

THE LABORATORY COURSE FOR PHYSICAL GEOGRAPHY:
A COMMUNITY COLLEGE PATTERN

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Physical Geography has been a "traditional" course in most California Community Colleges.¹ This appears to have been the case in the days of fewer colleges with limited course selection, and it appears to be the situation today with more than ninety colleges offering hundreds of courses.² Over the years, Geography I, the introductory physical course, has provided a substantial challenge for thousands of lower division students. Unfortunately, significant numbers have either failed to complete the course or have earned low marks; thus, Geography I has the reputation of being a "hard" course.

Student Background

A recurring theme in discussions with students who had withdrawn from or earned low marks in Geography I centered on their lack of academic preparation to deal with the subject matter. Considering the state of high school geography, this does not come as a surprise to the experienced instructor. It is, however, a significant factor when considering the potential success level of a given group.

Another problem theme centered on the difficulty in grasping spatial concepts on a world-wide basis. For example, introductory students appeared to have a particularly difficult time in trying to understand the descriptive, explanatory, and interpretive relationships of the earth's climates. During several years of interviews, students have frequently pointed out their frustrations in relating world patterns to their own situation.

Thus, with little or no formal geographic preparation, and with an inadequate understanding of their own geographic environments, the challenge of learning about the geographer's perspective in terms of areal and spatial concepts ensures the continued labeling of Geography I as "difficult."

Course Content of Geography I

Realistically, the course content of Geography I does not vary significantly between two and four year institutions. The body of subject material to be considered is large. Many experienced instructors agree that the generally traditional three hours per week meeting pattern barely allows time to consider subject material. Trying to compensate for the unevenness of student backgrounds is not only subordinated, but clearly often neglected due to the pressure of the time commitment.

There has been, in short, no suitable way to provide class time for either involvement or tutorial exercises.

In these times of competitive enrollment, requiring additional tutorial hours or increasing the informal out-of-class study time decreases the likelihood of large enrollments. And, on occasion, there is the additional task of providing the exceptionally able student with exciting challenges beyond the normal scope of the course.

We at Southwestern College decided that the logical solution would be to transform Geography I from straight lecture to lecture/laboratory.

The Laboratory Program

Consultations with staff members in the physical and life sciences provided encouragement to prepare a one-unit laboratory supplement to Geography I. This new course, Geography 5, was initially offered in the Spring of 1971.

Four one-unit laboratory sections were scheduled at various times on Tuesdays and Thursdays to allow students maximum program flexibility.

The current course organization of Geography I is as follows:

- Unit I - The Discipline of Geography
- Unit II - Spatial Concepts and Maps
- Unit III - The Earth
- Unit IV - The Oceans
- Unit V - Weather and Climate
- Unit VI - Soils
- Unit VII - Natural Vegetation

Geography 5 was designed with several specific factors in mind. Recollecting discussions with students concerning difficulties in Geography I, the staff agreed that each laboratory session had to include three main considerations: (1) to allow time to explore basic aspects of each topical area; (2) to explore, in an informal and unhurried atmosphere, the characteristics of geographic relationships; and (3) to use the local environment as a case example of the topic under consideration as often as possible.

With the goals identified, the laboratory course was developed on an experimental exercise basis; each class meeting was devoted to a specific topical area correspondent with the Geography I lecture series. Thus far, the Geography 5 course pattern has been as follows:

- Ex. I - Classroom - Atlas Orientation
- Ex. II - Classroom - Basic Location
- Ex. III - Fieldwork - Topographic Maps
- Ex. IV - Fieldwork - Contour Drawing
- Ex. V - Field/Class - Rocks and Minerals
- Ex. VI - Field/Class - Stream Flow Mechanics
- Ex. VII - Fieldwork - Beach, Shore, and Coastline Observation

- Ex. VIII - Fieldwork - Scripps Institute Visit
- Ex. IX - Field/Class - Basic Meteorological Instruments and U.S. Weather Facility Visit
- Ex. X - Fieldwork - Three week on-site project: A Physical Geographic Account of an Exercise Site

Transportation for off-campus sessions has been by college station wagons assigned to the geography classes on a semester basis. Section enrollments have been limited to fifteen students; thus, both students and equipment have been easily transported in two or three vehicles. The three hour class schedule has permitted off-campus exercises which include study of sites of exceptional instructional merit. For example, each laboratory section has been able to observe rock and mineral displays at the San Diego Museum of Natural History and has visited the Thomas Vaughn Museum-Aquarium at Scripps Institution in La Jolla.

In some cases investigative work could be done within walking distance of the college. A local coastal terrace formation, about a mile and a half walk from the college, has provided students an excellent field introduction to water erosion.

Preliminary Results

Of course the most significant question is whether students who were concurrently enrolled in Geography I and Geography V have a greater course success rate than those students who enrolled only in Geography I. An analysis of grade reports suggests that they do.

By comparing the grade distributions and withdrawal patterns of students not enrolled in the laboratory program with those who were not, it is possible to assert that at least two of the Geography V goals are responsible for better education: (1) exercise material supporting Geography I lectures, and (2) local field experiences demonstrating many of the geographic relationships presented in Geography I.

Students concurrently enrolled in Geography I and Geography V appear to build an early confidence level and an interest threshold that give them a decisive advantage over those who attend Geography I as a straight lecture course.

Conclusion

It is still too early to draw any firm conclusions about the value of the Physical Geography Laboratory Class as a part of a community college geography program. Nevertheless, at this time a strong case could be made for requiring concurrent enrollment in Geography I and Geography V. There are, however, other factors to be considered. These include the changing nature of requirements by upper division institutions, the problem of geography as a suitable physical science experience, and the course needs of students who may be Geography I enrollees. Moreover, establishing a physical geography laboratory program in competition with the traditional laboratory sciences such as chemistry, physics, geology, and astronomy, is a formidable task.

The present situation is encouraging. Several more semesters of experience will allow a more complete appraisal of this curricular innovation in community college geography.

REFERENCES

¹A. Carthew, "Geography in California Colleges," *Junior College Journal*, XXIX (1949), pp. 244-49.

²Commission on College Geography, Association of American Geographers, *Geography in the Two-Year Colleges*, General Series Publication No. 10 (Washington, D.C.: Association of American Geographers, 1970), pp. 20-21.