

## Chief Reader Report on Student Responses: 2021 AP<sup>®</sup> Human Geography Free-Response Questions

• Number of Students Scored	211,735		
• Number of Readers	1,104		
• Score Distribution	Exam Score	N	%At
	5	30,460	14.4
	4	41,811	19.7
	3	38,840	18.3
	2	32,063	15.1
	1	68,561	32.4
• Global Mean	2.69		

The following comments on the 2021 free-response questions for AP<sup>®</sup> Human Geography were written by the Chief Reader, Dr. Seth Dixon, Associate Professor, Political Science Department-Geography Program, Rhode Island College. They give an overview of each free-response question and of how students performed on the question, including typical student errors. General comments regarding the skills and content that students frequently have the most problems with are included. Some suggestions for improving student preparation in these areas are also provided. Teachers are encouraged to attend a College Board workshop to learn strategies for improving student performance in specific areas.

**Question #1****Topic:** Total Fertility Rate (TFR)**Max. Points:** 7**Mean Score:** 2.65***What were the responses to this question expected to demonstrate?***

Students were expected to know the definition of the total fertility rate, and how it relates to the rate of natural increase and economic, social, and political factors. The stem of the question noted that students are to explain how the total fertility rate changes given shifts in a country's economic structure, increased access to education, the impact of advanced healthcare, and the effect of pronatalist policies. This allowed students to demonstrate their geospatial knowledge of how these factors affect changes in the total fertility rate in less developed countries or more developed countries.

In part A, students were asked to define the total fertility rate. In part B, they were asked to describe one difference between the total fertility rate and the rate of natural increase. Parts A and B would seem to be simple, but students often confused the total fertility rate with other demographic measures (e.g., the infant mortality rate) or used the definition for birth rate. Because the correct response in part B was dependent on a correct response in part A, this often negated the part B response even where it was partially correct.

In part C, students were to describe one way in which the total fertility rate changes as a country shifts from an agricultural to a manufacturing economy. Part D asked the students to explain how access to education for women in less developed countries would affect the total fertility rate. Parts C and D focused on uneven development. Students here were generally successful in linking shifts in the economic structure from high labor, traditional agricultural to higher paying and more gender-equitable manufacturing and services careers, coupled with the empowering effects of education for women as highly likely causes of decreasing fertility rates.

In part E, the students needed to explain the degree to which advanced healthcare for women in more developed countries affected the total fertility rate. To earn this point, students needed to state a degree to which this was true or not using terms such as “highly likely,” “to a great degree,” etc. A large majority of students did not seem to recognize the need to “explain the degree to which” in this question. Students could readily identify the advantages of advanced healthcare for women in more developed countries and that it would lead to lower fertility rates, but they rarely expressed “the degree to which” healthcare affected fertility rates—whether access to healthcare had a small but perceivable impact, a moderate but measurable impact, or a strong or significant impact on decreasing fertility rates.

In part F, the students were to explain one economic reason why governments enact pronatalist policies. And in part G, they were to explain how a government's implementation of a pronatalist policy could influence people's family planning decisions. In parts F and G, students did well if they understood what pronatalist policies were. In many cases, the responses confused pronatalist with antinatalist policies such as China's one child policy. Those who understood pronatalist policies were able to clearly explain both the economic reasons for them, and the actions a government might take to influence family planning.

Combined, the seven parts of this question took the basic knowledge of the total fertility rate and applied it to the students' understanding of how uneven global development affects total fertility and what factors lead to declining fertility, and knowing why some countries would try to reverse fertility trends.

***How well did the responses address the course content related to this question? How well did the responses integrate the skills required on this question?***

Parts A and B had two of the easier skills (define and describe), and many responses were able to meet the standard adequately and accurately for these task verbs on this question. Some of the responses did confuse total fertility rate with one of the many other demographic indicators taught in Unit 2, such as infant mortality rate or birth rate. Course content, not the skills, was the main stumbling block in parts A and B.

**What common student misconceptions or gaps in knowledge were seen in the responses to this question?**

<i>Common Misconceptions/Knowledge Gaps</i>	<i>Responses that Demonstrate Understanding</i>
<ul style="list-style-type: none"><li>• Many students erroneously included migration as part of their definition of rate of natural increase (RNI).</li></ul>	<ul style="list-style-type: none"><li>• Quality responses were able to compare a difference between TFR and RNI, such as that TFR refers to births/fertility while the RNI refers to growth of population or includes deaths in its statistics.</li></ul>
<ul style="list-style-type: none"><li>• Students would not link the rise in education to the drop/decrease in total fertility rate (TFR).</li><li>• Students often confused pronatalist policies with antinatalist policies. Many students explained an antinatalist policy used by the government to discourage parents to have more children instead of a pronatalist policy which would encourage parents to have more children.</li></ul>	<ul style="list-style-type: none"><li>• Responses that earned a point in part D would explain how the increase in education would make women more aware of information on reproduction and family planning options and how this would result in a decreased TFR.</li><li>• Quality responses in part G were able to explain how governments would provide incentives such as financial or tax incentives to influence people’s family planning decisions to have children.</li></ul>

**Based on your experience at the AP® Reading with student responses, what advice would you offer teachers to help them improve the student performance on the exam?**

Focus on the Course and Exam Description (CED) Skill page (page 14). In part E, the student needed to explain the degree to which advanced healthcare for women in more developed countries affected the total fertility rate. To earn this point, students needed to state a degree to which this was true or not using terms such as highly likely, to a great degree, etc., and then explain why that degree is an accurate response. Less prepared students did explain some geographic issues surrounding this topic but were not prepared to explain the degree to which the two issues may or may not be interrelated.

“Explain the degree” is an important part of the advanced skills in the CED (page 14) and preparing students to answer these types of questions will be an important part of the exam moving forward. Many students could readily identify the advantages of advanced healthcare for women in more developed countries (e.g., that it would lead to lower fertility rates), but they rarely expressed “the degree to which” healthcare affected fertility rates—whether access to healthcare had a small but perceivable impact, a moderate but measurable impact, or a strong or significant impact on decreasing fertility rates. Responses that earned the point were able to close the loop by stating a degree and explaining why that degree is the correct response concerning the relationship between two patterns. To successfully “explain the degree,” students have two separate but connected tasks to perform.

**What resources would you recommend to teachers to better prepare their students for the content and skill(s) required on this question?**

The following resources are available to support instruction on the topics of population dynamics, population policies, and women and demographic change. Strategies to reinforce the use of higher-level skills, such as “explain the degree to which,” may also be found in Developing the Course Skill in the course framework and Skill Category and Skill option in the Question Bank in AP Classroom.

- Topic 2.4 Population Dynamics AP Daily Videos 1 & 2 and Topic Questions in AP Classroom.
- Topic 2.7 Population Policies AP Daily Video 1 and Topic Questions in AP Classroom.
- Topic 2.8 Women and Demographic Change Videos 1 & 2 and Topic Questions in AP Classroom.
- Topic 7.3 Measures of Development Video 1 and Topic Questions in AP Classroom.
- Instructional Strategies on “Explain the degree to which” under Develop Course Skills pages 147 and 151 in the Course and Exam Description.
- Everything You Need to Know About Data Analysis (Live Review Session 4) AP Daily Video.

**Question #2****Topic:** Cultural patterns and processes in the English language**Max. Points:** 7**Mean Score:** 2.87***What were the responses to this question expected to demonstrate?***

This question was expected to demonstrate students' abilities across several aspects of the course and exam description. In part A, students were expected to understand that there are historical reasons as to why language diffuses. At its highest level, the question measured the students' knowledge of historical and geographic connections. While this part of the question seemed quite simple, many students were not able to make this connection.

In part B, students were expected to demonstrate knowledge related to the contemporary reasons as to why people in China and India are learning English. At its highest level, the question measured student understanding related to the growth of business, jobs, and trade opportunities in relation to the English language acting as a lingua franca or global language of business and trade, as well as the impact of western culture in China through the spread of English through online content, entertainment, and media.

In part C, students were expected to demonstrate an understanding of how successfully English has been able to diffuse throughout China by describing a barrier to this diffusion. Students needed to understand the scale of analysis at which this question was posed, i.e., barriers within a country versus barriers to and from a country.

In part D, students were expected to understand why there is a higher percentage of English speakers in the Netherlands than in China. At their highest level, responses would be able to clearly state a social, political, and economic understanding instead of using a simple mathematical rationale. Responses using differences in language families between the two countries and business and cultural connections of English within the Netherlands were not often found.

In part E, students were expected to understand why a corporation based in an English language speaking country would want to place a call center in a country where English is not the dominant language. At their highest level, students were asked to explain how and why cost-effective means of locating in a developing or less developed country would be most advantageous for these companies.

In part F, students were expected to demonstrate knowledge related to the limitations of using data, explaining why population data for specific countries cannot appropriately measure economic development. At its highest level, this question measured the students' ability to effectively analyze data appropriately and determine the relationship of data to multiple geographic characteristics.

In part G, students were expected to understand that a global lingua franca such as English can have a negative local impact on areas where indigenous or native languages are spoken. At its highest level, this question measured a students' understanding of how the scale of analysis can affect reality.

***How well did the responses address the course content related to this question? How well did the responses integrate the skills required on this question?***

The topic of the English language and the impacts of diffusion is prominent in the CED, and students were very comfortable with the topic. Even the responses that did not earn points were more on topic than in previous years. The most difficult parts of the question were (understandably) the last two parts. Part F was more difficult because of the skill than because of the content.

This question measures the students' ability to effectively analyze data appropriately and determine the relationship of the data to multiple geographic characteristics. The responses that did not receive credit lacked an explanation of the data's limited capability to determine a country's level of economic development.

Part G measures a student’s understanding of how the scale of analysis can affect a real-world setting and see the negative impacts of global forces. These are proficient skills that were measured in parts F and G, but they were balanced with emerging content and skills in parts A and B, where responses were much more likely to be awarded points.

**What common student misconceptions or gaps in knowledge were seen in the responses to this question?**

<i>Common Misconceptions/Knowledge Gaps</i>	<i>Responses that Demonstrate Understanding</i>
<ul style="list-style-type: none"> <li>In part B, many students discussed migration as though relocation diffusion were the only means by which a language could spread.</li> <li>In part D, many students did not reference information from the table, despite the prompt saying, “Using the table, explain ONE reason ...” Reasonable answers from a student’s prior knowledge that did not use any information from the table did not earn a point.</li> </ul>	<ul style="list-style-type: none"> <li>Looking across the units, quality responses were able to see the effects of international trade and the global economy on linguistic patterns.</li> <li>Responses that earned the point in part D explained a geographic context such as the Netherlands’ membership in the European Union and the practicality of knowing English in the Netherlands vs. in China due to social and political relationships.</li> </ul>
<ul style="list-style-type: none"> <li>In part G, some students did not focus on a local impact of a global lingua franca, changing scales with responses such as, “if people in a country stopped speaking a native language.”</li> </ul>	<ul style="list-style-type: none"> <li>Students do seem to understand the concept of endangered languages and how a lingua franca might threaten languages when they focused on local, indigenous cultures.</li> </ul>

**Based on your experience at the AP® Reading with student responses, what advice would you offer teachers to help them improve the student performance on the exam?**

- Teach students to thoroughly read the questions and then carefully address the question asked (not the one that they may be best prepared to answer).
- Teach students that the focus of the CED and the AP Human Geography course is teaching geographic skills more so than it is specific content. The content teaches an instance of the skill so it can be applied to other circumstances, so focus more on skill-building.
- Teach students not to panic or be rattled when they find words on the exam that they cannot recall. Use the stimuli and stem for context clues.
- Teach students the models, concepts, and theories first—and then teach the students to critique them.
- Work with students to find the limitations of datasets, maps, and other potential stimuli.

***What resources would you recommend to teachers to better prepare their students for the content and skill(s) required on this question?***

The following resources are available to support instruction on the topics of historical causes of diffusion and the diffusion of languages focusing on different ways in which relocation diffusion may occur. Strategies to reinforce the use of higher-level skills that focus on spatial relationships and comparing geographic concepts, processes, and theories across various scales may also be found in Developing the Course Skill in the course framework and Skill Category and Skill option in the Question Bank in AP Classroom.

- Topic 3.5 Historical Causes of Diffusion AP Daily Video 1 in AP Classroom.
- Topic 3.7 Diffusion of Religion and Language AP Daily Videos 1, 2, & 3 in AP Classroom.
- Skill 5.B Explain spatial relationships across various geographic scales using geographic concepts, processes, models or theories and 5.C Compare geographic characteristics and processes at various scales under Instructional Strategies page 151 in the Course and Exam Description.
- Strategies to Explain Spatial Relationships (Live Review Session 3) AP Daily Video.

**Question #3****Topic:** Spatial economic patterns in special economic zones (SEZs)**Max. Points:** 7**Mean Score:** 2.14***What were the responses to this question expected to demonstrate?***

This question expected students to demonstrate a comprehensive understanding of special economic zones (SEZs) in China as well as how these zones affect China's economy, both internally and externally, with regard to global economic processes using a variety of economic and geographic concepts. Several skills were required of the students to be able to answer this question: (1) the ability to interpret the geographic data shown on a map and in a table; (2) the ability to identify the reasons behind the spatial patterns observed; (3) the ability to integrate their knowledge from different units of the course (e.g., internal migration and corporations' profits); (3) the ability to apply their understanding of theories (e.g., the world system theory) to real-world examples (e.g., China's manufacturing industry); and (4) the ability for high-level reasoning and thinking to explain geographic phenomena and processes, such as the comparative advantage of China's specialized clusters in global trade.

***How well did the responses address the course content related to this question? How well did the responses integrate the skills required on this question?***

In parts A and B, students were expected to describe the spatial pattern of selected specialized manufacturing clusters in China and explain a reason for the pattern. Most students correctly identified the predominantly coastal locations of the clusters and many knew that such locations facilitated exports and shipping because of easy access to ports and relatively inexpensive waterborne transportation.

In part C, students were expected to define SEZs, but a majority of the students could not define SEZs and many thought they were places specialized in manufacturing one particular product, probably based on the information provided in the stimuli. Quite a few students seemed to have confused SEZs with exclusive economic zones (EEZs) in Unit 4.

In part D, students needed to explain how economic policies implemented in the SEZs attract foreign investments. Even though most students could not define SEZs in part C, many knew low minimum wage or low-cost labor in China were attractive to foreign investments. Many of those students failed to earn a point because they simply identified the reason and did not elaborate on why foreign investors sought lower-cost locations outside of their home countries.

In part E, the question asked students to demonstrate their ability to relate internal migration and the profits of corporations in China's SEZs. Many students equated increased profits with more sales to migrants after they arrived in the SEZs, instead of explaining that migrants desperate for jobs worked for low pay which, in turn, increased the profits of corporations.

In part F, students were challenged to apply Wallerstein's world system theory to explain where the products featured in the question are made and where they are sold. Many students showed a reasonably good grasp of the world system theory, but few were able to apply it correctly and make the proper connections to China to earn a point. Some students confused Wallerstein with Weber and Christaller.

In part G, students were expected to explain how the specialized clusters in China have a comparative advantage in global trade with respect to the products featured in the question. Students did not seem to have a sufficient understanding of the content to use terms like "cost per unit" and "comparative advantage" or to think about how agglomeration and well-established supply chains lead to more efficient production. Many students based their explanation on the idea that since most of the products are "everyday" items, then the demand for them is large without explaining why the clusters in China have a comparative advantage in producing them.

**What common student misconceptions or gaps in knowledge were seen in the responses to this question?**

<i>Common Misconceptions/Knowledge Gaps</i>	<i>Responses that Demonstrate Understanding</i>
<ul style="list-style-type: none"><li>• Students confused SEZs with EEZs, despite the lack of maritime borders on the map stimulus.</li></ul>	<ul style="list-style-type: none"><li>• Even without specific knowledge to define an SEZ in part C, many students who took the time to analyze the stimuli as a prompt were still able to explain how economic policies could attract foreign investment into the SEZs through tax breaks.</li></ul>
<ul style="list-style-type: none"><li>• For part B, students described the spatial patterns they saw but failed to explain why those spatial patterns exist.</li><li>• For part F, students described Wallerstein’s world system theory without explaining the strengths of this theory in this particular context.</li></ul>	<ul style="list-style-type: none"><li>• Students noted that the SEZs were overwhelmingly coastal and then explained that access to major shipping lanes and deep-water ports would enable greater international distribution of these manufactured goods.</li><li>• Quality responses explained that Wallerstein’s world system theory divided the world into the core, periphery, and semi-periphery. This is important because places with lower labor costs such as China could export manufactured goods to the core in one global market but with a global division of labor, as described in the theory and as shown in the stimuli.</li></ul>

**Based on your experience at the AP® Reading with student responses, what advice would you offer teachers to help them improve the student performance on the exam?**

In part F, many students had a grasp of world system theory, but few were able to apply it correctly and make the proper connections to China to score points. Given that many responses were close to earning a point, teachers should focus on preparing students to better explain their reasoning.

The command verb “explain” is used in several different skills. “Explain the degree” was addressed in Question 1 of this Chief Reader Report. “Explain a limitation” was addressed in Question 2. Students may also be asked to “explain a strength.” All three of these are advanced skills. They are more difficult than a typical “explain” question, primarily because students have a very specific task to perform. In these questions, many students will address part of the question, but not the specific context that is required. Part of the difficulty is that many students might know the concept, theory, or model mentioned (e.g., Wallerstein’s world system theory) at a cursory level but are not able to apply the theory to the given context (e.g., China’s SEZs). In addition, this type of question requires the students to understand the concept, theory, or model at a deep enough level to know the strengths and weaknesses of that concept, theory, or model.

Students should be to be prepared for the three variations of “explain” that are directly tied to the skills categories found on page 14 of the CED: 1) Explain the degree, 2) Explain a limitation (or weakness), and 3) Explain a strength (or advantage).

This was the hardest question on this exam. Whichever unit is taught last, historically, is often seen as a difficult FRQ on the exam. This was a year unlike any other and many teachers ran out of time to thoroughly teach Unit 7. It is tempting to spend too much time on our “favorite” units or ones that we feel are foundational. That decision often comes with some

trade-offs; not being able to dive deeply enough into the final units is unfortunately a result of a schedule that allocates more resources and time to the beginning of the course. Units 6 and 7 are placed at the end because the content is complex and relies on previous information in the course. This means that these final units need sufficient instructional time so that they are not condensed or cut short.

***What resources would you recommend to teachers to better prepare their students for the content and skill(s) required on this question?***

The following resources are available to support instruction on the topics of theories of development and changes as a result of the world economy. Strategies to reinforce the use of higher-level skills that explain the strengths, weaknesses, and limitations of models and theories may also be found in the Developing the Course Skill in the course framework and Skill Category and Skill option in the Question Bank in AP Classroom.

- Topic 7.5 Theories of Development AP Daily Videos 1 & 2 in AP Classroom.
- Topic 7.7 Changes as a Result of the World Economy AP Daily Videos 1 & 2 in AP Classroom.
- Skill 1.E Explain the strengths, weaknesses, and limitations of different geographic models and theories in a specified context under Instructional Strategies page 145 in the Course and Exam Description.
- Similarities and Differences Between Concepts and Processes (Live Review Session 2) AP Daily.