

Student Performance Q&A: 2009 AP[®] Human Geography Free-Response Questions

The following comments on the 2009 free-response questions for AP[®] Human Geography were written by the Chief Reader, David Lanegran of Macalester College in St. Paul, Minnesota. 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 performance 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

What was the intent of this question?

This question focused on the geography of religion in the United States as influenced by migration patterns during the nineteenth and twentieth centuries. Its intent was to determine how well students could make connections between the cultural and population sections of the course outline. The question was also structured so that students were required to think critically about patterns shown on maps. The case of predominate church affiliation by county in 2000 was used because a map of these data, with accompanying commentary, can be found in all the major textbooks used by AP Human Geography teachers.

Part A of the question asked students to identify the three religious groups shown on the map.

Part B required them to select the religious group they knew the most about and to develop an explanation for its spatial pattern based on two factors.

Part C asked students to use their knowledge of map design and the concept of scale to critically analyze the map.

How well did students perform on this question?

Students did moderately well: the mean score was 2.16 out of a possible 8 points.

In part A most students were able to identify one or two of the religious groups. Mormonism was most frequently identified, followed by the Baptists.

In part B most students wrote about the Mormon region and could explain the original migration of Mormons into the Salt Lake Basin from the eastern United States. They had much more difficulty explaining how Mormonism was carried to other parts of the Mormon culture realm, and they did not discuss the lack of other migrations into the region, which would have changed the pattern.

Students who chose to write on the preponderance of Baptists in the southeastern United States were able to explain the lack of later migrations into the region but could not discuss the process through which this religion developed in response to the geography of the region.

The small number of students who wrote on the Lutheran region generally understood that the pattern resulted from an initial migration of Lutherans into this part of the country and the lack of subsequent migrants with different religious affiliations.

In part C most students were able to write about how the use of county data for the map obscured smaller concentrations. They understood that the counties vary in size, and if percentages are used, large, lightly populated counties will be emphasized at the expense of small, densely settled counties. Others indicated that the pattern would have looked different if state rather than county data had been used.

This question differentiated among three groups of students. Those who understood the general patterns of migration into and within the 48 contiguous states, and the connection between migration and cultural diffusion, typically earned 6 to 8 points. Those who had knowledge of the history of Mormonism but did not have a grasp of the more general geographical issues of migration and regional cultures in the United States typically earned 3 to 5 points. Those who had some knowledge of regional culture in the United States but no knowledge of how cultural regions emerge and change earned 1 to 3 points.

What were common student errors or omissions?

- A small percentage of students did not recognize the three patterns and could not identify the religious groups.
- Most of the mistakes were errors of omission: that is, students did not answer parts of the questions (e.g., essays explained the initial migration of Mormons to the Salt Lake Basin but not subsequent moves into Idaho).
- Some students wrote that the Baptist denomination originated in Africa and was brought to the southeastern United States by slaves.
- Many students could not identify the region in which the Lutheran Church is dominant.
- Most students did not mention the lack of a subsequent migration of Europeans or other Americans into the three regions in the twentieth century, which would have brought greater diversity to the regions.
- Most students showed a lack of knowledge of the major internal migrations within the United States during the last century.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Make sure that students understand how to read and use maps to analyze situations.
- Geography is based on spatial patterns, and it is important to teach students to think critically about such patterns. When seeing a map for the first time, students should consider the characteristics of the patterns and likely correlations with other distributions they have seen. They should be able to answer the questions “Where,” “Why,” and “What” is the significance of the pattern or distribution?
- Make sure that students do not ignore the maps in their textbook. Ideally, teachers will spend class time analyzing every map in the basic text used in the course.

Question 2

What was the intent of this question?

This question was designed to evaluate students’ knowledge of urban geography, economic development, population geography (especially rural-to-urban migration), and world-systems theory, as well as their ability to synthesize knowledge gained in different parts of the course curriculum. They were asked to use this information to answer a significant question about the megacities of the global periphery (the developing countries), which are the future centers of population and industry in the world.

Part A of the question required students to describe a typical location of squatter settlements within urban areas of megacities on the global fringe. This question determined how well students understood the internal spatial structure of cities in the less-developed countries of the world and assessed their ability to apply the models of the internal structure of these cities.

Part B required students to describe two factors that contribute to the formation of squatter settlements. This question determined how well students understood the processes that produce the spatial structure of these cities.

Part C required students to describe three consequences of the rapid growth of squatter settlements. They were told they could discuss social, economic, political, or environmental consequences. This question assessed how well students could evaluate the significance of geographical patterns and processes.

Students needed to have a firm grasp of the spatial models of cities and the generalization of world-systems theory to answer all parts of this question successfully. They were helped if they understood issues of political geography in the developing world.

How well did students perform on this question?

Students did fairly well: the mean score was 2.18 out of a possible 6 points.

This question differentiated among three groups of students. Those who understood the general patterns of world cities, had knowledge of urban spatial structures and rural-to-urban migration, and showed an understanding of the issues of rapidly growing cities typically earned 5 to 6 points. Those who had knowledge of the geography of cities but did not understand the implications of their rapid growth typically earned 3 to 4 points. Those who had some knowledge of squatter settlements earned 1 to 2 points. Students who did not understand the difference between large cities in the core and the periphery earned no points.

- Most students could write an essay on this topic, and only a small percentage of responses earned no points.
- The vast majority of students understood that squatter settlements are located on land that has not been developed because of clouded ownership or undesirable aspects of the sites, such as dumps.
- Most students understood that squatter settlements are not well served by city services, such as water, electricity, and sewers.
- Most students understood that one of the problems of squatter settlements is the lack of adequate social services, such as education and health care.

What were common student errors or omissions?

- Students confused the large cities of the core region (North America, Europe, and Japan) with the megacities of the periphery.
- Some students wrote about slums rather than squatter settlements.
- Students frequently did not consider the rural-to-urban migration in the periphery as one of the primary factors in the formation of squatter settlements.
- Students frequently stated that squatter settlements are located in middle-class sections of cities.
- Students frequently mistook international migration as a cause for the development of squatter settlements.
- A significant number of students wrote about squatter settlements forming in rural areas, ignoring the prompt to write about megacities.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Make sure that students are able to apply the major models of geography to real-world situations. In this question, students should have used world-systems theory and the models of the urban structure of Latin American and African cities as a basis for their answer.
- Make sure that students are able to combine the major portions of the course outline to analyze complex locational questions. In this case, the sections on economic development, population, and urban geography should have been marshaled to address the issue of squatter settlements.

Question 3

What was the intent of this question?

This question required students to evaluate important trends in the geography of modern agriculture in one of the countries of the core region. They were asked to evaluate data presented in a graph and to connect that data to their knowledge of the processes of industrialization/ economic development and urbanization.

Part A of the question asked students to identify and explain two factors that contributed to the decline in the number of dairy farms since 1970. This question assessed students' understanding of the changing spatial scale of agriculture, specifically how the increased size of operations has meant that a smaller number of farmers can meet the demand for milk. The question also determined if students understood how the efficiency of large farms makes it harder for smaller operations to compete in the marketplace.

Part B required students to describe two factors that have contributed to the increase of organic farms. This question assessed students' understanding of how cultural tastes or preferences for food types and environmental concerns impact the structure of agriculture.

Students needed to have a firm grasp of the spatial pattern of modern agriculture to answer all parts of this question successfully. They were helped if they understood and could describe commodity chains and the influence of culture on food production and consumption.

How well did students perform on this question?

Students had less difficulty with this question than they did with the other two: the mean score was 2.91 out of a possible 8 points.

This question differentiated among three groups of students. Those who understood the general patterns of modern agriculture, commodity chains, and how culture influences food production and consumption earned 6 to 8 points. Those who had knowledge of the geography of organic agriculture but did not understand the implications of how the changing spatial scale of dairy operations has affected this industry typically earned 3 to 4 points. Those who had incomplete knowledge of organic agriculture and no knowledge of the large changes of scale in commercial agriculture earned 1 to 2 points. Students who did not understand the issues in the question earned no points. Some students did not attempt an answer, and others could not accurately respond to any part of the question, so a large percentage of responses earned no points.

What were common student errors or omissions?

- Many students appear to understand neither where their food comes from nor how it is produced.
- Many students confused the Green Revolution that occurred in the developing world with the current Green Movement within the United States and Europe.
- Many students attributed the decline in dairy farms to a decline in the total demand for milk due to people switching to soy milk.

- Some students wrote that the number of farms is declining because the United States is importing milk and other dairy products from India and China. They believe that dairying has been outsourced.
- Many students tried to use the von Thünen model to explain the decline of dairy farms. These students have learned the basic elements of the model but not how to apply it.
- Students have the erroneous belief that refrigeration and trucking were developed in the United States in the last decade (i.e., they have a poor sense of modern history).
- Students do not understand the range of products that use milk, such as the cheese on their pizzas, and focused their entire essay on fluid milk consumption.

Based on your experience of student responses at the AP Reading, what message would you like to send to teachers that might help them to improve the performance of their students on the exam?

- Spend more time on the agriculture section of the AP Human Geography course outline. Students need information about the dynamic geography of modern agribusiness.
- Use class time to present both sides of such issues as the increasing scale of farm operations, genetically modified plants, and the need to increase food supplies in the future. (Some responses implied that teachers may simply be criticizing modern agricultural practices rather than giving a balanced presentation.)
- Take advantage of the maps on the U.S. Census of Agriculture Web site (www.agcensus.usda.gov/). These free, downloadable graphics provide the latest information on the geography of agriculture in the United States and are an excellent tool for encouraging students to think critically about spatial patterns.