Oklahoma State University

Assessment Report
2004 - 2005

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Executive Summary

Entry-Level Assessment

Three methods are used for entry-level assessment at Oklahoma State University (OSU): the ACT, a locally-developed predictive statistical model called Entry Level Placement Analysis (ELPA), and COMPASS, the ACT Computer Adaptive Placement and Support System placement tests. The first stage of entry-level assessment is the ACT subject area test scores; an ACT subscore of 19 or above (or SAT equivalent) automatically qualifies a student for college-level coursework in that subject area. The ACT Reading subscore is used to indicate readiness for courses in reading-intensive introductory courses in Sociology, Political Science, Psychology, History, Economics, and Philosophy. The second stage of entry-level assessment is ELPA; it is a multiple regression model that uses high school grades, high school class rank and size, and ACT scores to predict student grades in entry-level courses. Students scoring below a 19 on the ACT subject area test *and* with predicted grades from ELPA of less than "C" in a particular subject area are recommended for remedial coursework. All first-time OSU students are assessed using the ACT and ELPA prior to enrollment. The third level of assessment is the COMPASS placement tests; students who are not cleared for enrollment in college level courses via their ACT scores or ELPA results may waive a remedial course requirement by passing a COMPASS test. Students who are missing ACT information or high school grade information needed for ELPA may also take the COMPASS placement test to waive a remedial course requirement.

In 2004-05, entry-level assessment was conducted for all admitted and enrolled new freshmen and new transfer students with fewer than 24 credit hours (n=3,980). After all stages of entry-level assessment were completed, 484 new students (12.2% of the total number enrolled) were recommended to take at least one remedial course. Of these, 68 (1.7%) were recommended to enroll in remedial English (UNIV 0133); 405 (10.2%) needed remedial math (UNIV 0123); 146 (3.7%) needed remedial science (UNIV 0111), and 51 (1.3%) were recommended to enroll in a course focused on reading and study skills (CIED 1230 or UNIV 0143) (note: some students are required to take remedial courses in more than one subject area).

Additional entry-level assessments used at OSU include the Cooperative Institutional Research Program (CIRP) Freshman Survey and the Noel-Levitz College Student Inventory. The CIRP Freshman Survey is a university-wide survey that is conducted in alternate years and provides information about characteristics of entering freshmen. The CIRP was conducted in Fall 2004. The College Student Inventory by Noel-Levitz, Inc., is a retention-management tool that may be used to identify potential problem areas for new students and is used each year in the College of Human Environmental Sciences.

General Education Assessment

OSU's assessment program uses three tools to evaluate student achievement of the expected learning outcomes for general education and the effectiveness of the general education curriculum: (1) institutional portfolios, (2) university-wide surveys, and (3) a general education course content database. Each of these three methods is aimed at evaluating expected student learning outcomes that are articulated in the *OSU General Education Course Area Designations - Criteria and Goals* document (Appendix B). Revisions to this document were approved in 2004,

to facilitate more effective assessment of student learning goals. General education assessment is also guided by the university's mission statement and the purpose of general education as articulated in the OSU catalog.

Institutional Portfolios directly assess student achievement of the primary learner goals for general education. Separate portfolios are developed to evaluate each general education learner goal, and each portfolio includes students' work from course assignments collected throughout the undergraduate curriculum. Faculty members (including assessment committee members and additional faculty members involved in undergraduate teaching) work in groups to evaluate the work in each portfolio and assess student achievement of the learner goal by using standardized scoring rubrics. The results provide a measure of the extent to which students are achieving OSU's expected general education competencies.

In 2004-05, institutional portfolios were used to evaluate students' written communication skills, science problem solving skills, mathematics problem-solving skills and critical thinking skills. The writing skills portfolio includes student work from OSU students from all classes (freshmen through seniors) and disciplines; the student work included in the science and mathematics portfolios is primarily from freshmen and sophomores taking lower division courses. Each 'artifact' of student work in the institutional portfolios is evaluated by a team of faculty reviewers and scored using a 5-point rubric, where a score of 5 represents excellent work. For writing assessment, 67% of students received a score of 3 or higher. Portfolio results show that seniors demonstrate significantly better writing skills than freshmen. For science assessment, 67% of students received a score of 3 or higher. For math assessment, 60% of students received a score of 3 or higher Following a pilot study last year, an institutional portfolio for the assessment of students' critical thinking skills was developed this year. In that assessment, 70% of students received a score of 3 or higher. Complete information about all general education assessment is provided in Appendix A.

University-wide surveys such as the National Survey of Student Engagement and OSU Alumni Surveys indirectly assess student achievement of general education learner goals and are used to corroborate evidence collected from the institutional portfolio process. For example, the General Education Advisory Council (GEAC) used results from the National Survey of Student Engagement (conducted in 2000 and 2002), in conjunction with institutional portfolio results, to assess the general education program. After review of assessment results, GEAC implemented new standards to increase opportunities for students to develop written communication skills in general education courses. OSU participated in the NSSE again in Spring 2005; results will be reported in Fall 2005.

The web-based General Education Course Database is used to evaluate how well each general education course is aligned with the expected learning outcomes for the general education program. Instructors are asked to submit their course information online via a web-based form, and the General Education Advisory Council reviews the submitted information during regular course reviews. Instructors identify which general education learning goals are associated with the course and describe course activities that provide students with opportunities to achieve those learning goals. The database provides a tool for summarizing general education course offerings and evaluating the extent to which the overall general education goals are met across the curriculum.

OSU's general education assessment methods are aimed at holistically evaluating student achievement of general education outcomes and critically evaluating the curriculum itself by evaluating how each course incorporates general education learner goals. Institutional portfolios

and university-wide surveys are implemented such that student participants are anonymous; therefore, these methods do not permit tracking individual students into future semesters. Information from general education assessment is presented annually to the General Education Advisory Council, Assessment Council, Instruction Council, and Faculty Council. The process has generated attention to student learning, general education outcomes, and how individual general education courses provide opportunities for students to develop general education knowledge and skills. Five years after implementation, these assessments are yielding interesting results and influencing change at several institutional levels.

Program Outcomes Assessment

All OSU degree programs, including undergraduate and graduate programs, must have an outcomes assessment plan and must submit an annual assessment report describing assessment activity. Assessment plans and reports may be submitted by colleges, schools, departments, or by individual degree programs, depending on the organizational level that faculty from these programs have elected to use for assessment. The Assessment Council periodically reviews all assessment plans and reports; the schedule for these reviews supports the Academic Program Review (APR) process. Since documentation of the use of assessment results for program development is requested for the APR process, the Assessment Council reviews and provides feedback on outcomes assessment one year in advance of each program's participation in Academic Program Review. In January 2005, programs that will participate in APR in Spring 2006 were provided with feedback about their program learning outcomes assessment, based on reviews conducted by the Assessment Council.

Academic units use a broad range of methods to assess student achievement of the learning outcomes articulated in assessment plans, and these are described in detail in the individual assessment reports submitted by each unit. The most commonly used program outcomes assessment methods reported in 2004-05 were:

- Capstone course projects, papers, presentations evaluated by faculty or by outside reviewers
- Senior-level projects & presentations
- Course-embedded assessments & classroom assessment techniques
- Exams – local comprehensive exams, local entry-to-program exams
- Exams – standardized national exams, certification or licensure exams
- Exit interviews
- Internships – evaluations from supervisors, faculty members, student participants
- Portfolios - reviewed internally or externally
- Projects, portfolios, exhibits, or performances – evaluated by professional jurors or evaluators
- Student performance in intercollegiate competitions
- Surveys - alumni
- Surveys - employers / recruiters
- Surveys – students, esp. seniors
- Surveys – faculty
- Enrollment data, student academic performance in particular courses, student participation in extracurricular activities related to the discipline, degree completion rates, time-to-degree completion
- Alumni employment tracking

Graduate programs reported the following *additional* outcomes assessment methods:

- Qualifying exams
- Theses / dissertations / creative component papers, projects, presentations, and defenses
- Comprehensive exams
- Research activity / publications / professional presentations / professional activity

In addition to these outcomes assessment methods, the Office of University Assessment and Testing provides program-specific results of alumni and student surveys to academic programs so that faculty may use this information for program outcomes assessment.

In keeping with the guidelines of the Higher Learning Commission of the North Central Association and the policy of the OSU Assessment Council, faculty are encouraged to develop effective program outcomes assessment methods that will provide meaningful information for program development. The Assessment Council reviews of outcomes assessment programs show that many degree programs are satisfactorily implementing their assessment plans and using assessment results for program development and improvement. Academic units are encouraged, but not required, to use assessment methods that may provide comparison of student performance with statewide or national norms. Programs that use such assessments report their findings in their individual annual outcomes assessment reports (Appendix F).

The number of individuals who participate in each outcomes assessment method within each academic unit is shown in Table 12.1. Methods are described in greater detail in the individual assessment reports submitted by each academic unit (Appendix F). Academic units are required to report the number of individuals assessed *in each assessment method.* Because the same students are assessed by multiple methods, the reporting process does not provide an accurate count of the total number of students that participated in outcomes assessment. Outcomes assessment reports demonstrate that academic programs use multiple assessment methods and a majority of students within each program participate in outcomes assessment measures. The total number of individuals who participated in all assessment methods includes multiple counts of the same students - because students participate in multiple methods - and may include non-students. For example, the 'number of individuals assessed' in an alumni or employer survey would include numbers of alumni or employers, respectively, rather than current students.

Uses of assessment results are unique to each program but can be generally categorized as sharing assessment information with faculty members, developing curriculum changes in response to assessment findings, and using assessment results to justify curriculum changes that have recently been implemented. The most commonly cited uses of assessment results in 2004-05 were:

- Changes in course content
- Addition / deletion of courses
- Changes in degree requirements or degree sheet options
- Development of tutorial and academic services for students
- Justification of past curriculum changes and demonstration of program improvement resulting from those changes
- Changes in course sequences
- Changes in advising processes
- Facilitation of curriculum discussions at faculty meetings, curriculum committee meetings, and faculty retreats
- Changes to student facilities such as computer labs and science labs

- Refinement of the assessment methods or implementation of new assessment methods
- Development of program-based websites to provide students with academic and program information

Student and Alumni Satisfaction Assessment

Student and alumni surveys are conducted to evaluate student and alumni perceptions of academic and campus programs and services, and the results are used in developing and improving those programs and services. The surveys complement program outcomes assessment because they are designed to provide feedback from students and alumni for use in continuous quality improvement in academic and student programs.

Alumni surveys are conducted every year at OSU; undergraduate program alumni and graduate program alumni are surveyed in alternate years. The surveys are intended to identify institutional strengths and areas for improvement as perceived by recent graduates; to track the careers and continuing education of recent OSU graduates; and to evaluate achievement of learning outcomes as perceived by alumni from individual academic programs. The alumni surveys target alumni who are 1- and 5-years post-graduation. The surveys are conducted as telephone interviews, and the questionnaire covers employment, continued education, and general satisfaction. Also, individual academic programs may include program-specific questions in the questionnaire for their program alumni; these data are used in program outcomes assessment as well as assessing alumni satisfaction. Alumni surveys have become a cornerstone of assessment at the university-, college- and program- level by providing regular feedback from OSU graduates about their perceptions of their educational experiences at OSU and the impact of those experiences on career and personal development.

Graduate Student Assessment

Student outcomes assessment in graduate programs is part of Program Outcomes Assessment and is reported in that section of this report. In addition, the Office of University Assessment and Testing conducts a Graduate Student Satisfaction Survey every third year, and the Survey of Alumni of Graduate Programs in alternate years. These university-wide assessments provide university- and program-level assessment information about graduate students.

In Fall 2004, the Graduate Student Satisfaction Survey (GSSS) was conducted to assess graduate students' satisfaction with, and perceptions about, various aspects of their academic experience - the quality of their academic program, relationships with faculty and advisors, support and resources provided by the department and the university, and interactions with the Graduate College and the Graduate and Professional Student Government Association (GPSGA). The GSSS was administered as telephone interviews by the BSR in October 2004. Interviews were completed with 2,537 of the 3,919 graduate students enrolled at the Stillwater and Tulsa campuses - a response rate of 64.7%. More than 90% of students indicated they were satisfied or very satisfied with their relationships and interactions with program faculty, overall program quality, and overall experience as a graduate student. Between 80% and 90% indicated they were satisfied or very satisfied with availability of their advisor, advisor's willingness to spend the time they need, computing resources available to them, library resources, research resources such as facilities, equipment, and lab space (for those who said they were applicable), preparation and guidance provided by department for role of teaching assistant (for those who served in that role), and helpfulness of Graduate College staff. Between 70% and 80% indicated they were satisfied or very satisfied with availability of course offerings in their program, opportunities for financial

support in their department such as assistantships and scholarships, and adequacy of assistantship stipend in meeting financial needs (Master's students). Between 65% and 70% of doctoral students indicated they were satisfied or very satisfied with adequacy of assistantship stipend in meeting financial needs.

The Graduate Program Alumni Survey was conducted in January 2005, and 787 alumni responded to the survey out of a target population of 2,187 graduates (response rate = 36%). Most alumni (92% of Master's graduates and 96% of Doctoral graduates) stated that they were satisfied or very satisfied in their educational experiences at OSU, and 93% of all alumni indicated that their graduate program prepared them very well or adequately for their current career. About 64% of the alumni contacted for the survey were residing in Oklahoma; about 36% were contacted out of state, including 16% who were contacted in states surrounding Oklahoma.

What's New in Assessment at OSU in 2004-05 (see Appendices for more details)**:**

- *Continued Development of General Education Assessment*. OSU is in its fifth year of implementing a general education assessment plan. Following a pilot study last year, an institutional portfolio for assessment of students' critical thinking skills was developed for assessment in 2005. Institutional portfolios have now been developed for assessment of writing, science problem-solving, mathematics problem-solving, and critical thinking skills.

- *Update of Entry-Level Placement Analysis (ELPA).* The ELPA program was created a few years ago using Microsoft Access, SAS and Visual Basic Access. It had not had any major updates since inception. With support from the Office of University Assessment and Testing, Enrollment Management's IT staff overhauled ELPA by creating the application in Microsoft SQL and C#.Net. This provided a higher level database structure, the ability to move the database from a limited space group drive to a server with virtually unlimited space, the ability for every Undergraduate Admissions staff member to produce and print assessment reports from their desk or the front counter, improved readability of the electronic and paper reports, improved data entry and search screens, removal of the annual licensing issues and cost, improved technical support from EMM IT, and increased accuracy and speed in loading data from the Student Information System.

- *Professional Development Sessions for Faculty and Assessment Coordinators*. The General Education Assessment Committee and the Assessment Council provided a series of professional development sessions for faculty in 2004-05. In Fall 2004, sessions were presented on "Developing and Assessing Critical Thinking," "Using Portfolios for Outcomes Assessment," "Effective Departmental Outcomes Assessment," and "Regional Accreditation with the Higher Learning Commission." In Spring 2005, sessions were presented on "Change in Format for Learning Outcomes Assessment Plans and Reports," "General Education Assessment – Writing," "Developing Graduate Program Outcomes Assessment," "General Education Assessment – Critical Thinking," and "General Education Assessment – Science."

- *Assessment Council Reviews of Outcomes Assessment Programs Integrated with Academic Program Review Process*. Plans and reports of learning outcomes assessment for each degree program are reviewed by the Assessment Council one year in advance of the program's participation in the Academic Program Review (APR) process. The APR process now requests documentation of assessment activities, so this schedule modification allows for feedback from the Assessment Council well in advance of the Academic Program Review. In Fall 2004, the Council reviewed and provided feedback on program outcomes assessment to those programs scheduled for Academic Program Review in 2006.

- *2004 Survey of Graduate Student Satisfaction.* In Fall 2004, the OSU Graduate Student Satisfaction Survey was conducted to obtain feedback from graduate students about a broad range of topics related to their educational experiences while enrolled in the Graduate College at OSU. The survey was conducted in October 2004, within the population of OSU graduate students in Stillwater and Tulsa who were enrolled in January 2004.

- *2005 Survey of Alumni of Graduate Programs*. The third university-wide survey of alumni of OSU graduate programs was conducted in January 2005. Results from these alumni surveys have become a cornerstone of the assessment efforts for most OSU academic units and provide valuable information about the career patterns of recent graduates.

Introduction

Assessment is an integral part of Oklahoma State University's commitment to continuous program improvement and sustaining and enhancing academic quality and the student experience. OSU's assessment program is divided into four primary areas as directed by the Oklahoma State Regents for Higher Education: entry-level assessment, general education assessment, program outcomes assessment, and assessment of student and alumni satisfaction. All of these assessment efforts span multiple institutional levels - from university-wide assessments to assessments conducted by individual academic programs and student service areas. Formally initiated in 1992, OSU's assessment program has evolved into a matrix of evaluation and monitoring aimed at improving students' educational experiences.

Assessment at OSU permeates all levels within the institution and includes assessments focused on the entire student body or on issues of concern to the central administration, as well as hundreds of projects aimed at individual college- and program-level assessments. The Associate Vice President for Undergraduate Education oversees OSU's assessment program, supervises the Office of University Assessment and Testing, and communicates assessment information to campus leaders. The faculty Assessment Council guides university-wide assessment efforts and monitors the use of student assessment fees to support assessment initiatives at the university-level and within individual colleges and academic programs. The Office of University Assessment and Testing conducts university-wide assessment projects, allocates funding and provides information for the development of successful assessment programs, and coordinates annual reporting and the dissemination of assessment information. The Office of Institutional Research and Information Management works closely with the Office of University Assessment and Testing, administers some entry-level assessment and provides data for all other assessment areas. The Admissions Office, University Testing Center, and the OSU Bureau for Social Research also assist in collecting assessment data at the university level. At the program level, administrators and faculty members within each academic unit are responsible for assessing student achievement of expected program learning outcomes. Each OSU academic unit has a faculty Assessment Coordinator who is responsible for guiding outcomes assessment in their academic program(s). For purposes of program learning outcomes assessment, an academic unit may refer to a college, school, department, or degree program. Each academic unit has an outcomes assessment plan and submits annual assessment reports.

This annual OSU Assessment Report is prepared in compliance with the State Regents' *"Policy Statement on Assessment of Students for the Purposes of Instructional Improvement and State System Accountability"* and annual guidelines from the OSRHE. The report summarizes all assessment activity from the Stillwater and Tulsa campuses of Oklahoma State University. As instructed by the State Regents, the report provides responses to specific questions in the areas of entry level assessment, mid-level assessment, program outcomes assessment, assessment of student and alumni satisfaction, and assessment of graduate programs. The report also provides an overview of OSU special assessment projects and new developments in assessment for 2004-05.

Entry-Level Assessment

The purpose of entry-level assessment is to assist academic advisors in making placement decisions that will give the student the best possible chance of academic success.

1. What methods were used for entry-level course placement? What were the instruments and cut-scores used for each subject area and course?

The Office of University Assessment, Institutional Research and Information Management, Admissions, and University Testing Services jointly accomplish entry-level assessment at Oklahoma State University (OSU). Three methods assess student's readiness for college level coursework: the ACT (consisting of four subtests in English, Reading, Mathematics, and Science Reasoning), results of the Entry-Level Placement Analysis (ELPA; developed by OSU), and the COMPASS placement test (Computer Adaptive Placement and Support System, produced by ACT).

Each enrolled new student (new freshmen and transfer students with fewer than 24 credit hours) receives a Student Assessment Report that summarizes information used for entry-level assessment:

- the student's academic information (ACT scores, high school GPA and class rank),
- the results of ELPA (described below),
- curricular and performance deficiencies that require remediation, and
- recommendations and requirements for course placement as per OSU guidelines that have been approved by the Oklahoma State Regents for Higher Education.

ACT Scores. ACT subscores in Reading, English, Mathematics, and Science Reasoning are used for the first level of assessment. An ACT subscore of 19 or above (or SAT equivalent) automatically qualifies a student for college-level coursework (1000-level university courses) in that subject area. The ACT subscore in Reading is used to indicate readiness for introductory college courses that require extensive reading (Sociology, Political Science, Psychology, History, Economics, and Philosophy).

Entry-Level Placement Analysis (ELPA). All students, regardless of ACT subscores, are also assessed using Entry-Level Placement Analysis (ELPA), a multiple-regression model that uses high school grades (overall grades and grades in each subject area), high school class rank, and ACT composite and subject area scores to predict student grades in selected entry-level OSU courses. These predictions are based on the success of past OSU freshmen with similar academic records. The predictive models for ELPA are updated annually. For each student, ELPA produces a predicted grade index (PGI) that represents the grade that the student is predicted to obtain in selected entry-level courses. A PGI of 2.0 or higher indicates a predicted grade of 'C' or better. The PGI serves to alert the student and advisor of potential problems when predicted grades are low. The PGI is also used to recommend college level placement for students with ACT subscores below 19. Students with ACT subscores below 19 may be cleared for enrollment in 1000-level university courses if their predicted grade in the subject area (from ELPA) is 2.0 or higher.

COMPASS. Students with ACT subscores below 19 and with predicted grades of less than 2.0 in a particular subject area (from ELPA) may take the ACT COMPASS placement test to qualify for college-level courses. COMPASS placement tests are available in the subject areas of

Mathematics, Reading, and English. Students may also take a science placement test that combines elements from the COMPASS mathematics and reading subject tests.

The cut-scores for the COMPASS tests in each subject area are shown in Table 1.1

Table 1.1. Cut-scores for the COMPASS placement test.

Subject Area:	Compass Score	Course Placement
Mathematics	Algebra 0-35	UNIV 0023
	Algebra 36-54	UNIV 0123
	Algebra 55-100	MATH 1513, 1483, or 1493
English	English 0-55	UNIV 0133
	English 56-100	ENGL 1113
Reading (Sociology, History, Political Science, Psychology, Economics, and Philosophy)	Reading 0-70	UNIV 0143 or CIED 1230
	Reading 71-100	No restrictions
Science (Biology, Chemistry, Geography, Geology, and Physics)	Reading 0-70 *or* Algebra 0-55	UNIV 0111
	Reading 71-100 *and* Algebra 55-100	No restrictions

2. How were instruments administered? Which students were assessed? Describe how and when they were assessed, including options for the students to seek retesting, tutoring, or other academic support.

All first-time entering students (new freshmen and transfer students with fewer than 24 hours) are assessed using Entry-Level Placement Analysis (ELPA) and all students and advisors are provided a Student Assessment Report describing the entry-level assessment results. The Student Assessment Reports are produced by the Office of Institutional Research and Information Management and are distributed to students by the Admissions Office. The reports are included in each student's file and are available when the student meets with their advisor for enrollment; hence, this assessment primarily occurs just prior to the spring and fall enrollment periods.

In 2004-2005, a total of 3,980 admitted and enrolled new freshmen and transfer students with fewer than 24 credit hours were assessed via entry-level placement analysis.

Students who were not cleared for 1000-level courses have several options. They may enroll in the remedial (zero-level, non-credit) course that is recommended; they may take the ACT test again, or they may take the COMPASS placement test to demonstrate proficiency in the subject area. Students may take the COMPASS test in any subject area twice free of charge at University

Testing Services. Students may prepare for the COMPASS placement test by visiting the ACT COMPASS website and viewing sample questions and information on COMPASS test content.

Entry-level assessment process also includes evaluation of educational readiness, educational goals, study skills, values, self-concept, and motivation, as per the State Regents' Assessment Policy. These important aspects of the entry-level are included in the assessment process when students meet with their advisors prior to enrollment.

Many resources are available to OSU students for academic support. *University Academic Services (UAS)* offers free tutoring services to all OSU students. The *Math Learning Resources Center* provides individual tutoring in mathematics. The *Writing Center* provides tutors, writing coaches, a grammar hotline, and assistance with word processing. *University Counseling* provides services to help students improve their study habits, deal with test anxiety, develop better time management skills, and explore careers. Several colleges, including the *College of Engineering, Architecture, and Technology* have created Student Success Centers that provide students with additional academic support including peer mentoring and tutoring in entry-level science and engineering courses.

3. What were the analyses and findings from the 2004-05 entry-level assessment?

In 2004-2005, Student Assessment Reports were produced for all admitted and enrolled new freshmen and new transfers with fewer than 24 credit hours (n=3,980). Each Student Assessment Report contained the student's high school data, ACT scores, results of Entry-Level Placement Analysis (ELPA), and course placement recommendations and requirements. Table 3.1 shows the number of enrolled students who had performance deficiencies in each subject area based on ACT scores alone (i.e., ACT subscores <19) and the number of these deficiencies that were cleared using ELPA (i.e., cleared based on high school performance in particular core curriculum areas).

Table 3.1. Number of enrolled new students with ACT scores below 19 in each subject area and number of these students who were cleared for college-level coursework by Entry-Level Placement Analysis (ELPA) in 2004-2005.

Subject Area	# of Students with ACT subscores <19*	# of Students cleared for college-level coursework by ELPA
English	380	266
Mathematics	607	202
Reading	330	246
Science	205	59

*Some students had ACT subscores <19 in more than one subject area. The following numbers of students were missing ACT subscores in these subject areas: English – 283, mathematics – 283, reading – 283, science – 519.

Students who were not cleared for college-level courses via ELPA and were required to take one or more remedial classes could take a COMPASS placement test in their area(s) of deficiency. The number of students who took the COMPASS test in each subject area and the number who passed are described in Table 3.2.

Table 3.2. Number of students who took COMPASS placement tests in 2004-2005.

Subject Area	# of Enrolled Students who took a COMPASS placement test*	# of Students who passed COMPASS and were cleared for college-level coursework
English	32	22
Mathematics	10	0
Reading	28	17

*Some students took COMPASS tests in more than one area
*cut-scores are shown in Table 1.1.
*this table differs from previous years because only students enrolled at OSU are included
*some students took a COMPASS test although they were not required by ELPA to take remedial courses

After all entry-level assessments were completed, 484 new students (12.2% of the total number enrolled) were recommended to take at least one remedial course. This percentage is consistent with previous years; in 2003-2004, 14.3% were recommended to take at least one remedial course, in 2002-2003, 14.8% of new students were recommended for at least one remedial course, in 2001-2002, 16.7% of new students were recommended for at least one remedial course, in 2000-2001, 17.0% of new students were recommended for at least one remedial course, and in 1999-2000, 15.9% of new students were recommended for at least one remedial course.

Of the 3,980 enrolled new students in 2004-2005, 68 (1.7%) were recommended to enroll in remedial English classes; 405 (10.2%) in remedial math classes; 146 (3.7%) in remedial science classes, and 51 (1.3%) in remedial reading classes. These findings are also similar to previous years. Note that some of the students who are recommended for remedial classes are students with less than 24 hours of transfer credit (i.e., considered as new, first-time freshmen for the purpose of entry-level assessment) who have satisfied their remedial course requirement with transfer courses. For this reason, the number of students who are recommended to enroll in remedial classes may differ from the number of students enrolled in those classes in their first year at OSU.

4. How was student progress tracked? Describe analyses of student success in both remedial and college-level courses, effectiveness of the placement decisions, evaluation of cut-scores, and changes in the entry-level assessment process as a result of findings.

Tracking of student success in remedial and college-level courses. Annual trends in grades, drops, withdraws, and failure rates in common freshman courses are monitored each semester by Institutional Research and Information Management and University Academic Services. Results of this tracking are shared each semester with the Directors of Student Academic Services and the Instruction Council. The Associate Vice President for Academic Affairs, Office of University Assessment and Office of Institutional Research work cooperatively to evaluate the entry-level assessment and track student success in remedial and college-level courses.

Evaluation of cut-scores. No changes were made in cut-scores in 2004-2005.

Changes in entry-level assessment. No changes were made to entry-level assessment procedures, the Entry-Level Placement Analysis program, or COMPASS testing procedures in 2004-2005.

5. What other studies of entry-level assessment have been conducted at the institution?

The CIRP Freshman Survey. The CIRP Freshman Survey is conducted in alternate years at OSU as part of a nationwide study conducted jointly by the American Council on Education and the University of California at Los Angeles' Higher Education Research Institute. The study provides information about the expectations, attitudes, and experiences of OSU freshmen and college freshmen nationwide. The survey results help identify areas that may become problems for students during their first year, and these areas can then be addressed in orientation classes and by academic advisors. Results of the study also help in developing programs for students by providing current information about what is important to students, what they hope to accomplish, what they are concerned about, and how they hope to become involved in campus life. The Office of University Assessment and Testing conducted the CIRP Freshman Survey in Fall 2004. A report of national trends, with OSU comparisons, is provided in this report (Appendix C) and a full report of OSU results of the survey is available in the Office of University Assessment and Testing.

The College Student Inventory. The College Student Inventory (CSI) is part of the Retention Management System developed by Noel-Levitz, Inc. The survey is given to new students during their first few days on campus and measures specific motivational variables that are closely related to persistence and academic success in college. The College of Human Environmental Sciences uses this survey each year at the beginning of fall semester. The college combines the CSI data with other background and academic information and tracks the academic success of these students. Information from the survey is used in student-advisor conferences and is used to identify problems that could impede academic success. Overall results of the CSI are used to identify the factors that contribute to persistence or withdrawal among incoming students and to develop programs and strategies to enhance student retention.

6. What instructional changes occurred or are planned due to entry-level assessment?

Entry-level assessment information is used in a variety of ways in OSU colleges. Continued demand for the entry-level Student Assessment Reports and information on entry-level assessment processes indicates that results of entry-level assessment are integral to the process of advising new students prior to enrollment.

Colleges use the results of the CIRP Freshman Survey in freshmen orientation courses to stimulate discussion about student expectations about college and common problems that students face in their first semester.

The *Freshmen in Transition* (FIT) program for College of Agricultural Sciences and Natural Resources students is in its sixth year and is aimed at developing a supportive academic community for new students. This program resulted partly from prior assessments in the college such as the College Student Inventory. The College Student Inventory is still used annually for students in this program as the basis for development of activities to support student success.

General Education Assessment

The purpose of general education assessment at OSU is to evaluate students' achievement of institutionally recognized competencies in general education including communication, analytical, and critical thinking skills. OSU students typically take general education courses throughout their undergraduate degree program. For this reason, the process is not referred to as '*Mid-Level Assessment*' as described by the State Regents. OSU's general education assessment program focuses on student attainment of general education competencies throughout the undergraduate curriculum and not necessarily at the mid-point of students' careers.

OSU's general education assessment program has been developed under the direction of three faculty groups: the General Education Assessment Committee, the Assessment Council, and the General Education Advisory Council. General Education assessment is aimed at evaluating student achievement of the institution's articulated general education competencies that are described in the OSU catalog and in the *OSU General Education Courses Area Designations – Criteria and Goals* document.

The history of OSU's general education assessment efforts and data collected to date are described in detail in Appendix A (the 2005 Annual Report from the General Education Assessment Committee).

7. What measures were used to assess reading, writing, mathematics, critical thinking, and other institutionally recognized general education competencies? Describe how assessment activities were linked to the institutional general education program competencies.

OSU's assessment program uses three tools to evaluate student achievement of the general education program competencies and the effectiveness of the general education curriculum:

(1) Institutional Portfolios. The General Education Assessment Committee used institutional portfolios to assess students' written communication skills (data collection in 2001, 2002, 2003, 2004, and 2005), math problem solving skills (data collection in 2002, 2003 and 2005), science problem solving skills (data collection in 2003, 2004 and 2005), and critical thinking skills (data collection in 2005). Details about the portfolios developed in 2005 (to evaluate students' written communication skills, science problem solving skills, mathematics problem-solving skills, and critical thinking skills) are described in Appendix A. Separate portfolios are developed to evaluate each general education learner goal, and each portfolio includes students' work from course assignments collected throughout the undergraduate curriculum. Faculty members (including assessment committee members and additional faculty members involved in undergraduate teaching) work in groups to evaluate the work in each portfolio and assess student achievement of relative to the learner goal that is being assessed by using standardized scoring rubrics. The results provide a measure of the extent to which students are achieving OSU's general education competencies as described in the *OSU General Education Course Area Designations Criteria and Goals* (Appendix B).

Institutional portfolios represent a holistic approach to general education assessment. The assessment is not aimed at individual courses, departments, or faculty. Rather, it utilizes work produced by students in their OSU courses and evaluates those 'artifacts' to gauge how successful students are in achieving the institution's general education learner goals. The student work that is included in the portfolios has no identifying information, so the process protects student

anonymity. The process is minimally intrusive to faculty, transparent to students, and utilizes work that is already produced in general education courses and other courses throughout the curriculum.

(2) General Education Course Database. The General Education Course Database is a tool for evaluating how each general education course is aligned with the expected learning outcomes for the general education program as a whole. Instructors are asked to submit course information online via a web-based form, and the General Education Advisory Council reviews the submitted information during regular course reviews. Instructors identify which general education learning goals are associated with the course and discuss the course activities that provide students with opportunities to achieve those learning goals. Instructors are also asked to describe how student achievement of those goals is assessed within the course. When completed, the database will provide a useful tool for holistically evaluating general education course offerings and the extent to which the overall general education goals are achieved across the curriculum.

(3) University-wide surveys. Surveys such as the National Survey of Student Engagement (NSSE), the College Student Survey, and Alumni Surveys (Appendix E) provide indirect measures of the extent to which students have achieved general education competencies and information that helps corroborate evidence collected from the institutional portfolios. Results of these surveys are described in other sections of this annual report.

In addition to these university-level assessments of general education learner goals described in this section of the report, many individual academic programs incorporate general education or mid-level assessment of writing, mathematic, science, problem solving, and critical thinking skills into their program outcomes assessment efforts. These are described in the program outcomes assessment reports for individual academic programs (Appendix F).

8. Which and how many students participated in general education assessment? Describe how the instruments were administered and how students were selected. Describe strategies to motivate students to participate meaningfully.

In 2004-05, institutional portfolios were developed to evaluate student written communication skills, science problem solving skills, mathematics problem solving skills and critical thinking skills. The portfolios included student work from 601 students from all classes (freshmen through seniors) and disciplines. Work from 142 students was contributed to the writing portfolio; work from 129 students was contributed to the science portfolio; work from 189 students contributed to the mathematics portfolio; and work from 141 students was included in the critical thinking portfolio. The work included in the portfolios was randomly selected from assignments in 35 OSU courses, including general education courses and upper division courses from across the curriculum. The courses represented a convenience sample because faculty members volunteered course assignments for the project. A fixed number of 'artifacts' of student work from each course assignment was randomly selected for the portfolio.

The development of institutional portfolios is transparent to students; students are not aware when their work is randomly selected for inclusion in an institutional portfolio. Therefore, motivating students to participate is not an issue. The artifacts are coded immediately after they are collected, and information that identifies individual students is removed after minimal demographic information is obtained from institutional records for analysis purposes (e.g., major, class, gpa, and transfer credit hours). This protects student anonymity in the process, but also prohibits the use of the resulting data for tracking students into future semesters.

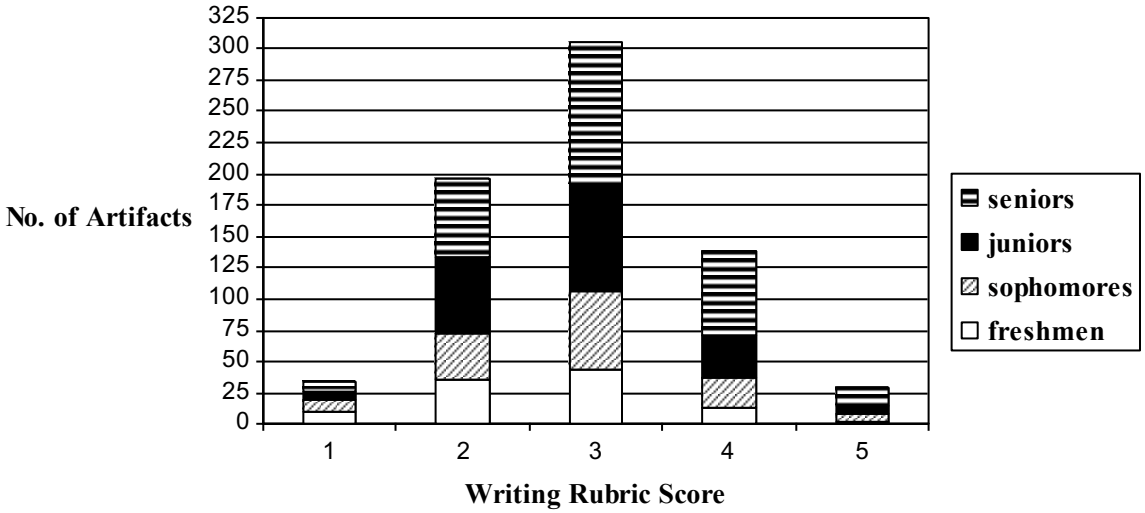
9. How was student progress tracked into future semesters and what were the findings?

OSU's General Education Assessment program is aimed at holistically evaluating student achievement of the expected learning outcomes for general education. Institutional portfolios essentially give a 'snapshot' of students' competencies at the time the portfolio is assembled, and university-wide surveys provide an overview of student achievement of general education outcomes. Because individual student information is not captured and recorded in either of these methods, the processes do not permit tracking students into future semesters. However, because portfolios are assembled each year, the process does allow us to detect changes in student general education competencies over time.

10. What were the analyses and findings from the 2004-05 general education assessment?

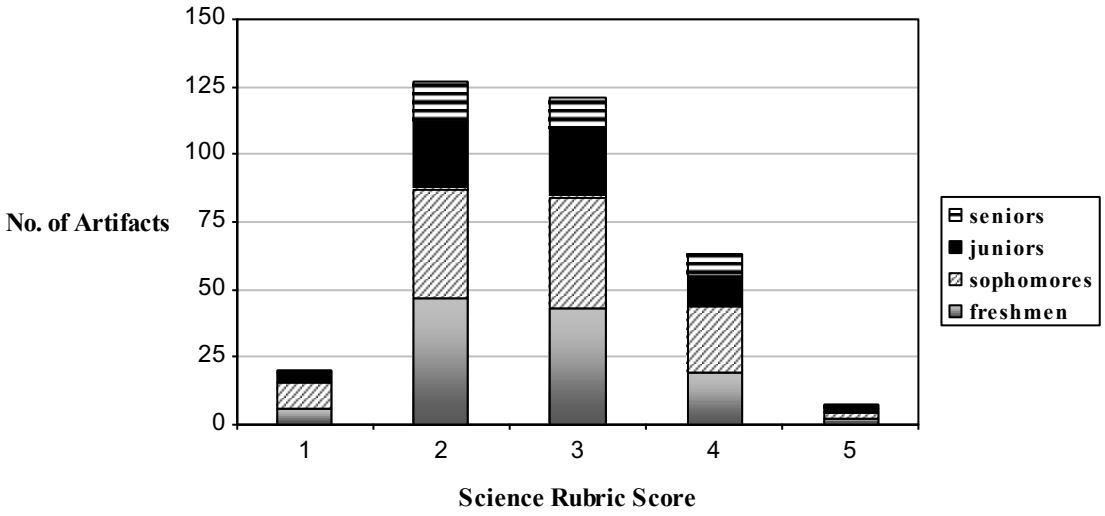
The analysis and findings from the 2005 institutional portfolios are described in detail in the General Education Assessment Committee's annual report (Appendix A).

Institutional portfolio – writing skills assessment. Results of this year's assessment of students' written communication skills build on data collected in 2001, 2002, 2003 and 2004. The distribution of writing assessment scores from the 2001-05 institutional portfolios for writing assessment (total n=704) is shown below:



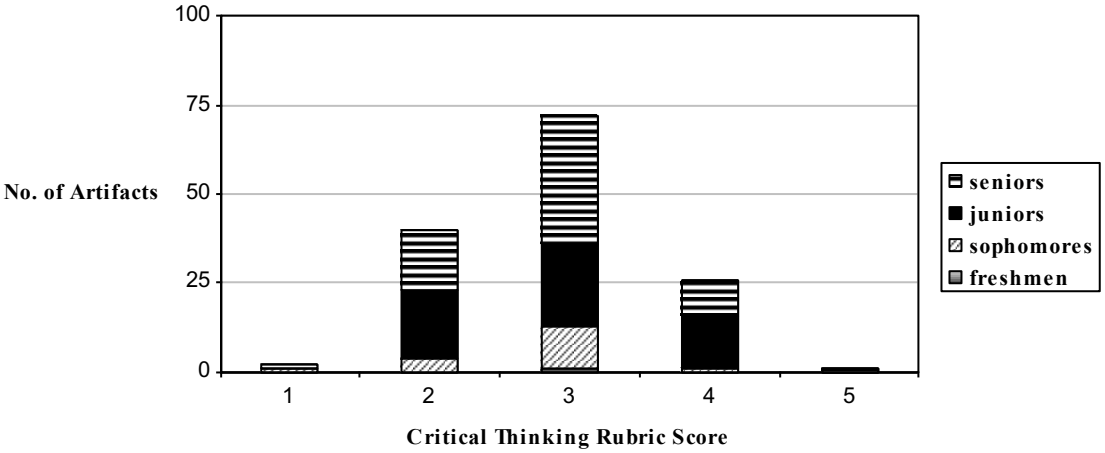
Each sample of student work was scored using a rubric with a 5-point scale. Writing scores on artifacts produced by freshmen had significantly lower scores than writing samples from seniors. About 73% of samples produced by seniors received a score of 3 or higher, and 56% of work produced by freshmen received scores of 3 or higher. When only regularly admitted students are evaluated (excluding transfer students, international students, and students admitted to the institution under alternative admission policies), more than 77% of work produced by seniors received scores of 3 or higher.

Institutional portfolio – science problem-solving skills assessment. Results of this year's assessment of students' science problem-solving skills builds on data collected in 2003 and 2004, but the sample size in the portfolio (n=338 artifacts) is still too small to make meaningful inferences. The distribution of scores from the 2004-05 institutional portfolio for science problem-solving skills assessment (total n=338) is shown below:



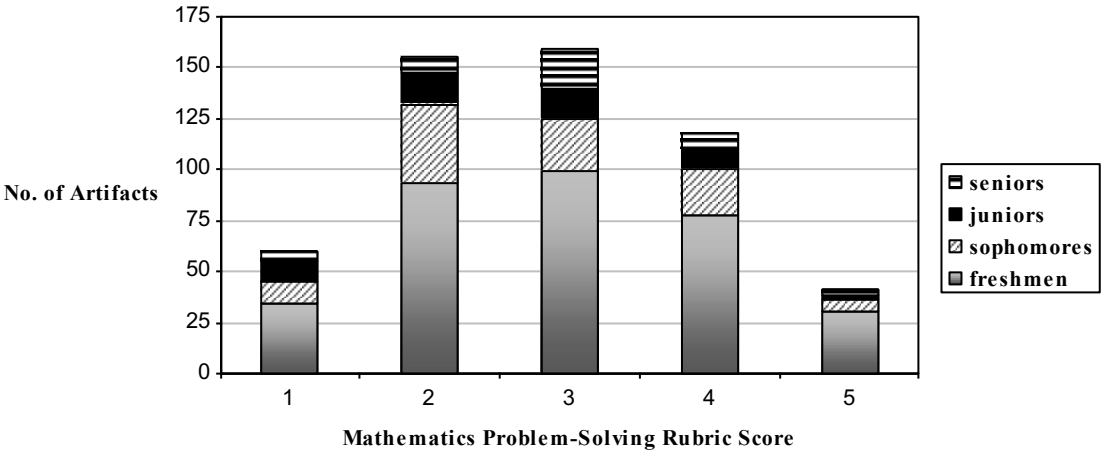
As with the writing portfolio, each sample of student work is scored using a Science Problem-Solving Skills Rubric with a 5-point scale. The overall distribution of scores indicates that 57% of students in science courses sampled for the portfolio demonstrate science problem-solving skills at the mid-point of the rubric (a score of '3') or higher.

Institutional portfolio – critical thinking skills assessment. This is the first year of assessment of students' critical thinking skills. Most artifacts were collected from upper division students. The sample size in the portfolio (n=141 artifacts) is too small to make meaningful inferences. The distribution of scores from the 2004-05 institutional portfolio for critical thinking skills assessment (n=141) is shown below:



Each sample of student work was scored using a Critical Thinking Skills Rubric with a 5-point scale. The overall distribution of scores indicates that 70% of students sampled for the portfolio demonstrate critical thinking skills at the mid-point of the rubric (a score of '3') or higher.

Institutional portfolio – mathematics problem-solving skills assessment. Results of this year's assessment of students' mathematical problem-solving skills builds on data collected in 2002 and 2003 (total n=533 artifacts). The distribution of scores from the 2004-05 institutional portfolio for mathematical problem-solving skills assessment (total n=533) is shown below:



Each sample of student work was scored using a Mathematics Problem-Solving Skills Rubric with a 5-point scale. The overall distribution of scores indicates that 60% of students sampled for the portfolio demonstrate mathematics problem-solving skills at the mid-point of the rubric (a score of '3') or higher.

11. What instructional changes occurred or are planned in the general education program due to general education assessment?

Information from the General Education Assessment Program is shared annually with the faculty who serve on the Assessment Council, Instruction Council, Faculty Council, and the General Education Advisory Council. The latter group is charged with the development and review of the general education curriculum; they consider general education assessment information in their review and approval of general education courses and in developing the criteria for those courses.

In Spring 2004, the General Education Advisory Council approved a new policy increasing requirements for written assignments in courses with general education designations; the policy is described in the document, "Oklahoma State University General Education Courses Area Designations – Criteria and Goals" (Appendix B). Effective August 2004, new requests for General Education designations were required to incorporate writing assignments.

The writing requirement for H, S and I courses is defined as follows:

Lower division courses - outside of class writing assignments appropriate to the discipline that are graded with feedback on writing. Minimum of 5 pages of writing assignments during semester.

Upper division courses - outside of class writing assignments that give students the opportunity to incorporate feedback in subsequent writing assignments (by

revising and resubmitting one assignment or submitting more than one assignment). Minimum of 10 pages of writing assignments during semester.

Faculty who teach "N" and "L" courses will describe writing assignments that are appropriate to the discipline.

The General Education Assessment Committee plans to evaluate the effect of the new writing requirements, but recognizes that any changes in writing scores due to this curriculum change may not be identified in assessment results for 2-3 years. The committee will continue the development of institutional portfolios to assess students' general education outcomes in 2006.

Program Learning Outcomes Assessment

All OSU degree programs are required to develop and implement an assessment plan, and faculty in those programs are responsible for determining the expected student learning outcomes for their degree program(s) and how student achievement of those learning outcomes should be assessed.

12. Attach a table listing the assessment measures and number of individuals assessed for the degree program or department.

Table 12.1 summarizes the assessment methods and number of individuals that participate in each method for each undergraduate and graduate degree program at OSU. Details about assessment methods and numbers of individuals assessed are provided in the individual assessment reports or summaries submitted by each college, department, or degree program (Appendix F).

The number of individuals who participate in each outcomes assessment method within each academic unit is shown in Table 12.1 and is described in detail in the individual assessment reports submitted by each academic unit (Appendix F). Outcomes assessment reports demonstrate that academic programs use multiple assessment methods and a majority of students within each program participate in outcomes assessment measures.

Academic units use a variety of methods to assess student-learning outcomes. The most commonly reported assessment methods in 2004-05 were:

- Capstone course projects, papers, presentations evaluated by faculty
- Senior projects and presentations
- Course-embedded assessments and Classroom Assessment Techniques (CATs)
- Exams – local comprehensive exams, local entry-to-program exams
- Exams – standardized national exams, certification or licensure exams
- Exit interviews
- Internships – evaluations from supervisors, faculty members, student participants
- Portfolios - reviewed internally or externally
- Focus groups
- Projects, portfolios, exhibits, or performances evaluated by professional jurors or evaluators
- Student competitions - intercollegiate
- Surveys - alumni
- Surveys - employers / recruiters
- Surveys – students, esp. seniors
- Surveys – faculty
- Enrollment data, student academic performance (GPA in particular courses), degree completion rates
- Time-to-degree completion
- Alumni employment tracking
- Student symposia and conference presentations
- Student honors, awards, scholarships

Graduate programs reported the following assessments *in addition to* the methods described above:

- Qualifying exams
- Theses / dissertations / creative component papers, projects, presentations, and defenses
- Comprehensive exams
- Tracking research activity / publications / professional presentations / professional activity

13. What were the analyses and findings from the 2004-05 program outcomes assessment?

Analyses and findings are described in the individual assessment reports or report summaries submitted by each college, department, or degree program (Appendix F).

14. What instructional changes occurred or are planned in the programs due to program outcomes assessment?

The uses of assessment results are described in the individual outcomes assessment reports submitted by each college, department, or degree program (Appendix F). The uses of assessment results are unique to each program but can be generally categorized as curricular changes, changes to academic programs or student support services, discussion of assessment information with faculty members in the context of curriculum planning, and using assessment results to evaluate curriculum changes were recently implemented.

The most commonly cited uses of assessment results in 2004-05 were:

- Changes in course content
- Addition / deletion of courses
- Changes in course sequences
- Changes in degree requirements or degree sheet options
- Development of tutorial and academic services for students
- Justification of past curriculum changes and demonstration of program improvement resulting from those changes
- Refinement of the assessment methods or implementation of new assessment methods
- Changes in advising processes
- Facilitation of curriculum discussions at faculty meetings, curriculum committee meetings, and faculty retreats
- Changes to student facilities such as computer labs and science labs
- Development of program-based websites to provide students with academic and program information

Table 12.1. Assessment methods and numbers of individuals assessed for each college, department, and degree program at OSU, including graduate degrees, reported for 2004-05. Details about assessment methods and individuals assessed are described in the individual assessment reports provided in the Assessment Report 2004-05, Appendix F.

College of Agricultural Sciences and Natural Resources

Academic Unit / Degree Program Assessed	Assessment Methods	Numbers of Individuals Assessed
Ag Education, Communication, and 4-H Youth Development		
B.S., Ag Communication	• 2005 NACT Critique and Contest Entries	• 33
	• Supervisor Evaluations	• 33
	• Exit Interviews	• 27
	• Capstone Project	• 35
	• Professional Evaluators in NACT Critique and Contest	• 33
B.S., Ag Education, Leadership and Service option	• Portfolio Submission #1	• 20
	• Portfolio Submission #2	• 21
	• Portfolio Submission #3	• 30
	• Supervisor's Evaluation and Faculty Coordinator's Visitation Report	• 30
	• Internship Seminar	• 30
	• Exit Interviews	• 30
B.S., Ag Education, Teaching option	• Results from State Licensure exam – OSAT	• 27
	• GPA for Student Teachers:	
	Undergraduate	• 36
	Graduate	• 6
	• Results from State Licensure exam – OPTE	• 42
	• Portfolios Passing Summative Review	• 42
	• Mean Ratings for Student Teachers' Second Teaching	• 42
	• Range of Mean Ratings of Student Teachers' Artifact Selections	• 42
	• Results from State Licensure exam – OGET	• 18
	• Cooperating Teachers' Summative Evaluation of Student Teachers' Performance	• 23
	• Cooperating Teachers' Summative Evaluation of Student Teachers'	• 26

	Content Knowledge and Ability • Admissions to Professional Education	• 14
M.Ag., Agricultural Education M.S., Agricultural Education M.S., Agricultural Communica-tions Ph.D., Agricultural Education	• Job Placement • Graduate Student Satisfaction Survey	• 10 (M.Ag.) 4 (M.S.) 2 (Ph.D.) • 22 (M.S.) 9 (Ph.D.)
Agricultural Economics		
B.S., Agricultural Economics B.S., Agribusiness M.S., Agricultural Economics M.Ag., Agricultural Economics	• Undergraduate Alumni Survey • Quiz Bowl • National Scholarship Competition • Awards	• 93 • 18 • 2 • 5
Ph.D., Agricultural Economics	• Graduate Alumni	• Done every other year (even)

Animal Science		
B.S., M.S., M.Ag., Ph.D., Animal Science	• Problem solving exercises	
	• Oral and written reports in capstone class	
	• National and Regional Judging Contests	• 44
	• Quiz Bowl competitions	• 9
	• Exit discussions and survey in capstone class	
	• Alumni Survey	
	Graduate	• 17+
	Undergraduate	
Biochemistry & Molecular Biology		
B.S., Biochemistry and Molecular Biology	• Alumni Survey	• 9
	• Standard Examinations	• 2
	• Exit Interviews	• 2
	• Publications and/or Presentations	• 1
	• Employment Status	
	• Enrollment Balance	• 181
M.S., PhD., Biochemistry and Molecular Biology	• Cumulative Examination—success rate	• 24
	• Cumulative Examination—rate of completion	• 11
	• Publications	
	Scientific method	• 11
	Peer-review journals	• 36
	• Presentations	
	Numbers	• 15
	Participation	• 36
	• Communication ability	
	• Years to degree	
	M.S.	• 22
	Ph.D.	• 13
Biosystems Engineering		
B.S., M.S., Ph.D., Biosystems Engineering	• Fundamentals of Engineering (FE) Exam	• 8
	• Exit Interview	• 9
	• Performance in Senior Design Experience	• 6 teams
	• Alumni Survey	

Entomology and Plant Pathology		
B.S., M.S., and Ph.D., Entomology, M.S. and Ph.D., Plant Pathology	• Written and oral exit surveys • Seminar presentation • Thesis • Oral comprehensive exam • Exit surveys • Written preliminary and oral comprehensive exam • Seminar • Thesis • Exit surveys	• 5 • 2 • 2 • 2 • 2 • 4 • 4 • 4 • 4
Horticulture and Landscape Architecture		
B.S., Horticulture	• Counts made of students on the college-issued graduation deficiency lists • GPA as part of the graduation check • Intercollegiate competitions • Exit Interview • HORT 2010 • 2004 Undergraduate Program Alumni Survey	• 23 • 34 • 19 • 8 • 17 • 7
BLA, Landscape Architecture	• Evaluation of Capstone Course • Evaluation of LA 4112 Course • Evaluation of LA 4894 Construction 3 • Evaluation of Computer Aided Design • Evaluation of Japan Study Abroad Program 2004 • Internal Evaluation of Student Performance • Digital Portfolio Review • Admission to the Professional Phase	• 10 • 11 • 10 • 98 • 15
M.Ag., Horticulture M.S., Horticulture Ph.D., Crop Science, Environmental Science, Food Science, Plant Science	• Oral or poster presentations • Electronic multimedia presentations • Written manuscripts • Written research proposal with an oral defense • Successful completion of a thesis, formal report, or creative component • Comprehensive exams • Coursework on the plan of study • Alumni survey	• 4 • 10

B.S. Landscape Contracting	• Internship • Internship Report • National competition • Exit interviews • Alumni survey	• 6 • 6 • 22 • 2

College of Arts and Sciences

Academic Unit / Degree Program Assessed	Assessment Methods	Numbers of Individuals Assessed
Art		
B.A., Art History	• Regional Art History Conference Presentations • Department Presentations	• 2 • Not conducted during this time
B.A., Studio Art	• At this time, no assessment procedures are in place to accommodate the students in this program.	•
B.F.A., Studio Art	• Annual Juried Student Art Exhibition • Exit Interview with an External Reviewer • Survey of Student Perceptions of University and Department	• 38 • 28 • 12
B.F.A., Graphic Design	• Sophomore Proficiency Review • Annual Juried Student Art Exhibition	• 30 • 20
Botany		
B.S., Botany B.S., Biology (partial assessment—Zoology administered)	• GRE • MCAT • Cumulative GPAs • Tracking of employment success and admission to graduate programs	• 6 (Botany) • 29 (Biology) • 8 (Botany) • 7 (Botany)
Chemistry		
B.S., B.S. (ACS), M.S., Ph.D., Chemistry	• Meeting Accreditation Requirements of the American Chemical Society	• 7 (B.S.—ACS) 4 (M.S.) 6 (Ph.D.)
	• Survey of Alumni	• 6 (B.S.) 7 (B.S.—ACS) 4 (M.S.) 6 (Ph.D.)
	• Exit Interviews with Chairman (oral, students' written remarks on file)	• 6 (B.S.) 7 (B.S.—ACS) 4 (M.S.) 6 (Ph.D.)

	• Input from Colleges served by the Department of Chemistry, and the Honors Program	• 6 (B.S.) 7 (B.S.—ACS) 4 (M.S.) 6 (Ph.D.)
	• Undergraduate Research and Reports from Capstone Course (CHEM 4990)	• 6 (B.S.) 7 (B.S.—ACS)
Communication Sciences and Disorders		
B.S., Communication Sciences and Disorders	• Capstone course performance • Course evaluations • Senior surveys • Alumni surveys	• 12 to 27 depending on assessment method
M.S., Communication Sciences and Disorders	• Course Performance • Course evaluations • Evaluation of students in practicum (internal) • Evaluation of students in practicum (external) • Student evaluation of practicum experiences (internal and external • Comprehensive examinations • Portfolios • Written exit interviews • National Certification Exam • Graduate student alumni surveys • Re-accreditation reviews by professional association	• 11-25 depending upon assessment method
Computer Science		
B.S., Computer Science	• Course rubrics filled out by faculty and students • Evaluations by employers • Graduating Senior Survey • Alumni Survey	• 259 • 6 • 5 • 37
M.S., Computer Science	• M.S. milestone rubric • Alumni Survey	• 9 • This was not a survey year
Ph.D., Computer Science	• Ph.D. milestone rubric • Alumni Survey	

English		
B.A., English	• Instructor evaluation of graduating seniors	• 42
	• Senior Survey	• 14
	• Alumni Survey	• 16
	• Evaluation of writing samples of graduating seniors by external evaluators	• 20
Foreign Languages and Literatures		
B.A., French, German, Russian, Spanish	• Advanced Language Acquisition Courses	• 244
	• Advanced Literature and Civilization Courses	• 200
Geography		
B.A. and B.S., Geography	• Core course evaluation rubric	• 33
	• Transcript analysis of graduates	• 15
	• 2004 Undergraduate Alumni Survey	• 13
	• Exit Survey of Graduating Seniors	• 15
	• Graduation and Retention Statistics	• 15
Geology		
B.S., Geology	• Lecture and laboratory final exams	
	• Classroom oral, written, and visual research presentations	
	• Mapping projects, written reports, and exams at Field Camp	• 46
	• Record of student employment/advancement to other endeavors is maintained	• 7
	• Departmental Exit Survey	
	• 2004 Survey of Alumni Undergraduate Programs	• 13
M.S., Geology	• Written thesis proposal and completed thesis document	• 7
	• Digital record of M.S. student employment/ advancement to other endeavors	• 7
	• Departmental Exit Survey	
	• 2003 Survey of Alumni Graduate Programs	• 13
	• 2004 Graduate Student Satisfaction Survey	• 20
History		
B.A., History	• Written artifacts	• 70
	• Enrollment	• 124
	• Portfolio/Research Papers	• 30

M.A. and Ph.D., History	• Capstone project	• Not assessed this year, but will be next year
	• Plans of Study for History graduate students	• 28
Journalism & Broadcasting		
B.A., B.S. Journalism / Broadcasting	• Exams, Quizzes, Papers, Group projects, Class discussions, Course evaluations, Graduate surveys, Student performance in internships and entry level employment	• 56
	• Papers, Exams, Quizzes, Group projects, Class discussions, Course evaluations	• 236
	• Informal faculty assessment, Capstone courses, Students' own perceptions of their learning	
	• News stories, Writing assignments, Exams, Class discussions, Course evaluations, Performance in Internships, 2004 Undergraduate Programs Alumni Survey	• Exams--Fall 2004 156 (Pre-test) 136 (Post-test) Spring 2005 148 (Pre-test) 150 (Post-test) Internship-- 83
	• Papers, Exams, Quizzes, Group Projects, Class discussions, Course evaluations, Undergraduate Programs Alumni Survey	
M.S., Mass Communica-tions	• Exams, Original papers, Preparation of an original thesis or capstone project	• 5
	• Original papers, Exams, Student survey of instruction	• 22
	• Original papers, Exams, Student survey of instruction	• 5
Mathematics		
B.S., Math	• Grades in core courses • Grades in courses • Putnam Exam and Mathematical Modeling competition • Student Questionnaire • Alumni Questionnaire • Student Questionnaires • Information from advisors	
Ph.D., Math		

Microbiology and Molecular Genetics		
B.S. Microbiology	• Grades in core courses • Alumni survey	• 46 • 23
B.S. Cell and Molecular Biology	• Graduate Record Exam GRE (B22) • Alumni Survey • Grades in BIOL 3024, CLML3014, 4113 • Exit Interviews	• 0 • 23 • 5
B.S., Medical Technology	• Grades in core courses and in clinical courses • Acceptance rate for internship, average GPA of those students accepted into an internship and overall GPA earned during their internship • Pass rate on the ASCP accreditation exam	• 12 • 7 • 2
M.S. and Ph.D., Microbiology, Cell and Molecular Biology	• Departmental survey of faculty to assess graduate student • Graduate student survey • Tracking of Ph.D. graduates • Student academic discipline action reports • Self-study of the average time to degree • Student evaluations	• 24 • 12 (M.S.) 3 (Ph.D.) • 5 • 24
Music		
B.A. Music BME, Music Education	• Upper Division Theory Exam • Keyboard Proficiency • Applied Music Juries • NATS Competitions • Recital Hearings • Internships • Professional Teaching Portfolios • Supervisor Evaluations • Teacher Certification Exams • Exit Survey • Alumni Survey	• 23 • 30 • 383 • 23 • 5 • 2 • 14 • 14 • 25 • 13 • Not conducted this year
Philosophy		
B.A., Philosophy	• Writing across the curriculum • Oral presentations • Exit questionnaire	• 5 • 5 • 5

	• Assessing quality of discussion and critical reasoning	• 5
M.A., Philosophy	• Exit Questionnaire	
Physics		
B.S., Physics, M.S., Physics, Ph.D., Physics	• GRE	• Will begin in 2006
	• Written Preliminary Exam	• 8
	• PHYS 4712	• Collected every 2 years -- 2006
		• 12
	• Exit Interview	• 21
	• Alumni Survey	
	• Grades and Course Evaluations for:	• 8
	PHYS 4413	• 10
	PHYS 5613	• 7
	PHYS 4423	• 13
	PHYS 5413	• 7
	PHYS 4113	• 10
	PHYS 5313	• 12
	PHYS 3113	• 7
	PHYS 5113	
Psychology		
B.A. and B.S., Psychology	• Online survey completed by undergraduate students	• 77
Sociology		
B.S., Sociology	• Exit Interview	• 26
M.A., Sociology	• Satisfactory completion of courses required in theory	• 2
	• Satisfactory completion of courses required in methods	• 2
	• Satisfactory completion of courses required in statistics	• 0
	• Presentation at professional meetings	• 2
	• Master's thesis	• 2
Ph.D., Sociology	• Preliminary exam	• 5
	• Comprehensive exams	• 5
	• Student teaching experience	• 5

	• Presentations and publications • Dissertation defense	• 5 • 5
Theatre		
B.A. Theatre, B.F.A. Theatre, M.A. Theatre	• Jury and portfolio review • Internship and graduate placement • Production reviews • Portfolio and performance juries • Creative component and thesis	• 45 • 12
Zoology		
B.S., Biological Science, Physiology, Wildlife and Fisheries Ecology, Zoology	• Depth of seniors' understanding in key courses—survey • Performance of seniors in key courses • Retention of declared majors	• 411 • 411 • 341
M.S. and Ph.D., Wildlife and Fisheries Ecology, Zoology	• Performance in qualifying and final examinations • Presentations and awards	• 19 • 48

Spears School of Business

Academic Unit / Degree Program Assessed	Assessment Methods	Number of Individuals Assessed
College-Wide Assessments		
B.S.B.A., Accounting B.S.B.A., Economics B.S.B.A., MIS and MSCS B.S.B.A., Finance B.S.B.A., Management B.S.B.A., Marketing M.S., Accounting M.S., Economics MBA, Business Administration Ph.D., Economics Ph.D., Business Administration	• OSU Survey of Alumni of Graduate Programs • Spears School of Business Annual Satisfaction Survey • OSU Survey of Alumni of Undergraduate Programs • Annual NSSE Satisfaction Survey • Assessment Survey • OSU Alumni Survey • EBI Satisfaction Survey for Undergraduate Students • Still choose to major in the SSB at OSU item in battery • Apply theories or concepts to practical problems or new situations item in battery • Synthesizing and organizing ideas, information, or experiences item in battery • EBI Student Exit Survey • Annual Satisfaction Survey • Focus Group Meetings	• 47 (B.S.B.A.) 155 (MSA) • 363 (B.S.B.A.) • 42 (Management) • 253 (MSIS) • 37 (MIS) • 52 • 42

College of Education

Academic Unit / Degree Program Assessed	Assessment Methods	Numbers of Individuals Assessed
Applied Health and Educational Psychology		
Ph.D., Counseling Psychology	• Passing grades of relevant coursework • Passing grades on qualifying exams • Satisfactory evaluations in practica and internship • Annual student evaluations • Success rates in obtaining internship placements • Success rates in completing internship placements • Accreditation of program by American Psychological Association (APA)	• 44 • 16 • 17 • 45 • 100% • 100% • 44
M.S., Counseling	• Student Progress Evaluation	• 79
M.S., Educational Psychology	• Plan of study collected and evaluated • Listing of clusters collected and evaluated • Description of material learned in each cluster collected and evaluated • Students deliver teaching philosophy • Theses and creative components • Theses Defense	
Ph.D., Educational Psychology	• Required experiences • Other professional experiences suggested • Professional experiences	
M.S. and Ph.D., Educational Psychology/ Research and Evaluation	• Thesis/dissertation proposal • Comprehensive exams • Thesis/dissertation defense • Survey	• 1 (Ph.D.) 1 (M.S.) • 1 (Ph.D.) 1 (M.S.) • 2 (Ph.D.) 1 (M.S.) • 7

	• Student dialog	• 16
Ph.D. and Ed.S., School Psychology	• Annual Student Evaluation and Practice Portfolio • Program Performance Rating Scales • Comprehensive Exams • Comprehensive Exams—Praxis II Psychological Foundations • Grades in Research/Statistics Courses • Research Team Ratings • Dissertation, Thesis, Formal Report, and Creative Component • Praxis II Diagnosis, and Prevention and Intervention • Practicum and Internships Field Supervisor Evaluations • Practicum and Internship Logs • Praxis II—Ethics	• 21 • 12 • 11
B.S., Athletic Training	• Student Clinical Education Experience • NATABOC Certification Exam • Alumni Survey	• 35 • 7
B.S., Health Promotion	• Senior capstone course • Portfolio • Alumni Survey • Department Survey • Formal assignments • Exams	• 52 • 33 • 23 • 38 • 38
M.S., Health and Human Performance	• Alumni Satisfaction survey	• 20
B.S., Leisure Studies	• Survey of graduates • OSU Assessment survey of graduates • External Review of Preparation--Internship Experience • Supervisors' evaluations of internship students • Five-year accreditation review • Review of records • Professional certification exams • Annual report from NCTRC and NRPA on graduates • Graduates	• 24 • 13 • 193 • 21

M.S., Leisure Studies	• Admission criterion based on alma mater and major with prerequisite courses for those students not meeting the expectation	• 22
	• NCTRC and CPRP exams	
	• Student resume or portfolio	
	• Exit interview	
	• Post graduation survey	
	• Courses on plan of study and comprehensive exam	• 1
	• Comprehensive exam	• 1
	• Research Project	
	• Creative component or thesis	• 1
Ph.D., Leisure Studies	• Review of applications for admission and plans of study	
	• Reports from NCTRC and NRPA on the respective certification exam	• 12
	• Exit Interview	
	• Post graduation survey	• 1
	• Comprehensive exam	• 2
	• Publication and presentation in professional settings, teaching and seminars	• 3
		• 2
	• Comprehensive exam and research projects, including dissertation	• 1
	• Dissertation, research symposium, seminars, presentation and publication in professional settings	• 2
	• Teaching experiences, symposia and seminars	
	• Student's resume or portfolio	
B.S., Physical Education	• Oklahoma General Education Test	• 15
	• Oklahoma Subject Area Test	
	• Oklahoma Professional Teaching Exam	• 11
	• Professional Education Portfolio	• 22
Educational Studies		
B.S., M.S., and Ed.D., Aviation and Space	• BS	• 64 B.S.
	• M.S. -- research emphasis of the plan of study, the creative component.	• 17 M.S.
	• The Ed.D. -- doctoral comprehensive examination.	• 0 Ed.D.

Ed.D., School Administration	• MAT scores	• 20
	• GRE scores	• 25
	• Consecutive enrollment after admission	• 29
Ed.D., Higher Education	• Number of those who initially enrolled in the program fall 02 who were continuing toward degree completion in a timely manner	• 27
	• Graduate Student Satisfaction Survey	• 71

Teaching & Curriculum Leadership

B.S., Elementary Education, Secondary Education, Technical and Industrial/Career and Technical Education	• Certification Exams for Oklahoma Educators	• 265 (OGET) • 235 (OSAT) • 295 (OPTE)
	• Professional Education Portfolio	
	• Student Teacher Interns Evaluation	• 130
	• New Teacher Residency-Year Requirement	• 332
	• Student Assessment of Professional Education Programs Survey	
	• Survey of Administrators	• 12
M.S., Teaching, Learning and Leadership	• Theses or Creative Component Projects (Master's) and Dissertations (Doctoral)	• 49 (M.S.) • 4 (Ed.D.) • 3 (Ph.D.)
Ed.D., Education	• Comprehensive Examinations (Masters) and the Qualifying Examinations (Doctoral)	• 50 (M.S.) • 5 (Ed.D.) • 6 (Ph.D.)
Ph.D., Education	• Student Survey	
	• Oklahoma Subject Area Test	• 28
	• Comprehensive or Qualifying Examination	• 44
	• Graduate Student Satisfaction Survey	• 210

College of Engineering, Architecture, and Technology

Academic Unit / Degree Program Assessed	Assessment Methods	Numbers of Individuals Assessed
Architecture		
B., Architecture and Architectural Engineering	• Professional Advisory Committee Survey	• 6 (Architectural Engineering) 7 (Architecture)
	• Architectural Design Studio Juror Survey	• 8 (Architectural Engineering) 16 (Architecture)
	• Undergraduate Program Alumni Survey	• 7 (Architectural Engineering) 9 (Architecture)
Chemical Engineering		
B.S., Chemical Engineering	• Fundamentals of Engineering Exam	• 69 (5-years)
	• Senior Survey in the fall semester	• 26
	• Exit interview fall and spring	• 17
	• End of course survey – student response to objectives	• ~7x25
	• End of course evaluation by the faculty	• ~7x25
	• Course evaluations	• 7x25
	• Internal OSU/CEAT academic awards and honors	• 3
	• External academic contests and scholarships	• 8
	• Student participation in School's activities	• >100
	• AIChE National Data	• Many
	• Industrial feedback (IAC and recruiters)	• ~15
	• Employer Survey of Annual Engineering Evaluation Criteria	• 10
Civil and Environmental Engineering		
B.S., Civil and Environmental Engineering	• Fundamentals of Engineering exam	• 13
	• Employer Survey	
	• Alumni Survey	
	• Success in professional school curriculum	
	• Capstone Design Courses	
	• Exit Interview	
	• Courses focusing on communication	

M.S., Civil Engineering M.S., Environmental Engineering Ph.D., Civil and Environmental Engineering	• Examination by committee • Employer Survey	
Electrical & Computer Engineering		
B.S., Electrical Engineering B.S., Electrical Engineering Computer option	• Exit Survey • FE exams • Course Content Survey • Instructor Survey • Capstone Design II Written and Oral Reports (Consultants) • Evaluations of Final Exams	• ~80 • 31 • ~200 • 22 (faculty) • ~80 written and ~80 oral • ~120
Industrial Engineering and Management		
B.S., Industrial Engineering and Management	• Course objective matrix • Fundamentals of Engineering exam • Alumni Survey • Senior Exit Survey • Oral Report Evaluation • Written Report Evaluation • Instructor Survey	• 15
M.S. and Ph.D.	• Alumni Survey	
Mechanical and Aerospace Engineering		
B.S., Mechanical Engineering B.S., Aerospace Engineering	• Performance of seniors on national Fundamentals of Engineering Exam administered by the National Council of Engineering Examiners • Graduating Senior Exit Survey	• 40 • 85
M.S., Mechanical Engineering	• Final defenses of reports and theses by all degree candidates	• 25

Ph.D., Mechanical Engineering	• Final defenses of dissertations by all degree candidates	• 4
Construction Management Technology		
B.S., Construction Management Technology	• Exit surveys of the graduates • Course evaluations • Reviews of student performance in internships • National CQE Level I • ASC/AGC Student Competitions • Alumni Telephone Survey	• 24 • 507 • 50 • 28 • 18 • 31
Fire Protection and Safety Technology		
B.S., Fire Protection and Safety Technology	• Class performance • Assessment exam • Capstone course team project • Student portfolios • Anecdotal reports • Exit interview • Alumni listserv • Internship feedback	• 42 • 3
Mechanical Engineering Technology		
B.S., Mechanical Engineering Technology	• Faculty Course Assessment Report (FCAR) • Fluid Power Certification Exam • Sample Fundamental of Engineering (FE) Exam questions • Senior Exam • Lab assignments and graded performance • Senior Capstone Design Course for team participation • Number of student plant trips • Number of student members participating • Number of student society meetings • Number of invited external speakers • Senior Exam (5 questions on ethics) • Senior Design Course • Introduction to MET • Degree program requires 6 hours of Social and Humanities with an	• 41

international dimension
- Senior Exit Interview Form
- College of Engineering, Architecture and Technology Graduate Tracker System
- Alumni Survey

College of Human Environmental Sciences

Academic Unit / Degree Program Assessed	Assessment Methods	Numbers of Individuals Assessed
Design, Housing, & Merchandising (DHM)		
B.S., Design, Housing, and Merchandising	• Alumni Survey • Senior Exit Survey • Design Portfolio Review • Undergraduate Program Alumni Survey • Internship Employer/ Supervisor Survey	• 46 • 82 • 33 • 46 • 90
M.S., Design, Housing, and Merchandising	• OSU Graduate Student Satisfaction Survey • Sound proposals • Rubrics	• 10
Human Development and Family Science (HDFS)		
B.S., Early Childhood Education	• Capstone Course • Practicum Experience • Grades in core ECE courses • ECE Portfolio • Evaluation of practicum experience • 2004 Senior Exit Survey • ECE Portfolios	• 38 • 36 • 231 • 38 • 37 • 102
B.S., Child and Family Services	• Faculty or site supervisor evaluation of internship • Supervisor evaluation of internship • Instructor 1: Score of 80% or above on a 40-minute live interview in HDFS 3523 • Instructor 2: Score of 80% or above on a 20-minute video in HDFS 3523 • Method 1: Supervisor evaluation of internship • Method 2: Score of 80% or above on HDFS 3533 exam • Instructor/Site supervisor evaluation of family life education (FLE) session HDFS 4433 • Instructor 1: Score of 80% or higher on family life education session project • Instructor 2: Evaluation of family life education session given in HDFS 4433 in accordance with best practice standards converted to a point system, for	• 29 • 60 • 48 • 37

	which a score of 80% or above on the session was earned • Professor evaluation of research evaluation assignment in HDFS 3513 • Instructor 1: Final project scores • Instructor 2: Instructor summary of skills demonstrated by the students in four written assignments • 2004 Senior Exit Survey • Human Services Management Portfolio (HSMP) • Policy statement project	• 42 • 106 • 55
M.S., Marriage and Family Therapy	• Percent of graduates employed in the field	• 7
Hotel & Restaurant Administration		
B.S., Hotel and Restaurant Administration	• Laboratory Exercises • Operational Case Studies • Homework • Case Study Resolutions • Classroom Instruction • Recruiters Interviews • Courses	
M.S., Hotel and Restaurant Administration	• Critiques • Exams • Team Discussion • Annual Graduate Conference Presentations • Thesis or Creative Component	
Ph.D., Hotel and Restaurant Administration	• Mentoring and Collaborative Relationship • Dissertation • Research Consideration at the Annual Graduate Education and Graduate Student Research Conference • Journal Research Article • Funded Grant • Outreach Recognition and Awards	

Nutritional Sciences		
B.S. and M.S., Nutritional Sciences	• Registration Exam for Dietitians • Senior Exit Survey	• 83 • 38

Student and Alumni Surveys

15. What assessment activities were used to measure student satisfaction? Describe the measures used, which students were assessed, how many students, and how they were selected.

Student and alumni surveys are conducted to evaluate student and alumni perceptions of academic and campus programs and services, and the results are used in developing and improving those programs and student services. These surveys complement program outcomes assessment because they are designed to provide feedback from students and alumni for use in continuous quality improvement in academic and student programs.

Annual OSU Alumni Surveys

Alumni surveys are conducted every year at OSU; undergraduate program alumni and graduate program alumni are surveyed in alternate years. The purpose of these surveys is to identify institutional strengths and areas for improvement as indicated by recent graduates; to track the careers and continuing education of recent OSU graduates; and to assess achievement of learning outcomes as perceived by alumni from individual academic programs. All alumni surveys target alumni who are 1- and 5-years post-graduation; include common questions that cover employment and career issues, continued education, and general satisfaction; and include program-specific questions for the purpose of program outcomes assessment as well as assessing alumni satisfaction. The Office of University Assessment and Testing coordinates the alumni surveys. The OSU Bureau for Social Research conducts the survey as telephone interviews with alumni. Alumni surveys have become a cornerstone of assessment at the university, college and program level by providing regular feedback from OSU graduates about their perceptions of their educational experiences at OSU and ideas regarding program development.

The 2005 OSU Survey of Alumni of Graduate Programs was conducted in February 2005. The target population for this survey was alumni of graduate programs who completed their degrees in calendar years 1999 and 2003. The total number of alumni in the target population was 2,187. The survey was administered as a telephone interview, conducted by the OSU Bureau for Social Research. The Office of University Assessment and Testing analyzed and summarized data and prepared the reports. A total of 787 interviews were completed by alumni of graduate programs, resulting in a 36% response rate. There were 643 respondents with a Master's degree and 144 respondents with a Doctorate.

Highlights from the 2005 Graduate Program Alumni Survey results are shown in Appendix E.

Graduate Student Satisfaction Survey

In Fall 2004, the Graduate Student Satisfaction Survey (GSSS) was conducted to assess graduate students' satisfaction with, and perceptions about, various aspects of their academic experience - the quality of their academic program, relationships with faculty and advisors, support and resources provided by the department and the university, and interactions with the Graduate College and the Graduate and Professional Student Government Association (GPSGA). The GSSS was conducted through telephone interviews with current graduate students by the OSU Bureau for Social Research in October 2004. Interviews were completed with 2,537 of the 3,919 graduate students enrolled at the Stillwater and Tulsa campuses - a response rate of 64.7%.

Highlights from the 2004 Graduate Student Satisfaction Survey results are shown in Appendix D.

The National Survey of Student Engagement (NSSE)

The NSSE is designed to obtain information about student participation in programs and activities that institutions provide for their learning and personal development, and results provide an estimate of how undergraduates spend their time and what they gain from attending college. The NSSE allows comparison between OSU and peer institutions in areas of academic challenge, student involvement in active and collaborative learning, student interaction with faculty, educational experiences, and campus environment. NSSE also includes items related to student satisfaction. OSU participated in the NSSE in 2000, 2002 and 2005; results of the 2005 survey will be reported in Fall 2005.

16. What were the analyses and findings from the 2004-05 student satisfaction assessment?

OSU Alumni Surveys: 2005 Survey of Alumni of Graduate Programs

Response Rate. A total of 787 alumni telephone interviews were completed, resulting in an overall response rate of 36.0%. Out of the initial target population of 2,187 alumni, 1,042 alumni could not be reached because either there was no phone number available or the number was deemed 'unreachable' (e.g., wrong number, disconnected). After accounting for 'unreachable' alumni, the overall adjusted response rate was 68.7%.

Out of the total population of survey respondents, 17.8% were alumni of the College of Arts & Sciences, 18.9% from the Spears School of Business, 8.6% from the College of Agricultural Sciences and Natural Resources, 16.0% from the College of Engineering, Architecture and Technology, 4.3% from the College of Human Environmental Sciences, 29.4% were from the College of Education, and 5.0% were from the Graduate College.

Satisfaction. 92% of Masters alumni and 96% of Doctoral alumni said they were somewhat or very satisfied with the overall educational experience in their OSU graduate programs.

Current Employment Information. Over 90% of alumni (n=715) reported that they were employed. Of these, 90.5% were employed full-time. Approximately 40.1% were employed by educational institutions; 26.9% by large corporations; 15.7% were employed corporations or small businesses; 10.9% by government agencies; 3.8% by nonprofit organizations and 2.4 % were self-employed. The most frequently reported annual salary range for alumni one and five years post-graduation was more than $36,000 but less than $45,000 per year (19.3%). Over 63% of alumni reported annual salaries of greater than $45,000 per year, and 17.1% of alumni reported annual salaries of less than $36,000 per year. In general, 93.8% of alumni (n=623) responded that their graduate program prepared them very well or adequately for their current position.

Graduate/Professional School Information. Of the alumni surveyed, 133 (16.9%) had completed or were currently enrolled in a graduate or professional school. Of these alumni, 60.9% were pursuing or had completed doctoral degrees, 21.1% were pursuing or had completed a masters degree, 6.8% were pursuing or had completed business degrees, 3.0% were pursuing or had competed law degrees, and 8.3% were pursuing or had completed 'other' degrees. Of the 133 alumni who were attending or had completed graduate school, almost 61% (n=81) attended

Oklahoma State University, and 10.5% attended graduate school at other Oklahoma institutions. Most alumni (93.9%) stated that their OSU graduate program had prepared them very well or adequately for additional graduate or professional school programs.

Resident Information (in-State / Out-of-State). Over 64% of the alumni who participated in the survey were living in Oklahoma and nearly 36% were out-of-state. Because the survey did not attempt to reach alumni who were not in the U.S., the alumni who live outside of Oklahoma may be under-represented.

Highlights from the 2005 Graduate Program Alumni Survey results are shown in Appendix E.

Graduate Student Satisfaction Survey

In Fall 2004, the Graduate Student Satisfaction Survey (GSSS) was conducted to assess graduate students' satisfaction with, and perceptions about, various aspects of their academic experience - the quality of their academic program, relationships with faculty and advisors, support and resources provided by the department and the university, and interactions with the Graduate College and the Graduate and Professional Student Government Association (GPSGA). The GSSS was administered as telephone interviews by the BSR in October 2004. Interviews were completed with 2,537 of the 3,919 graduate students enrolled at the Stillwater and Tulsa campuses - a response rate of 64.7%.

More than 90% of students indicated they were satisfied or very satisfied with their relationships and interactions with program faculty, overall program quality, and overall experience as a graduate student. Between 80% and 90% indicated they were satisfied or very satisfied with availability of their advisor, advisor's willingness to spend the time they need, computing resources available to them, library resources, research resources such as facilities, equipment, and lab space (for those who said they were applicable), preparation and guidance provided by department for role of teaching assistant (for those who served in that role), and helpfulness of Graduate College staff. Between 70% and 80% indicated they were satisfied or very satisfied with availability of course offerings in their program, opportunities for financial support in their department such as assistantships and scholarships, and adequacy of assistantship stipend in meeting financial needs (Master's students). Between 65% and 70% of doctoral students indicated they were satisfied or very satisfied with adequacy of assistantship stipend in meeting financial needs.

Highlights from the 2004 Graduate Student Satisfaction Survey results are shown in Appendix D.

17. What changes occurred, or are planned, due to student satisfaction assessment?

OSU Alumni Surveys: 2005 Survey of Alumni of Graduate Programs

Results of the graduate program alumni survey are widely distributed to faculty and administrators at the college- and university-levels. The alumni survey results have the biggest impact in effecting change at the program level, and specific program changes that have resulted from the alumni surveys are discussed in outcomes assessment reports for individual academic programs. All OSU programs have begun to use results of the annual OSU alumni surveys in the five-year academic program reviews coordinated by Academic Affairs and, where applicable, as part of professional accreditation self-studies and reports. For many academic programs, the alumni surveys coordinated by the Office of University Assessment and Testing are now a

cornerstone of their outcomes assessment efforts and results are regularly used in curriculum planning.

Graduate Student Assessment

18. What assessment activities were used to measure graduate students? Describe the measures used, which students were assessed, how many students, and how they were selected.

[see below]

19. What were the analyses and findings from the 2004-05 graduate student assessment?

[see below]

20. What changes occurred or are planned due to graduate student assessment?

[see below]

Responses to Questions #18 – 20

Graduate student assessment is considered to be part of Program Learning Outcomes Assessment for each academic unit; graduate degree programs are among the degree programs assessed for each college, school, or department. Graduate student assessment methods, numbers of students assessed, results of assessments, and uses of results of assessment are described and summarized in the Program Learning Outcomes Assessment section of this report, Table 12.1, and in Appendix F (bound separately).

Graduate Student Satisfaction Survey

In addition to the graduate student assessment that is conducted in individual academic units, the Graduate College periodically conducts the Graduate Student Satisfaction Survey to evaluate graduate students' satisfaction with their educational experiences at OSU. The survey is intended to provide information to identify areas for improvement and gauge success of services provided by the Graduate College. A survey was conducted in 2000, 2002, and again in Fall 2004, each time targeting all currently enrolled graduate students. See items #15 and #16 above, and Appendix D for more information about this survey.

Special Assessment Projects

The Office of University Assessment conducts and provides financial support for special assessment projects aimed at evaluating the effectiveness of academic or student programs, results of strategies developed to improve student learning, or factors that contribute to the educational impact of the university experience on students. Special projects that are conducted within a single academic discipline are reported in the program's annual report or a separate outcomes assessment report.

APPENDIX A

General Education Assessment Committee 2005 Annual Report

GENERAL EDUCATION ASSESSMENT COMMITTEE ANNUAL REPORT, 2005

2005 General Education Assessment Committee Membership

Greg Wilber (Civil and Environmental Engineering), Chair; Jeff Hattey (Plant & Soil Sciences); John Gelder (Chemistry); Frances Griffin (Business Management); Ed Walkiewicz (English), Rick Rohrs (History); Pam Bowers (ex officio, University Assessment and Testing).

General Education Assessment Committee History

Assessment of OSU's general education program is required by the Higher Learning Commission of the North Central Association (HLC, OSU's accrediting body) and by the Oklahoma State Regents for Higher Education. OSU's general education assessment efforts have been motivated by these requirements. The Assessment Council and Office of University Assessment and Testing formed a faculty General Education Assessment Task Force in May 2000 for the purpose of developing and implementing a new plan to assess the effectiveness of OSU's general education program. Although general education and "mid-level" assessment methods such as standardized tests and surveys had been conducted intermittently at OSU since 1993, no sustainable approach to evaluating the general education curriculum had been established. The task force formed in 2000 was the first group of OSU faculty members who were paid to work on this university-wide assessment project and marked a renewed commitment to general education assessment at OSU.

Following the assessment standard of articulating desired student outcomes first, the Task Force started in 2000 by revising OSU's *Criteria and Goals for General Education Courses* document and identifying "assessable" outcomes for the general education program. After studying general education assessment practices at other institutions, the task group developed the following guidelines for effective and sustainable general education assessment for OSU:

- the process must not be aimed at individual faculty members or departments,
- the process should be led by faculty members, and faculty participation should be voluntary,
- the process should use student work already produced in courses, and
- the process should assess all undergraduates, including transfer students, because general education outcomes describe qualities expected for all OSU graduates.

After summer-long study and discussion, the 2000 task group agreed to initiate two assessment methods to evaluate general education that were consistent with these guidelines: institutional portfolios and a course-content database. Institutional portfolios directly assess student achievement of the expected learning outcomes for the general education program, and the course database evaluates how each general education course contributes to student achievement of those articulated outcomes. These methods were implemented in 2001.

In 2003, the Assessment Council and General Education Advisory Council approved the task force's name change to the General Education Assessment Committee. The Committee is charged with continuing to develop and implement general education assessment and reports to the Assessment Council and General Education Advisory Council; membership in these committees is intentionally overlapped. Committee members serve rotating 3-year terms, are extensively involved in undergraduate teaching at OSU, represent a range of disciplines, and are paid summer stipends for their work on general education assessment.

Institutional Portfolios. The Committee has developed institutional portfolios to assess students' written communication skills (data collection in 2001, 2002, 2003, 2004, and 2005), math problem solving skills (data collection in 2002, 2003 and 2005), and science problem solving skills (data collection in 2003, 2004 and 2005). The Committee began developing an institutional portfolio for assessment of students' critical thinking in 2005, using a rubric pilot tested in 2004. Separate portfolios are developed to evaluate each general education learner goal, and each portfolio includes students' work from course assignments collected throughout the undergraduate curriculum. Faculty members (including Committee members and additional faculty members involved in undergraduate teaching) work in groups to evaluate the work in each portfolio and assess student achievement relative to the learner goal that is being assessed by using standardized scoring rubrics. The results provide a measure of the extent to which students are achieving OSU's general education learning goals. The Committee plans to continue to develop institutional portfolios to assess the learner goals for general education as described in the *Criteria and Goals for General Education Courses*.

General Education Course Database. The General Education Course Database is a tool for evaluating how each general education course is aligned with the overall expected learning outcomes for the general education program as a whole. Instructors are asked to submit their course information online via a web-based form, and the General Education Advisory Council reviews the submitted information during regular course reviews. The database form requests information about what general education learning goals are associated with the course and how the course provides students with opportunities to achieve those learning goals. Instructors are also asked to describe how student achievement of those goals is assessed within the course. When completed, the database will provide a useful tool for holistically evaluating general education course offerings and the extent to which the overall general education goals are targeted across the curriculum. During the past academic year efforts have been continued to develop the database; this effort will be a high priority during 2005-06.

In addition to these two primary assessment tools, student surveys such as the National Survey of Student Engagement and OSU Alumni Surveys contribute to the general education assessment process and are considered in reviewing general education assessment results.

Committee Goals for 2005

A. The Committee met in Fall 2004 to determine committee membership for work to be completed in summer 2005. Although a 3-year rotating membership cycle had been articulated for the Committee, all current committee members continued with the committee so that portfolios for four learning goals could be evaluated in 2005.

B. The Committee continued the institutional portfolio for assessing student written communication skills as in previous years. As planned, two portfolio-scoring groups each reviewed about 70 samples of randomly collected student work demonstrating written communication skills. Each group consisted of three faculty members, requiring six faculty reviewers for the 2005 written communication skills portfolio (two Committee members and four additional faculty reviewers).

C. The Committee also continued the institutional portfolio for evaluating students' math problem-solving skills. As planned, a portfolio-scoring group, consisting of three faculty reviewers (coordinated by a Committee member) evaluated the math skills

portfolio. This group of reviewers reviewed 189 samples of student work demonstrating math problem-solving skills.

D. Additionally, the Committee continued the institutional portfolio for evaluating students' science problem-solving skills. Although the timeline called for assessing science and math portfolios in alternate years, the committee believed it would be beneficial to do both, so that a sufficient sample size for analysis could be provided within a shorter timeframe. A portfolio-scoring group, consisting of three faculty members (two Committee members and one additional faculty reviewer), evaluated the science skills portfolio. This group of reviewers scored 141 samples of student work demonstrating math problem-solving skills.

E. The Committee developed the first full-scale institutional portfolio to evaluate students' critical thinking skills. Two portfolio-scoring groups, consisting of six faculty members (two Committee members and four additional faculty reviewers), evaluated the critical thinking portfolio. This group of reviewers reviewed 141 samples of student work demonstrating critical thinking skills.

F. As planned, the Committee presented information sessions for faculty to describe the process and results of assessment of students' achievement of general education learning goals since the committee began its work in 2000.

Assessment of Written Communication Skills

2005 collection of writing samples

The University Assessment and Testing Office supervised the collection of student writing artifacts for the Written Communication Skills Institutional Portfolio in Spring 2005. Instructors from the following undergraduate courses contributed random samples of student work to the 2005 written communication skills institutional portfolio:

Course No.	Course Name	General Education Designation (if any)	Number of artifacts randomly collected from one assignment	Number of artifacts reviewed	Number of artifacts used in data analysis
AGED 2303	Personal Leadership Development in Agricultural Sciences and Natural Resources		10	10	10
BCOM 3113	Written Communication		10	0	0
CIVE 3813	Environmental Engineering Science		10	10	10
ENGL 3323	Technical Writing		10	0	0
ENTO 2003	Insects and Society	N	25	25	23
HDFS 3453	Management of Human Service Programs		25	25	24
HIST 1103	Survey of American History		11	11	11
HIST 4063	Historic Preservation		10	10	10
LEIS 4473	Outdoor Recreation		10	10	6
NSCI 2111	Professional Careers in Nutritional Sciences		21	21	20
NSCI 3543	Food and the Human Environment	I, S	11	11	11
PLNT 3213	Forage and Grazinglands Resource Management		10	10	10
PSYC 3073	Neurobiological Psychology	N	10	10	7
	Total Number of Writing Artifacts (samples)		**173**	**153**	**142**

*The number of artifacts reviewed in 2005 was less than the number collected because it was determined that artifacts did not meet the criteria for assessment (n=20). The number of artifacts used in data analysis is less than the number reviewed because student information could not be found in OSU Student Information System databases (n=1); students were determined to be graduate students (n=3), or artifacts were incomplete or inappropriate for the assessment (5).

Artifacts were collected as in previous years. Artifacts selected for the Institutional Portfolio were coded and all identifying information was removed from the samples. Demographic data were collected for each artifact using the OSU student database; these data were collected for analysis purposes only and the information cannot be used to identify an individual. The student demographic information associated with the samples was not shared with reviewers prior to the reviews.

2005 written communication skills portfolio reviews

Six faculty reviewers for the written communication skills institutional portfolio met and completed their work in May and June 2005. The portfolio reviewers included Frances Griffin (Business Management), Rick Rohrs (History), Camille DeYong (Industrial Engineering), Celinda Reese (Psychology), Lou Anella (Horticulture and Landscape Architecture) and Lowell Caneday (Leisure Studies).

All portfolio reviewers met for two training sessions where they received background information on the procedure, and practiced scoring samples of student work using the written communication

skills scoring rubric developed for this purpose in 2001. During these two initial sessions, reviewers discussed questions and concerns regarding use of the rubric, discussed scores given to samples of student work, and developed a common approach for evaluating student writing samples.

As with past groups of reviewers, by the end of training sessions with all reviewers present, the reviewers were scoring fairly consistently with little variation among individual members. Eight artifacts were scored during the training session. The scoring committee then divided into two sub-groups, each of which undertook to review 71 artifacts. Scoring was done individually, and each sub-group then met to reach consensus scores where there was variation in individual scores. The final scores were then submitted to the Assessment and Testing Office for compilation and interpretation.

Written communication skills scores from each review group

Review Group	Artifact Score	Number of Artifacts	Percent of Artifacts
#1 (68 artifacts scored)	1	6	9%
	2	26	38%
	3	26	38%
	4	7	10%
	5	3	4%
#2 (71 artifacts scored)	1	1	1%
	2	12	17%
	3	38	54%
	4	16	23%
	5	3	4%
8 artifacts scored during training	1	0	0%
	2	3	38%
	3	3	38%
	4	2	25%
	5	0	0%

Rubric for evaluating student written communication skills

The General Education Assessment Committee developed the following rubric for evaluating samples of student writing in 2001. Minor revisions were made to the rubric in 2004; the revised rubric is provided below. Reviewers scored the artifacts independently and then met to develop a consensus score for each artifact; each artifact received a whole-number score from 1 to 5.

Score	Characteristics	
5	**Content &** Organization	Topic/thesis is clearly stated and well developed; details/wording is accurate, specific, appropriate for the topic & audience, with no digressions; evidence of effective, clear thinking; completely accomplishes the goals of the assignment
		Paragraphs are clearly focused and organized around a central theme; clear beginnings and endings; appropriate, coherent sequences and sequence markers
	Style & Mechanics	Word choice appropriate for the task; precise, vivid vocabulary; variety of sentence types; consistent and appropriate point of view and tone
		Standard grammar, spelling, punctuation; no interference with comprehension or writer's credibility
4	**Exhibits some characteristics of "3" and some characteristics of "5"**	
3	**Content &** Organization	Topic is evident; some supporting detail; wording is generally clear; reflects understanding of topic and audience; generally accomplishes goals of the assignment
		Most paragraphs are focused; discernible beginning and ending paragraphs; some sequence markers
	Style & Mechanics	Generally appropriate word choice; variety in vocabulary and sentence types; appropriate point of view and tone
		Some non-standard grammar, spelling, and punctuation; errors do not generally interfere with comprehension or writer's credibility
2	**Exhibits some characteristics of "1" and some characteristics of "3"**	
1	**Content &** Organization	Topic is poorly developed; support is only vague or general; ideas are trite; wording is unclear, simplistic; reflects lack of understanding of topic and audience; minimally accomplishes goals of the assignment
		Most paragraphs are rambling and unfocused; no clear beginning or ending; inappropriate or missing sequence markers
	Style & Mechanics	Inappropriate or inaccurate word choice; repetitive words and sentence types; inappropriate or inconsistent point of view and tone
		Frequent non-standard grammar, spelling, punctuation interferes with comprehension and writer's credibility

Student demographics associated with written communication skills artifacts, 2001-2005

		2001-04		2005		All Years	
		no. of artifacts	pct	no. of artifacts	Pct	no. of artifacts	Pct
Number of Artifacts	# collected	673		173		846	
	# scored	575		142		717	
	# used in analysis	562		142		704	
Class	Freshman	88	16%	16	11%	104	15%
	Sophomore	107	19%	35	25%	142	20%
	Junior	145	26%	46	32%	191	27%
	Senior	222	40%	45	32%	267	38%
College	CAS	196	35%	27	19%	223	32%
	CASNR	76	14%	26	18%	102	14%
	SSB	99	18%	12	8.5%	111	16%
	COE	67	12%	10	7%	77	11%
	CEAT	49	8.7%	13	9.2%	62	8.8%
	CHES	58	10%	48	34%	106	15%
	UAS	17	3.0%	6	4.2%	23	3.3%
Gender	Female	299	53%	82	58%	381	54%
	Male	261	47%	60	42%	321	46%
Admit Type	Regular (A, AR, L)	340	60%	97	68%	437	62%
	Alternative Admit (F)	22	3.9%	5	3.5%	27	3.8%
	Adult Admit (G)	8	1.4%	3	2.0%	11	1.6%
	"Third Door" Admit (K)	5	.9%	0		5	.7%
	International (J)	3	.5%	0		3	.4%
	Transfer (M, MR)	170	30%	37	26%	207	29%
	Other or Blank	14	2.5%	0		14	2.0%
ACT	<22	136	30%	37	32%	173	30%
	22 to 24	126	28%	35	31%	161	28%
	25 to 27	101	22%	28	25%	129	23%
	28 to 30	69	15%	11	9.6%	80	14%
	>30	26	5.7%	3	2.6%	29	5.0%
OSU GPA	<2.0	29	5.2%	7	4.9%	36	5.1%
	2.0 to 2.49	73	13%	20	14%	93	13%
	2.50 to 2.99	128	23%	30	21%	158	23%
	3.00 to 3.49	175	31%	50	35%	225	32%
	3.50 to 4.00	155	28%	35	25%	190	27%

Written communication skills scores, 2001 - 2005 (years combined)

			Score 1	2	3	4	5	Avg	N
Overall Scores	Overall	n	34	196	306	139	29	2.9	704
		%	4.8%	28%	43%	20%	4.1%		
By Class	Freshmen	n	10	36	43	13	2	2.63	104
		%	9.6%	35%	41%	13%	1.9%		15%
	Sophomores	n	9	37	64	25	7	2.89	142
		%	6.3%	26%	45%	18%	4.9%		20%
	Juniors	n	7	61	84	33	6	2.84	191
		%	3.7%	32%	44%	17%	3.1%		27%
	Seniors	n	8	62	115	68	14	3.07	267
		%	3.0%	23%	43%	25%	5.2%		38%
By Class (regular admit only)	Freshmen	n	6	30	38	11	2	2.69	87
		%	6.9%	34%	44%	13%	2.3%		20%
	Sophomores	n	5	24	47	19	5	2.95	100
		%	5.0%	24%	47%	19%	5.0%		23%
	Juniors	n	2	27	54	16	4	2.93	103
		%	1.9%	26%	52%	16%	3.9%		24%
	Seniors	n	2	30	64	41	10	3.18	147
		%	1.4%	20%	44%	28%	6.8%		34%
By Transfer Status	Native Students* (domestic only)	n	23	136	217	95	23	2.92	494
		%	4.6%	28%	44%	19%	4.6%		
	Transfer Students	n	9	60	88	44	6	2.89	207
		%	4.3%	29%	43%	21%	2.9%		

*Native students refers to freshmen who started at OSU as first-time freshmen

Key findings

- Writing scores for samples from freshmen had significantly lower scores than writing samples for seniors (n=704, $p<0.05$); 45% of the freshmen writing samples had scores of "1" or "2" and 55% had scores of "3" or higher. In contrast, 73% of writing samples from seniors received a score of "3" or higher. When only regularly admitted students were included in the analysis (i.e., excluding transfer, international, and alternatively admitted students), the contrast was even more pronounced. Considering only regularly admitted students, 79% of work produced by seniors received scores of "3" or higher.

- Although students who start their career at OSU ("native" OSU students) are slightly more likely to receive high scores on their writing samples, there is no statistically significant difference between the writing scores of native and transfer students, even when only regularly admitted native students are considered in the comparison.

Assessment of Science Problem-Solving Skills

2005 collection of science samples

The University Assessment and Testing Office supervised the collection of artifacts for the Science Problem-Solving Skills Institutional Portfolio in Spring 2005 using methods described in previous annual reports. As with the other portfolios, the artifacts were collected from introductory-level sciences courses that are part of the general education course offerings. Instructors from the following courses contributed artifacts to the 2005 science problem-solving skills institutional portfolio.

Three faculty reviewers for the science problem-solving skills institutional portfolio met and completed their work in June and July 2005. The portfolio reviewers included John Gelder (Chemistry), Ed Walkiewicz (English), and Bruce Ackerson (Physics).

Course No.	Course Name	General Education Designation (if any)	Number of artifacts randomly collected	Number of artifacts reviewed	Number of artifacts used in data analysis
ASTR 1024	Stars, Galaxies and the Universe	N	25	0	0
BIOL 1114	Introductory Biology	L, N	29	29	29
CHEM 1314	General Chemistry	L, N	44	25	25
ENTO 2003	Insects and Society	N	25	25	25
GEOG 1114	Physical Geography	L, N	25	25	25
PHYS 1313	Inquiry-Based Physics	L, N	25	25	25
	Total Number of Science Artifacts (samples)		**173**	**129**	**129**

The artifacts collected from ASTR 1024, and some from CHEM 1314 (n=19) were determined to not be appropriate for assessing science problem-solving skills using this method and were not scored or included in analysis.

Rubric for evaluating students' science problem-solving skills

The General Education Assessment Committee developed the following rubric for evaluating students' science problem-solving skills in 2003, and made minor revisions in 2005. Reviewers scored the artifacts independently and then met to develop a consensus score for each artifact; each artifact received a whole-number score from 1 to 5. Scores of "2" indicate work that has some elements of "1" and some elements of "3." Scores of "4" indicate work that has some elements of "3" and some elements of "5."

Rubric for evaluating students' science problem solving skills

Aspects	(1)	(3)	(5)
Understanding of problem	Student does not exhibit a clear understanding of the problem; Displays little comprehension of the important elements of the problem; Failed to understand enough to start to work the problem.	Response is free of misconceptions that lead to wrong answers; Student grasps basic parts of the problem as well as the general framework; Understands enough to work most of the problem; Can make a diagram that exhibits some understanding of the model; Can demonstrate some conceptualization of the model.	Student manifests a thorough understanding of concepts and relationships between concepts; Identifies all the important elements of the problem; Organizes the response in a manner that demonstrates clarity of understanding.
Use of terms and symbols	Student is unable to communicate scientific concepts through terminology; Fails to employ technical, mathematical, or scientific terms or employs them inappropriately; Fails to use symbols or uses them incorrectly.	Student uses most terminology and symbols correctly; Provides evidence of reasonable understanding of terms and symbols.	Student explains thoughts thoroughly using correct terminology and clearly displayed, appropriate symbols; Communicates ideas clearly and concisely; Demonstrates superior knowledge of the language of science and symbolic usage; Knows all the symbols and terms in a mathematical relationship and their association with the scientific model of interest.
Calculations and graphical data presentation	Student provides no evidence of manipulation of mathematical expressions; Commits numerous arithmetic errors; Fails to present data in graphical or tabular format.	Response is mainly accurate with some minor arithmetic errors; Student possesses sufficient understanding to work the problem, but presentation is not sophisticated; Provides graphical representation but cannot extract abstract information or interpretation; Presents calculations in an orderly manner, but misses some details; Represents data graphically but commits minor errors.	Response is fully mathematically accurate; Solution is clearly displayed with various computation steps shown; Student executes algorithms completely and correctly; Presents data in an appropriate graphical or tabular format; Provides a clear interpretation and conceptualization of results; Displays results graphically in a clear and illuminating way.
Solution and graphical data interpretation	Student shows significant misunderstanding of the process; Does not correctly apply or even make attempt to apply appropriate solution; Adopts inappropriate strategy for solving the problem; Attempts to use irrelevant information; Fails to provide a graphical representation of the mathematical thought process or provides an incorrect one.	Student shows understanding of the process; Adopts a reasonable strategy for solving most of the problem; Displays solution in a rote manner indicating a simple conceptualization of the problem; Shows understanding of some of the problem's concepts.	Student shows mastery of the process; Presents a detailed solution characterized by logical sequencing and systematic progression; Offers strong supporting arguments; Uses relevant outside information; Solution reflects excellent problem-solving skills.
Answer and conclusions	Answer lacks units or they are stated incorrectly; Student offers an invalid answer; Fails to offer any empirical findings.	Answer is stated in correct units; Student expresses empirical findings but is limited in identification of related issues; Is unable to demonstrate complete understanding of the mathematical result and its relationship to the conceptual model.	Answer is stated in correct units with any unit changes clearly illustrated; Student provides a complete response with a clear, unambiguous, accurate explanation; Fully describes findings in words; Convincingly connects the numeric results and the conceptual model.
Evidence of higher level thinking	Student is unable to plug values directly into equation; Seems incapable of mathematical manipulation.	Student combines two related concepts; Substitutes correct values and manipulates equation but still has some difficulty with more complicated relationships or model; Has some difficulty in developing a mathematical relationship from the written form.	Student can solve problems requiring multiple steps with development of concepts evolving into the solution; Can clearly synthesize information and organize it in a path through multiple steps to arrive at the solutions; Has no difficulty connecting mathematical relationships or expressing ideas mathematically; Is capable of interpreting and applying results in a new or modified situation.

Student demographics associated with science problem solving skills artifacts, 2003-2005

		2003-04		2005		Total Years	
		No. of artifacts	pct	No. of artifacts	pct	no. of artifacts	Pct
Number of Artifacts	# collected		-	173			
	# scored		-	129			
	# used in analysis	209	-	129		338	
Class	Freshman	76	36%	41	32%	117	35%
	Sophomore	67	32%	50	39%	117	35%
	Junior	41	20%	26	20%	67	20%
	Senior	25	12%	12	9.3%	37	11%
College	CAS	78	37%	49	38%	127	38%
	CASNR	55	26%	14	11%	69	20%
	SSB	9	4.3%	17	13%	26	7.7%
	COE	44	21%	33	26%	77	23%
	CEAT	14	6.7%	3	2.3%	17	5.0%
	CHES	7	3.3%	9	7.0%	16	4.7%
	UAS	2	1.0%	4	3.1%	6	1.8%
Gender	Female	135	65%	87	67%	222	66%
	Male	74	35%	42	33%	116	34%
Admit Type	Regular (A, AR,L)	148	71%	90	70%	238	70%
	Alternative Admit (F)	8	3.8%	5	3.9%	13	3.8%
	Adult Admit (G)	0		0			
	"Third Door" Admit (K)	0		1	.8%	1	.3%
	International (J)	4	1.9%	1	.8%	5	1.5%
	Transfer (M, MR)	49	23%	29	22%	78	23%
	Other or Blank	0		3	2.3%	3	.9%
ACT	<22	46	27%	39	36%	85	30%
	22 to 24	50	29%	33	31%	83	30%
	25 to 27	45	26%	17	16%	62	22%
	28 to 30	21	12%	13	12%	34	12%
	>30	10	5.8%	5	4.7%	15	5.4%
OSU GPA	<2.0	13	6.2%	9	7.0%	22	6.5%
	2.0 to 2.49	24	11%	23	18%	47	14%
	2.50 to 2.99	52	25%	33	26%	85	25%
	3.00 to 3.49	55	26%	29	22%	84	25%
	3.50 to 4.00	65	31%	35	27%	100	30%

Science problem-solving skills scores, 2003-2005

			Score						
			1	**2**	**3**	**4**	**5**	**Avg**	**N**
Overall Scores	Overall	n	20	127	121	63	7	2.73	338
		%	5.9%	38%	36%	19%	2.1%		
By Class	Freshmen	n	6	47	43	19	2	2.69	117
		%	5.1%	40%	37%	16%	1.7%		35%
	Sophomores	n	9	40	41	25	2	2.75	117
		%	7.7%	34%	35%	21%	1.7%		35%
	Juniors	n	4	25	25	11	2	2.73	67
		%	6.0%	37%	37%	16%	3.0%		20%
	Seniors	n	1	15	12	8	1	2.81	37
		%	2.7%	41%	32%	22%	2.7%		11%
By Class (regular admits only)	Freshmen	n	6	42	40	17	2	2.69	107
		%	5.6%	39%	37%	16%	1.9%		45%
	Sophomores	n	8	29	28	19	1	2.72	85
		%	9.4%	34%	33%	22%	1.2%		36%
	Juniors	n	1	12	12	5	2	2.84	32
		%	3.1%	38%	38%	16%	6.3%		13%
	Seniors	n		3	4	6	1	3.36	14
		%		21%	29%	43%	7.1%		5.8%
By Transfer Status	Native Students*	n	17	95	92	50	6	2.74	260
		%	6.5%	37%	36%	19%	2.3%		77%
	Transfer Students	n	3	32	29	13	1	2.71	78
		%	3.8%	41%	37%	17%	1.3%		23%

*Native students refers to freshmen who started at OSU as first-time freshmen

Key findings

- The science problem-solving skills portfolio is limited to assessing science problem-solving skills of students in entry-level science courses. The data are too limited at this point to make generalizations about students' science problem-solving skills, but this approach appears to be promising for this type of assessment.

- Science scores from the institutional portfolio were significantly correlated with OSU GPA ($n=338$, $p<0.01$); and with ACT Composite scores and all ACT sub-scores ($n=279$, $p<0.01$).

Assessment of Math Skills

2005 collection of math samples

The University Assessment and Testing Office supervised the collection of student math artifacts for the Math Institutional Portfolio in Spring 2005. Instructors from the following undergraduate courses contributed random samples of student work to the 2005 math skills institutional portfolio:

Course No.	Course Name	General Education Designation (if any)	Number of artifacts randomly collected from one assignment	Number of artifacts reviewed	Number of artifacts used in data analysis
MATH 1483	Mathematical Functions and their Uses	A	75	54	54
MATH 1493	Applications of Modern Mathematics	A	25	25	25
MATH 1513	College Algebra	A	100	25	25
MATH 1613	Trigonometry	A	25	25	25
MATH 2103	Elementary Calculus	A	50	50	50
MATH 2153	Calculus II	A	10	10	10
	Total Number of Math Artifacts (samples)		**285**	**189**	**189**

Some of the artifacts collected from MATH 1483 (n=21) and some from MATH 1513 (n=75) were determined to not be appropriate for assessing mathematics problem-solving skills using this method and were not scored or included in analysis.

2005 math problem-solving skills portfolio reviews

The General Education Assessment Committee developed the following rubric for evaluating students' mathematical problem-solving skills in 2002. Reviewers scored the artifacts independently and then met to develop a consensus score for each artifact; each artifact received a whole-number score from 1 to 5. Scores of "2" indicate work that has some elements of "1" and some elements of "3." Scores of "4" indicate work that has some elements of "3" and some elements of "5."

Three faculty reviewers for the mathematics problem-solving skills institutional portfolio met and completed their work in June and July 2005. The portfolio reviewers included Nigel Jones (Architecture), Meg Kletke (Management Science and Information Systems), and Dennis Bertholf (Mathematics). Reviewers met for a training session to "calibrate" their reviewing process using the rubric. Each reviewer received a copy of the artifacts to be evaluated and reviewed them independently; the group then met and discussed each artifact to agree on a consensus score for each.

Rubric for evaluating student math problem solving skills

The General Education Assessment Committee developed the following rubric for evaluating students' math problem solving skills in 2002. Reviewers score the artifacts independently and then meet to develop a consensus score for each artifact; each artifact receives a whole-number score from 1 to 5.

	Poor (1)	Acceptable (3)	Excellent (5)
Understanding of problem	No clear understanding indicated; Lack of comprehension of the basic parts of the problem; Didn't understand enough to start to work the problem;	Able to glean basic parts of the problem and the general framework; No serious misconceptions; Adequate to work most of the problem;	Full grasp of concepts and relationships between concepts; Identifies all the important elements of the problem;
Use of terms and symbols	Unable to communicate any math concepts though terminology; Absent of technical or mathematical terms, or used inappropriately; Mathematical symbols are not used, or used incorrectly;	Uses most terminology and symbols correctly; Evidence of reasonable understanding of terms and symbols;	Clear, concise communication of ideas; Thoughts thoroughly explained with the correct terminology and clearly displayed appropriate symbols; Demonstrates superior knowledge of the language of mathematics/science
Calculations	No evidence of manipulation of mathematical expressions; Arithmetic errors prevalent in the work;	Mainly accurate with some minor arithmetic errors; Appropriate to work the problem, but not a sophisticated presentation;	Fully arithmetically accurate; Clearly represented with various computation steps shown; Executes algorithms completely and correctly;
Solution	Shows significant misunderstanding of the process; Does not correctly apply or even make attempt to apply appropriate solution; Reflects inappropriate strategy for solving the problem; Attempts to use irrelevant information; No (or incorrect) graphical representation of the mathematical thought process;	Reflects reasonable strategy for solving most of the problem; **Displayed in a rote manner showing simple conceptualization;** Shows understanding of some of the problem's mathematical concepts; Presented in an orderly manner, but lacking some details; Represented graphically with only minor flaws;	Represented with detail through logical sequence and systematic progression; Reflects excellent problem-solving skills; Presents strong supporting arguments; Use of relevant outside information; Results are represented graphically in clear and illuminating way;
Answer	No expression of any empirical finding; Units if stated are incorrect; Conclusion is not valid;	Expressed empirical findings but limited in identification of related issues; Answer is stated in correct units;	Complete response with a clear, unambiguous, accurate explanation; Fully described findings in words; Stated in correct units with any unit changes clearly illustrated;
Difficulty of Problem	Values plug directly into equation; No mathematical manipulation;	Combines two related concepts;	Requires multiple steps with development of concepts evolving into the solution;

Student demographics associated with math problem solving skills artifacts, 2002-2005

		2002-03		2005		All Years	
		no. of artifacts	Pct	no. of artifacts	pct	no. of artifacts	pct
Number of Artifacts	# collected	695	-	285	-	980	-
	# scored	352	-	189	-	541	-
	# used in analysis	344	-	189	-	533	-
Class	Freshman	239	69%	95	50%	334	63%
	Sophomore	53	15%	51	27%	104	20%
	Junior	29	8.4%	23	12%	52	9.8%
	Senior	23	6.7%	20	11%	43	8.1%
College	CAS	94	27%	50	26%	144	27%
	CASNR	64	19%	22	12%	86	16%
	SSB	90	26%	51	27%	141	27%
	COE	17	4.9%	32	17%	49	9.2%
	CEAT	37	11%	14	7.4%	51	9.6%
	CHES	18	5.2%	12	6.3%	30	5.6%
	UAS	24	7.0%	8	4.2%	32	6.0%
Gender	Female	174	51%	102	54%	276	52%
	Male	170	49%	87	46%	257	48%
Admit Type	Regular (A, AR)	254	74%	140	74%	394	74%
	Alternative Admit (F)	14	4.1%	6	3.2%	20	3.8%
	Adult Admit (G)	5	1.5%	2	1.1%	7	1.3%
	"Third Door" Admit (K)	0		0		0	
	International (J)	12	3.5%	1	.5%	13	2.4%
	Transfer (M, MR)	57	17%	39	21%	96	18%
	Other or Blank	2	.6%	1	.5%	2	.4%
ACT	<22	102	36%	59	37%	161	37%
	22 to 24	86	30%	51	32%	137	31%
	25 to 27	55	19%	29	18%	84	19%
	28 to 30	32	11%	10	6.3%	42	9.5%
	>30	8	2.8%	9	5.7%	17	3.9%
OSU GPA	<2.0	49	14%	23	12%	72	14%
	2.0 to 2.49	43	13%	35	19%	78	15%
	2.50 to 2.99	78	23%	47	25%	125	23%
	3.00 to 3.49	84	24%	42	22%	126	24%
	3.50 to 4.00	90	26%	42	22%	132	25%

Math problem solving skills scores, 2002 - 2005 (years combined)

			Score 1	2	3	4	5	Avg	n
Overall Scores	Overall	N	60	155	159	118	41	2.86	533
		%	11%	29%	30%	22%	7.7%		
By Class	Freshmen	N	34	93	99	78	30	2.93	334
		%	10%	28%	30%	23%	9%		63%
	Sophomores	N	11	39	26	22	6	2.74	104
		%	11%	38%	25%	21%	5.8%		20%
	Juniors	N	10	15	15	10	2	2.60	52
		%	19%	29%	29%	19%	3.8%		9.7%
	Seniors	N	5	8	19	8	3	2.91	43
		%	12%	19%	44%	19%	7.0%		8.0%
By Class, (regular admits only)	Freshmen	N	29	76	91	74	27	2.98	297
		%	9.8%	26%	31%	25%	9.1%		75%
	Sophomores	N	2	22	18	14	3	2.90	59
		%	3.4%	37%	31%	24%	5.1%		15%
	Juniors	N	3	2	6	6	1	3.00	18
		%	17%	11%	33%	33%	5.6%		4.5%
	Seniors	N	1	3	11	3	2	3.10	20
		%	5.0%	15%	55%	15%	10%		5.0%
By Transfer Status	Native Students*	N	40	124	135	101	36	2.93	436
		%	9.2%	28%	31%	23%	8.3%		82%
	Transfer Students	n	20	30	24	17	5	2.55	96
		%	21%	31%	25%	18%	5.2%		18%

*Native students refers to freshmen who started at OSU as first-time freshmen, regardless of admit type

Key findings

- The math problem solving skills portfolio is limited to assessing math problem-solving skills of students, primarily freshmen, in entry-level mathematics courses. The overall distribution of scores indicates that 60% of students in entry-level math courses demonstrate math problem-solving skills at the midpoint of the rubric (a score of "3") or higher.

- Math scores from the institutional portfolio were significantly correlated with OSU GPA ($n=533$, $p<0.01$); and with ACT Composite scores and all ACT sub-scores ($n=441$, $p<0.01$).

Assessment of Critical Thinking Skills

Background information regarding assessment of critical thinking

The criteria and goals for each General Education area designation include some aspect of critical thinking as part of their desired results. For example, those courses designated with an "A" (analytical and quantitative thought) list as their first goal that "Students will critically analyze and solve problems using quantitative, geometric, or logical models." Those courses designated with "H" (humanities) have the goal that "Students will critically analyze the relationships of aesthetics, ideas, or cultural values to historic and contemporary cultures." Similar goals are stated for those courses designated as social and behavioral sciences ("S"), natural sciences ("N"), contemporary international cultures ("I"), and scientific investigation ("L").

The assessment of the achievement of these critical thinking goals was pilot-tested in the summer of 2004, and in 2005 implemented the first full-scale critical thinking institutional portfolio.

The critical thinking assessment plan

Assessment of critical thinking follows most closely that of the writing skills assessment which has been in place for several years. Like writing, critical thinking is a skill which is desired across the curriculum, and one for which continuous improvement over the course of a student's education is expected. The assessment plan consists of the collection of artifacts of assignments designed (as reported by participating faculty) to elicit critical thinking by the student. Artifacts were collected from a total of 10 courses, representing 10 departments and four colleges. Freshmen through seniors were represented in the sample of student work. A total of 141 artifacts were determined to be usable for assessment using the rubric developed for this process and were analyzed by the faculty sub-committee. These artifacts were evaluated using the rubric, developed last year, which lists four essential characteristics and three additional optional characteristics of critical thinking. The rubric is designed such that each characteristic can be scored from 1 to 5, with 5 indicating the highest level of achievement. The artifacts are also given an overall score. These scores are then submitted to the Office of University Assessment and Testing for statistical analysis and cross-referencing with the individual student information (which is not made known to the reviewers).

Critical thinking assessment committee activities in 2005

Members of this sub-committee included Greg Wilber (Civil and Environmental Engineering), Jeff Hattey (Plant and Soil Science), Jonathan Comer (Geography), Joanna Ledford (Biochemistry and Molecular Biology), Doren Recker (Philosophy), and Stacey Thompson (Human Development and Family Sciences). The committee operated much like those for the other assessments. Initially, reviewers participated in a training session using artifacts from last summer's pilot study. Then, reviewers independently evaluated a set of training artifacts using the critical thinking rubric. The committee reconvened and, following some discussion, settled on consensus scores for the training artifacts. In this way, the committee's judgment was calibrated, to the extent possible, for evaluation of the new artifacts collected for 2005.

The next task was to evaluate the artifacts collected over the year for the critical thinking assessment. Several of the artifacts were very quickly deemed unusable for the assessment. This was primarily due to the structure of the assignment or the degree to which key assumptions were built into the assignment. For example, a laboratory assignment involving a worksheet for

reporting observations was submitted for evaluation. While answering the worksheet's questions may have required critical thinking on the part of the student, the short answers required were not enough to evaluate the level of that thinking. Furthermore, the questions asked implied assumptions that were undoubtedly apparent to the instructor and the participating students, but were not apparent to an outside evaluator. In another example, an assignment consisting primarily of computer code was submitted. While recognizing that critical thinking was undoubtedly required to complete the assignment, the thought process itself is not displayed by the resulting code, and as such, was not useful for assessment against the rubric. Following this process, a total of 3 assignments were eliminated and 141 were retained for further evaluation. Next, those artifacts to be evaluated were reviewed by the entire group to determine which of the "optional characteristics" were to be considered. In some cases all three were deemed relevant and in others none were selected. The usefulness of this approach will be discussed below.

Two teams, with three members each, were then formed, and the 2005 artifacts were distributed between them. Subsets of each set of artifacts (from a course) were given to each team, in an effort to ensure that any bias between the two teams was present for all artifact sets. Each team then worked independently, evaluating their assigned artifacts.

Results

The results of the committee's evaluations, and data with respect to the students whose work was assessed, are shown in the tables that follow.

2005 collection of critical thinking samples

The University Assessment and Testing Office supervised the collection of student artifacts for the Critical Thinking Institutional Portfolio in Spring 2005. Instructors from the following undergraduate courses contributed random samples of student work to the 2005 critical thinking skills institutional portfolio:

Course No.	Course Name	General Education Designation (if any)	Number of artifacts randomly collected from one assignment	Number of artifacts reviewed	Number of artifacts used in data analysis
AGED 2303	Personal Leadership Development in Agricultural Sciences and Natural Resources		10	10	10
BAE 1022	Experimental Methods in Biosystems Engineering		10	0	0
CIVE 3813	Environmental Engineering Science		21	21	21
DHM 3433	Retailing of Apparel, Interiors and Related Products		25	25	24
ENGR 1412	Introductory Engineering Computer Programming		26	0	0
HDFS 3513	Introduction to Research Methods	S	25	25	25
HORT 1013	Principles of Horticultural Science	N	25	0	0
NSCI 4643	Critical Issues in Nutrition and Healthcare		26	26	25
PHIL 4313	Philosophy of Mind	H	21	21	20
PSYC 3073	Neurobiological Psychology	N	16	16	16
	Total Number of Critical Thinking Artifacts (samples)		**205**	**144**	**141**

*The number of artifacts reviewed in 2005 was less than the number collected because it was determined that artifacts did not meet the criteria for assessment (n=61). The number of artifacts used in data analysis is less than the number reviewed because students were determined to be graduate students (n=3).

Student demographics associated with critical thinking skills artifacts, 2005

		2005 no. of artifacts	pct
Number of Artifacts	# collected	205	
	# scored	144	
	# used in analysis	141	
Class	Freshman	1	.7%
	Sophomore	18	13%
	Junior	57	40%
	Senior	65	46%
College	CAS	34	24%
	CASNR	11	7.8%
	SSB	0	
	COE	0	
	CEAT	22	16%
	CHES	74	52%
	UAS	0	
Gender	Female	95	67%
	Male	46	33%
Admit Type	Regular (A, AR, L)	85	60%
	Alternative Admit (F)	4	2.8%
	Adult Admit (G)	0	
	"Third Door" Admit (K)	0	
	International (J)	2	1.4%
	Transfer (M, MR)	49	35%
	Other or Blank	1	.7%
ACT	<22	42	37%
	22 to 24	23	20%
	25 to 27	21	18%
	28 to 30	15	13%
	>30	13	11%
OSU GPA	<2.0	3	2.1%
	2.0 to 2.49	22	16%
	2.50 to 2.99	31	22%
	3.00 to 3.49	44	31%
	3.50 to 4.00	41	29%

Critical thinking skills scores, 2005

			Score						
			1	**2**	**3**	**4**	**5**	**Avg**	**N**
Overall Scores	Overall	n	2	40	72	26	1	2.89	141
		%	1.4%	28%	51%	18%	.7%		
By Class	Freshmen	n	0	0	1	0	0	3.00	1
		%			100%				.7%
	Sophomores	n	1	4	12	1	0	2.72	18
		%	5.6%	22%	67%	5.6%			13%
	Juniors	n	0	19	23	15	0	2.93	57
		%		33%	40%	26%			40%
	Seniors	n	1	17	36	10	1	2.89	65
		%	1.5%	26%	55%	15%	1.5%		46%
By Class (regular admit only)	Freshmen	n	0	0	1	0	0	3.00	1
		%			100%				1.2%
	Sophomores	n	0	1	10	0	0	2.91	11
		%		9.1%	91%				13%
	Juniors	n	0	10	18	12	0	3.05	40
		%		25%	45%	30%			47%
	Seniors	n	0	9	20	4	0	2.85	33
		%		27%	61%	12%			39%
By Transfer Status	Native Students*	n	0	23	51	18	0	2.95	92
		%		25%	55%	20%			65%
	Transfer Students	n	2	17	21	8	1	2.78	49
		%	4.1%	35%	43%	16%	2.0%		35%

*Native students refers to freshmen who started at OSU as first-time freshmen

Key findings

- In the first year of full-scale implementation of the critical thinking assessment, a few conclusions can be drawn about the results as well as about the process. Regarding the results, the first conclusion is that the overall scores were disappointingly low. Of the artifacts available for assessment, very few received overall scores of 4 or 5, including those produced by seniors. The average score for assignments written by seniors was 2.89. Some members of the committee felt that, to some extent, the nature of the artifacts resulted in the low scores. For example, for some of the assignments, the 'identification of the problem' was so implicit in the assignment that it was never explicitly stated by the student. This may have resulted in somewhat artificially low scores for that characteristic.

- Regarding the process itself, some committee members expressed some frustration with the artifacts that were available. As mentioned above, one common problem was the nature of the assignments and the implicit nature of the assumptions inherent. Another problem involved assignments that were so specialized that some of the reviewers did not feel they

had an adequate background in the topic to thoroughly evaluate the quality of the critical thinking. While it is felt that the attributes of sound critical thinking, like good written communication, are somewhat universal, the evidence for such thinking may be highly specialized.

- The solution to these difficulties involves two actions. One, the committee will make an effort to seek a wider variety of samples, focusing on mid-level courses that are designated with either an 'H' or an 'S'. As noted, most of these courses list critical thinking as a prominent learning objective. Two, by continuing to host seminars on the assessment of critical thinking, it is felt that more faculty will become aware of the need for developing assignments that can be assessed in this way. Based on past experience at these seminars, many faculty are very interested in learning from each other about how they structure and evaluate such assignments.

Campus-wide discussion of critical thinking assessment

The committee plans to continue the campus-wide discussion on the development and assessment of students' critical thinking skills, and encourage faculty to share their experiences in teaching and assessing critical thinking. A professional development workshop, held in February 2005, on the development of the process for assessment of critical thinking was well attended and generated many ideas about the development of assignments for this assessment.

Additional seminars, in conjunction with other university assessment activities, are being discussed. Specifically, the leaders of the Washington State University critical thinking project will be invited to present their work on assessment of critical thinking, most likely in the Spring 2006 semester.

Committee plans for critical thinking assessment

During the 2005-2006 academic year, the committee's activities will again be focused on two goals: continuing development of the campus-wide conversation on critical thinking, and gathering of artifacts for evaluation next summer using the adapted critical thinking rubric. Accumulating enough artifacts and enough data to be statistically meaningful takes time. Additional efforts will be made to find a wider variety of artifacts, with the goal of avoiding some of the difficulties with the previous set. A greater emphasis on 'H'-designated courses that stress critical thinking as a learning goal will be made. These efforts will be critical in ensuring that data is available and can be used in improving critical thinking development and assessment in the General Education program, as well as throughout the college, at OSU.

Critical thinking rubric (adapted from Washington State University course evaluation for critical thinking)

Characteristics 1 -4: Essential Characteristics		Level of Achievement				
		1	2*	3	4**	5
1	**Identification** and/or summary of the **problem/question** at issue.	No identification and/or summary of the problem.		The main question is identified and clearly stated.		The main question and subsidiary, embedded, or implicit aspects of a question are identified and clearly stated.
2	Presentation of the **STUDENT'S OWN perspective and position** as it is important to the analysis of the issue.	The student's own position relative to the question is not provided.		The student's own position on the question is stated; however, little support for the position is provided.		The student's own position on the issue is stated and support has been drawn from experience or information not available from assigned sources.
3	Assessment and appropriate use of **supporting data/evidence.**	No supporting data or evidence is utilized.		Evidence is used but not carefully examined. Source(s) of evidence are not questioned for accuracy, precision, relevance, and completeness. Inferences of cause and effect are stated, but not completely or entirely accurately. Facts and opinions are stated although not clearly distinguished from value judgments.		Evidence is identified and carefully examined. Source(s) of the evidence are questioned for accuracy, precision, relevance, and completeness. Accurately observes cause and effect. Facts and opinions are stated and clearly distinguished, and value judgments are acknowledged.
4	Discussion of **conclusions**, implications and consequences.	Conclusions are not provided.		Conclusions are provided without discussion of implications or consequences. Little or no reflective thought is provided with regards to the assertions.		Conclusions are clearly stated and discussed. Implications and consequences of the conclusion are considered in context, relative to assumptions, and supporting evidence. The student provides reflective thought with regards to the assertions.
5 – 7: Optional Characteristics (evaluated where appropriate)						
5	Consideration of **OTHER salient perspectives and positions** that are important to the analysis of the issue.	Does not acknowledge other possible perspectives.		Acknowledges other possible perspectives although they are not clearly stated.		Uses other perspectives noted previously, and additional diverse perspectives drawn from outside information.
6	Assessment of the key **assumptions and the validity of the supporting/ background information**.	Does not identify the key assumptions and/or evaluate the given information that underlies the issue.		The key assumption(s) that underlies the issue is clearly stated. Necessary data or other background data is identified but not evaluated for validity, relevance or completeness.		The key assumption that underlies the issue is clearly stated and the validity of the assumption that underlies the issue is assessed. Key data and background information is evaluated for validity and used in a way consistent with this evaluation.
7	Consideration of the influence of the **context** on the issue (including, where appropriate, cultural, social, economic, technological, ethical, political, or personal context).	The problem is not connected to other issues or placed in context.		The context of the question is provided although it is not clearly analyzed. Limited consideration of the audience is provided. No consideration of other contexts is provided.		The issue is clearly analyzed within the scope and context of the question. An assessment of the audience is provided. Consideration of other pertinent contexts is provided.

* 2 - Exhibits some characteristics of '3' and no characteristics of '5'
** 4 - Exhibits most characteristics of '3' and some characteristics of '5'

Critical Thinking rubric, based on revisions resulting from pilot study.

General Education Institutional Portfolios Overview

The numbers of samples scored and used in analysis for each institutional portfolio developed in 2001-2005 are shown below. Institutional Portfolios for written communication skills assessment were developed in 2001 (pilot test year), 2002, 2003, 2004 and 2005; portfolios for math problem-solving skills were developed in 2002 (pilot test year), 2003 and 2005; and portfolios for science problem-solving skills were developed in 2003 (pilot test year), 2004 and 2005. An Institutional Portfolio for assessment of critical thinking was pilot tested in 2004 (data not reported) and fully developed in 2005. Samples sizes have been increased in each year of portfolio development to allow sufficient samples sizes for data analysis.

Number of samples in each portfolio, 2001 – 2005

	Portfolio Type				Total number of samples - all portfolios
Year	Written Communication Skills	Math Problem-Solving Skills	Science Problem-Solving Skills	Critical Thinking Skills	
2001	86	-	-	-	86
2002	111	76	-	-	187
2003	225	268	68	-	561
2004	140	-	141	-	281
2005	142	189	129	141	601
All Years	**704**	**533**	**338**	**141**	**1716**

Overall portfolio scores for subject-area portfolios, years combined

		Score				
	Artifacts	**1**	**2**	**3**	**4**	**5**
Written Communication Skills (2001, 2002, 2003, 2004, 2005)	N	34	196	306	139	29
	%	4.8%	28%	43%	20%	4.1%
Science Problem-Solving Skills (2003, 2004, 2005)	N	20	127	121	63	7
	%	5.9%	38%	36%	19%	2.1%
Math Problem-Solving Skills (2002, 2003, 2005)	N	60	155	159	118	41
	%	11%	29%	30%	22%	7.7%
Critical Thinking Skills (2005)	N	2	40	72	26	1
	%	1.4%	28%	51%	18%	.7%

The written communication skills institutional portfolio is developing into an effective assessment tool. Faculty reviewers agree that this as a reasonable way to holistically evaluate undergraduate students' written communication skills. The increased sample size in this portfolio has allowed more confidence in the analysis and implications of the results.

The portfolios for math and science also have the potential to provide useful information for assessing student achievement of general education learner goals. However, these portfolios are different from the writing and critical thinking portfolios in some important ways. Unlike student writing and critical thinking samples, which are collected from courses across the undergraduate curriculum, math and science artifacts can only be obtained from a limited number of lower division courses. Students in some majors that are not related to math or science may choose to take as few as two math courses and two science courses to meet general education requirements, and would generally not be expected to demonstrate math or science problem-solving skills in other courses. Also, the variation in the level of difficulty of the problems presented to students in courses from which artifacts can be obtained adds to the difficulty in holistically evaluating these skills using work produced in a range of courses. In contrast, courses in both upper and lower division and across all majors require students to demonstrate written communication skills and critical thinking skills. The General Education Assessment Committee will further consider these unique characteristics in the continued development of these and other institutional portfolios.

Proposed General Education Assessment Activity for 2006

A. The Committee plans to continue the institutional portfolio for assessing student written communication skills as in previous years. The committee recommends that two portfolio-scoring groups each review about 70 samples of randomly collected

student work demonstrating written communication skills. Because each group consists of three faculty members, this will require six faculty reviewers for the 2006 written communication skills portfolio (two Committee members and four additional faculty reviewers).

B. The Committee plans to continue the institutional portfolio to evaluate students' critical thinking skills. The Committee recommends that two portfolio-scoring groups, consisting of six faculty members, evaluate the critical thinking portfolio (two Committee members and four additional faculty reviewers). It is expected that this group of reviewers could review about 150 samples of student work demonstrating critical thinking skills.

C. The Committee will work with the Assessment Council and the General Education Advisory Council to conduct a review of the General Education Assessment Process.

D. The Committee will work with the General Education Advisory Council to clarify criteria and goals for the general education learning outcome regarding diversity, and to develop an assessment process to evaluate students' learning related to this learning goal.

E. The Committee plans to present information sessions for faculty to describe the process and results of assessment of students' achievement of general education learning goals since the committee began its work in 2000.

APPENDIX B

General Education Courses Area Designations – Criteria and Goals

OKLAHOMA STATE UNIVERSITY
GENERAL EDUCATION COURSES AREA DESIGNATIONS –CRITERIA AND GOALS

(revised July 2003, accepted March 2004)

General education courses at Oklahoma State University provide students with general knowledge, skills, and attitudes conducive to lifelong learning in a complex society. Specifically, general education at Oklahoma State University is intended to:

- Construct a broad foundation for the student's specialized course of study,
- Develop the student's ability to read, observe, and listen with comprehension,
- Enhance the student's skills in communicating effectively,
- Expand the student's capacity for critical analysis and problem solving,
- Assist the student in understanding and respecting diversity in people, beliefs, and societies, and
- Develop the student's ability to appreciate and function in the human and natural environment.

Every general education course is aligned with one of four content areas: analytical and quantitative thought (A), humanities (H), social and behavioral sciences (S), and natural sciences (N). In addition, OSU students must participate in an international dimension course (I) and in natural sciences courses that include a lab component and have a scientific investigation (L) designation. A course is qualified to be part of the general education curriculum if it meets the needs of students in all disciplines without requiring extensive specialized skills and satisfies all the criteria for a specific general education area. The criteria for each general education area follow.

General Education Area Designations*

***All goals listed under each designation must be met for a course to receive that designation.**

ANALYTICAL AND QUANTITATIVE THOUGHT - (A)

1. Criteria:

a. Courses designated "A" incorporate the study of systems of logic and the mathematical sciences.
b. Courses designated "A" will place primary emphasis on the development of the intellect through inductive and/or deductive processes. Their aim should be broader than proficiency in techniques and should include appreciation of how the processes can supplement intuition and provide ways to analyze concrete problems.

2. Goals:

a. Students will critically analyze and solve problems using quantitative, geometric, or logical models.
b. Students will form inferences using logical systems and mathematical information and communicate them in writing.
c. Students will give appropriate multiple representations (symbolical, visual, graphical, numerical, or verbal) of logical or mathematical information.
d. Students will estimate, analyze, or check solutions to problems to determine reasonableness, alternative solutions, or to determine optimal methods or results.

HUMANITIES - (H)

1. **Criteria:**
   a. Courses designated "H" concentrate on the expression, analysis, and interpretation of ideas and the aesthetics or values that have formed and informed individuals and societies.
   b. Courses designated "H" emphasize the diversity in the expression of human ideas and aesthetic or cultural values.

2. **Goals:**
   a. Students will critically analyze the relationships of aesthetics, ideas, or cultural values to historic and contemporary cultures.
   b. Students will develop an understanding of how ideas, events, arts, or texts shape diverse individual identities.
   c. Students will demonstrate their understanding through written work that provides them the opportunity to enhance their writing skills; upper division "H' courses will include extensive written work.[1]

SOCIAL AND BEHAVIORAL SCIENCES - (S)

1. **Criteria:**
   a. Courses designated "S" propose theoretical constructs to explain human behavior and society in social and/or physical environments.
   b. Courses designated "S" are normally based on empirical observation of human behavior rather than the study of aesthetics, ideas, or cultural values.

2. **Goals:**
   a. Students will critically analyze generalizations about society and explore theoretical structures.
   b. Students will understand the role of empirical observation in the social and behavioral sciences.
   c. Students will demonstrate their understanding through written work that provides them the opportunity to enhance their writing skills; upper division "S" courses will include extensive written work. [1]

NATURAL SCIENCES - (N)

1. **Criteria:**
   a. Courses designated "N" feature the systematic study of natural processes and the mechanisms and consequences of human intervention in those processes.
   b. Courses designated "N" place primary emphasis on the subject matter of one or more basic physical or biological sciences in a broadly integrative fashion.

2. **Goals:**
   a. Students will understand the scientific inquiry process.
   b. Students will critically analyze the physical world using the language and concepts of science.
   c. Students will use the methodologies and models of science to select, define, solve, and evaluate problems in biological and physical sciences.
   d. Students will evaluate evidence, interpretations, results, and solutions related to the physical and biological sciences.
   e. Students will understand the consequences of human intervention in natural processes and

mechanisms.

f. Students will demonstrate their understanding through written work appropriate to the discipline that provides them the opportunity to enhance their writing skills.[2]

CONTEMPORARY INTERNATIONAL CULTURES - (I)

1. Criteria:

a. Courses designated "I" emphasize contemporary – the current time in the context of the discipline - cultures outside the United States. Courses concerning ethnic and cultural minorities within the U.S. do not qualify.
b. At least one-half of the course materials must relate to contemporary, not historical, cultures.

2. Goals:

a. Students will critically analyze one or more contemporary cultures external to the United States.
b. Students will understand how contemporary international cultures relate to complex, modern world systems.
c. Students will demonstrate their understanding through written work that provides them the opportunity to enhance their writing skills; upper division "I" courses will include extensive written work. [1]

SCIENTIFIC INVESTIGATION - (L)

1. Criteria:

a. Courses designated "L" must include the equivalent of at least one semester credit hour of laboratory experience aimed at interpreting scientific hypotheses.
b. Courses designated "L" emphasize scientific inquiry and experimental methodology.

2. Goals:

a. Students will critically analyze scientific problems, formulate hypotheses, conduct appropriate experiments, and interpret results.
b. Students will solve problems using scientific inquiry and experimental methodology.
c. Students will communicate procedures, results and conclusions to others.
d. Students will demonstrate their understanding through written work appropriate to the discipline that provides them the opportunity to enhance their writing skills. [2]

Effective August 2004, all new requests for General Education designations must meet criteria and goals in this document. However, courses with approved General Education designations that meet all criteria and goals except the writing requirements will retain the General Education designation. When the General Education Advisory Council reviews the course in three years or when course modifications are submitted, the course must satisfy all criteria and goals, including the writing requirements, to retain the General Education designation.

[1]The writing requirement for H, S and I courses is defined as follows:

> Lower division courses - outside of class writing assignments appropriate to the discipline that are graded with feedback on writing. Minimum of 5 pages of writing assignments during semester.

Upper division courses - outside of class writing assignments that give students the opportunity to incorporate feedback in subsequent writing assignments (by revising and resubmitting one assignment or submitting more than one assignment). Minimum of 10 pages of writing assignments during semester.

[2]Faculty who teach "N" and "L" courses will describe writing assignments that are appropriate to the discipline.

Appendix C

2004 Cooperative Institutional Research Program (CIRP) Freshman Survey Trends

OSU Assessment

CIRP Freshman Survey Fall 2004

National Press Release on Characteristics of College Freshmen, and OSU Comparisons

The Cooperative Institutional Research Program (CIRP) is a continuing longitudinal study of the American higher education system with the primary purpose of assessing the effects of college on students. The Freshman Survey, a project of the CIRP, is designed to obtain data on the characteristics of students attending American colleges and universities as first-time, full-time freshmen. The CIRP is sponsored by the American Council on Education (ACE) and the Graduate School of Education and Information Studies at the University of California, Los Angeles.

Oklahoma State University has participated in the Freshman Survey periodically since it began in 1966, and regularly since 1993. In Fall 2004, 2,277 first-time, full-time OSU freshmen (70% of the population) participated by completing a paper version of the survey in their freshman orientation classes.

This report provides a press release published by the Higher Education Research Institute at UCLA, which conducts the nationwide survey, on national trends identified in the survey. Information about the responses of OSU students has been added for comparison. A full report of OSU's participation in the CIRP Freshman Survey 2004 can be obtained from the Office of University Assessment and Testing.

Political Orientations of the Nation's Freshmen Are More Polarized, UCLA Survey Reveals

A record number of students define themselves at the political extremes of "far right" and "far left," according to the results of UCLA's annual survey of the nation's students entering undergraduate classes. The fall 2004 survey, conducted by the Higher Education Research Institute (HERI) at UCLA's Graduate School of Education & Information Studies, finds that 3.4 (OSU 1.7) percent of students consider themselves as "far left" and 2.2 (OSU 3.3) percent as "far right."

"Although these percentages are small, the change between 2003 and 2004 numbers — concurrent with the presidential election year — reflects the largest one-year shift in students' political orientation in the 35 years that it has been included in the survey," said Linda J. Sax, UCLA associate professor of education and director of the survey.

Identification as either "liberal" (26.1 percent) (OSU 15.5) or "conservative" (21.9 percent) (OSU 34.0) is also up from last year. "Middle-of-the-road" remains the most popular category at 46.4 percent, but reaches its lowest point in more than 30 years, and marks a nearly four-percentage point drop since last year (50.3 percent in 2003).

Now in its 39th year, the UCLA survey is the nation's longest running and most comprehensive assessment of student attitudes and plans. The survey serves as a resource for researchers, practitioners and policy makers throughout the world.

The 2004 freshman norms are based on the responses of 289,452 students at 440 of the nation's baccalaureate colleges and universities. The data have been statistically adjusted to reflect the responses of the 1.2 million first-time, full-time students entering four-year colleges and universities as freshmen in 2004.

Interest in politics grows while support for military spending declines

Interest in politics is still on the rise, with 34.3 (OSU 33.4) percent of students who feel that "keeping up to date with political affairs" is a very important or essential life goal. This marks a substantial increase from the item's record low of 28.1 percent reported among freshmen in 2000 and the highest level of political interest since 1994.

The percentage of freshmen who frequently "discussed politics" increased from 22.5 percent in 2003 to 25.5 (OSU 21.7) percent in 2004, marking the highest point in more than a decade. In 1966, 60.3 percent of freshmen valued keeping up with politics and one-third of 1968 freshmen discussed politics regularly.

"The current indicators of political engagement are far lower than the peaks of the late 1960s, but represent a noteworthy increase over the past four years, a shift we can safely attribute to the events surrounding Sept. 11, the war in Iraq and the recent U.S. presidential election," Sax said.

The 2004 survey also reveals a number of shifts in attitudes about the role of federal and state governments. Currently 35.4 (OSU 47.2) percent of students believe that federal military spending should be increased, marking a decline of 10 percentage points from a high of 45 percent in 2002, the immediate aftermath of Sept. 11. However, the percentage of today's freshmen who advocate increased military spending is double the rate reported in 1992 (17.4 percent).

Additionally, there is declining support for the death penalty and a growing sense that the legal system is not doing enough to protect the rights of criminals. The belief that "The death penalty should be abolished" reached 33.2 (OSU 21.7) percent, its highest point since 1980, while the opinion that "There is too much concern in the courts for the rights of criminals" fell to 58.1 (OSU 65.1) percent, its lowest point since 1976.

"Those beliefs might reflect the widely publicized moratorium placed on the death penalty in states like New York, clemency for death row inmates in Illinois and a call for a moratorium on executions from the American Bar Association," said Sylvia Hurtado, UCLA education professor and director of HERI.

Digital divide remains unconquered

Although gender differences in computer usage have disappeared over time, differences based on race have persisted. A spread of 15 percentage points exists in rates of frequent computer usage across racial/ethnic groups and disparities in technological preparedness based on race have widened over time. Notably, Hispanic/Latino students have surpassed African American students in their levels of pre-college computing experience. Differences in computer use are minimized among students from high-income families, but are heightened at lower income levels.

"As rates of computer use have increased for all students, little or no progress has been made in bridging the 'digital divide' since it gained national attention in the 1990s," Sax said.

Interest in health careers at record high

Student interest in majoring in the general biological sciences, biochemistry or biophysics reached an all-time high this year, with twice as many freshmen indicating an interest in these fields compared with students in the late 1980s. Additionally, interest in nursing reached a 20-year high (3.9 percent) (OSU 1.2). While women far outnumber men in this career field (6.5 percent vs. 0.7 percent) (OSU 2.0 vs. 0.2), there have been steady increases in nursing interest among both men and women over the last four years. Freshman interest in other health careers, such as pharmacy (2.4 percent) (OSU 1.8) and dentistry (1.1 percent) (OSU 1.8), is also at all-time highs. Interest in medical careers held steady, with women continuing to outnumber men (7 percent vs. 5.1 percent).

"Women may soon no longer be underrepresented in these fields at the graduate level. Capitalizing on renewed interest in the biomedical sciences, we are launching a new longitudinal study on this cohort to determine racial/ethnic differences in paths toward research careers," Hurtado said. This new project is sponsored by the National Institutes of Health.

Increasing expectations to work during college, especially among women

A record high 47.2 (OSU 37.4) percent of 2004 entering freshmen believe that there is a very good chance that they will get a job to help pay for college expenses, compared to a low of 35.3 percent in 1989. More women (53.3 percent) (OSU 43.4) than men (39.6 percent) (OSU 29.2) currently indicate that there is a very good chance they will seek employment during college.

In recent years, there has also been a steady increase in the percentage of students planning to rely on family resources and loans to cover their first-year educational expenses. This year 29.5 (OSU 26.0) percent of incoming freshmen expect to receive more than $10,000 in family support, up from 28.9 percent last year and 25.6 percent in 2001, the first year this question was asked. Among the 2004 incoming freshmen, 8.8 (OSU 6.9) percent expect to borrow more than $10,000 to cover first-year expenses, up from 7.8 percent last year and 5.6 percent in 2001. Although just 13 (OSU 12.9) percent of all students report "major" concerns about their ability to pay for college (down from a record high 19.1 percent in 1995), the current figure jumps to 22.7 percent among students whose families earn less than $60,000 per year.

Women manage time better but feel more overwhelmed than men

Although women are more likely to rate their time management skills as "above average" or "highest 10 percent" (37.4 percent vs. 31.5 percent) (OSU 37.3 vs. 30.7), they are also twice as likely as men to indicate that they frequently feel overwhelmed by all they have to do (36.4 percent vs. 16.3 percent) (OSU 37.8 vs. 21.7).

"The greater tendency for women to feel overwhelmed may be a reflection of the differences in how women and men spend their time," Sax said, "with women devoting more time to academic and family commitments, and men devoting more time to recreational activities."

Specifically, men were more inclined than women to spend more than 10 hours per week during their last year in high school engaged in the following activities: socializing with friends (53.1 percent vs. 48.7 percent) (OSU 62.8 vs. 53.8), exercising or playing sports (40.7 percent vs. 27.2 percent) (OSU 47.7 vs. 31.5), watching television (15.5 percent vs. 9.1 percent) (OSU 15.2 vs. 8.7) and partying (13.7 percent vs. 8.2 percent) (OSU 19.1 vs. 8.9). By comparison, women were more likely than men to spend more than 10 hours per week in non-recreational activities such as working for pay (45.7 percent vs.

42.3 percent) (OSU 49.7 vs. 48.3), studying and doing homework (18.5 percent vs. 11.6 percent) (OSU 7.9 vs. 4.3), and engaging in housework and childcare (5.2 percent vs. 2.8 percent) (OSU 3.8 vs. 1.9).

Perhaps as a function of their comparatively higher levels of involvement in potentially stress-buffering activities, men are more likely than women to rate their emotional health as "above average" or "highest 10 percent" (57.1 percent vs. 45.8 percent) (OSU 55.7 vs. 47.4). Similarly, men are less likely than women to report that they felt frequently or occasionally depressed over the past year (48.5 percent vs. 61.6 percent) (OSU 48.3 vs. 59.5). Men are also less likely than women to indicate at least "some" chance of seeking personal counseling while in college (30.3 percent vs. 37.5 percent) (OSU 23.9 vs. 25.3).

High school grades and student boredom reach record highs

Students' grades continue to improve, with the number of students earning "A" averages in high school increasing to an all-time high of 47.5 (OSU 59.1) percent, compared to 46.4 percent last year and a record low of 17.6 percent in 1968. The percentage of students earning average grades of C+ or below stayed at the all-time low of 5.1 (OSU 2.6) percent reached in 2003 (compared to a high of 23.1 percent in 1968).

As grades have risen, so has student boredom. The percentage of students who were frequently "bored in class" during their final year of high school reached a record 42.8 (OSU 49.8) percent, compared to 40.1 percent last year and a low of 29.3 percent reported in 1985. There was also a downward trend in the amount of students' out-of-class interactions with their teachers. Less than half of students (47 percent) (OSU 46.0) report spending at least one hour per week talking with their teachers outside of class, compared to a high of 63 percent reported in 1989.

Declining interaction across racial/ethnic groups

Fewer freshmen today indicate that "helping to promote racial understanding" is an "essential" or "very important" personal goal than any other entering class in the history of the survey (29.7 percent, down from a high of 46.4 percent in 1992) (OSU 22.3). Further, over the last three years there has been an increase in the number of freshmen who feel that racial discrimination is no longer a problem in America. In 2004 a record 22.7 (OSU 31.1) percent held this belief (up from 22.4 percent in 2003 and a low of 12.5 percent in 1993), although differences exist across racial groups.

Recent declines in interaction patterns are also evident, with 67.8 (OSU 63.3) percent of freshmen in 2004 stating that they frequently socialized with someone of a different racial/ethnic group in high school, a decline from 70 percent in 2001. Moreover, while 63.1 (OSU 54.0) percent of entering freshmen report that chances are "very good" that they will socialize with someone of a different racial/ethnic background during college, the current figure is the lowest since the question's inclusion in the survey in 2000. "In an increasingly multicultural world, curricular and co-curricular activities designed to improve students' knowledge and skills in this realm, such as diversity courses and inter-group dialogue, may be especially important," Hurtado said.

Copies of the 39th annual report, titled "The American Freshman: National Norms for Fall 2004 (Sax, L.J., Hurtado, S., Lindholm, J.A., Astin, A.W., Korn, W.S. and Mahoney, K.M.), are available for $25 plus $5 (and $1 for each additional book) for shipping. Send payment to the Higher Education Research Institute, UCLA Graduate School of Education & Information Studies, 3005 Moore Hall, Box 951521, Los Angeles, CA 90095-1521.

A full report of the results of OSU's participation in the CIRP Freshman Survey 2004 can be obtained from the Office of University Assessment and Testing.

Appendix D

2004 Graduate Student Satisfaction Survey Highlights

OSU Assessment

Graduate Student Satisfaction Survey 2004

Highlights

GRADUATE STUDENT SATISFACTION SURVEY

The 2004 OSU Graduate Student Satisfaction Survey was conducted to assess student perceptions of various aspects of OSU graduate programs and services, and to identify areas where improvements may be needed. A full copy of the report can be obtained from the Office of University Assessment and Testing (744-6687). This sheet describes a small sample of the survey results.

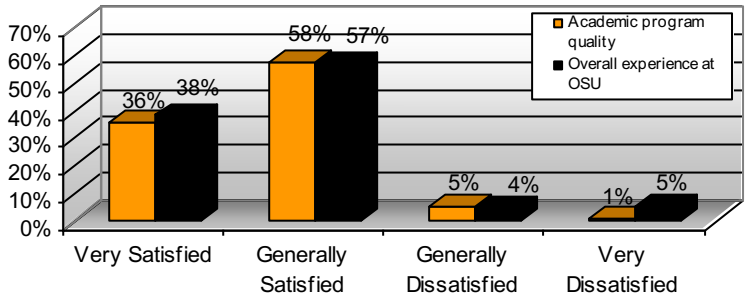
Population: The target population for this survey was OSU graduate students who were enrolled in October 2004. The total number of OSU graduate students in the target population was 3,919.

Methods: The survey included 31 questions and was administered as a telephone survey. The OSU Bureau for Social Research conducted the survey in October 2004. Attempts were made to reach all OSU graduate students enrolled at the Stillwater and Tulsa campuses. Results were reported for the university as a whole, for Masters and Doctoral level students, and by college and academic department.

Results: A total of 2,537 surveys were completed by OSU graduate students, resulting in a response rate of 65%. When adjusted for students for whom a working telephone number could not be determined, the response rate was 79%.

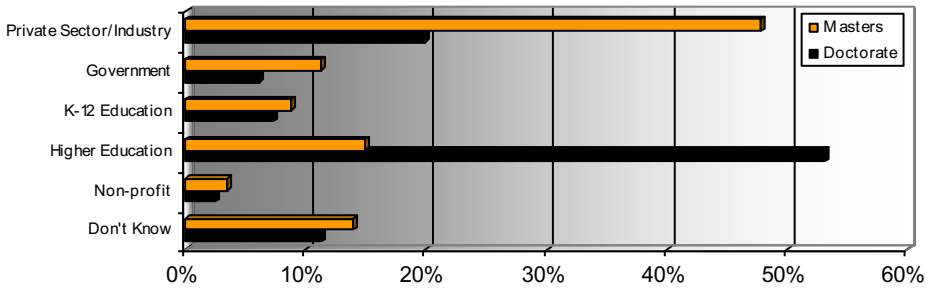
OVERALL SATISFACTION

Overall Graduate Student Satisfaction



CAREER PREPARATION

Employment Setting for Future Career



Student Demographics

- 67% of graduate students in the sample are seeking a Masters degree, 34% of graduate students are seeking a Ph.D.
- 73% of OSU graduate students are taking classes in Stillwater.
- 73% of graduate students are enrolled full-time (more than 6 hours).
- 68% of graduate students were very or somewhat involved in scholarly activities such as presentations, professional conferences, and publications.

Age Distribution

≤24	12.9%
25-29	34.9%
30-39	30.2%
40-49	12.8%
50 +	9.2%

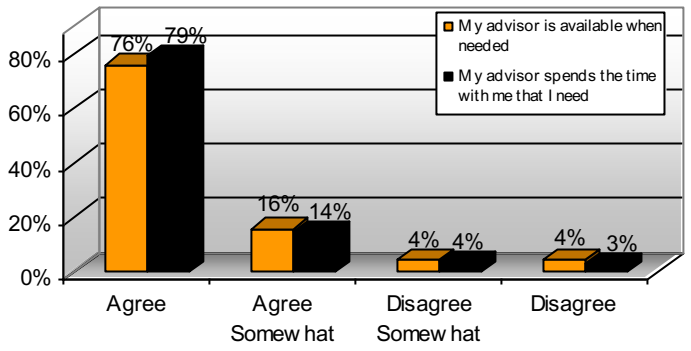
Which of the following groups do you identify yourself?

International	32.5%
African American	2.1%
American Indian/Alaskan	4.3%
Asian American	1.6%
Hispanic American	1.2%
Caucasian	58.0%

This survey was developed by the Office of University Assessment and Testing, with assistance from the Graduate College and the OSU Bureau for Social Research. To obtain a full copy of this report, please call the Office of University Assessment and Testing at 744-6687.

RELATIONSHIPS WITH ADVISORS AND FACULTY

Relationships with Advisors

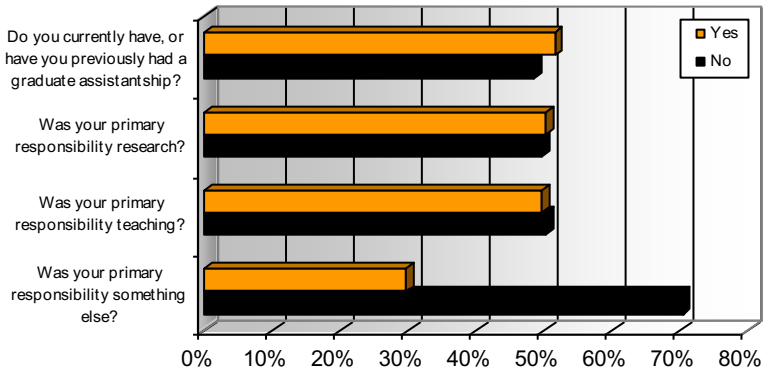


Satisfaction with relationships and interactions with faculty in their department:	
Very satisfied	51%
Generally satisfied	43%
Generally dissatisfied	5%
Very dissatisfied	1%

- **92% of graduate students agreed or agreed somewhat that their advisor was generally available when they needed to meet with them.**
- 94% of graduate students were very or generally satisfied with their relationships and interactions with faculty in their department.
- 94% of graduate students agreed or agreed somewhat that their advisor spends the time with them that they need.

ASSISTANTSHIPS

Assistantship: Availability and Responsibilities

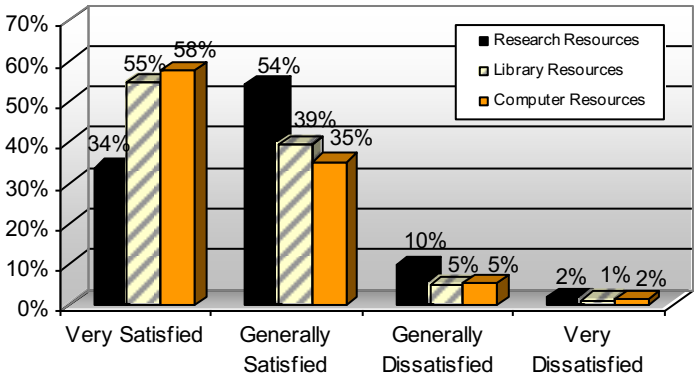


Satisfaction with the preparation and guidance provided by their department in their role as a teaching assistant:	
Very satisfied	33%
Generally satisfied	51%
Generally dissatisfied	12%
Very dissatisfied	4%

- Over 50% of graduate students have or previously had a graduate assistantship. Of those with an assistantship, 50% said their primary responsibility was teaching, 50% said it was research, and 30% said they had other primary responsibilities (some reported more than one assistantship).
- 31% of graduate students with assistantships said their stipend was adequate in meeting their financial need and more than 43% said it was somewhat adequate.
- More than 38% of graduate students said financial support in their department was readily available and 48% said it was somewhat available.

CAMPUS CLIMATE / CAMPUS RESOURCES

Comparisons of Satisfaction with Services at OSU



Satisfaction with the availability of the course offering in their program:	
Very satisfied	22%
Generally satisfied	58%
Generally dissatisfied	16%
Very dissatisfied	4%

- Almost 13% of graduate students said their department provided full travel support for scholarly activities, 37% said it provided some support, and 26% did not know about travel support.
- 90% of graduate students agreed or somewhat agreed that OSU is a supportive campus to those with diverse backgrounds.
- 89% of graduate students have not experienced discrimination directed toward them since they have been at OSU.

Appendix E

2005 Graduate Program Alumni Survey Highlights

OSU Assessment

Survey of Alumni of Graduate Programs 2005

Highlights

The 2005 OSU Survey of Alumni of Graduate Programs was conducted to assess perceptions of various aspects of graduate programs and services and to identify areas where improvements may be needed. A full copy of the report can be obtained from the Office of University Assessment and Testing (744-6687). This sheet describes highlights from the survey results.

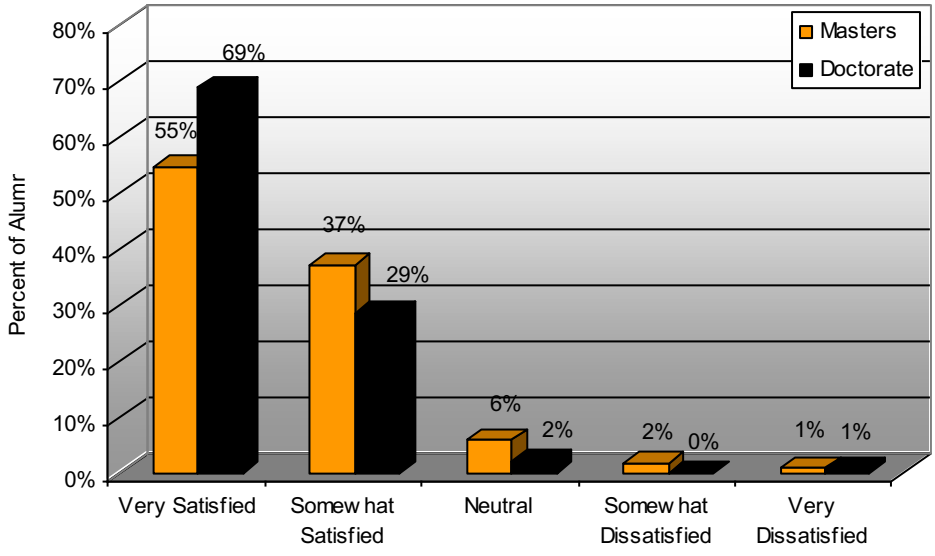
Population: The target population for this survey was alumni of graduate programs who completed their degrees in calendar years 1999 and 2003. The total number of alumni in the target population was 2,187.

Methods: The survey was administered as a telephone interview. The OSU Bureau for Social Research conducted the interviews in February of 2005 and coordinated data collection. The Office of University Assessment and Testing analyzed and summarized data and prepared the reports.

Results: A total of 787 surveys were completed by alumni of graduate programs, resulting in a 36% response rate. There were 643 respondents with a Masters' degree and 144 respondents with a Doctorate.

Overall Satisfaction

How satisfied are you with your overall educational experience at OSU?

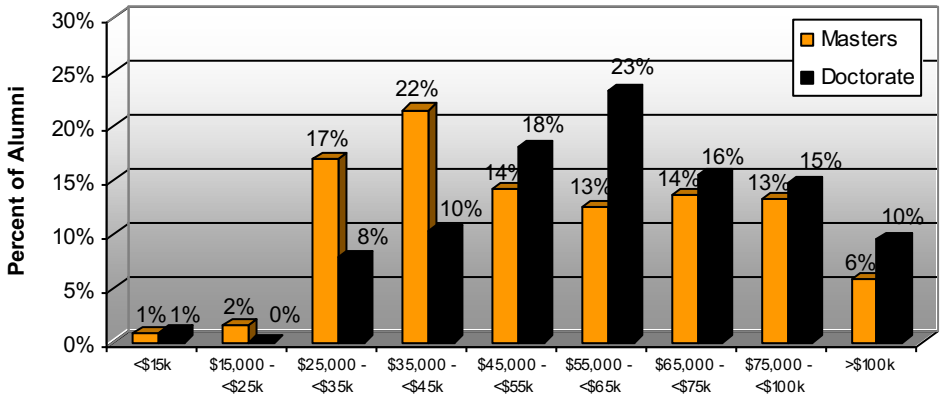


- ***91% of alumni were employed (90% for Masters and 94% for Doctorates).***
- ***17% of alumni had completed or were currently enrolled in graduate programs or professional schools (Of those, almost 61% were enrolled or had attended OSU graduate programs).***
- ***64% of alumni were living in Oklahoma and 36% were out-of-state (16% were living in a surrounding state).***
- 92% of Masters alumni and 96% of Doctoral alumni said they were somewhat or very satisfied with the overall educational experience in their OSU graduate programs

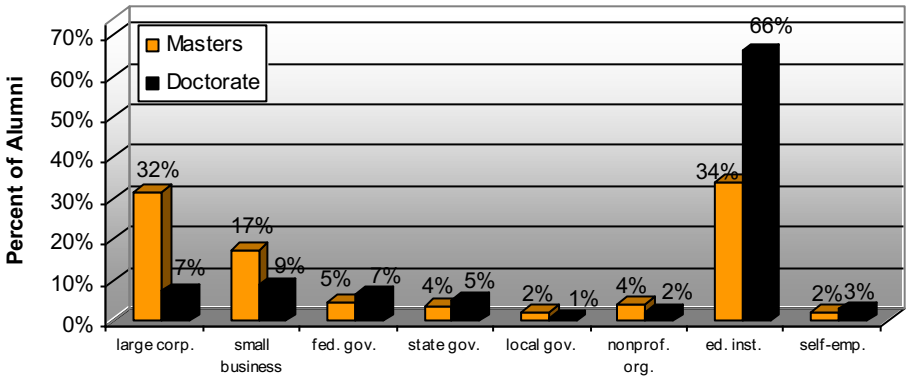
For a detailed report on alumni survey results for your college or program, please contact the OSU Office of University Assessment and Testing (744-6687).

Employment

What is your approximate total annual salary?



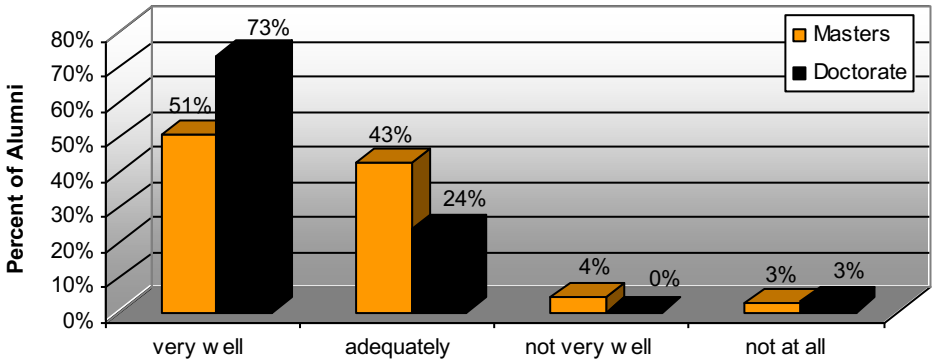
Which of the following best describes your employer?



- 91% of alumni were employed; of those, 91% were employed full-time.
- 84% of alumni said their current position was highly or moderately related to their OSU graduate studies.
- 93% of alumni said their graduate studies had prepared them very well or adequately for their current position.
- The median salary for recent OSU graduate program alumni ranged from $45k/yr to $55k/yr.
- The majority of graduate program alumni were employed in educational institutions or organizations.

Continuing Education

How well did your OSU graduate program prepare you for your current position?



- 19% of graduates with a Masters and 8% of graduates with a Doctorate were currently enrolled or had completed another graduate program since they received their OSU graduate degree.
- 93% of alumni said their OSU graduate studies prepared them very well or adequately for a further graduate program.
- 72% of alumni stayed in Oklahoma for further