UNIT REPORT Geography BS - Assessment Plan Summary

Geography BS

Training Geographically Informed Students

Goal Description:

Students completing core education in geography will be able to demonstrate foundational knowledge of geographic principles and concepts about the physical world.

RELATED ITEMS/ELEMENTS - - - -

RELATED ITEM LEVEL 1

Demonstrate Knowledge Of Foundational Concepts Of Physical Geography

Learning Objective Description:

Students completing the core education in geography will demonstrate knowledge of physical geography including the world in spatial terms, places and regions, and physical systems.

RELATED ITEM LEVEL 2

Physical Geography Concepts

Indicator Description:

Students will correctly answer the embedded questions on exams throughout the semester that address physical geography. The areas of emphasis include the world in spatial terms, places and regions, and physical systems.

Criterion Description:

Students will score 70% correct on those questions pertaining to each of the three areas of emphasis concerning physical geographical concepts.

Findings Description:

Students enrolled in GEOG 1321 scored on average 62% on those questions

pertaining to the world in spatial terms. Once again this score was both slightly

lower than that found on the previous year, and slightly lower than expected.

Students enrolled in GEOG 1401 scored on average 60% on questions assessing

this concept, less than expected and also lower than that of the previous year.

Students enrolled in GEOG 2301 scored on average 72 % on these questions, a

score that decreased from the previous year, although it remained higher than

expected. Students enrolled in GEOG 2355/2356 (World Regions) scored 64% on

these questions. Students enrolled in both GEOG 1321 and GEOG 2301 scored

on averaged 70% and 71%, respectively, on questions pertaining to concepts of

places and regions. Both scores met expectations, yet are are lower higher than were

found the previous year. Students enrolled in GEOG 2355/2356, courses focused

specifically on this subject matter, scored 66% on these questions. Students

enrolled in GEOG 1401 scored on average 56% on such questions, a significantly

lower score than realized previously, and one that failed to meet expectations once

again. In those two assessment areas students generally performed as well as they

did on exams as a whole. Students enrolled in GEOG 1321 scored 60% on

questions pertaining to physical systems, while students enrolled in GEOG 1401

scored 61% on such questions. Both scores were slightly decreased from that of

the previous year. Students enrolled in GEOG 2301 scored on average a 77% on

these questions.

RELATED ITEM LEVEL 3

Acting on Assessment

Action Description:

The assessment from this year's cycle suggest that student performance on certain basic and major concepts (charts & graphs, statistical procedures, even general concepts) increased when they were addressed in a smaller group settings. For example, student performance improved somewhat among those students enrolled in GEOG 1321 (course with smaller class sizes). They also increased when the concept in question was emphasized in labs associated with larger lecture courses, particularly among students enrolled in GEOG 1401. Thus, in the future we plan to incorporate the teaching of important concepts within break-out sections associated with more of our advanced course offerings. The hope will be that we will ultimately see student improvement across our entire geography curriculum.

As a result of a new faculty hire, an individual possessing expertise in physical/environmental geography, we were able to offer a few additional courses in that subject area of the discipline. Previous assessments have indicated that our students lacked a full understanding of physical systems, although some results from this assessment reflect improvement in this area. We plan to incorporate newly offered physical/environmental geography courses into future assessments, simply as a means to further gage student success in the area of physical systems.

Previous assessments also indicated a weakness among our students in regards to statistical procedures. A slight improvement this past cycle could reflect the inclusion of a statistics course as a degree requirement. However, only a small percentage of students (new majors this past year) have needed to abide by this requirement thus far. We will be paying increasing attention to student outcomes in terms of statistics performance as we move forward, as an increasing number of students should be effected by the requirement in future years.

RELATED ITEM LEVEL 3

Acting on assessment Action Description:

The assessment from this year's cycle suggest that student performance on certain basic and major concepts (charts & graphs, statistical procedures, even general concepts) increased when they were addressed in a smaller group settings. For example, student performance improved somewhat among those students enrolled in GEOG 1321 (course with smaller class sizes). They also increased when the concept in question was emphasized in labs associated with larger lecture courses, particularly among students enrolled in GEOG 1401. Thus, in the future we plan to incorporate the teaching of important concepts within break-out sections associated with more of our advanced course offerings. The hope will be that we will ultimately see student improvement across our entire geography curriculum.

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RELATED ITEM LEVEL 1

First-Year Foundational Geographical Principles And Concepts

Learning Objective Description:

Students completing core curriculum education in geography will be able to demonstrate foundational knowledge of geographic concepts and principles, including critical thinking.

RELATED ITEM LEVEL 2

Comprehensive Final Exam

Indicator Description:

Common embedded questions on the comprehensive final exam will determine student knowledge regarding general geographic concepts.

Criterion Description:

The average scores will be 70% correct on the general geographic concept questions embedded in the comprehensive exam.

Findings Description:

Students enrolled in GEOG 1401 averaged 59% on a series of specific concept questions embedded in a comprehensive final exam. Students enrolled in GEOG 1321 averaged 69% on a separate, yet very similar, series of concept questions. Students enrolled in world region sections (GEOG 2355 & 2356) were assessed for the first time and averaged 61% on these concepts. As was the case in the previous assessment cycle, scores for GEOG 1401 students were consistent with overall overage scores on the respective final exams, while scores for GEOG 1321 students were slightly higher than final exam averages. Scores for students enrolled in GEOG 2355 or 2356 scored slightly below final exam averages. The scores among students enrolled in GEOG 1401 were slightly lower than those from the previous year. The scores for students enrolled in GEOG 1321, while slightly lower than the previous year, yet were very close to the 70% criterion outlined as a base goal.

RELATED ITEM LEVEL 3

Acting on Assessment

Action Description:

The assessment from this year's cycle suggest that student performance on certain basic and major concepts (charts & graphs, statistical procedures, even general concepts) increased when they were addressed in a smaller group settings. For example, student performance improved somewhat among those students enrolled in GEOG 1321 (course with smaller class sizes). They also increased when the concept in question was emphasized in labs associated with larger lecture courses, particularly among students enrolled in GEOG 1401. Thus, in the future we plan to incorporate the teaching of important concepts within break-out sections associated with more of our advanced course offerings. The hope will be that we will ultimately see student improvement across our entire geography curriculum.

As a result of a new faculty hire, an individual possessing expertise in physical/environmental geography, we were able to offer a few additional courses in that subject area of the discipline. Previous assessments have indicated that our students lacked a full understanding of physical systems, although some results from this assessment reflect improvement in this area. We plan to incorporate newly offered physical/environmental geography courses into future assessments, simply as a means to further gage student success in the area of physical systems.

Previous assessments also indicated a weakness among our students in regards to statistical procedures. A slight improvement this past cycle could reflect the inclusion of a statistics course as a degree requirement. However, only a small percentage of students (new majors this past year) have needed to abide by this requirement thus far. We will be paying increasing attention to student outcomes in terms of statistics performance as we move forward, as an increasing number of students should be effected by the requirement in future years.

RELATED ITEM LEVEL 3

Acting on assessment Action Description:

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RELATED ITEM LEVEL 2

Comprehensive Final Exam - Geographic Principles Portion Indicator Description:

The final faculty-developed comprehensive exam will indicate students' grasp of major geographic principles, including critical thinking.

Criterion Description:

The average score will be 70% correct of the major geographic principles and critical thinking items embedded on the comprehensive exam.

Findings Description:

Students enrolled in GEOG 1401 averaged 64% on a series of questions focused on competency with major principles and critical thinking skills that were embedded in a comprehensive exam. Students enrolled in GEOG 1321 and GEOG 2355/2356 averaged 75% and 65%, respectively, on similar series of questions. In terms of GEOG 1401 and 1321 both cohorts of students this represents a slight improvement from results found from the previous assessment cycle. One notable, albeit minor, improvement when compared to the previous assessment cycle pertains to student scores on questions requiring the interpretation of charts and graphs. Scores among students enrolled in GEOG 1401 averaged 62% on such questions, while students enrolled in GEOG 1321 averaged 71%. Students enrolled in GEOG 2355/2356 averaged 61% on questions pertaining to intepreting charts and graphs. Students enrolled in GEOG 1401 averaged 61% on such questions requiring the interpretation of basic statistics. Students enrolled in GEOG 1401 averaged 50% on such questions, while those enrolled in GEOG 1321 averaged 62%.

RELATED ITEM LEVEL 3

Acting on Assessment

Action Description:

The assessment from this year's cycle suggest that student performance on certain basic and major concepts (charts & graphs, statistical procedures, even general concepts) increased when they were addressed in a smaller group settings. For example, student performance improved somewhat among those students enrolled in GEOG 1321 (course with smaller class sizes). They also increased when the concept in question was emphasized in labs associated with larger lecture courses, particularly among students enrolled in GEOG 1401. Thus, in the future we plan to incorporate the teaching of important concepts within break-out sections associated with more of our advanced course offerings. The hope will be that we will ultimately see student improvement across our entire geography curriculum.

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additional courses in that subject area of the discipline. Previous assessments have indicated that our students lacked a full understanding of physical systems, although some results from this assessment reflect improvement in this area. We plan to incorporate newly offered physical/environmental geography courses into future assessments, simply as a means to further gage student success in the area of physical systems.

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RELATED ITEM LEVEL 3

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Training Geographically Informed Students - Cultural Aspects

Goal Description:

Students completing the core courses required for a Geography degree will demonstrate knowledge of cultural geography including both human systems and the interaction between the environment and society.

RELATED ITEM LEVEL 1

Demonstrate Knowledge Of Cultural Concepts In Geography

RELATED ITEMS/ELEMENTS -----

Learning Objective Description:

Students completing the core courses required for a Geography degree will demonstrate knowledge of cultural geography including both human systems and the interaction between the environment and society.

RELATED ITEM LEVEL 2

Cultural Geography Concepts

Indicator Description:

Students will correctly answer the embedded questions on exams during the semester that address cultural geography. The areas of emphasis include human systems and the environment and society.

Criterion Description:

Students will score 70% correct on those questions pertaining to each of the two areas of emphasis associated with cultural geography

concepts.

Findings Description:

Students enrolled in GEOG 3350 scored an average of 72% on a set of questions focused upon human systems, a score that was slightly higher than realized on the previous assessment. Students enrolled in GEOG 1321 and GEOG 2301 scored an average of 66% and 70% on those same questions. These scores were slightly lower than scores generated from the previous assessment. Students enrolled in GEOG 3350 scored 63% on questions concerning the interaction of the environment and society, while students enrolled in GEOG 1321 scored an average of 61% on these questions. The scores on these questions were below expectation for both courses, and did decrease slightly from the previous year. Students enrolled in GEOG 2301 scored on average of 70%, a lower score than recognized from the previous assessment, yet still slightly above expectation.

RELATED ITEM LEVEL 3

Acting on Assessment Action Description: The assessment from this year's cycle suggest that student performance on certain basic and major concepts (charts & graphs, statistical procedures, even general concepts) increased when they were addressed in a smaller group settings. For example, student performance improved somewhat among those students enrolled in GEOG 1321 (course with smaller class sizes). They also increased when the concept in question was emphasized in labs associated with larger lecture courses, particularly among students enrolled in GEOG 1401. Thus, in the future we plan to incorporate the teaching of important concepts within break-out sections associated with more of our advanced course offerings. The hope will be that we will ultimately see student improvement across our entire geography curriculum.

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requirement in future years.

Update to Previous Cycle's Plan for Continuous Improvement

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

Based on the assessment of 2015-2016, it would appear that we have slightly improved our teaching of both basic and major geographical concepts, but only in certain areas and/or only among students completing a select number of our courses (for example, students in GEOG 1321, 2301 and 3350 generally perform better than students enrolled in GEOG 1401). This dichotomy is almost certainly due to the varied nature of the courses assessed. Weather & Climate (GEOG 1401), a course where students perform less well, is a core curriculum course enrolling large numbers of students from across campus (over 80 students per section). The other courses assessed (GEOG 1321, 2301 and 3350) enroll smaller numbers of students (30 or less), with many of the students enrolled being geography majors. For this reason we plan to continue our efforts to more assertively implement methodologies that seem to work in GEOG 1321 into the smaller "lab" sections of GEOG 1401. It must be noted that this can be a

challenge when the lab TAs are undergraduates themselves. That said, students enrolled in 1401 did improve their performance in areas pertaining to both "world in spatial terms" and "interpretation of charts & graphs." Pedagogical methodologies previously utilized in other geography courses (1321 & 2301) to teach these two subject areas were newly implemented in GEOG 1401 labs during this last year. In short, our efforts towards improving the delivery of important concepts in 1401 through the incorporation of methods proven successful in other courses have already proven somewhat successful.

The offering of Environmental Geography (GEOG 2301) has enabled us to effectively teach concepts related to physical systems among our students, a finding overwhelmingly supported by the results of this assessment. Partially due to this recognition, we have arranged to offer a new course specifically focused on Physical Geography. The new course has been approved and will be offered for the first time in Fall 2016 and will be required of all geography majors. The new course will be taught by a newly appointed environmental geography, who in time will offer a number of courses in the sub-area of physical geography. We expect to incorporate the new physical geography course in future assessments, which should enable us to more accurately gage how effective we are at delivering content relate to physical systems.

Our plans to include two additional introductory "regional geography" courses in assessment efforts (GEOG 2355 & 2356) had to be put on hold this past year. The reason for this was that both courses had to be partially redesigned to meet the needs of a host of education majors, many of which are now required to enroll in them in order to complete their degrees. Now that this transition has been made we will be assessing student performances in these courses, specifically when it comes to focusing on the learning pertaining to "world regions." The inclusion of these two courses in assessment efforts will provide a clearer picture of now effective we are at teaching a critical aspect of a geographic education.

Based on previous recognition that students were not performing all that well when it came to basic statistical procedures, we implemented a requirement that all geography majors complete an introductory statistical course. However, as of yet this change has only applied to a few of our new majors. It is our prediction that the impact of this change will not really show up for a few years. This past assessment demonstrated that some of our students improved their performance in this subject area, but not all. Depending on the outcomes of future assessment, there may be a possibility that we deem it necessary to develop our own "in-house statistics course specifically designed for geography majors.

Update of Progress to the Previous Cycle's PCI:

Student performance on important geographical concepts, and in terms of the development of geographic skills, have improved somewhat, but this recent assessment reinforces what we've learned from previous assessments - significant levels of improvement have only been realized among students completing a select number of courses (for example, GEOG 1321, 3301, and 3350). Performance within a few classes still have yet to reach the desired level as outlined in the goals we have put forth. We will continue to try implementing teaching strategies proven to be effective in smaller course sections (ex. statistical analysis; interpretation of maps and graphs) into break-out sections within other courses across our curriculum. Moreover, we will also broaden our assessment to include the evaluation of student performance within a number of additional courses. A number of courses discussed in this report have only been assessed for one full year (in some cases, only one semester), so we still don't have a lot of performance data to consider. Some of our newly offered courses (physical geography, hydrology, sustainable development) have only recently been required by a large number of our majors, yet focus directly or indirectly on subject matter that our students have traditionally struggled with. Accordingly, we anticipate having a more clear picture of student performance as we move forward.

One assessment strategy we plan on implementing involves directly assessing some of our summer field courses. These courses are often temporary (for example, may only be offered once), and all field courses tend to enroll small numbers of students at any given time. Accordingly we have not really assessed such courses in any previous assessment. However, anecdotal evidence suggest that it appears that students who've participated in one or more field courses generally tend to perform better in our other more traditional in-class courses. It is very possible that students who are

directly exposed to the geographical study may benefit in ways that translate to overall performance in the classroom. If this proves to be true, it would indicate it might be beneficial to increasingly incorporate field components across the curriculum.

Plans for Continuous Improvement

Closing Summary:

As a means to both improve the geography program, and to improve the assessment of our the goals we have set forth, our future plans call for increased focus on three things.

First, we plan to continue to monitor performance on material pertaining to identified weaknesses (working with maps, graphs & statistical procedures) in break-out sections of classes. When appropriate we will put more emphasis on teaching these skills in lab sections of larger lecture-based courses. Certain other material will be treated in smaller group settings without non-lab based courses. Our hope is to identify which specific courses work best for the teaching of important geographical material.

Second, we will attempt to identify the performance of students that are enrolling in newly offered courses within the major (physical geography, hydrology), as well as within new degree-specific requirements (Intro to Statistics). The addition of these type courses to the major is still relatively new, so we do not yet have a full grasp at how effective their inclusion have been in terms of enabling us to teach important spatial skills. To a degree, we will need to also monitor the learning outcomes generated from the newly redeveloped world regional courses (2355 & 2356).

Third, we will begin assessing learning outcomes in our summer field courses. These courses have not generally been required of all students, but anecdotal evidence suggests that students have a firm grasp of the "world in spatial terms" upon completion of them. It may very well decide it best to design one or more of these courses as capstone experiences required of all geography majors.