledge through problem solving. |
| M8P1.b | Solve problems that arise in mathematics and in other contexts |

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| M8P1.c | Apply and adapt a variety of appropriate strategies to solve problems |
| M8P1.d | Monitor and reflect on the process of mathematical problem solving. |
| M8P2 | Students will reason and evaluate mathematical arguments. |
| M8P2.a | Recognize reasoning and proof as fundamental aspects of mathematics |
| M8P2.b | Make and investigate mathematical conjectures. |
| M8P2.c | Develop and evaluate mathematical arguments and proofs. |
| M8P2.d | Select and use various types of reasoning and methods of proof. |
| M8P3 | Students will communicate mathematically. |
| M8P3.a | Organize and consolidate their mathematical thinking through communication |
| M8P3.b | Communicate their mathematical thinking coherently and clearly to peers, teachers, and others. |
| M8P3.c | Analyze and evaluate the mathematical thinking and strategies of others. |
| M8P3.d | Use the language of mathematics to express mathematical ideas precisely. |
| M8P4 | Students will make connections among mathematical ideas and to other disciplines. |
| M8P4.a | Recognize and use connections among mathematical ideas. |
| M8P4.b | Understand how mathematical ideas interconnect and build on one another to produce a coherent whole. |
| M8P4.c | Recognize and apply mathematics in contexts outside of mathematics. |
| M8P5 | Students will represent mathematics in multiple ways. |
| M8P5.a | Create and use representations to organize, record, and communicate mathematical ideas. |
| M8P5.b | Select, apply, and translate among mathematical representations to solve problems. |
| M8P5.c | Use representations to model and interpret physical, social, and mathematical phenomena. |
| M8RC | Students will enhance reading in all curriculum areas |
| M8RC.ai | Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas |
| M8RC.aii | Read both informational and fictional texts in a variety of genres and modes of discourse |
| M8RC.aiii | Read technical texts related to various subject areas |
| M8RC.bi | Discuss messages and themes from books in all subject areas. |
| M8RC.bii | Respond to a variety of texts in multiple modes of discourse. |
| M8RC.biii | Relate messages and themes from one subject area to messages and themes in another area. |
| M8RC.biv | Evaluate the merit of texts in every subject discipline. |
| M8RC.bv | Examine author's purpose in writing |
| M8RC.bvi | Recognize the features of disciplinary texts |
| M8RC.ci | Demonstrate an understanding of contextual vocabulary in various subjects. |
| M8RC.cii | Use content vocabulary in writing and speaking. |

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| M8RC.ciii | Explore understanding of new words found in subject area texts. |
| M8RC.di | Explore life experiences related to subject area content. |
| M8RC.dii | Discuss in both writing and speaking how certain words are subject area related. |
| M8RC.diii | Determine strategies for finding content and contextual meaning for unknown words. |

*Note. Data retrieved from "GPS by Grade Level" by Georgia Department of Education,* 2009a.
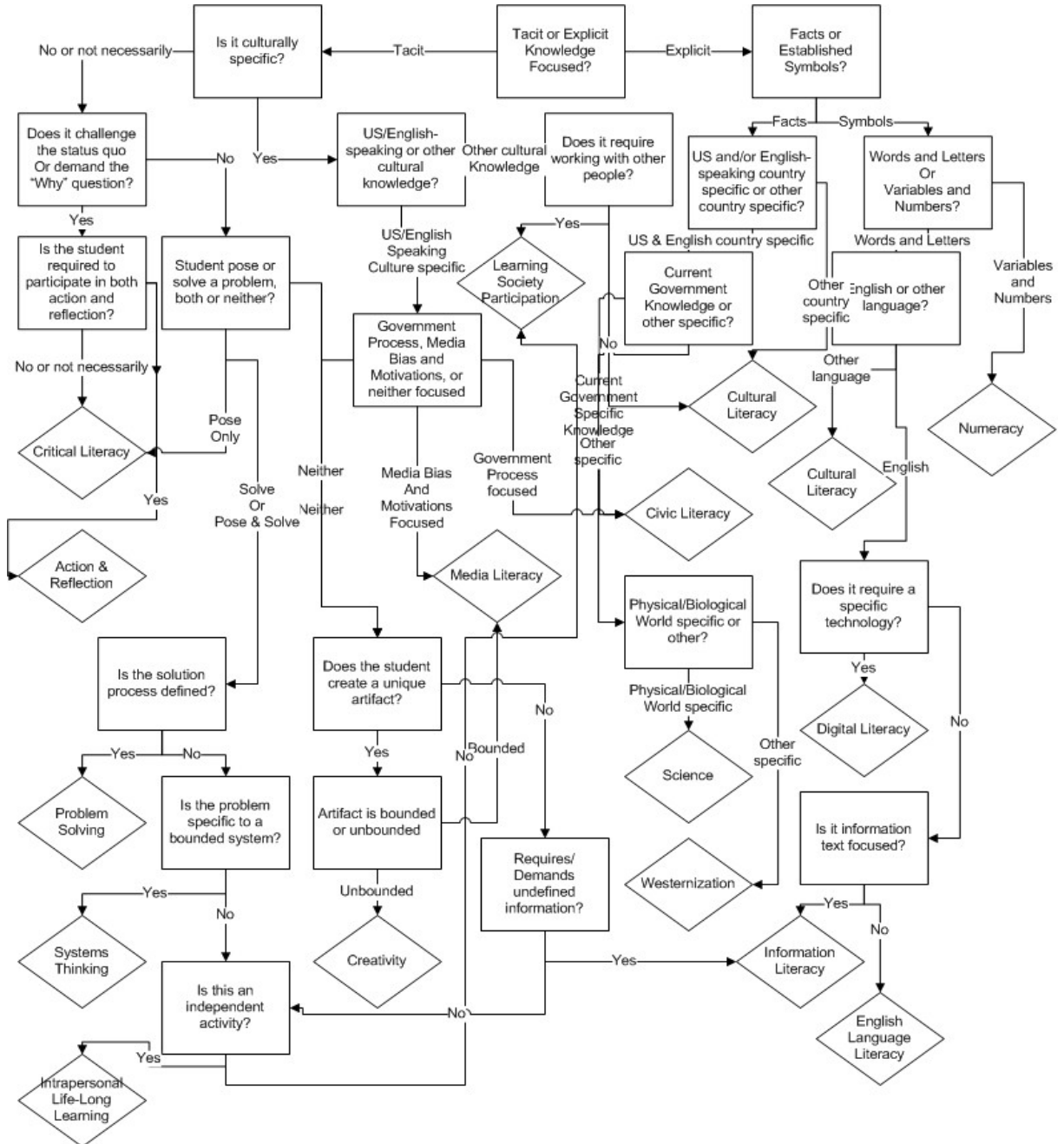
Decision Scheme

**Prospectus Codebook and Database Coding Form Screenshot**

This codebook is designed to help you, the coder, in the process of coding the eighth

grade GPS. You will find each variable as defined for this study in italics. You are to

refer only to these definitions while coding for this study. You may be aware of other

definitions of these words, but those do not apply to this study. In addition, you are to

code the GPS unites based on the instructions that follow. You may have previous

experience in research or coding but because each study is different you are to code only

according to these instructions.

Instructions:

7. At the top of the database code form, enter the metadata which includes your **Coder ID** and today's **Date**.
8. Read the recording unit provided on the database form in the field **GPS_element**. If you need clarity in understanding the recording unit you may refer to any other recording units which have the same **GPS_ID**, the alpha-numeric code, to the left of the decimal.
9. For each dependent variable defined below, read the levels of support. Judge which level best describes the recording unit according to that variable.
10. On the database form provided, use the drop-down arrow to select the level you judged to best describe the recording unit for each of the eighteen variables.
11. Be sure to make and record your judgments for all eighteen variables on the form.
12. When you are done, do not close any application. Notify the researcher and she will help you save your coding work and close the application.

**Codebook**

**Variable 1:** <u>Action and Reflection</u>
*learning activity which requires the learner to both reflect and act upon life situations specific to the learner*

> 2-Supports: the unit of analysis clearly supports action and reflection by requiring the learner to both reflect and act upon a life situation(s) specific to the learner.
>
> 1-Somewhat Supports: the unit of analysis somewhat supports action and reflection by requiring the learner to either reflect or act upon life situations specific to the learner; or the unit of analysis somewhat supports action and reflection by requiring the learner to both reflect and act upon a situation that is not specific to the learner.
>
> 0-Does Not Support or Hinders: the unit of analysis does not support action and reflection as defined.

**Variable 2:** <u>Civic Literacy</u>
*learning activity which promotes active participation in government through civic activities of decision-making and an understanding of the local and global implications of those decisions*

> 2-Supports: the unit of analysis clearly supports civic literacy by requiring the learner to actively participate in a form of government (student government, local government, national government, etc.) through activities of decision-making and develop an understanding of the local and global implications of those decisions.
>
> 1-Somewhat Supports: the unit of analysis somewhat supports civic literacy by requiring the learner to actively participate in a form of government (student government, local government, national government, etc.) through activities of decision-making but not necessarily develop an understanding of the local and global implications of those decisions; or the unit of analysis somewhat supports civic literacy by not requiring the learner to actively participate in a form of government (student government, local government, national government, etc.) through activities of decision-making but does develop an understanding of the local and global implications of others' decisions in government.
>
> 0-Does Not Support or Hinders: the unit of analysis does not support civic literacy as defined.

**Variable 3:** <u>Creativity</u>
*learning activity which promotes student originality of thought; requires interest of the student, challenge, artistic skills of all forms such as dance and drama, opportunity for choice, risk-taking, teamwork, autonomy, experimentation, and encouragement of perseverance*

> 2-Supports: the unit of analysis clearly supports creativity by requiring the learner to express originality of thought in an area of student-initiated interest; or unit of analysis clearly supports creativity by requiring learner use of artistic skills of one or more forms such as dance and drama unbounded by academic criteria; or unit

of analysis clearly supports creativity by requiring learner to make or experiment with risky choices individually or with other learners.

1-Somewhat Supports: the unit of analysis somewhat supports creativity by requiring the learner to express originality of thought in an area that is not student-initiated; or unit of analysis somewhat supports creativity by requiring learner use of artistic skills of one or more forms such as dance and drama bounded by academic criteria.

0-Does Not Support or Hinders: the unit of analysis does not support creativity as defined.

## Variable 4: <u>Critical Literacy</u>

*affective learning activity which promotes student deepening an attitude of awareness of situation; student poses personally and situationally relevant problems and why questions*

2-Supports: the unit of analysis clearly supports critical literacy by promoting the learner to deepen an attitude of awareness of situation by posing personally and situationally relevant problems and why questions.

1-Somewhat Supports: the unit of analysis somewhat supports critical literacy by promoting the learner to deepen an attitude of awareness of situation by posing interdisciplinary problems and why questions that are not personally or situationally relevant to the student.

0-Does Not Support or Hinders: the unit of analysis does not support critical literacy as defined.

## Variable 5: <u>Culturally Specific to US/English-Speaking Countries</u>

*learning content or activity containing culturally relevant knowledge of society in the United States or other English-speaking countries including but not limited by historical events, attitudes, values, arts, literature, and language*

2-Supports: the unit of analysis clearly supports learning which is culturally specific to the US and other English-speaking countries through content or activity containing culturally relevant knowledge of popular society in the United States or other English-speaking countries including but not limited by historical events, attitudes, values, arts, literature, and language; or the unit of analysis clearly supports learning which is culturally specific to the dominate groups in the US and other English-speaking countries through content or activity containing culturally relevant knowledge of society in the United States or other English-speaking countries and this knowledge is exclusive of, or includes in a negative tone, cultural knowledge relevant to non-English-speaking countries or minority groups within English-speaking countries.(Note to promote reliability: this content will be culturally relevant to white, Christian, English-speaking, middle and upper-class groups)

1-Somewhat Supports: the unit of analysis somewhat supports learning which is culturally typical of minority within the US and other English-speaking countries through content or activity containing culturally relevant knowledge of minority groups specific to society in the United States or other English-speaking countries

including but not limited by historical events, attitudes, values, arts, and language. (Note to promote reliability: this content may be culturally relevant to large minority groups within the US or other English-speaking countries including African-American, Latino-American, Asian-American, Native-American, etc.) 0-Does Not Support or Hinders: the unit of analysis does not support culturally relevant knowledge of society in the United States or other English-speaking countries as defined. (Note to promote reliability: this content cannot be determined to be culturally specific or includes multi-cultural knowledge which exists predominately outside of the US and other English-speaking countries including Chinese in China or non-English speaking countries, African in Africa or non-English speaking countries, etc.)

**Variable 6: <u>Digital Literacy</u>**
*learning activities which specify interaction with hard technologies in order to manipulate various software tools*

2-Supports: the unit of analysis clearly supports digital literacy by requiring the learner to interact with hard technologies in order to manipulate various software tools.

1-Somewhat Supports: the unit of analysis somewhat supports digital literacy by suggesting but not requiring the learner to interact with hard technologies in order to manipulate various software tools

0-Does Not Support or Hinders: the unit of analysis does not support digital literacy as defined.

**Variable 7: <u>English Language Literacy</u>**
*learning activity that encompasses reading, writing, and a variety of social and intellectual practices that call upon the voice as well as the eye and hand; specific to English language only*

2-Supports: the unit of analysis clearly supports English language literacy because it is learning activity has a primary focus on acquiring English-specific reading, writing, and/or a variety of social and intellectual practices that call upon the voice as well as the eye and hand.

1-Somewhat Supports: the unit of analysis somewhat supports English language literacy because it is learning activity that requires English-specific reading and/or writing but has a content focus outside of English Language learning.

0-Does Not Support or Hinders: the unit of analysis does not support English language literacy as defined.

**Variable 8: <u>Information Literacy</u>**
*learning activity which specifies student participate in identification of needed information, effective search for that information, judgment of the validity of information, synthesis of information, interpretation of information, and/or prioritization of information*

2-Supports: the unit of analysis clearly supports information literacy because it is specifically requires the learner to acquire/use/demonstrate one or more

information literacy skills including identification of needed information, effective search for information, judgment of validity of information, synthesis of information, interpretation of information, and prioritization of information.
1-Somewhat Supports: the unit of analysis somewhat supports information literacy because it is suggests, but does not require, the learner acquire/use/demonstrate one or more information literacy skills including identification of needed information, effective search for information, judgment of validity of information, synthesis of information, interpretation of information, and prioritization of information.
0-Does Not Support or Hinders: the unit of analysis does not support information literacy as defined.

**Variable 9: Interpersonal Participation in a Learning Society**
*learning activity that is cooperative or involves working in teams, communicating well with others, while generating and applying ideas together*

2-Supports: the unit of analysis clearly supports interpersonal participation in a learning society because it is specifically requires the learner to work with other learner(s), and specifies one or more of the following: communicating well with others; generating ideas together; and/or applying ideas together.
1-Somewhat Supports: the unit of analysis somewhat supports interpersonal participation in a learning society because it is specifically requires the learner to work with other learner(s), but does not specify any of the following: communicating well with others; generating ideas together; and/or applying ideas together.
0-Does Not Support or Hinders: the unit of analysis does not support interpersonal participation in a learning society as defined.

**Variable 10: Intrapersonal Skills of Life-Long Learning**
*learning activity which promotes skills of learning whether how to find learning opportunities or the ability to teach one's self throughout the duration of life; learning activity which specifies the demands of meta-cognitive awareness and strategies*

2-Supports: the unit of analysis clearly supports intrapersonal skills of life-long learning because it is specifically requires skills of learning how to find learning opportunities or the ability to teach one's self throughout the duration of life; or unit of analysis clearly supports intrapersonal skills of life-long learning because the learning activity specifies the demands of meta-cognitive awareness and/or strategies
1-Somewhat Supports: the unit of analysis somewhat supports intrapersonal skills of life-long learning because it is suggests but does not require skills of learning how to find learning opportunities or the ability to teach one's self throughout the duration of life; or unit of analysis somewhat supports intrapersonal skills of life-long learning because the learning activity suggests but does not require the demands of meta-cognitive awareness and/or strategies
0-Does Not Support or Hinders: the unit of analysis does not support intrapersonal skills of life-long learning as defined.

**Variable 11: <u>Media Literacy</u>**
*learning activity which promotes the creation and analytical interpretation of messages found in the media; media refers to mass media and popular media*

2-Supports: the unit of analysis clearly supports media literacy because it requires the creation and/or analytical interpretation of messages found in the media (Note to promote reliability: media in this context refers to mass media and popular media, although artistic media such as paint, pencil, chalk, piano, violin, etc. may be used, they are not focus of media literacy.)
1-Somewhat Supports: the unit of analysis somewhat supports media literacy because it suggests but does not require the creation and/or analytical interpretation of messages found in the media (Note to promote reliability: media in this context refers to mass media and popular media, although artistic media such as paint, pencil, chalk, piano, violin, etc. may be used, they are not focus of media literacy.)
0-Does Not Support or Hinders: the unit of analysis does not support media literacy as defined.

**Variable 12: <u>Numeracy</u>**
*learning activity which promotes student capability of quantitative thought and expression; learning activity which promotes student capability to think and reason mathematically and a useful base of mathematical knowledge and skills needed in any walk of life*

2-Supports: the unit of analysis clearly supports numeracy because it is learning activity has a primary focus on acquiring thinking and reasoning mathematically and/or a useful base of mathematical knowledge and skills needed in any walk of life; or unit of analysis clearly supports numeracy because it is learning activity which requires student quantitative thought and expression.
1-Somewhat Supports: the unit of analysis somewhat supports numeracy because it is learning activity that requires quantitative thought but not expression and has a content focus outside of Mathematics.
0-Does Not Support or Hinders: the unit of analysis does not support numeracy as defined.

**Variable 13: <u>Problem-Solving</u>**
*learning activity which promotes the student use of cognitive processes to confront and resolve real, cross-disciplinary situations where the solution is not immediately obvious, and where the literacy domains or curricular areas that might be applicable are not within a single domain of mathematics, science, or reading*

2-Supports: the unit of analysis clearly supports problem-solving because it requires student use of cognitive processes to confront and resolve real, cross-disciplinary situations where the solution is not immediately obvious, and where the literacy domains or curricular areas that might be applicable are not within a single domain of mathematics, science, or reading.

1-Somewhat Supports: the unit of analysis somewhat supports problem-solving because it requires student use of cognitive processes to confront and resolve problems where the solution is not immediately obvious but it is not obviously cross-disciplinary.

0-Does Not Support or Hinders: the unit of analysis does not support problem-solving as defined.

## Variable 14: <u>Science</u>

*learning activity where student acquires the body of knowledge related to the physical and biological world and with the processes of discovering and validating this knowledge in a positivistic manner*

2-Supports: the unit of analysis clearly supports science because it requires student acquisition of the body of knowledge related to the physical and biological world and/or with the processes of discovering and validating this science knowledge in a positivistic manner.

1-Somewhat Supports: the unit of analysis somewhat supports science because the content includes, but not focuses on, knowledge of the physical and biological world.

0-Does Not Support or Hinders: the unit of analysis does not support science as defined.

## Variable 15: <u>Systems Thinking</u>

*learning which involves synthetic thinking which is where the learner first views the entity as a whole made up by parts rather than parts that make up a whole; learning activity which involves emergence of new knowledge, involves expansionism which is where the learner knows ultimate understanding can never be reached, but should be sought, and teleology which is the act or awareness of individual will, choice, function, and purpose beyond immediate reward*

2-Supports: the unit of analysis clearly supports systems thinking because it requires synthetic thinking which is where the learner first views the entity as a whole made up by parts rather than parts that make up a whole; and/or the unit of analysis clearly supports systems thinking because it requires emergence of new knowledge; and/or the unit of analysis clearly supports systems thinking because it requires expansionistic thinking which is where the learner knows ultimate understanding can never be reached, but should be sought; and/or the unit of analysis clearly supports systems thinking because it requires teleology which is the act or awareness of individual will, choice, function, and purpose beyond immediate reward.

1-Somewhat Supports: the unit of analysis somewhat supports systems thinking because it suggests, but does not require, synthetic thinking which is where the learner first views the entity as a whole made up by parts rather than parts that make up a whole; and/or the unit of analysis somewhat supports systems thinking because it suggests, but does not require, emergence of new knowledge; and/or the unit of analysis somewhat supports systems thinking because it suggests, but does not require, expansionistic thinking which is where the learner knows

ultimate understanding can never be reached, but should be sought; and/or the unit of analysis somewhat supports systems thinking because it suggests, but does not require, teleology which is the act or awareness of individual will, choice, function, and purpose beyond immediate reward.
0-Does Not Support or Hinders: the unit of analysis does not support systems thinking as defined.

## Variable 16: Test Taking

*learning activity which promotes acquisition of tips, techniques and strategies to pass a test; knowing what to expect on the state test; testing confidence*

2-Supports: the unit of analysis clearly supports test-taking because it includes tips, techniques and/or strategies to pass a test; and/or the unit of analysis clearly supports test-taking because it explicitly states learners should expect to see the said content on the state test; and/or the unit of analysis clearly supports test-taking because it specifically promotes testing confidence.
1-Somewhat Supports: the unit of analysis somewhat supports test-taking because it includes content a student might expect on the state test.
0-Does Not Support or Hinders: the unit of analysis does not support test-taking as defined.

## Variable 17: Western Philosophies

*learning activity or content which promotes specific western ideologies including classical Greek philosophy, empiricism which is roughly the gaining of knowledge through sensory experience of phenomena, Judeo-Christianity, and scientific reductionism which is the focus beginning on the parts of a whole before investigating the whole*

2-Supports: the unit of analysis clearly supports western philosophies because the content includes specific western ideologies including classical Greek philosophy, empiricist activity which is the gaining of knowledge through sensory experience of phenomena, Judeo-Christian specific knowledge, and/or scientific reductionism which is the focus beginning on the parts of a whole before investigating the whole.
1-Somewhat Supports: the unit of analysis somewhat supports western philosophies because the learner must critically examine western ideologies including classical Greek philosophy, empiricist activity which is the gaining of knowledge through sensory experience of phenomena, Judeo-Christian specific knowledge, and/or scientific reductionism which is the focus beginning on the parts of a whole before investigating the whole. By critically examining western philosophies, it is unknown whether the learner will be influenced to adopt these philosophies.
0-Does Not Support or Hinders: the unit of analysis does not support western philosophies as defined.

**Database Coding Form Screenshot**