Date of Report: 8/31/2018
Name of Person Submitting Report: Jon Comer

A. Program Information:
Assessment Coordinator’s Name: Jon Comer
Assessment Coordinator’s Email Address: jon.comer@okstate.edu
Number of students enrolled in the program 2017-2018: 9
Number of students graduated in 2017-2018: 1

B. Program Mission Statement
In the box below, provide the mission statement for the program.
The graduate programs in Geography specialize in three broad areas including cultural/historical geography, resource management, and transportation/urban geography. These degree programs are designed for students to master the theoretical knowledge and skills to design, implement, and present original geographic research in oral and written form. Therefore, students study geographic research methods and analysis, the history and philosophies of geography, and knowledge of current geographic research.

C. University Assessment Funds
Were university assessment funds used by the department/program for assessment activities? ☑ Yes ☐ No
The Department of Geography was awarded $1,200 (plus benefits) for the conduct of assessment towards Outcome 1 (writing ability), specifically the evaluation of student artifacts (papers) collected from graduate courses in Geography during the academic year. The funds were used to compensate two faculty members for their time reading the artifacts collected and scored against Rubric E (see departmental graduate assessment plan).

The impact of this award was two-fold. First, most other information gathered during the year is very quickly and efficiently collected by faculty members during or immediately after the various student defenses (proposals, comprehensive exams, and final thesis/dissertation defenses) and is tabulated as the year progresses. However, evaluation of artifacts from graduate courses must be read and scored individually. Compensating these individuals makes the task somewhat less onerous.

Second, with compensation available, the department is able to entice faculty members who are not on the Graduate/Assessment Committee to engage in artifact review. As a consequence, the number of faculty in the department engaged more directly with assessment is expanded beyond the 3-person Graduate/Assessment Committee.

D. Student Learning Outcomes
The pages that follow list the Student Learning Outcomes associated with the program identified in this assessment form.
D1) **Student Learning Outcome #1:** Graduate students will develop the ability to communicate geographic information effectively orally and in writing at the appropriate masters or doctoral level.

**Identify opportunities for students to learn this outcome during the 2017-2018 academic year:**
A curriculum map for the Graduate Program (see Appendix) indicates that only a few graduate courses do not assess writing. In all other courses writing quality is assessed, and in about half of those courses the instructors indicated they devoted some time to writing instruction. An overwhelming majority of courses taught/assessed writing at an intermediate level, while a few did so at the beginner level and one course at the advanced level. Thus, almost every course provides students an opportunity to develop their writing, and some include oral presentations as well (these were not mapped).

**How many students were included in the assessment of this outcome?**
Six students defended *proposals* during the school year, and all six were assessed.

All defenses are likewise evaluated for *oral* communications, and there were 11 students assessed in this dimension (six proposals, five final defenses).

Additionally, 37 student artifacts by Geography graduate students from GEOG graduate courses/seminars were obtained for assessment and evaluated by two departmental readers (paid with Assessment funds during summer 2018 with FY18 funds).

**How were students selected to participate in the assessment of this outcome?**
All students defending a proposal were assessed by their committee members with Rubric E (written proposals) and Rubric J (oral presentation); see departmental assessment plan for these rubrics. Nearly all faculty members successfully returned their rubrics to the Assessment Coordinator, with 20 out of 22 possible assessments on Rubric E and 38 out of 42 assessments for Rubric J submitted over the past year.

Additionally, all instructors of Geography courses with graduate student enrollments and graduate credit (4000*, 5000, or 6000-level) were asked for artifacts from one assignment during the semester, resulting in 37 total artifacts, which has some students represented multiple times and some none at all depending on their course enrollments. No sampling was used.

**Assessment Methods**
- ☑️ Survey
- ☑️ Rating of skills (e.g., rubrics)
- ☑️ Analysis of written artifacts
- ☐ Comprehensive, certification, or professional exam(s)
- ☑️ Oral presentation
- ☐ Course project
- ☐ Satisfaction Survey
- ☑️ Benchmarking
- ☐ Measuring effectiveness relative to professional standards
- ☐ Review of thesis/dissertation/ creative component
- ☐ Capstone project
- ☐ Internship
- ☐ Interviews
- ☐ Performance or jury
- ☐ Visual collection (photos, videos, etc.)
- ☐ Review of student research
- ☐ Other (please specify):
  - [Click here to specify.]

**Describe the how the assessment method was implemented, administered, and/or conducted.**
All students undergoing a defense of some sort are assessed on their writing and oral presentation skills by all committee members. Rubrics are distributed to the committee members before the defense and are usually collected afterwards, although some faculty members return them later.

As to the other component of assessment, all instructors of graduate-level courses are requested to provide all Geography student papers from one of their assignments, usually a term paper or project, for evaluation by paid summer artifact readers. These readers have both assessed artifacts in the past, and were given general instructions on the assessment of the artifacts. Instructors were not aware of any identifying student information, including level, to avoid bias, although the readers were also contributors of some artifacts so likely recognized their courses and their students via their writing.

**Did your department/program faculty have a goal set for this learning outcome?**
- ☐ Yes
- ☑️ No

**Provide a summary of the results from the assessment of Learning Outcome 1.**
With regards to Rubric E (proposals), the six students assessed performed comparably to recent years (dating back to 2010-11 when this assessment plan was implemented). This year’s averages of between 2.5 and 3.0 (on a 4-point scale) are down somewhat from the previous two years (2015-16 especially) but fairly close to long-term averages as the time series figure at right shows. There were fewer students assessed this year compared to years past, so one or two lower-scoring students this year contributed to the slight decrease in scores. Also, as might be evident on the figure, there is less variability in scores for the “Organization” component of Rubric E over time, with a standard deviation (0.14) that is about half the size of the standard deviation for the other two components.

Beyond assessing student writing at defenses, the department collects all possible artifacts written by Geography graduate students in GEOG graduate courses (one per student per course), which resulted in 37 total artifacts collected during the past year. The table at right summarizes the results of this analysis over the past eight years since the assessment plan has been in effect in the department.

The scores show moderate variation but have largely remained (since 2011-12) in the mid-to-upper 2 range with 2013-14 setting the high bar for all three categories on the rubric. Inter-rater reliability across the seven years calls some of the changes into question, as we have only twice had the same pair of raters for two consecutive years (2014-15 and 2015-16, and again in 2016-17 and 2017-18). That said, out of 111 total scores (37 papers times three categories on the rubric), just 4 (4%) scores were different by 3 points between the two reviewers. There were 25 scores that were 2 points apart (23%), 56 (50%) scores that were only 1 point apart, and 26 scores (23%) that were identical. It is worth noting that out of the 85 scores in which the two raters differed, 79 of the scores were lower for rater #1 and just 6 of the
scores were lower for rater #2. This was also the case last year with the same two reviewers, who (on average) tend to score each item on the rubric about 1 point apart as the two charts below show, although last year these same two raters had a larger number of scores 2 points apart (28%) than they did this year (23%).

![Comparison of R1 vs. R2 scores](image1.png)  ![Comparison of R1 vs. R2 scores](image2.png)

**What do the results suggest about student achievement of this learning outcome?**

Student writing quality remains one of the biggest exasperations of faculty; this is a university- and nation-wide issue but we must tackle it here on the ground in a manner over which we can exert control. The department added a writing sample to its admission materials several years ago, and has always used GRE scores and personal statements as additional evidence of the writing quality of applicants. The department has also added some courses that heavily (5423) if not exclusively (5203) focus on methods and writing, though they are not meant to be remedial. These results indicate that there has not been much change over the past five years (and beyond) and that measures taken by the department have not had any consistently measurable effect. Small numbers of students, artifacts, and ratings limit our ability to make strong statistical statements about these results, but even a qualitative review of average scores (a questionable statistical summary at best since they are ordinal 0-4 rankings on rubrics) reveals no long-term trends and also that scores remain stuck in a broad band around 3, which is “Proficient” (as defined on the rubrics) but not “Advanced” (4).

**Timeline for the Assessment**

- [X] Each Semester
- [ ] Yearly
- [ ] Every other year
- [ ] Other (please specify):
D2) **Student Learning Outcome #2:** Graduate students will develop apposite knowledge in geographic literature and research at the appropriate masters or doctoral level.

**Identify opportunities for students to learn this outcome during the 2017-2018 academic year:**
In GEOG 5403, the instructor provides students rubrics for the grading/assessment of each assignment, so that students know expectations. The rubrics correspond with the appropriate learning outcomes for the graduate program. In GEOG 5413, learning outcomes are provided in the syllabus. They are discussed at the start of the semester, and reviewed in conjunction with specific assignments throughout the semester. Students are also given grading rubrics for the different assignments and projects.

**How many students were included in the assessment of this outcome?**
GEOG 5403 — 9 students total
GEOG 5413 — 8 students total

**How were students selected to participate in the assessment of this outcome?**
All Geography graduate students enrolled in the two courses were assessed.

**Assessment Methods**

- [ ] Survey
- [ ] Benchmarking
- [ ] Measuring effectiveness relative to professional standards
- [ ] Performance or jury
- [ ] Visual collection (photos, videos, etc.)
- [ ] Review of student research
- [ ] Other (please specify):
  
  Click here to specify.

- [ ] Rating of skills (e.g., rubrics)
  - [ ] Review of thesis/dissertation/ creative component
  - [ ] Measure of student performance/ research/ creative output

- [ ] Analysis of written artifacts
  - [ ] Analysis of written artifacts
  - [ ] Analysis of written artifacts

- [ ] Comprehensive, certification, or professional exam(s)
  - [ ] Comprehensive, certification, or professional exam(s)
  - [ ] Comprehensive, certification, or professional exam(s)

- [ ] Oral presentation
  - [ ] Oral presentation
  - [ ] Oral presentation

- [ ] Course project
  - [ ] Course project
  - [ ] Course project

- [ ] Satisfaction Survey
  - [ ] Satisfaction Survey
  - [ ] Satisfaction Survey

**Describe the how the assessment method was implemented, administered, and/or conducted.**
Instructors of the respective courses assess their students on rubrics specific to the course, designed by them (5403 – Rubric B, 5413 – Rubric C; see departmental Graduate Assessment Plan). Instructors are provided with a copy of the rubric and instructions early in the semester, and are left to complete it at their leisure (either as the semester progresses or at the end) but are urged to separate student grades from achievements of specific benchmarks as indicated on the rubric.

**Did your department/program faculty have a goal set for this learning outcome?**
- [ ] Yes
- [x] No

**Provide a summary of the results from the assessment of Learning Outcome 2.**
For GEOG 5403 (Current Geographic Research) scores for three of the four learning outcomes have been higher the last two years, following an instructor change. Scores notably increased again this year over last year.
For GEOG 5413 (History and Philosophy of Geography) average scores were very similar to the preceding three years, although learning outcome 2 (LO 2) scored noticeably low in 2016-17 but returned to typical levels this year. The same instructor has taught the course since the initiation of this assessment plan in 2010-11.

**What do the results suggest about student achievement of this learning outcome?**

**5403:** The class was of moderate size, with five incoming M.S. students and four Ph.D. students. A minority of M.S. and Ph.D. students held degrees in geography. Admittedly it would be interesting to track performance of Geography vs non-Geography degree holders, but that’s a separate issue.

The “Practice Literature Review” was submitted as the representative artifact to be tested for the presence of any written communication skills (LO#1). Another early assignment involved researching an assigned SWAAG department and providing an oral presentation (LO#1) on its history and research emphases. Reading assignments from the two textbooks and ensuing discussions examined the various parts of a research proposal (abstracts, literature review, problem statement, methodology, etc.). As with the previous semester, the final draft of the entire proposal was collected as a single document during Dead Week following a break from class meetings for three weeks in April designated for weekly, individualized instructor-student conferences for feedback on draft sections of proposals. Some students utilized this time wisely and produced viable proposals, but some demonstrated little initiative.

Some students attended the AAG meeting in New Orleans in April. Another course assignment directed students, regardless of their attendance, to use the 2018 AAG website to search abstracts and develop a bibliography of papers, posters, and researchers whose work was relevant to their own proposal ideas and, for those actually attending the AAG meeting, to attend as many relevant sessions as possible (LO#2).

In order to make the course’s other role—the intra-disciplinary exploration of current published research (LO#2)—more meaningful, the instructor selected and assigned readings geared toward the specific research emphases of the nine graduate students. This allowed each student to lead discussion on one class day and demonstrate the expertise they were attaining via developing their own proposal literature review. The articles, like the students’ interests, reflected the breadth of the discipline of geography itself: papers included topics on historical GIS, desert geomorphology, gentrification and housing supply, UAV platforms for remote sensing, human impacts on marine environments, invasive species abatement, and public transportation planning. An anticipated yet disheartening drawback of this approach was that some students habitually failed to prepare for class and/or refused to participate in discussion. The capstone project of the seminar, a full draft proposal and formal presentation, was taken seriously by some students but not at all by others.

**5413:** This year’s cohort was generally very engaged. Discussions and student presentations were, on the whole, very well done. No additional assignments were added to the course requirements; however, time management problems—as reflected in late assignments, incomplete assignments, and assignments that were not submitted—proved to be a challenge for a few students, and affected learning outcomes related to content knowledge. Although there is not a specific learning outcome on the current rubric for writing, this particular cohort demonstrated what the instructor would consider to be an overall “advanced” performance in written communication skills.

**Timeline for the Assessment**

- [X] Each Semester
- [ ] Yearly
- [ ] Every other year
- [ ] Other (please specify):
D3) **Student Learning Outcome #3**: Graduate students will develop skills in tools for geographic data collection and methods of analysis at the masters or doctoral level.

**Identify opportunities for students to learn this outcome during the 2017-2018 academic year:**
Instructors of both GEOG 5303 and 6313 devote considerable time and effort to designing exercises and projects that challenge the students to employ data collection and analysis methods with real-world data (instructor-provided as well as obtained by the students). Extensive grading and feedback is employed to communicate to students where they are not fully grasping the methods.

**How many students were included in the assessment of this outcome?**
- GEOG 5303 – 7 students total
- GEOG 6313 – 0 students (instructor did not provide scores)

**How were students selected to participate in the assessment of this outcome?**
All Geography graduate students enrolled in the two courses were assessed.

**Assessment Methods**

- [ ] Survey
- [X] Rating of skills (e.g., rubrics)
- [ ] Analysis of written artifacts
- [ ] Comprehensive, certification, or professional exam(s)
- [ ] Oral presentation
- [X] Course project
- [ ] Satisfaction Survey
- [ ] Benchmarking
- [ ] Measuring effectiveness relative to professional standards
- [ ] Review of thesis/dissertation/ creative component
- [ ] Capstone project
- [ ] Internship
- [ ] Interviews
- [ ] Performance or jury
- [ ] Visual collection (photos, videos, etc.)
- [X] Review of student research
- [ ] Other (please specify):
  - [ ] Click here to specify.

**Describe the how the assessment method was implemented, administered, and/or conducted.**
Instructors of the respective courses assess their students on rubrics specific to the course, designed by them (5303 – Rubric A, 6313 – Rubric D; see departmental Graduate Assessment Plan). Instructors are provided with a copy of the rubric and instructions early in the semester, and are left to complete it at their leisure (either as the semester progresses or at the end) but are urged to separate student grades from achievements of specific benchmarks as indicated on the rubric.

**Did your department/program faculty have a goal set for this learning outcome?**
- [ ] Yes
- [X] No

**Provide a summary of the results from the assessment of Learning Outcome 3.**
For GEOG 5303 (Geographical Analysis I) scores in 2017-18 were about the same as last year, although with some unevenness as three learning outcomes decreased and three increased. The range between the lowest outcome (2) and highest (5) was a bit wider this year, although in general the aggregate trend is for scores to be roughly centered on 3.5. This is down a bit from 2013-14 and 2014-15 but similar to or slightly higher than in the more distant past.

**What do the results suggest about student achievement of this learning outcome?**
**5303**: As the rubric scores have risen over time, the instructor feels there have been improvements in the course due to his greater emphasis on both instruction (and instructions) in areas that were challenging for students. Fewer students are “failing” the course (C or below) and having abysmal assignment scores early in the semester, and this has partly resulted from a restructuring and resequencing of assignments to better ensure that students understand expectations and have grasped the important core concepts (such as data handling/preparation and adequate interpretations of statistical results). More detailed instruction documents (appendices to the syllabus) have been distributed as well to provide a template for doing adequate work.
Timeline for the Assessment

☐ Each Semester  ☒ Yearly  ☒ Every other year

☐ Other (please specify):  **GEOG 5303 is taught every spring, while GEOG 6313 is taught every other fall and was taught in Fall 2017.**
D4) Student Learning Outcome #4: Advanced graduate students will be able to develop geographic creative components, theses, or dissertations that marshal evidence, analyze data, and synthesize meaningful conclusions.

Identify opportunities for students to learn this outcome during the 2017-2018 academic year:
All courses in the program should, at some level, teach students these skills. Furthermore, the classic model of graduate education in which a student works closely with his or her advisor to develop a research proposal and then a final product (thesis or dissertation) remains the only logical and obvious way to impart these skills.

How many students were included in the assessment of this outcome?
One student was assessed.

How were students selected to participate in the assessment of this outcome?
All students defending a creative component, thesis, or dissertation are assessed by their committee members with Rubric F (Creative Components), Rubric G (Theses), or Rubric I (Dissertations); see departmental assessment plan for these rubrics. All but 1 faculty members returned their rubrics to the Assessment Coordinator (out of 19 possible assessments).

Assessment Methods
☐ Survey
☒ Rating of skills (e.g., rubrics)
☐ Analysis of written artifacts
☐ Comprehensive, certification, or professional exam(s)
☐ Oral presentation
☐ Course project
☐ Satisfaction Survey
☐ Benchmarking
☐ Measuring effectiveness relative to professional standards
☒ Review of thesis/dissertation/ creative component
☐ Capstone project
☐ Internship
☐ Interviews
☐ Performance or jury
☐ Visual collection (photos, videos, etc.)
☒ Review of student research
☐ Other (please specify):
Click here to specify.

Describe the how the assessment method was implemented, administered, and/or conducted.
All students undergoing a final defense are assessed on their research and writing skills by all committee members. Rubrics are distributed to the committee members at the beginning of the defense and are usually collected afterwards, although some faculty members return them later.

Did your department/program faculty have a goal set for this learning outcome? ☐ Yes ☒ No

Provide a summary of the results from the assessment of Learning Outcome 4.
As there was just a single student assessed, completing a creative component, there is insufficient data and privacy issues so no analysis was possible.

What do the results suggest about student achievement of this learning outcome?
[From past reports] Students typically have a hard time crafting proposals that show a clear plan, grasp of the tasks necessary to complete a dissertation or thesis, and ability to clearly articulate the research questions, hypotheses, and goals. This is often the main critique delivered by committee members at proposal defenses. At the end stage, many theses and dissertation still have a lot of editing (micro and macro) before the committee can sign off on the document; too little self-editing and too few iterations with advisors and/or outside readers takes place before delivery to the committee.

Outside of largely mechanical issues, though, students rarely fail a defense, having undertaken a solid if unexceptional piece of research, and demonstrate adequate proficiency as evinced by scores that average in the low to mid-3 range, for the most part.

Timeline for the Assessment
☒ Each Semester ☐ Yearly ☐ Every other year
☐ Other (please specify):
E. Summary of Assessment Results
Describe the overall results of the program assessment and program faculty members’ interpretation of the assessment results.
Overall, results indicate that student performance is fairly consistent and that while we would always strive to see students achieving higher scores and performance, the average scores (and performance of most students) are at an acceptable level. Ultimately, a graduate student’s curriculum follows a very specialized path beyond the few core courses, and they undertake a lot of independent work, so effecting curricular changes that can target weak areas (like writing) is especially challenging at the graduate level. Overall, faculty seem satisfied with the general results but will continue to focus on teaching writing skills through examples and extensive feedback on written work.

F. Dissemination of Results
Describe the individual(s) or committee (e.g., a curriculum committee) responsible for reviewing and interpreting assessment data.
The Graduate Coordinator serves a dual role as Graduate Outcomes Assessment Coordinator and disseminates and gathers the rubrics from defenses and for the core courses (Rubrics A-D), and sends out repeated calls for artifact submission for Learning Outcome 1. He then collects, inputs, and preliminarily evaluates the data and computes summary statistics.

Describe the process for sharing and discussing assessment results with program faculty.
The Assessment Coordinator writes and circulates (via e-mail) a draft report for review and comment by all faculty in the department. This is done in early August in advance of an all-day planning conference held by the department the week before the fall semester begins, and discussion about the results, what they mean, and what to do with them subsequently occurs and is incorporated into a final draft of this report. This final draft is sent around a second time for final review before submission.

G. Program Improvements Based on Assessment
Based on the findings of this assessment, what changes are being considered or planned for the program?
At this point in time, no concrete ideas for making and changes to the program have emerged.

Based on the findings of this assessment, what (if any) changes are planned for the assessment process?
No changes are planned for 2018-19 in the process.

Describe the process for implementing these changes/planned program improvements.
Not applicable.

H. Assessment Tools
Ten rubrics are used for assessment and are not repeated here for space considerations; the rubrics can be found in the department’s Graduate Assessment Plan on file with the Office of University Assessment and Testing. A curriculum map was developed in 2013 and is given on the next page to demonstrate where major skills are taught and assessed.
# Department of Geography
## Graduate Program Curriculum Map (Core Courses)

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course name</th>
<th>Instructor</th>
<th>Learning Outcome</th>
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<td>Bays</td>
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<td>5273</td>
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<td>Frazier</td>
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<td>5940</td>
<td>Internship</td>
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11
### Course Schedule

<table>
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<th>Course #</th>
<th>Course name</th>
<th>Instructor</th>
<th>Learning Outcome</th>
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</table>

### Instruction Codes (T/A)
- T = Taught
- A = Assessed

### Level Codes (L)
- B = Beginner
- I = Intermediate
- A = Advanced

### Departmental Learning Outcomes:

1. Graduate students will develop the ability to communicate geographic information effectively orally and in writing at the appropriate masters or doctoral level.
2. Graduate students will develop apposite knowledge in geographic literature and research at the appropriate masters or doctoral level.
3. Graduate students will develop skills in tools for geographic data collection and methods of analysis at the masters or doctorate level.
4. Advanced graduate students will be able to develop geographic creative components, theses, or dissertations that marshal evidence, analyze data, and synthesize meaningful conclusions.
5. Advanced PhD students will be able to identify and discuss significant geographic trends within their (three) chosen specialty areas of geography.