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Situating Texas' World Geography End-Of-Course Exam in the Ecosystem of American Geography Education

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Abstract

Educational policy in the United States is highly decentralized. While the federal government subsidizes education across the country, and despite federal initiatives such as the Common Core and the Partnership for Assessment of Readiness for College and Careers to establish national standards and assessments, most states maintain control over the daily affairs of education. Nowhere in the United States is this fact more pronounced than in Texas. The purpose of this paper is to situate Texas' assessment of geographic literacy in the ecosystem of American geography education. The research is driven by three fundamental questions: 1) Is Texas' World Geography End-of-Course (EOC) exam an accurate assessment of national geography standards?; 2) Does Texas' World Geography EOC assessment framework reflect the most prominent American assessment framework?; and 3) Is Texas' World Geography EOC exam a good model of large-scale summative assessment of geographic literacy? A content analysis of the second edition of *Geography for Life: National Geography Standards*, Texas' state geography standards, the National Assessment of Educational Progress in Geography, and Texas' World Geography assessment framework, combined with a review of 2012 student performance data and public reaction are used to answer the research questions. Findings indicate that Texas' World Geography EOC is an accurate and useful summative assessment of geographic literacy at the local scale, but that the assessment's ability to inform educational decision-making at the state level has not been realized.

Keywords: Geography education, national geography standards, summative assessment, Texas

Introduction

Educational policy in the United States is highly decentralized. While the federal government subsidizes education across the country, and despite federal initiatives to

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establish a Common Core of national standards and assessments, most states maintain control over the daily affairs of education. At the local scale policymakers are approaching the use of a common language of curriculum and assessment from different corners of the country, but have historically been so separated that they continue to grapple with a newfound move toward integration (DeBoer, 2012). Nowhere in the United States is this fact more pronounced than in Texas. With regard to geography education, Texas has been at the forefront of education policy; adapting national standards and assessment frameworks for local use. In an effort to explain this process, I adopt an ecological perspective to situate the State of Texas Assessments of Academic Readiness (STAAR) World Geography End-of-Course (EOC) exam in the context American geography education.

As any geographer will explain, an ecosystem is a complex of many variables, all functioning independently yet in concert, with complicated flows of energy and matter. "The key is to understand the linkages and interconnections within and between systems" (Christopherson, 2012, p. 556). The purpose of this paper is to situate Texas' assessment of geographic literacy in the ecosystem of American geography education. The research is driven by three fundamental questions: 1) Is Texas' World Geography EOC exam an accurate assessment of national geography standards?; 2) Does Texas' World Geography EOC assessment framework reflect the most prominent American assessment framework?; and 3) Is Texas' World Geography EOC exam a good model for large-scale summative assessment of geographic literacy?

Background

> *Educational assessment seeks to determine how well students are learning and is an integral part of the quest for improved education. It provides feedback to students, educators, parents, policy makers, and the public about the effectiveness of educational services…A vision for the future is that assessments at all levels—from classroom to state—will work together in a system that is comprehensive, coherent, and continuous. In such a system, assessments would provide a variety of evidence to support educational decision making. Assessment at all levels would be linked back to the same underlying model of student learning and would provide indications of student growth over time (National Research Council, 2001, pp. 1-2).*

Standards and Summative Assessment in American Geography Education

Over the last twenty years, the American geography education community has moved slowly toward the goal of integrating standards and assessment. As Stiggins and Chappuis (Chappuis, Stiggins, Arter, & Chappuis, 2005) state, "We can't dependably assess that which we have not defined" (pp.2). In 1984, a committee comprised of geographers representing the Association of American Geographers and the National Council for Geographic Education published the *Guidelines for Geographic Education* (1984). The *Guidelines* articulated the teacher-friendly "five fundamental themes in geography" and presented an inquiry method of skills development in geography. The *Guidelines* served as the cornerstone for standards development for ten years until the

publication of *Geography for Life: National Standards in Geography* (1994). At the turn of the 20th century, American geographers struggled to define the boundaries of geographic education research (Brown, 1997; Hanson, 2004). Meanwhile, education scholars such as Marzano (cited in Scherer, 2001, p. 4) advocated for "lean and mean standards that are specific and non-redundant." In the mid-1990s when the American standards movement was maturing, Darling-Hammond (Darling-Hammond, 1994) suggested that:

> *Standards are useful only to the extent that teachers can use them to build their own knowledge and understanding of what helps students learn…it is the process of using a set of images about teaching and learning to deepen one's own understanding and that of the teachers and students with whom we work that makes standards useful in any way (p.10).*

Throughout the 1990s, states implemented the new standards to various degrees (Anthematten, 2004; S. W. Bednarz, 2003; Black & William, 1998; Gandy & Kruger, 2004). In the late 1990s, the College Board developed an Advanced Placement Human Geography course complete with standards and assessments (Gray, Hildebrant, & Strauss, 2006). The publication of the second edition of *Geography for Life* (Heffron & Downs, 2012) represents a great leap forward toward Darling-Hammond's goal of making standards useful to teachers.

Like the first edition, the second edition of *Geography for Life* articulates curricular standards for what students should know and be able to do. The stated goal of the U.S. national geography standards is to enable students to become geographically informed through knowledge and mastery of three things: 1) factual knowledge; 2) mental maps and tools; and 3) ways of thinking (Heffron and Downs 2012, p.7). The desired outcome of *Geography for Life* is a geographically informed person who 1) applies spatial and ecological perspectives to life situations; 2) see meaning in the spatial arrangement of things; 3) see relations among people, places, and environments; and 4) uses geographic skills (Heffron and Downs 2012, p.9). Redesigned with practitioners in mind, the three-column publication, organized by grade level (K-4, 5-8 and 9-12) includes both knowledge statements and performance statements. Two of the original eighteen standards have been updated to reflect 21st century geographic thinking: the revised Standard 1, concerning the use of maps and other geographic representations, includes geospatial technologies and spatial thinking. The discussion of ecosystems in Standard 8 has been expanded to include biomes. Throughout the text, classroom vignettes offer teachers suggestions for doing geography (asking and answering geographic questions) in the classroom. The five themes of geography remain embedded in the "6 Essential Elements," which clearly articulate how geographic literacy is an important element for understanding the world.

With the evolution of standards like *Geography for Life* came the development of summative assessments. The roots of large-scale summative assessment in American educational history are well documented and can be traced back to the mid-1980s (Herman, 1997; Popham, 2001). Rothman (1995) has argued that the modern American educational testing period began with the passage of the Elementary and Secondary

Education Act of 1965 (ESEA), and by the mid-1980s a majority of states were administering some type of large-scale assessment. Today's large-scale summative assessment took shape after the publication of *A Nation at Risk* in 1983. Prepared for the United States Department of Education by the National Commission on Excellence in Education, the report called for the adoption of rigorous and measurable standards along with higher expectations for students (National Commission on Excellence in Education, 1983).

Today, as discussed in the 2013 report *A Road Map for 21st Century Geography Education – Assessment* there are three prominent geographic literacy assessment frameworks currently being used in the United States: the National Assessment of Educational Progress (NAEP) in Geography, Advanced Placement Human Geography, and the National Assessment of Educational Progress for Science. NAEP is the oldest assessment having first been administered in 1994. The NAEP geography assessments at grades 4, 8, and 12 measure the knowledge and skills students have acquired as part of their geography education. The NAEP assessment framework in geography consists of two dimensions: a content dimension; and a cognitive dimension. Each question in the assessment has a content and cognitive skills dimension. Student achievement is measured at three levels: 1) Basic, which denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade; 2) Proficient, which represents solid academic performance and demonstrated competency over challenging subject matter; and 3) Advanced, which represents superior performance (National Center for Educational Satistics, 2011).

Despite NAEP's longevity, there is consensus that American summative assessments continue to place too little emphasis on the practical skills of doing geography (Edelson, Shavelson, & Wertheim, 2013; Fu, Raizen, & Shavelson, 2009; National Center for Educational Satistics, 2011; National Research Council, 2011, 2012).

At the state scale, summative assessments of geographic literacy are rare. This fact highlights the importance of the Texas Assessment of Academic Readiness (STAAR). In 2007, the state of Texas enacted Senate Bill 1031. The legislation phased out the old accountability system known as the Texas Assessment of Knowledge and Skills (TAKS) and replaced it with the State of Texas Assessments of Academic Readiness (STAAR). With STAAR, students in grades 3-8 are tested in mathematics and reading. Students are also tested in writing at grades 4 and 7, science at grades 5 and 8, and social studies at grade 8. In addition, STAAR phased out high school TAKS and replaced them with STAAR end-of-course (EOC) assessments beginning in the 2011-2012 academic year. Students enrolled in grade 9 or below in 2011-2012 were required to take the STAAR EOC assessments as part of their graduation plan. Students graduating on the "recommended" plan had to pass fifteen EOC assessments: six English exams, and one each in Algebra I, Geometry, Algebra II, Biology, Chemistry, Physics, World Geography, World History, and U.S. History (Texas Education Agency 2011b). In May 2012, Texas administered the STAAR World Geography EOC exam for the first time to 320,971 students, and again in the spring of 2013 to 366,114 students (Texas Education Agency, 2012). However, in May 2013, House Bill 5 (HB5) was

passed into law. The law radically altered the landscape of summative assessment in Texas and included the elimination of the World Geography EOC.

Methodology

Given the uniqueness of the STAAR World Geography EOC, this research asks three fundamental questions: 1) Is Texas' World Geography End-of-Course (EOC) exam an accurate assessment of national geography standards?; 2) Does Texas' World Geography EOC assessment framework reflect the most prominent American assessment framework?; and 3) Is Texas' World Geography EOC exam a good model for large-scale summative assessment of geographic literacy? The basic premise of this research is that well-designed, state-level summative assessments are necessary to support "…the effective and broad implementation of the development of geographic knowledge, skills, and practices.." (S. Bednarz, Heffron, & Huynh, 2012, pp. p. 8-9).

In an effort to determine whether or not the STAAR World Geography EOC is a useful summative assessment, this study combines a qualitative content analysis of geography education standards documents and assessment frameworks with a review of student performance data.

Content Analysis

In order to generate data to answer the research questions one and two, I conducted two crosswalk analyses, the first between the Texas Essential Knowledge and Skills (TEKS) for high school world geography, and the twelfth grade standards articulated in the second edition of *Geography for Life*; and a second crosswalk between the State of Texas Assessment of Academic Readiness (STAAR) and National Assessment of Educational Progress (NAEP) assessment frameworks. The purpose of the crosswalk comparisons was to situate Texas' system for assessing geographic literacy in the context of American geography education. Like the study Texas standards conducted by Talerico and Moseley (2012), this study examines relationships by arraying two sets of statements orthogonally in a matrix format and then examining the intersection of each element of each statement in a unique cell. The result is designed to produce insight into how the pairs of content standards and assessment frameworks interact with one another. Because of its length, the geography standards crosswalk appears in Appendix A. The geography assessment framework crosswalk appears in Table 2.

Review of STAAR Reported Data

A review of STAAR reported data addresses research question three. Data were acquired from the Texas Education Agency (TEA) STAAR website (http://www.tea.state.tx.us/student.assessment/staar/) and a data portal created for the TEA by Pearson Education – the company contracted by the state to design and implement STAAR. The portal may be accessed at: https://www.pearsonaccess.com/cs/Satellite?pagename=Pearson/QuickLink/tx. The goal of the review was to analyze the quantity and quality of student performance data. Quantity was defined by the availability of data at various scales from individual student performance to state-level aggregated data. Quality was defined by the data's ability to foster reflective collaboration at all scales.

Findings

An analysis of the STAAR World Geography EOC exam reveals a strong alignment with the national geography standards as presented in the second edition of *Geography for Life*. The analysis also reveals that Texas' assessment framework reflects the assessment framework used by the National Assessment of Educational Progress in Geography. Finally, the study concludes that STAAR is a useful summative assessment at the local scale, but falls short of influencing educational reform at the state scale.

Aligning the STAAR World Geography EOC Exam with *Geography for Life*

As stated previously, any assessment must be tied to established standards. In Texas, the Texas Essential Knowledge and Skills (TEKS) guide the curriculum and form the basis for the STAAR World Regional Geography EOC exam. The question becomes: how does Texas define geographic literacy? In other words, is the exam an accurate assessment of national geography standards?

Appendix A contains a crosswalk analysis of the Texas Essential Knowledge and Skills (TEKS) and the national geography standards (GS) articulated in the second edition of *Geography for Life*. In some cases the alignment is straight forward. For example, TEKS 1.A aligns with GS17.2.A and GS17.3.A. Specifically, the state of Texas expects geographically literate students to be able to analyze the effects of physical and human geographic patterns and processes on the past and describe their impact of the present, including significant physical features and environmental conditions that influenced migration patterns and shape the distribution of culture groups today. At the national level, geographically literate students are expected to interpret the causes and processes of change in the geographic characteristics and spatial organization of places, regions, and environments over time, identify and explain the causes and processes of change in the geographic characteristics and spatial organization of places, regions, and environments over time; interpret historical events in the contexts of people's past perceptions of places, regions, and environments, and analyze and evaluate the role that people's past perceptions of places, regions, and environments played as historical events unfolded. In other cases, the TEKS combine parts of several national standards into one. This fact is illustrated in TEKS 2.A aligned with GS7.3.A, GS12.1.A, GS12.2.A, GS12.3.A, and GS12.3.B. The basic piece of geographic literacy expressed in this cell of the crosswalk is that the human and physical characteristics of places change over time. The language at the national level breaks the idea down into specific topics (i.e. physical processes interact over time to shape Earth's surface, and the spatial patterns of settlements change over time), while the state presents more general language.

Empty cells in the crosswalk suggest apparent gaps in the curriculum. These gaps, however, are more a product of mismatched language than of curricular omissions. For example, TEKS14.B expects students to compare how democracy, dictatorship, monarchy, republic, theocracy, and totalitarian systems operate in specific countries. This specific set of knowledge and skills does not appear in the national standards for twelfth grade, but more generalized statements addressing the world's political geography do appear and align more directly with TEKS14.A.

Whether the alignment is "exact" or not, the conclusion must be that based on the crosswalk analysis, it is clear that the TEKS define geographic literacy in a manner consistent with *Geography for Life*.

Aligning the STAAR World Geography EOC Exam with the National Assessment of Education Progress in Geography

Having established that Texas has developed a high school world geography curriculum that reflects the national geography standards, I turn now to how the state assesses geographic literacy. The findings are based on a crosswalk analysis of the STAAR World Geography EOC assessment framework with the assessment framework used by the National Assessment of Educational Progress (NAEP) in Geography for grade twelve.

First and foremost, from crosswalk analysis in Table 1, it is important to note that both the STAAR World Geography EOC and the NAEP assessment frameworks address what NAEP refers to as "content areas" and "cognitive areas" (see Table 1). The term "content areas" refers to the specific geographic matter, or standards, that should be measured by the assessment; in this case the TEKS or the national geography standards. The term "cognitive areas" refers to the importance placed on a student's ability to know (What is it? Where is it?), understand (Why is it there? How did it get there? What is its significance?), and apply (How can knowledge and understanding be used to solve geographic problems?) geographic concepts and vocabulary (National Center for Educational Satistics, 2011).

In both the STAAR and NAEP assessment frameworks, process skills are assessed in context, not in isolation, which allows for a more integrated and authentic assessment of the content areas. Process skills are incorporated into exam questions and reported along with content skills under the content reporting categories. In the STAAR assessment framework, process skills are not listed under a separate reporting category as was the case with the Texas' previous assessment framework.

Table 2 exposes additional and striking similarities between the state-level STAAR and the national-level NAEP assessment frameworks. To begin, both frameworks utilize three performance levels defined by increasing levels of process skill. STAAR and NAEP documents are quick to point out that performance levels are based on the recommendations of policymakers, educators, and members of the general public. At the lowest level of "unsatisfactory" STAAR assessed geographic literacy, students are able to use the process skills of identifying and recognizing. NAEP defines "basic" geographic literacy at a slightly higher level by adopting the verbs "interpret" and "understand." Texas considers students to have achieved satisfactory geographic literacy if they can interpret, explain, analyze, and describe geographic phenomena. Texas students performing at this level "pass" the exam. At the highest or third level of academic performance, both the STAAR and NAEP assessment frameworks place a premium on the application of geographic knowledge and skills. If Texas students can draw inferences, make predictions, evaluate data, and generally apply an understanding of geographic concepts, then the state deems them to have achieved advanced academic performance. Likewise, at the national level, NAEP classifies students with advanced

geographic literacy based on their ability to formulate hypothesis, translate geographic narratives into representations, perform locational analysis, develop criteria assessing geographic issues, and compile databases.

Table 1.
NAEP Assessment Framework for Geography

Content Area	Cognitive Area
Space and place questions measure students' knowledge of geography related to particular places on Earth, spatial patterns on Earth's surface, and physical and human processes that shape spatial patterns.	***Knowing*** questions ask: What is it? Where is it? In this area, students are assessed on their ability to observe and recall. Students should be able to observe different elements of the landscape and answer questions about them.
Environment and society questions measure students' knowledge of how people depend upon, adapt to, are affected by, and modify the natural environment.	***Understanding*** questions ask: Why is it there? How did it get there? What is its significance? In this area, students attribute meaning to what has been observed and explain an event in their own words.
Spatial dynamics and connections questions measure students' ability to understand geography as it relates to spatial variations and the connections among people and places.	***Applying*** questions ask: How can knowledge and understanding be used to solve geographic problems? In this area, students classify, hypothesize, use inductive and deductive reasoning, and form problem-solving models.

Source: National Center for Education Statistics, 2011.

Not evident from the crosswalk, but clear upon exam inspection, is one major difference between the STAAR and NAEP assessment frameworks: NAEP includes free response questions. These questions require students to draft short responses (one-three sentences) to prompts. While free response questions provide valuable measures of student learning, their use is limited by scale. In 2010, for example, the NAEP assessment of geographic literacy at grade 12 was based on a sample of 10,000 students. In contrast, in May 2012, Texas administered the STAAR World Geography assessment to over 320,000 students. The simple fact is that Texas cannot afford the cost of grading free response questions. Despite this discrepancy, the STAAR assessment framework clearly reflects that of NAEP.

Table 2.
STAAR World Geography EOC and NAEP Geography Assessment Framework Crosswalk

STAAR World Geography Performance Level Descriptors	NAEP Geography Achievement-Level Descriptions for Grade 12
Level III. Students with Advanced Academic Performance can: • Draw inferences and make predictions using various forms of geographic data • Apply an understanding of the interaction between physical patterns, cultural patterns, natural resources, and underlying processes that affect people, places, and environments to predict future conditions or problems	***Advanced. Students with Advanced levels in geography should:*** • Possess a comprehensive understanding of geographic knowledge • Apply knowledge to case studies • Formulate hypothesis and test geographic models • Translate narratives about places and events into graphic representations

• Analyze how globalization leads to conflict and cooperation among various populations and regions of the world • Evaluate examples of cultural diffusion, convergence, and divergence and draw conclusions about the spread of cultural traits and the resulting patterns	• Perform locational analysis and interpret spatial relationships • Develop criteria assessing issues relating to human spatial organization and environmental stability • Compile databases and develop generalizations
Level I. Students with Satisfactory Academic Performance can: • Interpret various forms of geographic data • Explain the characteristics of, and processes that create, major landforms, climates, and ecosystems • Analyze the ways geography influences historical events • Analyze factors that promote continuity and change among cultures • Describe the characteristics of various political and economic systems • Explain the reasons for and impact of migration on various regions, countries, and nations • Analyze how humans interact with the environment • Analyze the impact of scientific and technological innovations on humans and the environment	***Proficient. Students with Proficient levels in geography should:*** • Have extensive knowledge of the concepts and terminology of physical and human geography • Use geographic concepts to analyze spatial phenomena • Discuss economic, political, and social factors that define and interpret space • Interpret maps and case studies • Design maps based on descriptive data • Describe the physical and cultural attributes of major world regions • Relate spatial distribution of population to economic and environmental factors • Report both historical and contemporary events within a geographic framework using tools such as special purpose maps, and primary and secondary sources
Level I. Students with Unsatisfactory Academic Performance can: • Identify and use geographic tools, terminology, and data • Identify major landforms, climate patterns, and ecosystems • Recognize the characteristics of culture • Identify factors that influence human settlement patterns	***Basic. Students with Basic levels in geography should:*** • Possess a knowledge of concepts and terms commonly used in physical and human • Provide examples of major landforms • Locate continents, major bodies of water, selected countries and cities • Interpret geographic data • Identify basic map projections • Understand the basic structure of the planet • Explain and apply geographic concepts • Recognize patterns across Earth's surface

Review of Reported Student Performance Data

As discussed earlier, a summative assessment is meaningful if it fosters reflective collaboration amongst stakeholders in the educational process. In other words, if a summative assessment prompts members of a school community to join ongoing problem-solving initiatives, then the assessment may be deemed a good model. Obviously, the process of reflective collaboration begins with clues about students' performance. Those clues are found in reported data.

Texas geography educators received their first STAAR data in May 2012 shortly after Texas administered the STAAR World Geography EOC exam, for the first time, to over 320,000 students. The state of Texas contracted with Pearson Education to design and implement the STAAR assessments. The contract stipulated that Pearson would provide raw data to individual students, teachers and administrators, and aggregated state and district data to the public.

Tables 3 and 4 provide examples of publicly available state-level reports. Generally speaking, the reports provide comprehensive data on the number of students tested, their average scaled scores, and their performance level. Each report provides detailed data on gender, ethnicity, and socio-economic status using several measures such as participation in Title 1 programs (Federal programs designed to assist low income students), English language proficiency, and participation in special education, gifted/talented, or career/technical education programs.

Each number on the report tells a story and has the power to prompt reflection and collaboration. However, crucial pieces of background knowledge are needed to interpret the data correctly. For example, the statewide report indicates that 81% of students passed (see Table 3. percentage of students achieving "Level II: Satisfactory" performance). Is this number helpful? Meaningful? In other words, does knowing this number facilitate reflective collaboration? For example, in order for the data to be meaningful, the term "passed" requires an explanation.

In 2012, the passing standard for the STAAR World Geography EOC was being "phased in." That is to say, the "final" passing standard would not be implemented for several years. In the meantime, students in 2012 passed at the "Phase 1" standard. Students taking the exam in 2014 would pass according to the "Phase 2" standard. The date for the "final" passing standard of to take effect was never set (see Table 4). The exam consisted of sixty-eight multiple choice questions. The passing standard for the students who took the exam in spring 2012 was 46% percent or 31 questions correct. With this information in mind, the passing rate of 81% takes on new meaning: only 81% of students answered 46% of questions correctly. Stated differently, over 62,000 students did not answer at least 46% of the questions correctly. As another example, the fact that only 41% of English as a Second Language (ESL) students were deemed geographically literate really means that the majority of ESL students failed the exam.

Table 3.
STAAR World Geography EOC Statewide Summary Report – Passed

Administration Summary			**Number of Students Tested**	**Average Scale Score**	**PASSED**			
					Level II: Satisfactory		**Level III: Advanced**	
Number Percent					**#**	**%**	**#**	**%**
Students Tested	**320971**	**99**						
Students Not Tested								
Absent	**2200**	**1**						
Other	**225**	**0**						
Total Documents Submitted	**323396**	**100**						
Legend --- = No Data Reported For Fewer Than Five Students								
All Students			**320971**	**3894**	**258698**	**81**	**43189**	**13**
Male			**161941**	**3939**	**133355**	**82**	**26558**	**16**
Female			**158989**	**3848**	**125319**	**79**	**16628**	**10**
No Information Provided			**41**	**3664**	**24**	**59**	**3**	**7**

Hispanic/Latino		**154115**	**3785**	**115668**	**75**	**10851**	**7**
American Indian or Alaska Native		**1449**	**3913**	**1205**	**83**	**193**	**13**
Asian		**11625**	**4270**	**11152**	**96**	**4563**	**39**
Black or African American		**41263**	**3728**	**29338**	**71**	**2037**	**5**
Native Hawaiian or Other Pacific Islander		**492**	**3951**	**430**	**87**	**71**	**14**
White		**106276**	**4068**	**95871**	**90**	**24319**	**23**
Two or More Races		**5220**	**4043**	**4644**	**89**	**1119**	**21**
No Information Provided		**531**	**3775**	**390**	**73**	**36**	**7**
Economically	*Free Meals*	**125648**	**3741**	**90621**	**72**	**6592**	**5**
Disadvantaged	*Reduced Meals*	**22727**	**3870**	**18766**	**83**	**2109**	**9**
	Other	**25049**	**3670**	**16288**	**65**	**851**	**3**
	No	**147073**	**4067**	**132690**	**90**	**33614**	**23**
	No Information Provided	**474**	**3734**	**333**	**70**	**23**	**5**
Title I, Part A	*School wide Program*	**142178**	**3781**	**105803**	**74**	**10277**	**7**
	Participants	**313**	**3606**	**187**	**60**	**6**	**2**
	Targeted Assistance Participants	**19**	**3725**	**15**	**79**	**0**	**0**
	Nonparticipants (Previous Participants)	**1068**	**3746**	**758**	**71**	**58**	**5**
	Homeless Participants at Non-Title I Schools	**176885**	**3987**	**151586**	**86**	**32821**	**19**
	Nonparticipants (Not Previous Participants)	**508**	**3718**	**349**	**69**	**27**	**5**
Migrant	*Yes*	**2284**	**3610**	**1340**	**59**	**67**	**3**
	No	**318174**	**3896**	**257003**	**81**	**43099**	**14**
	No Information Provided	**513**	**3725**	**355**	**69**	**23**	**4**
Limited English	*Current LEP*	**16140**	**3479**	**6862**	**43**	**154**	**1**
Proficient	*Non-LEP (Monitored 1st Year)*	**4388**	**3647**	**2838**	**65**	**100**	**2**
	Non-LEP (Monitored 2nd Year)	**7147**	**3731**	**5320**	**74**	**264**	**4**
	Other Non-LEP	**292766**	**3925**	**243311**	**83**	**42644**	**15**
	No Information Provided	**530**	**3726**	**367**	**69**	**27**	**5**
Bilingual	*Bilingual*	**321**	**3807**	**242**	**75**	**22**	**7**
ESL Program	*ESL*	**14900**	**3470**	**6161**	**41**	**129**	**1**
	Neither	**305177**	**3915**	**251902**	**83**	**43010**	**14**
	No Information Provided	**573**	**3714**	**393**	**69**	**28**	**5**
Special Education	*Yes*	**17877**	**3498**	**7605**	**43**	**426**	**2**
	No	**302594**	**3918**	**250742**	**83**	**42739**	**14**
	No Information Provided	**500**	**3733**	**351**	**70**	**24**	**5**
Gifted/Talented	*Participants*	**33089**	**4362**	**32667**	**99**	**15218**	**46**
	Nonparticipants	**287388**	**3840**	**225683**	**79**	**27947**	**10**
	No Information Provided	**494**	**3733**	**348**	**70**	**24**	**5**
At-Risk	*Yes*	**124621**	**3623**	**76016**	**61**	**3226**	**3**
	No	**195842**	**4067**	**182327**	**93**	**39939**	**20**
	No Information Provided	**508**	**3727**	**355**	**70**	**24**	**5**
Career/Technical	*Elective*	**105162**	**3848**	**82515**	**78**	**11341**	**11**
Education	*Coherent Sequence*	**47067**	**3870**	**38157**	**81**	**5059**	**11**
	Tech Prep	**24565**	**3938**	**20979**	**85**	**3359**	**14**
	No	**143659**	**3928**	**116691**	**81**	**23404**	**16**
	No Information Provided	**518**	**3719**	**356**	**69**	**26**	**5**

Source: Source: Texas Education Agency, 2012

Table 4.

STAAR World Geography EOC Statewide Summary Report – Did Not Pass

Administration Summary					DID NOT PASS			
Number Percent								
Students Tested		320971	99					
Students Not Tested								
Absent		2200	1					
Other		225	0					
Total Documents Submitted		323396	100					
Legend --- = No Data Reported For Fewer Than Five Students				Number of Students Tested	Average Scale Score	Level I: Unsatisfactory		Achieved Minimum Score	
						#	%	#	%
All Students				320971	3894	62273	19	23355	7
Male				161941	3939	28586	18	10332	6
Female				158989	3848	33670	21	13015	8
No Information Provided				41	3664	17	41	8	20
Hispanic/Latino				154115	3785	38447	25	13981	9
American Indian or Alaska Native				1449	3913	244	17	94	6
Asian				11625	4270	473	4	219	2
Black or African American				41263	3728	11925	29	4366	11
Native Hawaiian or Other Pacific Islander				492	3951	62	13	27	5
White				106276	4068	10405	10	4381	4
Two or More Races				5220	4043	576	11	233	4
No Information Provided				531	3775	141	27	54	10
Economically Disadvantaged	*Free Meals*			125648	3741	35027	28	12655	10
	Reduced Meals			22727	3870	3961	17	1646	7
	Other			25049	3670	8761	35	2835	11
	No			147073	4067	14383	10	6169	4
	No Information Provided			474	3734	141	30	50	11
Title I, Part A	*School wide Program*			142178	3781	36375	26	13237	9
	Participants			313	3606	126	40	41	13
	Targeted Assistance Participants			19	3725	4	21	1	5
	Nonparticipants (Previous Participants)			1068	3746	310	29	101	9
	Homeless Participants at Non-Title I Schools			176885	3987	25299	14	9922	6
	Nonparticipants (Not Previous Participants)			508	3718	159	31	53	10
Migrant	*Yes*			2284	3610	944	41	286	13
	No			318174	3896	61171	19	23014	7
	No Information Provided			513	3725	158	31	55	11
Limited English Proficient	*Current LEP*			16140	3479	9278	57	2391	15
	Non-LEP (Monitored 1st Year)			4388	3647	1550	35	598	14
	Non-LEP (Monitored 2nd Year)			7147	3731	1827	26	781	11
	Other Non-LEP			292766	3925	49455	17	19531	7
	No Information Provided			530	3726	163	31	54	10
Bilingual/ ESL Program	*Bilingal*			321	3807	79	25	25	8
	ESL			14900	3470	8739	59	2238	15
	Neither			305177	3915	53275	17	21034	7
	No Information Provided			573	3714	180	31	58	10
Special Education	*Yes*			17877	3498	10272	57	2550	14
	No			302594	3918	51852	17	20752	7
	No Information Provided			500	3733	149	30	53	11
Gifted/Talented	*Participants*			33089	4362	422	1	241	1
	Nonparticipants			287388	3840	61705	21	23061	8
	No Information Provided			494	3733	146	30	53	11
At-Risk	*Yes*			124621	3623	48605	39	16805	13
	No			195842	4067	13515	7	6495	3
	No Information Provided			508	3727	153	30	55	11
Career/Technical Education	*Elective*			105162	3848	22647	22	8581	8
	Coherent Sequence			47067	3870	8910	19	3583	8
	Tech Prep			24565	3938	3586	15	1481	6
	No			143659	3928	26968	19	9659	7
	No Information Provided			518	3719	162	31	51	10

Source: Source: Texas Education Agency, 2012

Table 5.

STAAR World Geography Raw Score Conversions (Spring 2012)

Level I Minimum Score		
Phase 1 (2012-2014)		
Scale	**Raw**	**%**
3383	27	40

Level II Satisfactory								
Phase 1 (2012-2014)			Phase 2 (2015-2016)			Final (not determined)		
Scale	**Raw**	**%**	**Scale**	**Raw**	**%**	**Scale**	**Raw**	**%**
3500	31	46	3750	39	57	4000	47	69

Level III Advanced Final		
Scale	**Raw**	**%**
4404	57	84

Source: Texas Education Agency, 2012.

For individual teachers, the aggregated state-level data was not very useful. Individual teachers did, however, focus on the reporting category data (see Table 5). The reporting categories for the STAAR World Geography EOC mirror the organization of the TEKS, the standards familiar to all teachers. Each of the reporting categories contains one or more of the social studies "strands." Reporting Category 1, for example, contains the assessment of essential knowledge and skills in history, government, and citizenship. From individual and campus student data, teachers are able to reflect on their pedagogy with regard to each category. They were also able to interpret the distribution of "supporting standard" questions, or lower level questions, and "readiness standard" questions.

Regardless of how much the aggregated data helped to facilitate reflection, in 2012, the Texas Education Agency (TEA) did not release the data teachers really wanted. What teachers really wanted was individual assessment items. For that they would have to wait six months to receive a sample of questions. Based on the grass-roots level outcry that followed, TEA revised this practice and released the entire spring 2013 exam two months after its administration. A detailed item analysis accompanied the released exam.

Table 6.
STAAR World Geography EOC Assessment Framework

Reporting Categories	**Number of Standards**		**Number of Questions**
Reporting Category 1: History, Government, and Citizenship	Readiness Standards	4	**14**
	Supporting Standards	5	
	Total	9	
Reporting Category 2: Geography	Readiness Standards	9	**26**
	Supporting Standards	10	
	Total	19	
Reporting Category 3: Culture	Readiness Standards	3	**14**
	Supporting Standards	9	
	Total	12	
Reporting Category 4: Economics, Science, Technology, and Society	Readiness Standards	5	**14**
	Supporting Standards	9	
	Total	14	
Readiness Standards	Total # of Standards	21	60–65% (41-44)
Supporting Standards	Total # of Standards	33	35–40% (24–27)
Total # of Questions on Test = 68 Multiple Choice			

Source: Texas Education Agency, 2012

With the exam in hand, geography educators at the classroom level began to reflect on how they had or had not taught the assessed content and cognitive areas. The reflection triggered a desire for collaboration as teachers sought out peers whose students performed well on items that their own students had not.

The abundance of student performance data available to classroom teachers represents the greatest value of STAAR. STAAR's state-wide standardization not only validates good geography education, but also exposes gaps in learning. These data stand in contrast to the abstract, national-scale NAEP results, which are based on nationally representative samples of public and nonpublic school students with scaled scores reported at five percentiles that show only national trends in results for students performing at lower (10^{th} and 25^{th} percentiles), middle (50^{th} percentile), and higher (75^{th} and 90^{th} percentiles) levels (National Center for Educational Satistics, 2011, p. 5).

Conclusions

Student assessment is valuable when it has the capacity to improve and document the results of teaching and learning. The State of Texas Assessment of Academic Readiness (STAAR) World Geography EOC exam is a case in point. The purpose of this paper has been to situate Texas' assessment of geographic literacy in the ecosystem of American geography education. Toward this end, I established the validity of the exam based on its connections to the national geography standards expressed in the second edition of *Geography for Life* and the assessment framework used by the National Assessment of Educational Progress (NAEP) in Geography, and a review of released student performance data for quantity and quality. In the end, I conclude that the STAAR World Geography exam is an accurate and useful summative assessment of geographic literacy at the local scale, but that the assessment's ability to inform educational decision-making at the state level will never be realized. The previous statement alludes to the fact that, as of June 2013, the STAAR World Geography EOC exam is extinct.

Earlier in this paper I suggested that an ecosystem provides an analogy for understanding Texas' public education assessment program. If thought of as an organism, then in order to survive the STAAR World Geography EOC exam had to find a niche within a community in the ecosystem. Without a defined role or function in a particular community, the organism is doomed to extinction. Such is the fate of the STAAR World Geography EOC exam. In the eyes of the Texas public, summative assessment serves no positive function in the education community. In other words, the STAAR World Geography EOC exam never carved out a niche. The exam never became part of an educational culture in which the purpose of assessment transcended accountability and fostered a collective sense of responsibility (Darling-Hammond, 2010; Hargreaves & Shirley, 2012; Ravitch, 2011; Sahlberg, 2011). The question becomes, what factors contributed to the exam's extinction?

I posit that a sudden seismic shift in Texas' political climate doomed the exam. Throughout the summer and fall of 2012, as the Texas Education Agency disseminated STAAR data for geography, as well as equally depressing assessment data for other subjects, public opposition to STAAR began to grow. By the time Texas legislators meet in January 2013, two groups of stakeholders emerged with strong voices in opposition to STAAR: school district superintendents, and a select group of parents.

In January 2013, Texas legislators began to file bills for discussion. Several bills reflected school districts superintendents' desire to eliminate STAAR on the basis that the state simply did not provide sufficient resources to enable students to pass the assessment. Other pieces of legislation opposed STAAR on the basis that the assessments were taking too much time away from classroom instruction. The business community, experienced teachers, and organizations speaking on behalf of minority and economically disadvantaged students, voiced their support for STAAR. They believed that the assessments fostered higher expectations for all students.

In June 2013, House Bill 5 (HB5), one piece of anti-STAAR legislation, became law. With regard to geography education, not only did HB5 eliminate the EOC, but also made the high school world regional geography course optional. Geography educators

may take heart in the knowledge that legislators never argued against geography as a discipline. Rather, they were swayed to eliminate assessments by high level administrators responsible for maintaining high standards, and by parents who feared reduced success in their children attending elite universities because STAAR performance negatively affected their high school grade-point-average. In the end, geography education fell victim to misguided habitat destruction.

The extinction of the exam, furthermore, provides a cautionary tale for those investing time and money in large-scale, centralized educational assessments like American's latest effort at education reform: the Common Core and the associated Partnership for Assessment of Readiness for College and Careers. Whether or not national efforts to improve the quality of education in general and geography education specifically, will depend on how local and state communities react to the first waves of nationally standardized high stakes assessment data. As the implementation of the Common Core proceeds, American geography educators would be wise to study the fate of Texas' assessment system.

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Biographical statements

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Appendix A.

Texas Essential Knowledge and Skills and National Geography Standards Crosswalk

TEKS World Geography	National Geography Standards
(1) History. The student understands how geography and processes of spatial exchange (diffusion) influenced events in the past and helped to shape the present. The student is expected to:	**GS17. How to apply geography to interpret the past**
(A) analyze the effects of physical and human geographic patterns and processes on the past and describe their impact on the present, including significant physical features and environmental conditions that influenced migration patterns and shaped the distribution of culture groups today; and	2. The causes and processes of change in the geographic characteristics and spatial organization of places, regions, and environments over time
	A. Identify and explain the causes and processes of change in the geographic characteristics and spatial organization of places, regions, and environments over time
	3. Historical events must be interpreted in the contexts of people's past perceptions of places, regions, and environments
	A. Analyze and evaluate the role that people's past perceptions of places, regions, and environments played as historical events unfolded
(B) trace the spatial diffusion of phenomena such as the Columbian Exchange or the diffusion of American popular culture and describe the effects on regions of contact.	1. Geographic contexts (the human and physical characteristics of places and environments) can explain the connections between sequences of historical events
	A. Analyze and explain the connections between sequences of historical events and the geographic contexts in which they occurred
(2) History. The student understands how people, places, and environments have changed over time and the effects of these changes. The student is expected to:	
(A) describe the human and physical characteristics of the same regions at different periods of time to evaluate relationships between past events and current conditions; and	**GS7. The physical processes that shape the patterns of Earth's surface**
	3. Physical processes interact over time to shape particular places on Earth's surface
	A. Analyze and explain the results of interactions of physical processes over time
	GS12. The processes, patterns, and functions of human settlement
	1. The numbers, types, and range of the functions of settlements change over space and time

	A. Explain how and why the number and range of functions of settlements have changed and may change in the future
	2. Settlements can grow and/or decline over time
	A. Explain and compare the factors that contribute to the growth or decline of settlements over time
	3. The spatial patterns of settlements change over time
	A. Compare and explain the changing functions, sizes, and spatial patterns of settlements
	B. Analyze and explain the structure and development of megacities and megalopoli
(B) explain how changes in societies have led to diverse uses of physical features.	**GS16. The changes that occur in the meaning, use, distribution, and importance of resources**
	1. The meaning and use of resources change over time
	A. Explain the relationship between the quest for resources and the exploration, colonization, and settlement of different regions of the world,
	B. Explain how globalization and higher standards of living affect the meaning and use of resources
	2. The spatial distribution of resources affects patterns of human settlement and trade
	A. Analyze and explain the relationships between the spatial patterns of settlement and resources
	B. Analyze and evaluate patterns of trade in resources
(3) Geography. The student understands how physical processes shape patterns in the physical environment. The student is expected to:	
(A) explain weather conditions and climate in relation to annual changes in Earth-Sun relationships;	**GS7. The physical processes that shape the patterns of Earth's surface**
	2. Earth-Sun relationships are variable over long periods of time resulting in changes in physical processes and patterns on Earth
	A. Explain how variability in Earth-Sun relationships affect Earth’s physical processes over time
(B) describe the physical processes that affect the environments of regions, including weather, tectonic forces, erosion, and soil-building processes; and	

(C) examine the physical processes that affect the lithosphere, atmosphere, hydrosphere, and biosphere.	**GS3.How to analyze the spatial organization of people, places, and environments on Earth's surface.** The studetns knows and understands:
	3. Models are used to represent features of human and/or physical systems
	A. Describe and construct models illustrating the properties of human and/or physical systems
	GS7. The physical processes that shape the patterns of Earth's surface
	1. The interactions of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) vary across space and time
	A. Explain how the effects of physical processes vary across regions of the world and over time
	B. Explain the ways in which Earth's physical processes are dynamic and interactive
(4) Geography. The student understands the patterns and characteristics of major landforms, climates, and ecosystems of Earth and the interrelated processes that produce them. The student is expected to:	**GS8. The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
(A) explain how elevation, latitude, wind systems, ocean currents, position on a continent, and mountain barriers influence temperature, precipitation, and distribution of climate regions;	1. Ecosystems are dynamic and respond to changes in environmental conditions
	A. Explain how there are short-term and long-term changes in ecosystems
	B. Explain how local and global changes influence ecosystems
	2. The characteristics and geographic distribution of ecosystems
	A. Explain the geographic distribution of ecosystems
	B. Evaluate ecosystems in terms of their biodiversity and productivity
(B) describe different landforms and the physical processes that cause their development; and	
(C) explain the influence of climate on the distribution of biomes in different regions.	3. The distribution and characteristics of biomes change over time
	A. Explain how climate can influence and change the characteristics and geographic distribution of biomes

(5) Geography. The student understands how political, economic, and social processes shape cultural patterns and characteristics in various places and regions. The student is expected to:	
(A) analyze how the character of a place is related to its political, economic, social, and cultural elements; and	
(B) interpret political, economic, social, and demographic indicators (gross domestic product per capita, life expectancy, literacy, and infant mortality) to determine the level of development and standard of living in nations using the terms Human Development Index, less developed, newly industrialized, and more developed.	
(6) Geography. The student understands the types, patterns, and processes of settlement. The student is expected to:	
(A) locate and describe human and physical features that influence the size and distribution of settlements; and	
(B) explain the processes that have caused changes in settlement patterns, including urbanization, transportation, access to and availability of resources, and economic activities.	**GS8. The characteristics, distribution, and migration of human populations on Earth's surface**
	2. Population distribution and density are a function of historical, environmental, economic, political, and technological factors
	A. Identify and explain how historical, environmental, economic, political, and technological factors have influenced the current population distribution
	B. Analyze demographic data and identify trends in the spatial distribution of population
(7) Geography. The student understands the growth, distribution, movement, and characteristics of world population. The student is expected to:	**GS8. The characteristics, distribution, and migration of human populations on Earth's surface**
(A) construct and analyze population pyramids and use other data, graphics, and maps to describe the population characteristics of different societies and to predict future population trends;	1. Culture, economics, and politics influence the changing demographic structure of different populations
	A. Explain the demographic history of countries using the demographic transition model
	B. Evaluate the effects of governmental policies on population characteristics

(B) explain how political, economic, social, and environmental push and pull factors and physical geography affect the routes and flows of human migration;	3. Migration is one of the driving forces for shaping and reshaping the cultural and physical landscape of places and regions
	A. Compare and explain different examples of migrations in terms of the "laws of migration"
	B. Evaluate and explain the impact of international migration on physical and human systems
	C. Compare and explain the ways in which different groups and governments adjust to the departure and arrival of migrants
(C) describe trends in world population growth and distribution; and	**GS3.How to analyze the spatial organization of people, places, and environments on Earth's surface.** The student knows and understands:
	2. The distribution of people, places, and environments form spatial patterns across Earth's surface
	A. Describe and compare distributions of people, places, and environments to examine spatial patterns, sequences, regularities, and irregularities
(D) examine benefits and challenges of globalization, including connectivity, standard of living, pandemics, and loss of local culture.	
(8) Geography. The student understands how people, places, and environments are connected and interdependent. The student is expected to:	**GS15. How physical systems affect human systems**
(A) compare ways that humans depend on, adapt to, and modify the physical environment, including the influences of culture and technology;	1. Depending on the choice of human activities, the characteristics of the physical environment can be viewed as both opportunities and constraints
	A. Explain how people may view the physical environment as both an opportunity or a constraint depending on their choice of activities
(B) describe the interaction between humans and the physical environment and analyze the consequences of extreme weather and other natural disasters such as El Niño, floods, tsunamis, and volcanoes; and	2. Humans perceive and react to environmental hazards in different ways
	A. Explain and compare how people in different environments think about and respond to environmental hazards
	B. Explain how environmental hazards affect human systems and why people may have different ways of reacting to them
	3. Societies use a variety of strategies to adapt to changes in the physical environment
	A. Explain how societies adapt to reduced capacity in the physical environment

	B. Analyze the concept of "limits to growth" to explain adaptation strategies in response to the restrictions imposed on human systems by physical systems
(C) evaluate the economic and political relationships between settlements and the environment, including sustainable development and renewable/non-renewable resources.	
(9) Geography. The student understands the concept of region as an area of Earth's surface with related geographic characteristics. The student is expected to:	**GS5. That people create regions to interpret Earth's complexity**
(A) identify physical and/or human factors such as climate, vegetation, language, trade networks, political units, river systems, and religion that constitute a region; and	2. Regional change is caused by multiple interacting processes
	A. Describe and explain the processes that have resulted in regional change
(B) describe different types of regions, including formal, functional, and perceptual regions.	1. Regions are defined by different sets of criteria, and places can be included in multiple regions of different types
	A. Identify and explain how a place can exist within multiple regional classifications
(10) Economics. The student understands the distribution, characteristics, and interactions of the economic systems in the world. The student is expected to:	**GS11. The patterns and networks of economic interdependence on Earth's surface**
(A) describe the forces that determine the distribution of goods and services in free enterprise, socialist, and communist economic systems;	3. Economic systems are dynamic organizations of interdependent economic activities for the production, exchange, distribution, and consumption of goods and services
	A. Explain how the economic systems of countries and regions consist of multiple coordinated economic activities
	B. Explain why and how economic systems change
(B) classify where specific countries fall along the economic spectrum between free enterprise and communism;	
(C) compare the ways people satisfy their basic needs through the production of goods and services such as subsistence agriculture versus commercial agriculture or cottage industries versus commercial industries; and	
(D) compare global trade patterns over time and examine the implications of globalization, including outsourcing and free trade zones.	1. The scale and organization of economic activities change over time
	A. Explain how economic activities change over time

(11) Economics. The student understands how geography influences economic activities. The student is expected to:	
(A) understand the connections between levels of development and economic activities (primary, secondary, tertiary, and quaternary);	
(B) identify the factors affecting the location of different types of economic activities, including subsistence and commercial agriculture, manufacturing, and service industries; and	**GS12. The processes, patterns, and functions of human settlement**
	4. Urban models are used to analyze the growth and form of urban regions
	A. Explain and compare the growth and structure of cities using different urban models
(C) assess how changes in climate, resources, and infrastructure (technology, transportation, and communication) affect the location and patterns of economic activities.	**GS11. The patterns and networks of economic interdependence on Earth's surface**
	4. Improvements in transportation and communication networks reduce the effects of distance and time on the movement of people, products, and ideas
	A. Explain the effects of technological changes in communications and transportation systems on the speed and distances over which people, products, and ideas move
(12) Economics. The student understands the economic importance of, and issues related to, the location and management of resources. The student is expected to:	**GS11. The patterns and networks of economic interdependence on Earth's surface**
(A) analyze how the creation, distribution, and management of key natural resources affects the location and patterns of movement of products, money, and people; and	2. Patterns exist in the spatial organization of economic activities
	A. Identify and analyze the origins and development of and changes in patterns of economic activities
(B) evaluate the geographic and economic impact of policies related to the development, use, and scarcity of natural resources such as regulations of water.	
(13) Government. The student understands the spatial characteristics of a variety of global political units. The student is expected to:	
(A) interpret maps to explain the division of land, including man-made and natural borders, into separate political units such as cities, states, or countries; and	
(B) compare maps of voting patterns or political boundaries to make inferences about the distribution of political power.	

(14) Government. The student understands the processes that influence political divisions, relationships, and policies. The student is expected to:	**GS13. How the forces of cooperation and conflict among people influence the division and control of Earth's surface**
(A) analyze current events to infer the physical and human processes that lead to the formation of boundaries and other political divisions;	1. The functions and consequences of territorial divisions
	A. Explain how territorial divisions are used to manage Earth's surface
	B. Compare the reasons for and consequences of different systems for dividing and controlling space
	2. Cooperation between countries and organizations may have lasting influences on past, present, and future global issues
	A. Evaluate how countries and organizations cooperate to address global issues
	2. Cooperation between countries and organizations may have lasting influences on past, present, and future global issues
	A. Evaluate how countries and organizations cooperate to address global issues
(B) compare how democracy, dictatorship, monarchy, republic, theocracy, and totalitarian systems operate in specific countries; and	
(C) analyze the human and physical factors that influence the power to control territory and resources, create conflict/war, and impact international political relations of sovereign nations such as China, the United States, Japan, and Russia and organized nation groups such as the United Nations (UN) and the European Union (EU).	3. Changes within, between, and among countries regarding division and control of Earth's surface may result in conflicts
	A. Explain the ways conflict affects the cohesiveness and fragmentation of countries
	B. Explain the causes and consequences of political and social revolutions resulting from issues of control of land and resources
(15) Citizenship. The student understands how different points of view influence the development of public policies and decision-making processes on local, state, national, and international levels. The student is expected to:	
(A) identify and give examples of different points of view that influence the development of public policies and decision-making processes on local, state, national, and international levels; and	**GS16. The changes that occur in the meaning, use, distribution, and importance of resources**
	3. Policies and programs that promote the sustainable use and management of resources impact people and the environment
	A. Explain and compare the costs and benefits of using various types of renewable, nonrenewable, and flow resources

	B. Evaluate policy decisions regarding the sustainable use of resources in different regions and at different spatial scales in the world
(B) explain how citizenship practices, public policies, and decision making may be influenced by cultural beliefs, including nationalism and patriotism.	
(16) Culture. The student understands how the components of culture affect the way people live and shape the characteristics of regions. The student is expected to:	**GS10. The characteristics, distribution, and complexity of Earth's cultural mosaics**
(A) describe distinctive cultural patterns and landscapes associated with different places in Texas, the United States, and other regions of the world and how these patterns influenced the processes of innovation and diffusion;	3. Cultures change through convergence and/or divergence
	A. Identify and explain examples of cultural convergence
	B. Identify and explain examples of cultural divergence
	4. The rate of cultural change has increased as a result of globalization
	A. Explain how and why globalization has increased the rate of change in cultures
(B) describe elements of culture, including language, religion, beliefs and customs, institutions, and technologies;	1. Cultural systems provide contexts for living in and viewing the world
	A. Describe and explain the characteristics that constitute any particular cultural system
	B. Explain how different cultures provide contexts from which people may view the world differently
	2. Cultural landscapes exist at multiple scales
	A. Identify and analyze the spatial patterns of cultural landscapes at multiple scales
	B. Explain differences in the human imprints on the physical environment of different cultures
(C) explain ways various groups of people perceive the characteristics of their own and other cultures, places, and regions differently; and	**GS6. How culture and experience influence people's perceptions of places and regions**
	1. People can view places and regions from multiple perspectives
	A. Explain how and why people view places and regions differently as a function of their ideology, race, ethnicity, language, gender, age, religion, politics, social class, and economic status

	2. Changing perceptions of places and regions have significant economic, political, and cultural consequences in an increasingly globalized and complex world
	A. Explain the possible consequences of people's changing perceptions of places and regions in a globalized and fractured world
(D) compare life in a variety of urban and rural areas in the world to evaluate political, economic, social, and environmental changes.	
(17) Culture. The student understands the distribution, patterns, and characteristics of different cultures. The student is expected to:	**GS4. The physical and human characteristics of places**
(A) describe and compare patterns of culture such as language, religion, land use, education, and customs that make specific regions of the world distinctive;	1. The effects of place-based identities on personal, community, national, and world events
	A. Explain how and why place-based identities can shape events at various scales
	2. The interaction of physical and human systems result in the creation of and changes to places
	A. Explain how physical or human characteristics interact to create a place by giving it meaning and significance
	B. Explain how physical or human characteristics interact to change the meaning and significance of places
(B) describe major world religions, including animism, Buddhism, Christianity, Hinduism, Islam, Judaism, and Sikhism, and their spatial distribution;	
(C) compare economic, political, or social opportunities in different cultures for women, ethnic and religious minorities, and other underrepresented populations; and	
(D) evaluate the experiences and contributions of diverse groups to multicultural societies.	**GS18. How to apply geography to interpret the present and plan for the future**
	3. Multiple and diverse perceptions of the world must be taken into account to understand contemporary and future issues
	A. Evaluate how perceptions vary and affect people's views of contemporary issues and strategies for addressing them
(18) Culture. The student understands the ways in which cultures change and maintain continuity. The student is expected to:	
(A) analyze cultural changes in specific regions caused by migration, war, trade, innovations, and	**GS18. How to apply geography to interpret the present and plan for the future**

diffusion;	1. Geographic contexts (the human and physical characteristics of places and environments) provide the basis for analyzing current events and making predictions about future issues
	A. Explain and evaluate the influences of the geographic context on current events and issues to make informed decisions and predictions about the future
	B. Analyze and evaluate the connections between the geographic contexts of current events and possible future issues
(B) assess causes, effects, and perceptions of conflicts between groups of people, including modern genocides and terrorism;	
(C) identify examples of cultures that maintain traditional ways, including traditional economies; and	
(D) evaluate the spread of cultural traits to find examples of cultural convergence and divergence such as the spread of democratic ideas, U.S.-based fast-food franchises, the English language, technology, or global sports.	**GS3.How to analyze the spatial organization of people, places, and environments on Earth's surface.** The student knows and understands:
	2. The distribution of people, places, and environments form spatial patterns across Earth's surface
	A. Describe and compare distributions of people, places, and environments to examine spatial patterns, sequences, regularities, and irregularities
(19) Science, technology, and society. The student understands the impact of technology and human modifications on the physical environment. The student is expected to:	**GS14. How human actions modify the physical environment**
(A) evaluate the significance of major technological innovations in the areas of transportation and energy that have been used to modify the physical environment;	1. Human modifications of the physical environment can have significant global impacts
	A. Explain the global impacts of human changes in the physical environment
(B) analyze ways technological innovations such as air conditioning and desalinization have allowed humans to adapt to places; and	2. The use of technology can have both intended and unintended impacts on the physical environment that may be positive or negative
	A. Evaluate the intended and unintended impacts of using technology to modify the physical environment
(C) examine the environmental, economic, and social impacts of advances in technology on agriculture and natural resources.	3. People can either mitigate and/or adapt to the consequences of human modifications of the physical environment

	A. Describe and evaluate scenarios for mitigating and/or adapting to environmental changes caused by human modifications
(20) Science, technology, and society. The student understands how current technology affects human interaction. The student is expected to:	
(A) describe the impact of new information technologies such as the Internet, Global Positioning System (GPS), or Geographic Information Systems (GIS); and	**GS18. How to apply geography to interpret the present and plan for the future**
	2. The current and possible future causes and processes of change in the geographic characteristics and spatial organization of places, regions, and environments
	A. Identify and explain the causes and processes of current and possible future changes in the geographic characteristics and spatial organization of places, regions, and environments
(B) examine the economic, environmental, and social effects of technology such as medical advancements or changing trade patterns on societies at different levels of development.	
(21) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including electronic technology. The student is expected to:	**GS2. How to use mental maps to organize information about people, places, and environments in a spatial context.** The student knows and understands:
(A) analyze and evaluate the validity and utility of multiple sources of geographic information such as primary and secondary sources, aerial photographs, and maps;	A. Identify from memory and explain the locations, characteristics, patterns, and relationships among human and physical systems
	2. Mental maps can change through experience and iterative self-reflection
	A. Explain the development of completeness and accuracy in the student's mental map of places and regions
	3. Mental maps are used to answer geographic questions about locations, characteristics, patterns, and relationships of places and regions
	A. Identify from memory and explain the locations, characteristics, patterns, and relationships of places and regions to answer geographic questions
(B) locate places of contemporary geopolitical significance on a map; and	
(C) create and interpret different types of maps to answer geographic questions, infer relationships,	4. Changing perceptions reshape mental maps of people, places, regions, and environments

and analyze change.	A. Compare an individual's mental map before and after a geographic event or experience
(22) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:	
(A) design and draw appropriate graphics such as maps, diagrams, tables, and graphs to communicate geographic features, distributions, and relationships;	**GS2. How to use mental maps to organize information about people, places, and environments in a spatial context.** The student knows and understands:
	1. The locations, characteristics, patterns, and relationships of physical and human systems are the basis for mental maps at local to global scales
	A. Identify from memory and explain the locations, characteristics, patterns, and relationships among human and physical systems
	GS3.How to analyze the spatial organization of people, places, and environments on Earth's surface. The studetns knows and understands:
	3. Models are used to represent features of human and/or physical systems
	A. Describe and construct models illustrating the properties of human and/or physical systems
(B) generate summaries, generalizations, and thesis statements supported by evidence;	**GS1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information.** The student knows and understands:
	1. The advantages of coordinating multiple geographic representations
	A. Explain the advantages of using multiple geographic representations to answer geographic questions
(C) use geographic terminology correctly;	**GS3.How to analyze the spatial organization of people, places, and environments on Earth's surface.** The students knows and understands:
	1. The meaning and use of fundamental spatial concepts such as location, distance, direction, scale, movement, region, and volume
	A. Describe and explain the spatial organization of people, places, and environments
(D) use standard grammar, spelling, sentence structure, and punctuation; and	
(E) create original work using proper citations and understanding and avoiding plagiarism.	

(23) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others, in a variety of settings. The student is expected to:	
(A) plan, organize, and complete a research project that involves asking geographic questions; acquiring, organizing, and analyzing information; answering questions; and communicating results;	**Skills. Asking Geographic Questions.** 1. The student knows and understands the role of developing geographic questions in a research project that answers geographic questions.
	A. Analyzes an issue and constructs geographic questions that inform a geographic investigation
	Skills. Acquiring Geographic Information. 1. The student knows and understands the criteria for evaluating the value and reliability of geographic information.
	The characteristics of geographic information. A. Describes and analyzes the characteristics of geographic information
	The sources of geographic information. A. Identifies observations, maps, globes, and other geographic representations as sources of geographic information
	Skills. Organizing Geographic Information. The student knows and understands the selection and design of appropriate forms for organizing and displaying geographic information.
	A. Evaluates the alternatives for organizing and displaying geographic information
	Skills. Analyzing Geographic Information. The student knows and understands the process of analyzing data to explain geographic relationships, patterns, and trends.
	Skills. Answering Geographic Questions. 1. The process for evaluating and defending the answers to geographic questions. A. Evaluates the data sources and processes used to answer geographic questions
	2. The process of using valid generalizations and conclusions to inform reasoned decisions. A. Explains and evaluates the data and processes used to inform answers to geographic questions
(B) use case studies and GIS to identify contemporary challenges and to answer real-world questions; and	**GS1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information.** The student knows and understands:

	4. The uses of geographic representations and geospatial technologies to investigate and analyze geographic questions and to communicate geographic answers
	A. Analyze geographic representations and suggest solutions to geographic questions at local to global scales using geographic representations and geospatial technologies
(C) use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.	**GS1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information.** The student knows and understands:
	2. The technical properties and quality of geospatial data
	A. Identify and explain the metadata properties (e.g., resolution, date of creation, and method of collection) of geospatial data
	B. Evaluate the quality and quantity of geospatial data appropriate for a given purpose