Undergraduate Academic Programs Assessment of Student Learning Annual Report

Academic Year 2013-2014

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APRENDIZAJE ESTUDIANTIL•UPRRP
OFFICE OF STUDENT LEARNING EVALUATION

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University of Puerto Rico

Rio Piedras Campus

Office of the Dean of Academic Affairs

Office of Student Learning Evaluation

Annual Report on the Fifth Cycle of the Assessment of Student Learning Process in the Undergraduate Academic Programs (2013-2014 Academic Year)

Introduction

During the 2013-2014 academic year the Campus Administration was in a changing process and decided to close the Office of Student Learning Evaluation. Nevertheless, a group of Assessment Coordinators from the undergraduate programs and Colleges continued the assessment of student learning in their programs. The Assessment of Student Learning at the University of Puerto Rico Río Piedras Campus (UPR-RP) underwent its fifth cycle in some of the undergraduate academic programs (2009-2010; 2010-2011; 2011-2012; 2012-2013, 2013-14). A total of 44 programs out of 70 (63%) participated and handed in their Annual Reports to their College Assessment Coordinators. For the purpose of this evaluation process, an assessment cycle was defined in accordance with the following stages: 1) selection of the competencies or learning outcomes to be assessed aligned with both the academic program's learning objectives and the UPR-RP Baccalaureate Student Graduating Profile, 2) identification of the educational activities in which the learning outcomes are going to be assessed, 3) adapting or developing assessment instruments to collect pertinent data, 4) selection of the different check points–in the same course or across courses–for gathering data, 5) analysis and interpretation of the data collected, and 6) proposal of transforming actions. In the next assessment cycle the implemented transforming actions will be evaluated and new learning outcomes will be added to those already assessed. The time frame established for each cycle is one academic year.

The programs that assessed Student Learning in Campus during the 2013-2014 academic year continued the process as designed and planned, and followed the guidelines traced in the Evaluation of Student Learning Plan approved by the Academic Senate in April 2006 (Appendix I). This process of assessment of student learning is faculty led, data driven and course embedded. Because of its nature, even though the OEAE was closed in this academic year, some programs continued assessing student-learning outcomes in their courses which shows professors' strong commitment with the Campus Assessment of Student Learning process.

The Office of Student Learning Evaluation (OEAE for its Spanish acronym) was created by the Office of the Dean of Academic Affairs. Its mission is to coordinate and institutionalize student learning assessment efforts through the implementation of the Student Learning Evaluation Plan of the University of Puerto Rico, Rio Piedras Campus. All information related to the assessment process in undergraduate academic programs and workshops that have been held relating to developing and supporting a Campus assessment culture is available at http://oeae.uprrp.edu/ .

The website includes assessment plans for each undergraduate and graduate academic program, competencies and learning objectives evaluated, assessment rubrics and educational activities, and the annual reports, among others documents. See Appendix II for the services rendered by the OEAE.

Support to this Office establishes the commitment the Campus has to an organized, systematic and sustained process of assessment. Nevertheless, a stronger commitment among the persons in high administrative positions: Chancellors, Academic Deans, Associate Deans, College Deans, and Programs and Department Directors, is needed in order to strengthen the student learning process in all campus academic programs, and to continue developing the assessment culture in the Campus.

The learning outcomes of the Campus mission, as stated in the Graduate Baccalaureate Student Profile (Appendix III), are assessed for two general learning areas in all undergraduate academic programs: (1) general education competencies from the perspective of the discipline, and (2) Content knowledge, skills and dispositions that characterize each discipline. The following diagram presents a schematic representation of the UPR-RP Assessment of Student Learning Process. A detail description of the implementation of this process follows in the next page.

Diagram 1: Integrated process of assessment of student learning
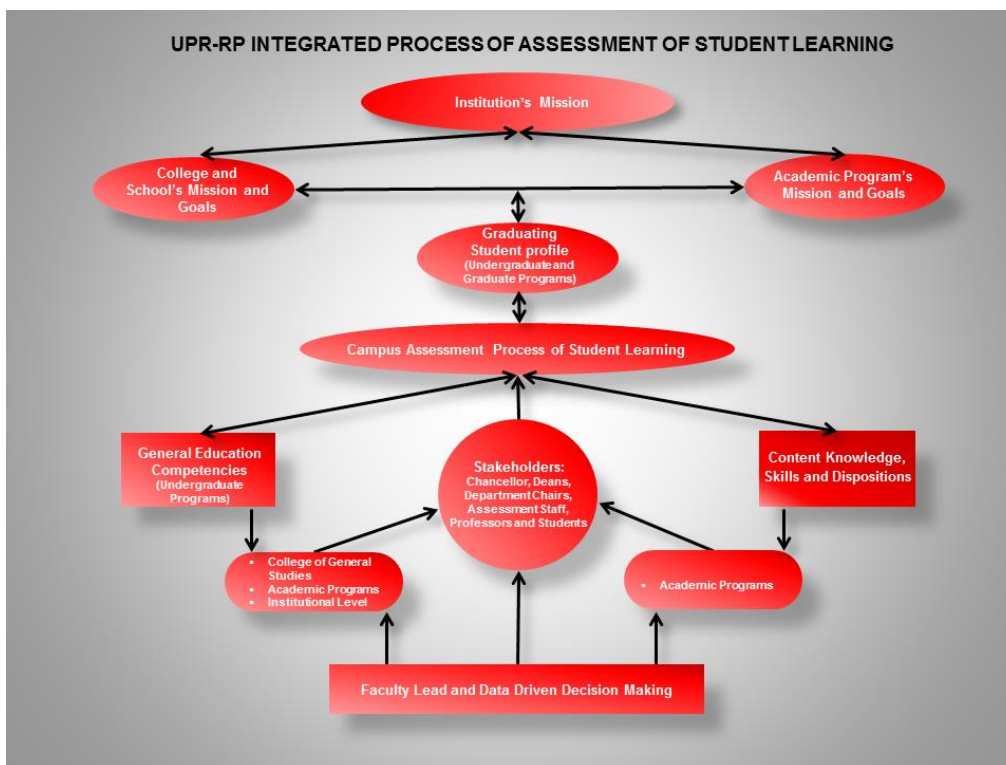
General Education Component

The general education competencies, such as: oral and written communication in Spanish and English, scientific reasoning, social responsibilities and information literacy are assessed at the **initial level** in the College of General Studies (CGS). They are also assessed throughout their careers at the **academic program level** since the 2008-2009 academic year. From the common set of intended learning outcomes for all undergraduate students at UPR-RP, as described in the Student Profile (Academic Senate Certification 46 2005-2006), the following general education competencies were assigned for assessment at CGS and distributed among its departments and programs as follows: (1) written and oral communication skills in the Spanish and English Departments' courses, (2) scientific reasoning in the Physical and Biological Sciences Departments' courses, (3) critical thinking in the Humanities Department's courses, (4) social responsibility in the Social Sciences Department's courses, (5) information literacy skills in all the departments, and (6) logical-mathematical reasoning skills in the General Studies Baccalaureate Degree Program.

Assessment of student learning of general education competencies within the College of General Studies

The continued assessment process of General Education Competencies in this College has been supervised by Dr. Vanessa Irizarry during the 2013-2014 academic year. Since 2009-2010, students' scientific reasoning skills and social responsibilities began to be assessed as pilot projects using laboratory reports in some sections of the Biological Sciences and Physical Sciences courses at this College. The development of the learning objectives to be assessed and the rubric to be used, including its validation, involved participation of all faculty members from these departments. Assessment pilot projects were conducted in some courses and sections in all the departments. The findings from these pilot projects evidenced areas of student learning that required attention, such as hypothesis writing in the science courses and grammar skills in the English courses. Analysis of the findings from these pilot projects identified areas that needed to be addressed. In a departmental meeting, faculty members proposed different transforming actions to be implemented in the assessment efforts for the following academic year. They proposed giving the rubric to the students with the laboratory assignment, that class meetings should include discussion of how to write and submit scientific findings in laboratory reports, including establishment of the hypothesis. These transforming actions were implemented and the analysis of assessment findings in the following years produced better learning outcomes. The Social Sciences Department of the College of General Studies also started assessment measurements during this period by means of case studies that involved issues of social concern such as environmental awareness, national heritage, gender conflicts, and ethics situations.

Assessment of Students' Information Literacy Skills at the College of General Studies (CGS) – Initial Level

Following the ongoing Campus-wide PICIC Project, an effort to assess information literacy skills in all general education courses at CGS was implemented since the academic year and systematically enforced during the following years. A CGS general objective and six supporting competencies were selected from the Association of College and Research Library (ACRL) information literacy competency standards at an initial level. These were incorporated in all Master course syllabi of general education courses. A significant increase in student participation is observed in CIFI's (Physical Sciences) assessment, in HUMA's (Humanities) assessment, and in the Intermediate English level from the 2011-2012 academic year to the present. Appropriate transformative actions were implemented in all the departments during the 2013-2014 academic year including general workshops offered to students at the Library and specific workshops offered to individual professors' classes.

All the departments are assessing their assigned student learning outcomes as well as information literacy skills with a diversity of measures compatible with their discipline. The rubrics that will be used were designed or selected and validated for the intended purpose. The College Coordinator administered a survey to all CGS professors during the 2012-13 academic year to indirectly assess implementation efforts. The indirect measure indicates that 93% of the professors included information literacy learning objectives in their syllabi and 90% included activities. Seventy nine percent (79%) of them stated they assess student learning of these competencies and 92% stated that the integration of information competencies to the curriculum has been successful. Professors confirmed that students can use a variety of sources and search strategies but have problems with ethical use and evaluating the validity of their sources because they are unable to quote correctly in-text or use the correct MLA or APA style format in a bibliography. Educational activities, in which assessment information of this learning outcome was gathered, were: annotated bibliography, essay bibliography, research reports, socio-biographical and research plan, presentation/bibliography of researched topic.

Assessment of Effective Written and Oral Communication in English- initial level

At the College of General Studies, incoming freshmen students are placed in their courses by proficiency level according to their College Entrance score in the ESLAT (English as a Second Language Assessment Test). Assessment results indicate that in the Low English Level courses, students did not achieve the expected 70% outcome in the writing communication aspects of content, organization, vocabulary, grammar and mechanics at an acceptable level. Students at this level achieved the expected outcome in oral communication skills. Proposed and implemented transforming actions at this level included incorporating grammar exercises, creating grammar modules, lowering the number of students per section, and revising course and lab curricular content. At present, the revised syllabi, including that of a three hour per week non-credit laboratory experience, are under the consideration of the Curriculum Committee.

For the Basic, Intermediate, and Honor level English courses the expected outcomes were achieved both in written and oral English as measured by the rubrics designed for the specific level of English in which students are classified according to their performance in that discipline in the College Entrance Exam administered by the College Board Transforming actions implemented in the upper level courses have included the use of the rubric as an instructional strategy, identification of strategies to teach critical aspects such as development of thesis statements at the Intermediate level and the inclusion of strong supporting paragraphs that develop the thesis statement at the Honors Level. The process of a shared essay correction effort has changed some professors' attitudes toward the assessment process in a positive way. In addition,

integrating information literacy skills to the language assessments (written and oral) has been a successful strategy.

Assessment of Effective Written and Oral Communication in Spanish- Initial Level

Incoming CGS students are also placed in their first year Spanish courses by level, based on their College Entrance Exam scores. Data collected in the Low and Basic levels indicate 100% achievement of writing competencies in both levels. Transforming actions included the use of the rubric and a systematic incorporation of writing assignments such as paragraph and short essay writing responding to class content. An important transforming action in this department has been the use of rubrics with instructional goals as opposed to using them as an evaluation instrument exclusively. This paradigm change has had a direct effect in the teaching strategies used by professors and also in the syllabus design.

Assessment of Scientific Research Competencies- Initial level

Scientific research and reasoning skills are assessed in the Biological Sciences (CIBI) and the Physical Sciences (CIFI) Departments at the College of General Studies. The difficulty students experience when formulating a hypothesis and reaching conclusions is evident from the assessment of this learning outcome. Similar results were observed in the CIFI Department assessment with students failing in two criteria: data analysis and generating conclusions. As transforming actions, the CIBI Department staff revised the Instructional Manual used in the non-credit laboratory required for their course and emphasized areas of weaknesses using the rubrics as instructional tools. Similar transforming actions were implemented in the CIFI Department including the development of new experiments with instructions. They also proposed that class meetings should include discussions on how to write and submit scientific findings in laboratory reports, including establishment of the hypothesis. There was increased professor participation in both the CIBI and CIFI Departments. The rigorous selection of a random sample, correction method, and instrument validation process used in the CIBI assessment should lead to the conclusion that assessment results are a true representation of students' achievement tendencies in scientific research competencies.

Assessment of Critical Thinking Competencies – Initial Level

Critical thinking skills are assessed in the Humanities (HUMA) courses at the College of General Studies. Using a critical review as an educational activity, the students were assessed in the following criteria:

identifies the problem, presents own perspective, considers others perspectives, and analyses arguments. Findings revealed that 70% of the students assessed met the expected outcome.

Assessment results reported by the College of General Studies College Assessment Coordinator, Dr. Vanessa Irizarry, during this academic year (2013-2014), will be included in the Appendix IV of this Annual Report.

Assessment of Student Learning at the Institutional Level

All undergraduate academic programs are required to assess general education competencies, as described in the Graduate Baccalaureate Student Profile, from the perspective of the discipline as well as the content knowledge, skills, and dispositions that characterize each academic program. Hence, the general education competencies of the General Education component of the Baccalaureate Degree are assessed at the initial levels in the College of General Studies as described above and at the institutional level in all undergraduate academic programs. For example, information literacy and logical-mathematical reasoning competencies were assessed at the institutional level. Information literacy skills were assessed in all departments at the College of General Studies and in all undergraduate academic programs. Logical-mathematical reasoning skills were assessed in those Mathematic courses in which students enroll to comply with this general education component of their Baccalaureate degree and in some undergraduate academic programs.

Assessment of Students' Information Literacy Skills

Information literacy competencies are assessed at an initial level (College of General Studies) and at the developmental level, from sophomore to senior years.

An operational definition for these competencies adapted from ACRL was made, and learning objectives were designed for the initial and developmental level (Appendix V). The different Colleges or Schools sponsored a series of workshops, aimed toward training faculty in the assessment of these competencies: writing learning objectives to measure this competency and including them in the course syllabus, selecting an appropriate learning activity to measure this competency, and designing a rubric.

These competencies have already been measured by some of the undergraduate academic programs as part of their Assessment Plans. This learning outcome is also assessed in special projects at the Library System (PICIC PROJECT), and at the Architecture and Natural Sciences Colleges' libraries.

Implementation of the information literacy assessment of the Library System PICIC Project

To facilitate the development of the Project three librarians of the Institution Library System participated in the ACRL Information Literacy Immersion Program (2009 teaching track, 2010 assessment track and teaching with technology, 2013 management track). Also, training activities for all library system personnel were coordinated and offered.

Three Colleges participated in the PICIC Project: College of Education, College of Business Administration and College of General Studies. Although this project is mainly geared toward undergraduate students, it also has an impact on graduate students from the Colleges of Education and Business Administration. All the colleges participating are following the same learning objectives for this learning outcome (information literacy) as approved by the Campus Committees.

In the 2012-2013 academic year the College of Business Administration trained 60% of the total undergraduate enrollment and 73% of the graduate enrollment. The College of Education trained 8% of their graduate students and 13% of the undergraduate students. The College of General Studies trained 100% of their undergraduate students at the initial developmental level (freshman students). In this College 93% of the faculty members integrate information literacy in their courses and syllabi. No information or annual report was received from this College during the 2013-2014 academic year.

The College of Humanities assessed this competency in the 2012-2013 and 2013-2014 academic years in their general education courses: Hispanics Studies, English and Comparative Literature. Also, it is measured in all the other academic programs of this College at least once in a five year cycle as part of their Assessment of Student Learning Plans.

It is recommended that a systematic gathering of assessment data in this competency, the inclusion of these competencies' learning objectives and the description of the learning activity or activities in which they will be measured be included in the course syllabus and that a standardized measurement instrument should be developed.

Information Literacy Project of the College of Architecture

As an academic entity, the Library of the Architecture School caters to different levels of research activities by supporting the School's baccalaureate and masters programs, as well as students and researchers from

other colleges and institutions. It is also used by professionals in the field when preparing for license exams or for their professional projects. During the 2013-2014 academic year information literacy skills were assessed in the courses ARQU 3121, ARQU 3015, ARQU 3132, ARQU 4115, ARQU 4213, and ARQU 4214 at the undergraduate level. They were also assessed in the ARQU 6311, ARQU 6313 and ARQU 6145 graduate courses. Workshops related to this learning outcome were scheduled throughout the semester to all students enrolled in these courses. Also, modules of topics related to this learning outcome were designed by the library personnel and assigned to the students. Students were required to take a pretest before studying a module, as well as a posttest afterward. For example, in Module 5: Academic Honesty and Plagiarism: Strategies to give credit to the sources consulted. A higher percentage of correct answers can be seen in the posttest in 3 of the 4 sections in which assessment data is available (75% in one of them and 93% in the other two sections versus 28% correct answers in the pretest in one section and 43% in the other two). The library personnel also gave workshops on bibliographic research in the UPR Library System databases to the School of Architecture's Graduate Research Assistants. Individualized assistance, regarding research topics and library databases, was given by library personnel to graduate students enrolled in dissertation and thesis courses.

The Library of Architecture, in an effort to improve and expand its services, has developed the following project: *The Information Literacy and Research Program*

This program started in 2009 and caters to the students and professors of the School of Architecture at the graduate and undergraduate level. Five instructional modules for the development of information literacy skills were designed, which follows the ACRL/ALA guidelines. Besides traditional reference services and bibliographical instruction, the librarians offer workshops and conferences about: identification of research subjects, strategies for finding and attaining information, criteria for evaluating information, academic honesty and plagiarism, and style manuals for preparing thesis and end of degree projects. Librarians also offer individualized consultations for students who are writing their thesis or end of degree projects. This service can go from help in the selection of a research subject and search for information sources for the research to even grammatical reviews of texts.

Information Literacy Project of the College of Natural Sciences

The information literacy teaching and assessment project of the College of Natural Sciences (developed in 2013-14) places the teaching of these competencies in the context of the discipline, so the student understands the importance of learning and mastering information skills within his chosen field. During the first stage, two exercises were developed and modified in the General Biology and General Chemistry

laboratories. Both exercises were in line with ACRL standards for the science, engineering, and technology academic programs. These courses were chosen with the purpose of impacting the majority of the first year students in the College of Natural Sciences. The information literacy learning objectives for this Project correspond with the learning objectives of the Information Literacy Program of the Campus. They were incorporated into the course syllabi along with the learning objectives of the course material. The description of the activities used to assess these competencies and the learning objectives of said activities were also included.

The first exercise of basic analysis of the parts of a scientific article (Project I) is due the first week of the laboratory course. It was determined that the expected outcome would be that 70% of the students obtain a score of 70% or more. During the first semester that this exercise was implemented, a total 82.59% of the students from both courses obtained the expected score. However, it was observed that they did not obtain a passing score in some of the questions relating to reference formats. The following semester as a transforming action students were sent a link with instructions on how to cite the articles. Although the amount of students that reached the expected outcome increased to 92%, the same problem was still being observed.

The same courses assigned a second exercise (Project II) that consists of the student participating in a research project in which information is gathered in stages, leading the student until reaching the final product. This second project includes the assessment of information literacy based on four ACRL Standards for Science, Engineering and Technology (http://www.ala.org/acrl/standards/infolitscitech). At the end of the semester students handed in a written project and gave an oral presentation. The expected outcome for this exercise was that 65% of the students would obtain a score of "good" or "excellent". However, only 63% of the students achieved the expected score. The main problems were the trustworthiness of the sources used, consistency between the references cited and the bibliography, and formatting errors in the bibliography. It was noted that first-year students didn't really understand reference formats or the importance of citing correctly.

In order to solve this problem, the presentations created by the library personnel have been improved upon since the previous semester. During meetings with library personnel information about assessment results was exchanged in order to help the Student Learning Assessment Coordinators determine what material offered by the library would be useful and what new materials they would need to evaluate when it comes to assessing information literacy skills in intermediate and advanced courses. The library academic personnel are conducting a series of workshops, directed to students and faculty members, dealing with topics pertinent

to information literacy. These workshops are offered more than once and at different times in order to reach a greater number of students and faculty members.

Assessment of Students' Logical-Mathematical Reasoning Skills

This learning outcome was not assessed at the institutional level since the OEAE was closed during the 2013-2014 academic year.

Assessment of Students' Effective Written Communication Skills in Spanish

This learning outcome was not assessed at the institutional level during 2013-14 academic year since the OEAE was closed.

Assessment of Student Learning at the Undergraduate Academic Programs: Fifth Assessment Cycle

The Assessment of Student Learning in the undergraduate academic programs has been engaged in a systematic and ongoing process since the learning and formative assessment experience was implemented in the 2008-2009 academic year. During the 2008-2009 academic year the focus of the process centered on providing the academic community with a series of workshops related to the implementation of the Evaluation of Student Learning Plan in the undergraduate academic programs, as well as much needed individual assistance. Therefore, as reported in the 2010 Periodic Review Report to the Middle States Commission of Higher Education, the first formal assessment of student learning cycle was carried out a year later, in the 2009-2010 academic year.

Even though the OEAE was closed during the 2013-2014 academic year, as stated earlier in this Report, a total of 45 programs (64%) participated in the assessment of student learning in their academic programs and handed in their Annual Assessment Reports. This participation, although lower than in previous years, considering that the OEAE was closed, shows a strong commitment on the part of these professors with the campus assessment of student learning process. The Colleges and the number of academic programs participating were: College of Business Administration (1/10), College of Education (23/23), College of Natural Sciences (7/8), School of Communication (3/3), College of Humanities (9/13) College Social Sciences (2/9) .The number of academic programs that have participated in an assessment of student learning cycle from 2008 to 2012 is presented in Graph 1.

Graph 1: Undergraduate Academic Program Assessment Cycles

Total of Assessment Cycles Completed by the Academic Programs (2009-2014)

Number of Academic Programs

- In One Cycle: 2
- In Two Cycles: 2
- In Three Cycles: 14
- In Four Cycles: 14
- In Five Cycles: 37
- Have not participated: 1

Participation in Assessment Cycles
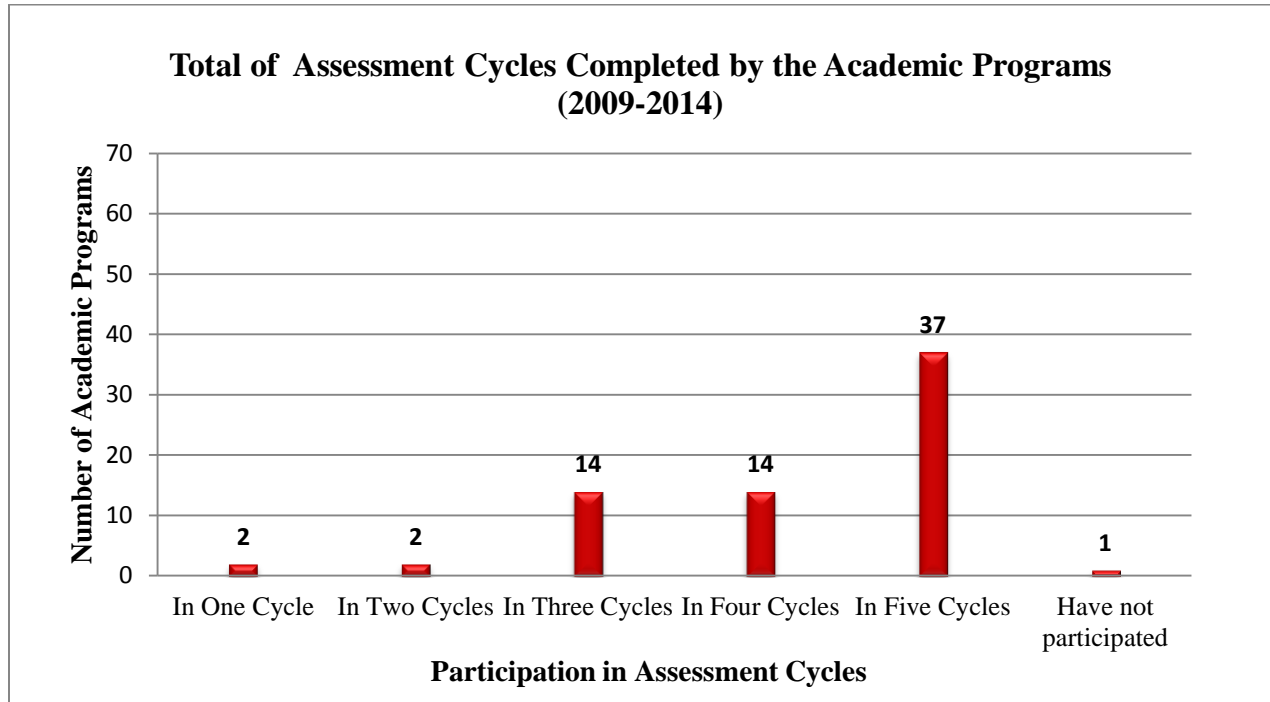
Graph 2: Number of academic programs that have participated in a Student Learning Assessment Cycle from 2008 to 2014

Undergraduate Academic Programs that Participated in Each Assessment of Student Learning Cycle (2008-2014)

Number of Academic Programs

- Training and Learning Assessment Cycle (2008-2009): 68
- First Assessment Cycle (2009-2010): 67
- Second Assessment Cycle (2010-2011): 59
- Third Assessment Cycle (2011-2012): 65
- Fourth Assessment Cycle (2012-2013): 54
- Fifth Assessment Cycle (2013-2014): 44

Assessment of Student Learning Cycles (2008-2014)

Assessment of Student Learning at the Río Piedras Campus

A. The process in undergraduate programs

The Assessment Plan and the Annual Report consist of two parts: assessment of the general education learning outcomes stated in the Alumni Student Profile and the assessment of content knowledge, skills and dispositions that characterize each program. A brief narrative describing the analysis of the assessment results and the proposed transforming actions should be submitted with the Annual Report. Diagram 2 shown below, describes the integrated process plan of the Evaluation of Student Learning at UPR-RP.

Samples of Assessment of Student Learning Plans, Annual Reports, and Rubrics developed by UPR-RP professors and OEAE personnel are available in the OEAE official web page http://oeae.uprrp.edu that has been created to assist faculty in this endeavor and, at the same time, to disseminate the ongoing assessment process to the different stakeholders.

Diagram 2: Integrated process plan of the Evaluation of Student Learning
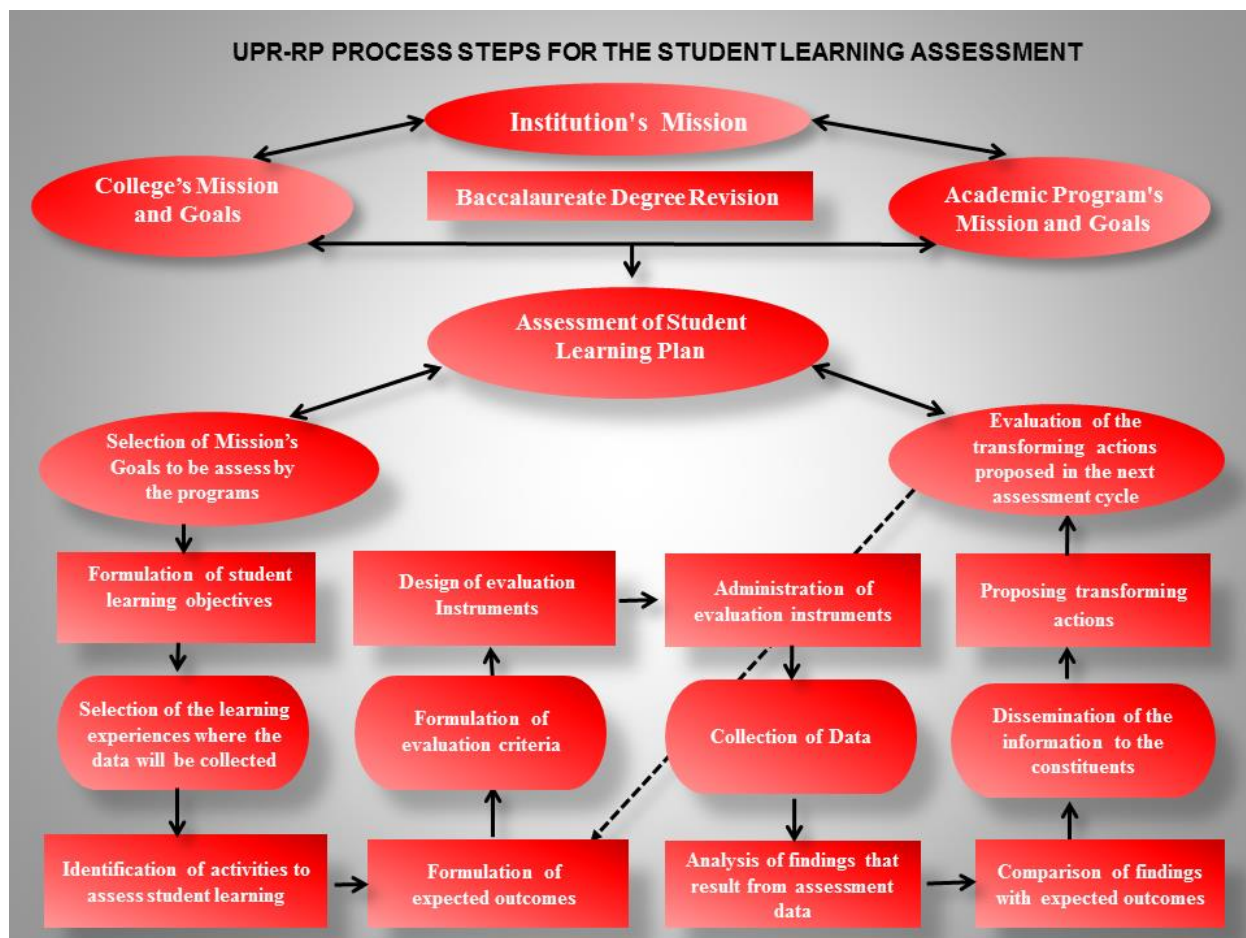
B. Student Learning Outcomes Assessed in the UPR-Rio Piedras Campus Assessment Cycles

The following graphs illustrate the number of academic programs that assessed the UPR-RP student learning outcomes by academic year from 2008-2009 to 2013-2014.

Effective Communication

Graph 3: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Effective Comunicaction Learning Outcome

Academic Year	Number of Academic Programs
2008-2009	67
2009-2010	63
2010-2011	52
2011-2012	57
2012-2013	43
2013-2014	42
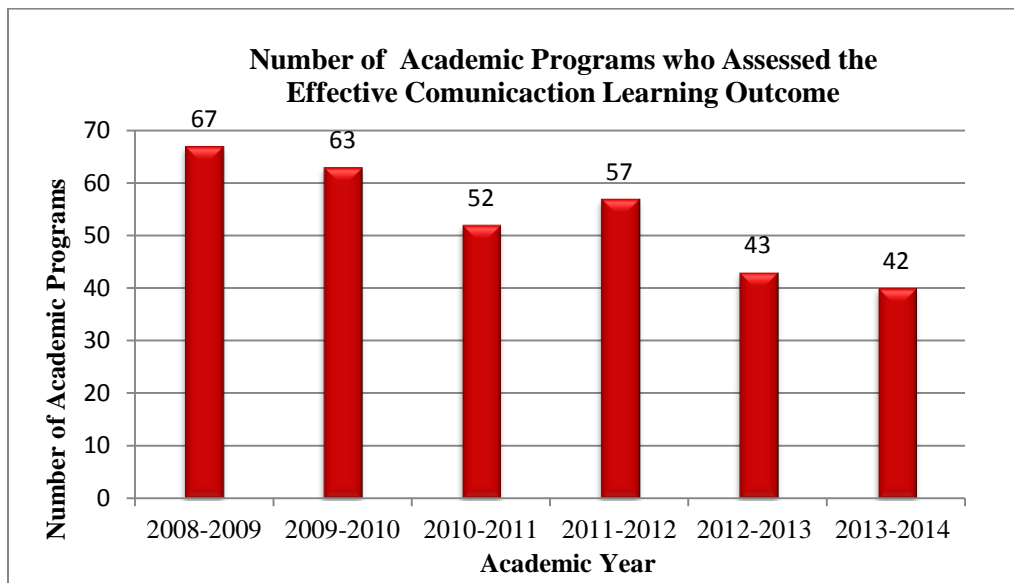
As of 2013- 2014, an average of 54 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year.

Critical Thinking

Graph 4: Number of Academic Programs that Assessed this Learning Outcome
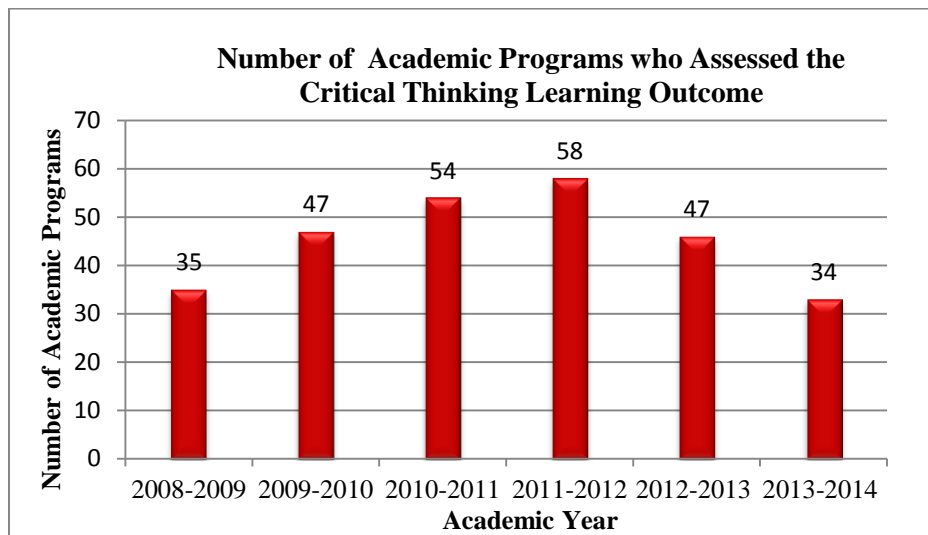
As of 2013- 2014, an average of 46 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year

Research and Creation

Graph 5: Number of Academic Programs that Assessed this Learning Outcome

As of 2013- 2014, an average of 28 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year

Information Literacy

Graph 6: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Information Literacy Learning Outcome

Y-axis: Number of Academic Programs (0 to 70)
X-axis: Academic Year

- 2008-2009: 32
- 2009-2010: 29
- 2010-2011: 46
- 2011-2012: 52
- 2012-2013: 37
- 2013-2014: 33

As of 2013- 2014, an average of 38 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year.

Social Responsibility

Graph 7: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Social Responsibility Learning Outcome

Y-axis: Number of Academic Programs (0 to 70)
X-axis: Academic Year

- 2008-2009: 13
- 2009-2010: 19
- 2010-2011: 49
- 2011-2012: 45
- 2012-2013: 33
- 2013-2014: 28

As of 2013- 2014, an average of 31 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year

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Logical-Mathematical Reasoning at the Program level

Graph 8: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Logical-Mathematical Reasoning Learning Outcome

(Bar graph showing Number of Academic Programs by Academic Year)

Academic Year	Number of Academic Programs
2008-2009	1
2009-2010	4
2010-2011	18
2011-2012	16
2012-2013	7
2013-2014	5

As of 2013- 2014, an average of 9 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year

Content Knowledge

Graph 9: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Content Knowledge, Skills, or Dispositions Learning Outcome

(Bar graph showing Number of Academic Programs by Academic Year)

Academic Year	Number of Academic Programs
2008-2009	35
2009-2010	41
2010-2011	57
2011-2012	55
2012-2013	45
2013-2014	36
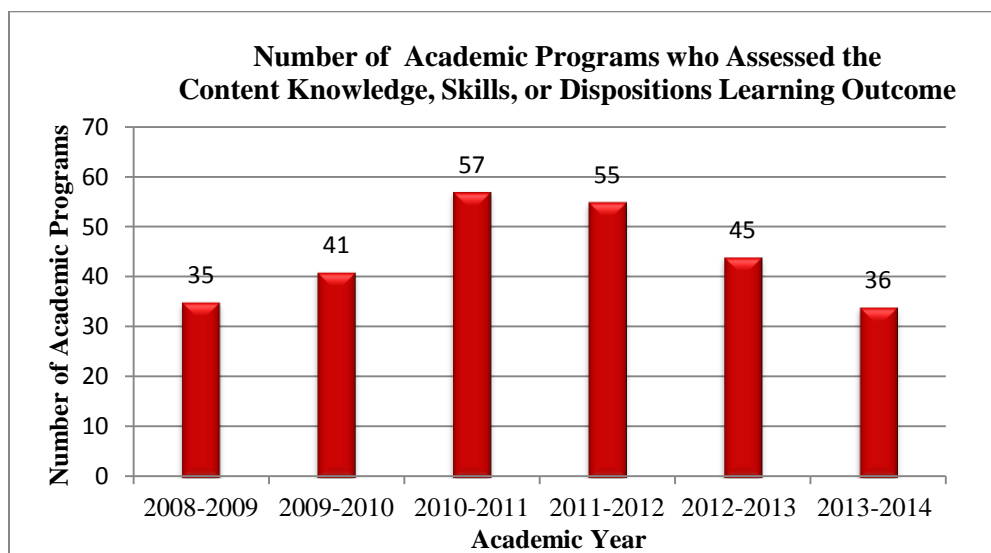
As of 2013- 2014, an average of 45 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year.

Knowledge Integration

Graph 10: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Knowledge Integration Learning Outcome

Academic Year	Number of Academic Programs
2008-2009	0
2009-2010	0
2010-2011	13
2011-2012	39
2012-2013	8
2013-2014	8

As of 2013- 2014, an average of 17 undergraduate academic programs have assessed this learning outcome, at least once, since the 2010-2011 academic year.

Ongoing Learning
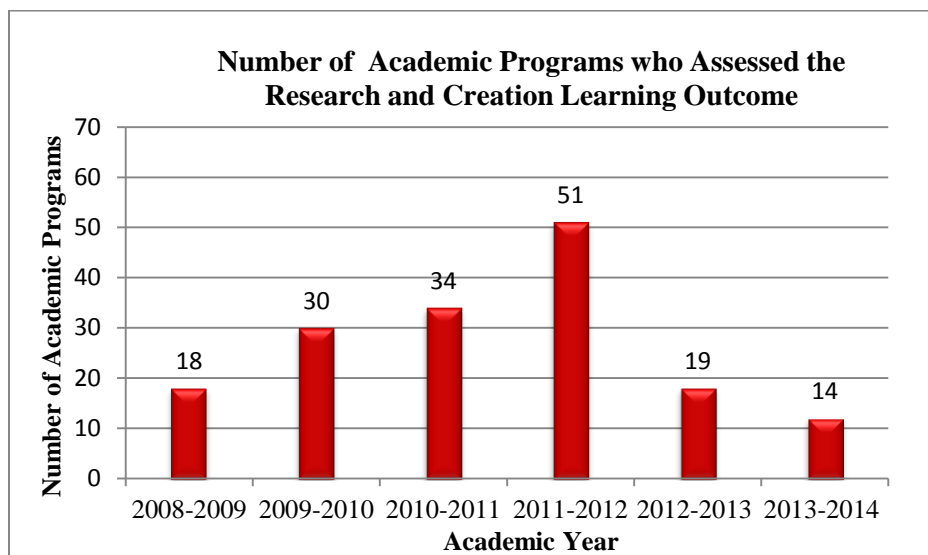
Graph 11: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Ongoing Learning Learning Outcome

Academic Year	Number of Academic Programs
2008-2009	10
2009-2010	1
2010-2011	11
2011-2012	0
2012-2013	0
2013-2014	1

As of 2013- 2014, an average of 4 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year.
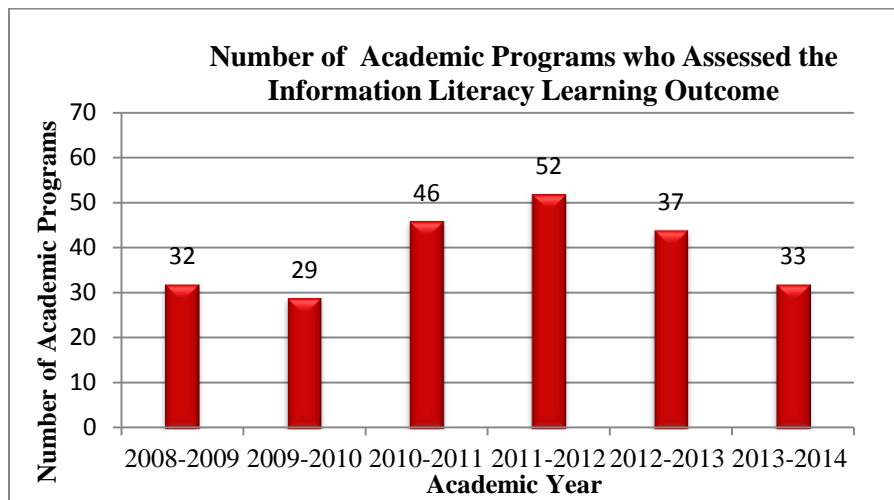
Intellectual Curiosity

Graph 12: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Intellectual Curiosity Learning Outcome

Number of Academic Programs (y-axis)

Academic Year (x-axis)

Academic Year	Value
2008-2009	1
2009-2010	1
2010-2011	6
2011-2012	7
2012-2013	3
2013-2014	3

As of 2013- 2014, an average of 4 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year.
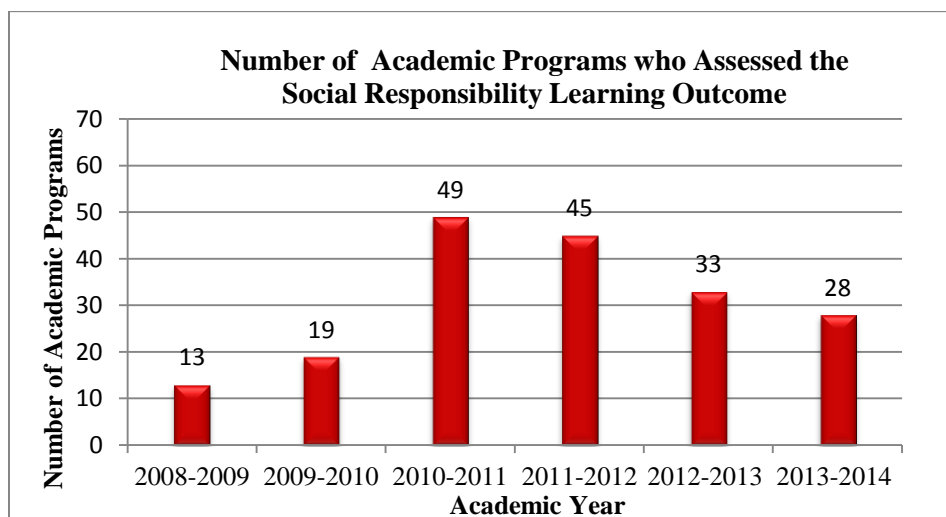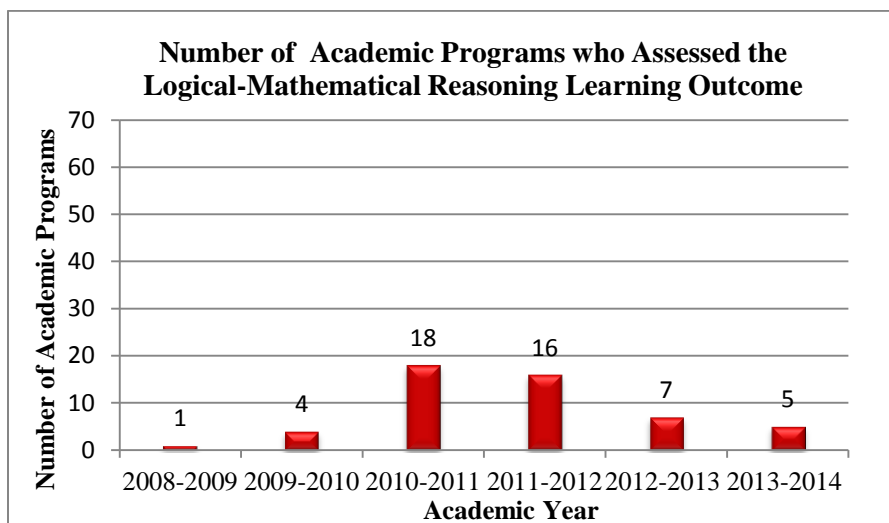
Capacity for independent study

Graph 13: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Capacity for Independent Study Learning Outcome

Number of Academic Programs (y-axis)

Academic Year (x-axis)

Academic Year	Value
2008-2009	10
2009-2010	0
2010-2011	14
2011-2012	6
2012-2013	4
2013-2014	4

As of 2013- 2014, an average of 6 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year

Ethical and Aesthetic Sensibility

Graph 14: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the Ethical and Aesthetical Sensibility Learning Outcome

Bar chart showing the Number of Academic Programs (y-axis, 0 to 70) by Academic Year (x-axis):
- 2008-2009: 0
- 2009-2010: 1
- 2010-2011: 15
- 2011-2012: 16
- 2012-2013: 3
- 2013-2014: 4

As of 2013- 2014, an average of 8 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year
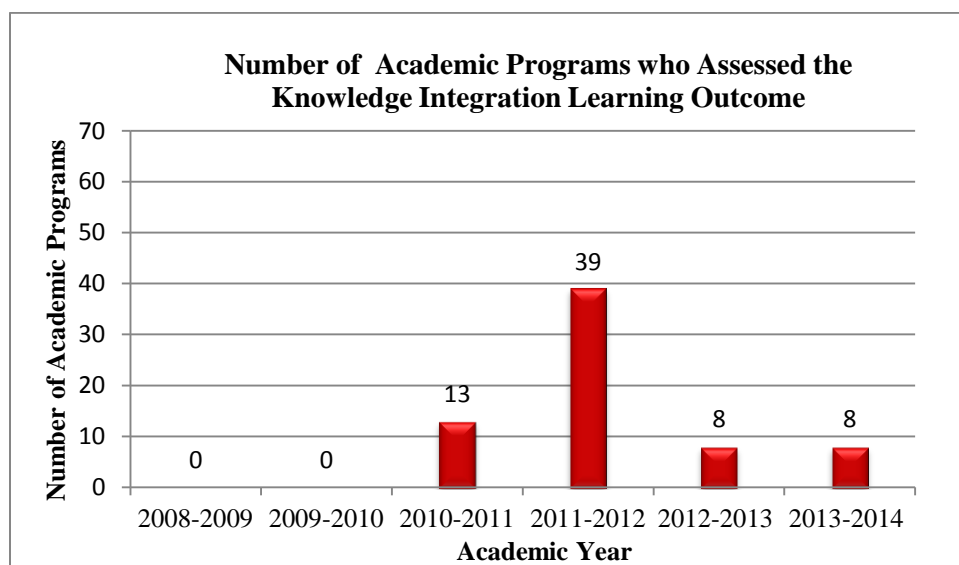
Appreciation for and Commitment to the Cultures, Ideals and Values of Puerto Rican society in the Caribbean and International Context

Graph15: Number of Academic Programs that Assessed this Learning Outcome

Number of Academic Programs who Assessed the *Appreciation for and Commitment to the Cultures, Ideals and Values of Puerto Rican society in the Caribbean and International Context* Learning Outcome

Bar chart showing the Number of Academic Programs (y-axis, 0 to 70) by Academic Year (x-axis):
- 2008-2009: 23
- 2009-2010: 23
- 2010-2011: 24
- 2011-2012: 23
- 2012-2013: 24
- 2013-2014: 23

As of 2013- 2014, an average of 23 undergraduate academic programs have assessed this learning outcome, at least once, since the 2008-2009 academic year
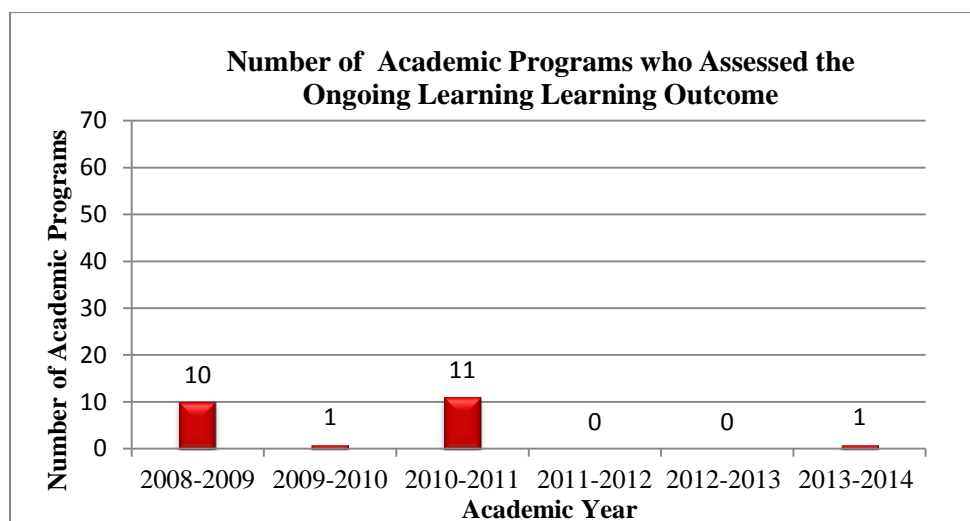
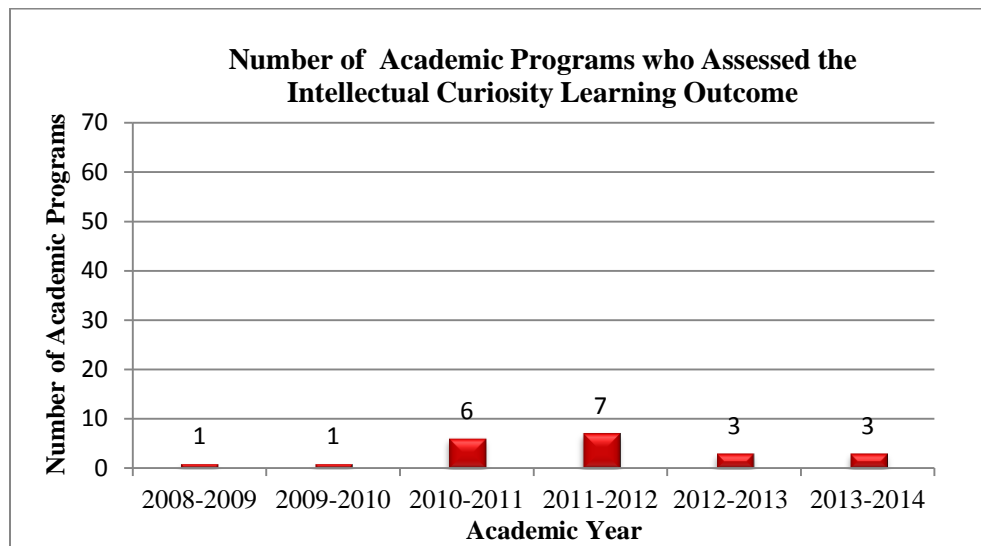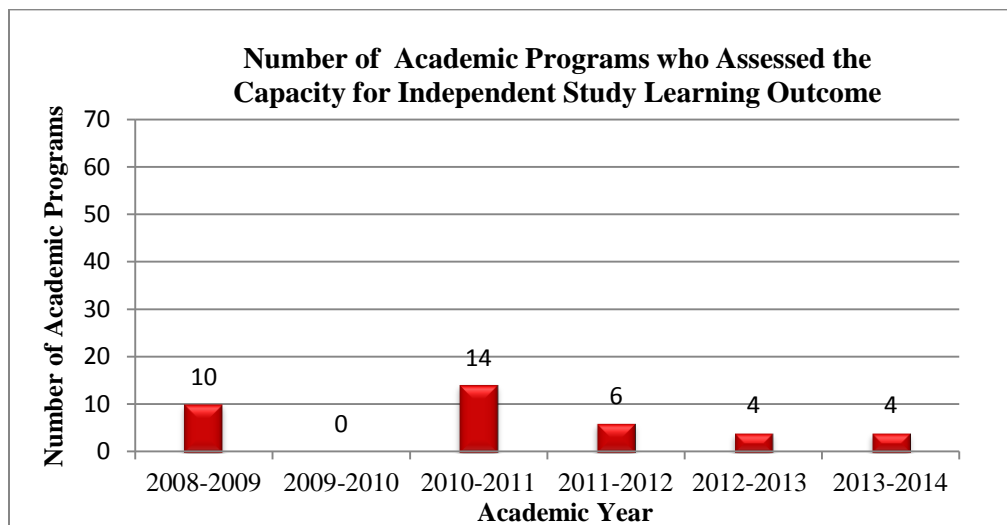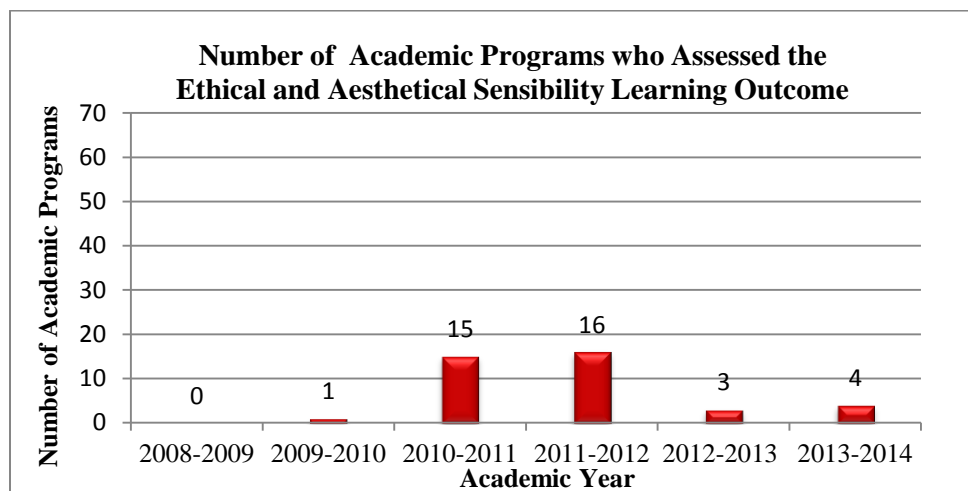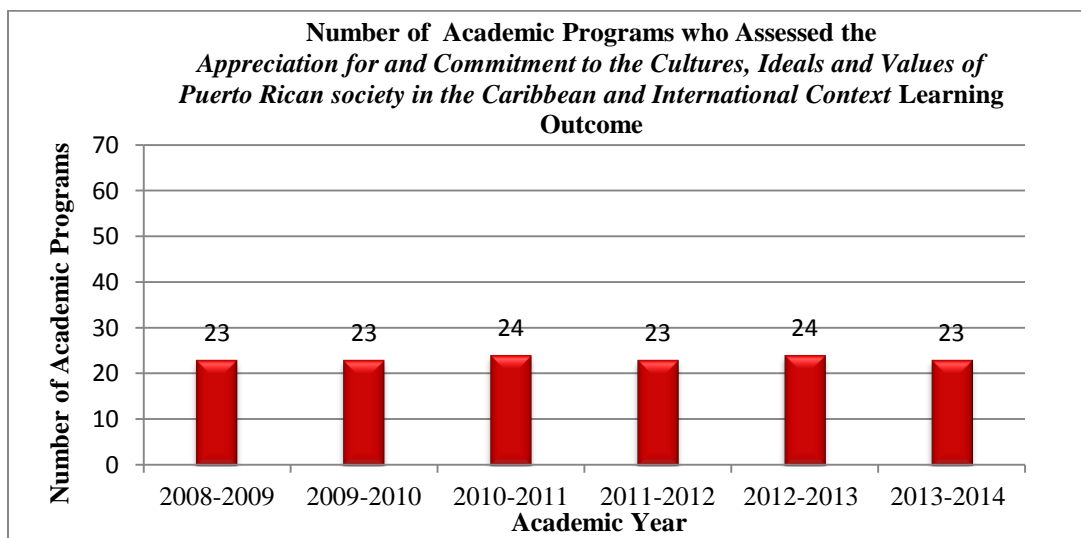The low program participation in the last five learning outcomes showed from Graphs 11 through 15 can be attributed to the difficulty encountered in designing adequate assessment instruments. Nevertheless, the institution considers that these leaning outcomes, from the actual student profile, should be acquired by the students throughout their baccalaureate experience. Therefore, the OEAE continues to encourage the assessment of these learning outcomes even though few programs can measure them.

The analysis of the assessment data received by academic programs and by Colleges or Schools and the summary of the results at Campus level can be found in the Table of Assessment Findings and Transforming Actions by Colleges and academic programs for the 2013-2014 academic year. (Appendix VII)

C. Assessment of student learning results at the UPR-RP for the 2013-2014 academic year

The data presented in this OEAE report contains assessment data of the student learning outcomes for the 2013-2014 academic year. It compares assessment results for this first stage of the five year Assessment Process cycles (from 2009-2010 to 2013-2014). The Table of Assessment Findings and Transforming Actions by Colleges and Academic Programs in the 2013-2014 Academic Year (Appendix VII) presents a summary of the learning outcomes assessed by Colleges or Schools and by individual programs, the teaching activities or learning measures used to assess a learning outcome and the number of instances being assessed. This table has been translated into English and published in the OEAE's official web site http://oeae.uprrp.edu.

Due to the ample academic offerings available for the students, and the diversity of the learning processes, one can observe different approaches of assessment of student learning. As expressed before, 44 (63%) of the 70 undergraduate academic programs participated in the 2013-2014 fifth assessment cycle. Graph 3 presents the learning outcomes that were assessed during the 2013-2014 academic year and the number of academic programs that assessed each one of them.

Graph 16: UPRP Learning Outcomes Assessed by Undergraduate Academic Programs

UPR-RP Mission Learning Outcomes Assessed by the Academic Programs (2013 - 2014)

UPR-RP Mission Learning Outcomes	Number of Academic Programs
Effective Communication	42
Critical Thinking	34
Research and Creation	14
Social Responsibility	28
Logical Mathematical Reasoning	5
Content Knowledge, Skills, or Dispositions	36
Information Literacy	33
Knowledge Integration	8
Ongoing Learning	1
Capacity for Independent Studies	4
Intellectual Curiosity	3
Ethical and Aesthetic Sensibility	4
Appreciation, Culture and Commitment to …	23

The assessment of student learning of UPR-RP learning outcomes by academic year and the number of academic programs that have assessed at least one of the student learning outcomes in the 2009-2014 period are represented in Graph 17 (next page).

Graph 17: Represents the assessment of student learning of UPR-RP learning outcomes by academic year

UPR-RP Mission Learning Outcomes Assessed by the Academic Programs (2009 - 2014)

Number of Academic Programs

Outcome	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Effective Communication	63	52	57	43	42
Critical Thinking	47	54	58	47	34
Research and Creation	30	34	51	19	14
Social Responsibility	19	49	45	33	28
Logical Mathematical Reasoning	4	18	16	7	5
Content Knowledge, Skills, or Dispositions	41	57	55	45	36

UPR-RP Mission Learning Outcomes Assessed by the Academic Programs (2009 - 2014)

Number of Academic Programs

Outcome	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Information Literacy	29	46	52	37	33
Knowledge Integration	0	13	39	8	8
Ongoing Learning	1	11	0	0	1
Capacity for Independent Studies	0	14	6	4	4
Intellectual Curiosity	1	6	7	3	3
Ethical and Aesthetic Sensibility	1	15	16	3	4
Appreciation, Culture and Commitment to …	23	24	23	24	23

D. **Discussion of Assessment Results – Assessment Findings and Transforming Actions – Fifth Cycle**

Findings and transforming actions from the assessment activities of the learning outcomes that most academic programs assessed this academic year are presented in this section. Those learning outcomes were: effective communication, critical thinking, research and creativity, social responsibility, information literacy, and content knowledge, skills or dispositions (discipline specific learning outcomes). A complete detailed description of the assessment findings and transforming actions of all learning outcomes assessed this year by undergraduate academic programs can be found in Appendix VI – Table of Assessment Findings and Transforming Actions by Colleges and Academic Programs in the 2013-2014 academic year.

Communication Skills Learning Outcome

Definition*:* Ability to express oneself effectively in oral and written language that demonstrates a clear, coherent, and accurate communication.

Of the 45 academic programs engaged in the student learning assessment process, 40 assessed effective communication skills (see Graph 17 for this learning outcome and in Appendix VII). Of those programs, 37 (93%) reported positive learning outcome results[1] in this competency according to the expected results established by the programs. Forty programs (100%) proposed transforming actions as a result of the assessment process.

Thirty seven of these academic programs (93%) used at least two different activities to collect data, and 39 (97%) programs reported having assessed this learning outcome in at least two instances. All programs used direct measures to collect data on this learning outcome. Assessment methods for competency in written and oral communication are embedded in the discipline courses throughout the curriculum. Evidence of students' ability to communicate effectively was assessed in the following activities: essays and oral presentations, art proposals, supervised practicum, laboratory reports, design projects, research article reviews, critiques, and research papers and projects, among others.

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[1] A positive result implies that the learning outcome was achieved in at least 70% of the instances measured. An instance was considered to be met if at least 70% of its corresponding criteria were achieved.

As an example of a program that assessed this learning outcome, the Teacher Preparation program used written essays in a series of workshops called Writing Zones using a standardized rubric. The results indicate that in the communication competency, and on a scale of 0 to 12, where 9 is achieved and 12 is outstanding, the average score of the students was **10.72**, corresponding to the **achieved level.**

Another example can be observed in the Hispanic Studies program. The faculty in charge of teaching the ESPA 4221, ESPA 4226 and ESPA 4266 courses recommended the following transforming actions:

- Offer a workshop in coordination with the main library in order to instruct students on how to look for information using data bases (research).

- Dedicate one of the sessions of the course to the discussion of what constitutes a good research paper in the field of literature and particular attention will be given to citing methods in this field using MLA guidelines (information literacy).

- Require students to hand in a first draft of their work so it can be assessed and returned with recommendations that should be incorporated into the final draft of the essay. In order to put this action into effect it is essential that the size of the section does not exceed 15 students. As part of its requirement the course includes written comments about the texts to be discussed in class (every two weeks), a written outline of the oral presentation, proposal of the final assignment, as well as two discussion-only exams. All the exercises develop the skills necessary for composition and require constant corrections throughout the course. The composition exercises will be intensified (syntax). (The rubric needs to be revised in order to change the numbers for advance, intermediate, and basic to one number).

Another example can be observed in the School of Communication. The faculty in charge of teaching the courses of the different programs strongly recommends the creation of a course sequence specifically designed to reinforce student's oral and written communication skills. These courses should be required for all students in the curricular sequence during the first two years of their baccalaureate experience. Although the expected outcome was achieved in all instances in which this learning outcome was assessed, the faculty feels there is a need to better comply with the expected student achievement in their written and oral communication skills.

As a result of the 2013-2014 student learning assessment process regarding the effective communication skills outcome, the following sample of transforming actions which were proposed by the academic programs, will be implemented in the next assessment cycle (2014-2015):

- The Philosophy program proposed the following transforming actions:
    - Create a *Guide on how to write a text commentary*.

- Create a specific rubric for each of the parts of the commentary with the following criteria:
    - Grammatical elements
    - Structure of the content (Introduction, body)
    - Conclusion (Reflection and critical analysis)

  (Part of this transforming action has already been done).

- Include an exercise at the undergraduate level in which the students writes a critical review of a Philosophy article (in progress).

- Include more composition exercises.

- The Chemistry program proposed the following transforming actions*:*
    - Students were informed of the rubric used to evaluate effective communication skills in their written report. Students were advised to register in several courses to improve their writing skills.

- Information and Journalism program proposed the following transforming actions*:*
    - The School of Communication should take the necessary measures to strengthen the writing skills and orthography of the students b: creating laboratory courses, creating pre requisite courses without credit, establishing tutorial programs, and encouraging the teaching of writing and spelling in courses. The possibility of creating an intensive summer writing experience, without credit, for students admitted to the School of Communication, in which basic writing skills are taught and reviewed should be considered

Critical Thinking Learning Outcome

__*Definition*__*:* A thinking skill that enables the student to analyze and interpret the object of study by judging, criticizing, and analyzing the diverse perspectives in a thorough and constructive way, with the end goal of developing their own criteria.

Thirty three (73%) of the 45 undergraduate academic programs assessed critical thinking skills. Of those programs, 30 (91%) reported positive learning outcomes results[2] in this competency according to the expected results established by the programs.

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[2] A positive result implies that the learning outcome was achieved in at least 70% of the instances measured. An instance was considered to be met if at least 70% of its corresponding criteria were achieved.

Thirty programs (91%) proposed 76 transforming actions as a result of the assessment process.

Of the 33 programs who assessed this learning outcome, 30 (91%) reported positive learning outcomes results in this competency according to the expected results established by the programs. Thirty programs (91%) used at least two different activities to collect data, and 32 (97%) reported having assessed this learning outcome in at least two instances. Most programs used direct measures and course-level activities to collect data regarding this learning outcome. Evidence of student ability to think critically was assessed through the following activities: supervised practicum, design of projects, marketing campaign plan, laboratory reports, research article reviews, critiques, research papers and projects, essays, and exam questions, among others.

Examples of programs that assessed this learning outcome are:

- *Nutrition and Dietetics program*: This program evaluated critical thinking skills in a research paper and a proposal. They proposed to evaluate student work in a second instance in the semester to assess skills in problem analysis. Also they recommended that specific instructions to students with regard to the expectations of their works should be provided.

- *Public relations and Advertising program*: This program proposed to emphasize the importance of using the adequate formats for the different situations and media. They also proposed the assignment of small research papers throughout the semester in order for the students to learn what is expected of them in the final paper and the importance of including the information sources.

Research and Creation Learning Outcome

<u>Definition</u>: Mastery of skills needed to design and conduct a systematic, objective, and critical investigation, be it qualitative or quantitative, of a scientific or social problem or issue; the ability to create, develop, and present a work of art or literature.

Of the 45 academic programs that engaged in the assessment of the student learning process, 12 (27 %) assessed students' research and creation skills. Of those programs, 8 (67%) reported positive learning outcome results in this competency according to the expected results established by the programs. Seven programs (58%) proposed a total of 17 transforming actions in the assessment process of this leaning outcome.

Seven programs (58%) used at least two different activities to collect data, and 11 (92%) reported having assessed this learning outcome in at least two instances. Most programs used direct measures to collect data on this learning outcome. Currently, reported assessment methods for this competency are embedded in the discipline courses throughout the curriculum. Evidence of students' ability to demonstrate research and creation skills was assessed through the following activities: laboratory reports, research article reviews, critiques, research papers and proposals, research seminars, oral presentations, music projects, undergraduate thesis, radio scripts and public relations campaigns, among others.

As a research oriented institution, students' research skills are of paramount importance to all undergraduate programs. Most programs that assessed students' critical thinking skills, also gathered information about a research and creation related outcome.

The Biology program assessed the research and creation learning outcome. During the assessment of the student learning process, it gathered information regarding this learning outcome in three instances each semester in the BIOL 3101 (General Biology Course), in BIOL 3350 (Genetics Laboratory) and in BIOL 4036 (Cellular-Molecular Laboratory). A rubric was used in the courses to assess student's' research skills. In all three courses assessed results surpassed the expected outcomes.

As the result of the 2013-2014 assessment of student learning process regarding the research and creation skills outcome, the following sample of transforming actions by academic programs will be implemented in the next assessment cycle (2014-2015).

- *Hispanic Studies program:* When discussing the procedures necessary to conduct research using human beings, in which participant's voices are recorded, the importance of obtaining oral and written consent will be emphasized. Also, students will be asked, twice during the process of the assignment, to turn in a draft of the demographic data poll they will be using during the study. This way, they will be sure to incorporate it into the first draft.

- *Chemistry program:* Students will be informed on the various criteria in the rubric used to assess their research projects. Feedback will be provided to the students on several occasions during the preparation of the research proposal or research project.

- *Public Relations and Advertisement program*: Assign students small research type assignments so they may know what is expected of them regarding analysis and depth of the topic

researched. Also, emphasize the importance of using adequate information sources and including them in the final work handed.

See Appendix VI for other examples of assessment results and transforming actions from these and other programs that assessed this learning outcome.

Social Responsibility Learning Outcome

Definition: The ability to apply knowledge and skills gained through the undergraduate experience toward the development of abilities and attitudes that promote ethics and civic responsibility for the advancement of society.

Twenty eight programs (62%) of those that participated in the assessment of the student learning process during the 2013-2014 academic year assessed the social responsibility outcome. Of those programs, 28 (100%) reported positive learning outcome results in this competency, according to expected results established by the programs. Only two of the programs (7%) proposed transforming actions as a result of the assessment process of this learning outcome.

Twenty-six programs (93%) used at least two different activities to collect data, and another 26 (93 %) reported having assessed this learning outcome in at least two instances. Academic programs used direct and indirect measures to collect data on this learning outcome. Currently reported assessment methods for competency in social responsibility skills are embedded in the discipline courses throughout the curriculum. Evidence of students' ability to demonstrate social responsibility in the community and towards their peers in their immediate working community and in applying moral and ethical principles was assessed through the following activities: case studies, field experiences, group discussions, critical reviews, student-teaching portfolios, surveys, written news and practicum, among others.

An example of an academic program that assessed this learning outcome, is the EDPE 4068 course (Teachers' Practicum) where a rubric was used to assess students' reflections on their professional responsibilities, and their leadership performances when it comes to making decisions based on pedagogical, psychological, sociological, and philosophical considerations relevant to their school context. Additionally, students reflect critically about the ethical and social implications of their educational practices. The assessment rubric used a 12 point scale, where 9 means achieved and 12 means excellent. It was expected that the students would score 9 points or more using the rubric for the

assessment of capacity for developing positive classroom environments. The teaching candidates obtained an average performance score of **10.66 points**, between achieved and excellent.

Another example can be observed in the Information and Journalism Program. The professor that taught the COPU 4045 course (Advanced Seminar in Communication) used a rubric to assess if students ponder ethical responsibility skills in the process of a final written assignment. It was expected that 70% or more of the students would obtain 3.0 points or more in each criterion assessed in the rubric used. Results showed that in the three criteria assessed, the assessment results by criteria were: Assumes and supports an ethical position in a topical/social issue, stating ways to deal with it; distinguishes between citizen issues and consuming goods practices**;** a social commitment as a way of life is showed, and not as a requisite to comply with the course objectives; and the level of commitment with citizens issues is stated as one that does not apply to only some sectors but to all people locally and in Puerto Rico. The expected outcome was met in each one of the criteria assessed.

Information Literacy Learning Outcome

<u>*Definition*</u>*:* A set of abilities requiring individuals to recognize when information is needed and be able to locate, evaluate and effectively use the needed information (adopted from the Association of College Research Libraries - ACRL).

Thirty-two academic programs (73%) assessed the information literacy outcome. Of the programs that assessed students' information literacy skills, 9 (28%) reported positive learning outcomes results in this competency according to the expected results established by the programs. Twenty eight programs (88%) proposed transforming actions as a result of the assessment process.

Thirty programs (94%) used at least two different activities to collect data, and 31 (97 %) reported having assessed this learning outcome in at least two instances. All programs used direct measures to collect data on this learning outcome. Currently, reported assessment methods for the information literacy competency are embedded in the discipline courses throughout the curriculum. Students' information literacy skills were assessed through the following activities: Project for the Integration of Information Literacy to the Curriculum (PICIC project in the College of Education, by its Spanish acronym), undergraduate thesis, historiographical essays, research projects, written assignments, research papers, critical reviews, research proposals, exams, film discussions, news articles, radio

reports, group projects, portfolios, research posters, course exercises, annotated bibliographies, online modules, and oral presentations, among others.

Among the undergraduate programs that assessed students' information literacy skills are the History and the Nutrition and Dietetics programs. These programs have placed an emphasis on developing students' information literacy skills as early as possible in their curriculum in order to prepare them adequately for advance courses with a strong research component. In the History program, a rubric was used to evaluate a written assignment in order to assess students' information literacy skills in terms of the use of data bases in electronic media, use of library collections, incorporation of citations and use of notes, preparation of the bibliography, and presentation of images and/or audio sources. It was expected that 70% of the students would achieve a performance level of at least 5 points or more in an eight points scale rubric. Findings revealed that an average of 98% of students met the expected outcome, of which 77% exceeded expectations. The program proposed that the professors should include information and objectives of this learning outcome in the courses syllabi. In the Nutrition and Dietetics program, students will be evaluated at the end of the semester and additional practice will be given to design an adequate search strategy.

The Biology program assessed students' information literacy skills for the third time in the 2013-2014 assessment of student learning cycle. A rubric was used in the BIOL 3350 (Genetics Laboratory) course to assess students' information literacy skills. Students were participating in research projects and /or hand in laboratory reports in which they needed to be able to use current information technologies to locate and apply evidence-based guidelines and protocols in order to use adequately relevant, valid and authoritative references. It was expected that 90% of the students would reach the good level or better in the rubric used. Findings revealed that 91.4% of the students' average scores were within the excellent and good performance levels, when assessing these learning outcome activities as a whole. Since three consecutive assessments of student learning cycles have resulted in positive outcomes, the program decided that it will continue to implement this type of activity to ensure that students have the necessary mastery of information literacy skills by the end of their baccalaureate degree.

As a result of the 2013-2014 assessment of student learning process regarding the information literacy skills outcome, the following sample of transforming actions by academic programs will be implemented in the next assessment cycle (2014-2015):

- *Teacher Preparation Programs:* Add additional courses to the PICIC Project to integrate information literacy skills to the curriculum such as the EDFU 4007 course (Introduction to Educational Research). The appropriate use of the style manual, particularly the citations rules, and the bibliography was emphasized in the courses. The inclusion of evidence on the development of information literacy in the Electronic Portfolio developed throughout the baccalaureate experience was required.

- *Art History Program:* The program will ask faculty members to explain in the classroom the proper use of the style manual, emphasizing the correct ways of writing citations, footnotes and the bibliography, in the students' projects.

- *Hispanic Studies program:* Schedule an orientation about the MLA guidelines in the Federico de Onís Seminar room at the beginning of the semester. Include the research orientations in the Hispanic Studies Seminar room. The rubric to assess this learning outcome needs to be revised in order to change the numbers for advance, intermediate, and basic to whole numbers.

- *Chemistry program*: The professors for the QUIM 4865 course reviewed the ACS citation style for references to improve student performance. The bioinformatics exercise will be modified for future students, requiring them to access library modules that practice the ACS citation style.

See Appendix VI for other examples of assessment results and transforming actions from these and other programs that assessed this learning outcome.

Content Knowledge, Skills, or Dispositions in the Academic Program Learning Outcome

Definition: Graduating students will demonstrate an in-depth knowledge of the content they learn as part of their academic experience. They will demonstrate their knowledge through inquiry, critical analysis, and synthesis of the discipline. Students demonstrate behaviors that show that they have acquired the dispositions that responsible citizens show. They also demonstrate the necessary skills that support the content knowledge acquired in their disciplines.

A total of 44 out of the 55 academic programs (80%) engaged in the assessment of student-learning process, and assessed students' content knowledge, skills or dispositions related to their disciplines. Among those programs, 38 (86%) reported positive learning outcome results in this competency according to the expected results established by the programs. Also, 39 programs (89%) proposed transforming actions as a result of the assessment process.

Forty-one programs (93%) used at least two different activities to collect data, and 43 (98%) reported having assessed this learning outcome in at least two instances. All programs used direct measures to collect data on this learning outcome. Currently, all assessment methods for competency in content knowledge, skills, or dispositions related to their disciplines are embedded in the discipline courses throughout the curriculum. The programs used the following activities to gathered information regarding this learning outcome: exam questions, course assignments, essays, comprehensive tests, internships, electronic portfolios, teaching practicums, field experiences, research-type essays, oral presentations, monographs, comic strips, theater performances, independent study projects, critical reviews, radio reports, advertisement campaigns, radio and TV scripts, workshops, laboratory reports, community and organizational activities, among others.

As an example of a program that assessed this learning outcome, the Public Relations and Advertisement Program used a rubric in the REPU 4166 (Advertisement Campaign) course to assess if students have the capacity to use the content knowledge acquired in the course effectively in the final project in which they had to present a situational analysis, consider the marketing objectives and strategies, design a Media Plan, selection of media means, consider the plan mechanical structure and communicability and present an innovative plan. It was expected that at least 70% of the students assessed would obtain 3.5 points or more in the 5.0 points scale rubric used. Findings revealed that the goal was met in every criteria (8) assessed.

Another program that assessed this learning outcome was Nutrition and Dietetics. A rubric was used to evaluate content knowledge acquired through the courses in three reports, where students must demonstrate utilization of adequate techniques based on population needs. It was expected that 70% or more of the students would receive a score of "good" or higher in the rubric used in each report assessed. Findings showed that the results exceeded the expected outcome, 92% of the students assessed obtained scores of excellent in the three reports submitted.

As the result of the 2013-2014 student-learning assessment process regarding the content knowledge, skills, or dispositions outcome, the following sample of transforming actions by academic programs will be implemented in the next assessment cycle (2014-2015):

- *Philosophy Program:* Multiply the interpretation exercises of the assigned philosophical texts. Also, offer workshops where graduate students can practice with undergraduate students the skills necessary for the analysis and interpretation of philosophical texts.

- *Performing Arts Program:* Reinforce the dexterities with comprehensive workshops about the basic technical skills to complement the knowledge of those students who lack a solid base in the art of acting. Also, revise the dexterities that are taught in order to standardize the syllabus used. Also, perform more exercises regarding the necessary skills (blur, light and shadow) in order to achieve and excel at theatrical makeup. Moreover, continue promoting the professional participation experiences of our students as a method to confirm their capacity of applying the acquired knowledge in a working environment performance.

- *Modern Languages Program:* Although the results are highly positive in the PORT4016 (Portuguese Oral Expression Techniques) this program proposed that the following actions should be taken: (1) Oral grammatical correctness will be emphasized during the laboratory starting in the first semester of the course, (2) a meeting will take place with the laboratory assistants to stress the importance of grammatical correctness and phonetics, (3) the existing grammar exercises will be expanded and verb conjugation exercises will be increased in the classroom; and (4) the grammatical aspects of the language will be emphasized even more during the third semester of Portuguese.

- *Teacher preparation Program:* The program for teachers whose specialization is in Mathematics proposed to include the Math 4120 course (History of Mathematics) as a requirement for all candidates of the Secondary Mathematics Program. As a result of the NCATE assessment process, the College of Education incorporated a four credit methodology course of (Manipulative and Technologies in Secondary Mathematics) in all of their secondary level programs to reinforce the area of pedagogical knowledge. Increasing time allotted to the following areas, strengthened this course: educational research, the use of technologies in learning mathematics, and the time dedicated to field experiences.

See Appendix VI for other examples of assessment results and transforming actions from these and other programs that assessed this learning outcome.

E. Summary of Assessment Results for the 2013-2014 academic year (Fifth Assessment Cycle)

The OEAE has been encouraging the assessment coordinators to use more than one academic activity in order to evaluate student learning in a specific learning outcome .The OEAE also encourages measuring student learning in more than one instance in order to corroborate the validity of the assessment results. Moreover, by these means the professors could show students their progress in the course so that students may strengthen the areas in which they are having difficulties.

Assessment results of the academic programs that evaluated student-learning using multiple measures and instances and proposed transforming actions are detailed in the following table (Table 1).

Table 1. Number of Academic programs that used multiple measures and instances, and proposed transforming actions (2013-2014)

Faculty or School (Total number of the academic programs who participated in the assessment cycle)	Percentage of Participation by Faculty or School	Number of Academic Programs that:		
		Assessed the Learning Outcomes Using Multiple **Measures**	Assessed the Learning Outcomes in Multiple **Instances**	Proposed **Transforming Actions** in at Least One Learning Outcome
Business Administration (1/10)	10%	1(100%)	1(100%)	1(100%)
Education (23/25)	92%	23(100%)	23(100%)	23 (100%)
General Studies (0/1)	Did not participate			
Humanities (9/13)	69%	5 (56%)	8 (89%)	9 (100%)
Natural Sciences (7/8)	88%	5 (71%)	6 (86%)	7 (100%)
Social Sciences (1/9)	11%	1 (100%)	1 (100%)	0 (0%)
Architecture (0/1)	Did not participate			
Communication (3/3)	100%	3 (100%)	3 (100%)	3 (100%)

Represented in Table 2 on the next page are the assessment results of the undergraduate academic programs that assessed a learning outcome, and the number of those programs that met the expected outcomes. If we compare these results with the ones obtained in previous years a higher percentage of them met the expected outcome for a particular student-learning outcome. From the assessment results it can be inferred that an improvement can be seen as better assessment tools are used and transforming actions are implemented.

Table 2. Assessment Results by Learning Outcomes in the Academic Programs (2013-2014)

Learning Outcomes	Number of Academic Programs Who Assessed the Learning Outcome	Number and Percentage of Academic Programs Who Reached the Expected Outcome
Effective Communication	42	38 (90%)
Critical Thinking	34	29 (85%)
Research and Creation	14	9 (64%)
Social Responsibility	28	27 (96%)
Information Literacy	33	10 (30%)
Content Knowledge, Skills or Dispositions Competencies in the Academic Programs	36	29 (81%)
Logical - Mathematical Reasoning	5	4 (80%)
Capacity for Independent Study	4	4 (100%)
Intellectual Curiosity	3	3 (100%)
Knowledge Integration	8	6 (75%)
Ethical and Aesthetic Sensibility	4	3 (75%)
Appreciation and Commitment to the values and Ideals of Puerto Rican Society, in Caribbean and International Context	23	23 (100%)
Ongoing Learning	1	1 (100%)

OEAE's achievements in the 2013-2014 academic year

Due to administrative changes, the OEAE was closed during the 2013-2014 academic year. Nevertheless, a group of professors from the undergraduate academic programs of the Colleges of Education, Natural Sciences, School of Communication, Humanities and Social Sciences, continued assessing student learning in their programs. This effort is evidence of the strong commitment the faculty of these Colleges have with the Campus Student Learning Assessment process and with the development of an assessment culture in the Campus. All the assessment activities programmed and achieved during this period, were analyzed, summarized, and tabulated during the academic year 2014-2015. They included:

- Revision and analysis of assessment results provided by the academic programs from the above mentioned Colleges and Schools. Aggregates of assessment results by College or School level and at Campus level, and the tabulation of this information was made. All this information is included in Table 4 and Table 5 of this report. It is also included in Appendix VI (Table of Findings and

Transforming Actions by Colleges and Academic Programs in the 2013-2014Academic Year) which presents a summary of the learning outcomes assessed by Colleges or School and by programs, the teaching activities or learning measures used to assess a learning outcome and the number of instances being assessed. This Table is prepared from assessment data reported by each academic program in their Annual Reports and translated into English by the Research Assistant and revised by the Assessment Coordinator. Once finished it is published in the OEAE's official web site.

- Tables 1 and 2 summarize by academic program and by College of School, the number of measures used, the transforming actions proposed, the instances in which they were met or not, the programs that assessed a specific learning outcome and how many of them met the expected outcome.

- Table 3 summarizes per cycle the number of programs that participated in assessing a learning outcome through the whole Five Year cycle.

- Writing the 2013-2014 Student-Learning Assessment Annual Report and publishing it in the OEAE's official website, http://oeae.uprrp.edu.

Highlights of improvement of the Students-Learning Assessment in Undergraduate Academic Programs at the UPR-RP Campus

So far, assessment results of student learning submitted in the Annual Reports by the academic programs that participated in the assessment process during 2013-2014, even though the Office was closed during this year, showed an improvement when assessment reports were analyzed by the OEAE staff during the 2014-2015.

- An increase can be seen in the number of faculty members participating in the assessment processes of most academic programs that participated in the process.
- More efficient assessment reports are handed-in in terms of the presentation of results gathered, the increase in the percentage of criteria that met the expected outcome, the implementation of transforming actions proposed from assessment efforts of previous years', and the identification of the needed transforming actions to attend to the student learning deficiencies identified.
- More efficient assessment instruments are designed by the professors.
- More instances in which the learning outcomes are assessed and the use of multiple measures by a higher number of academic programs that do not require budget allocations are evidence of an increased commitment with the assessment processes from the faculty members.
- Most of the transforming actions that are implemented at the program level do not require budget allocations.

- More interest in student outcomes and in ways to improve them can be perceived in the different academic programs.

Table 3. Program Participation in each Student Learning Outcome in the First Five Year Cycle

Learning Outcomes	Academic Years									
	2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	67 Programs		59 Programs		65 Programs		54 Programs		44 Programs	
	Frequency	% of Participation	Frequency	% of Participation	Frequency	% of Participation	Frequency	% of Participation	Frequency	% of Participation
Effective Communication	63	94%	52	88%	57	88%	43	80%	42	95%
Critical Thinking	47	70%	54	92%	58	89%	47	87%	34	77%
Research and Creation	30	45%	34	58%	51	78%	19	35%	14	32%
Social Responsibility	19	28%	49	83%	45	69%	33	61%	28	64%
Logical Mathematical Reasoning	4	6%	18	31%	16	25%	7	13%	5	11%
Content Knowledge, Skills, or Dispositions	41	61%	57	97%	55	85%	45	83%	36	82%
Information Literacy	29	43%	46	78%	52	80%	37	69%	33	75%
Knowledge Integration	0	0%	13	22%	39	60%	8	15%	8	18%
Ongoing Learning	1	1%	11	19%	0	0%	0	0%	1	2%
Capacity for Independent Studies	0	0%	14	24%	6	9%	4	7%	4	9%
Intellectual Curiosity	1	1%	6	10%	7	11%	3	6%	3	7%
Ethical and Aesthetical Sensibility	1	1%	15	25%	16	25%	3	6%	4	9%
Appreciation, Culture and Commitment to …	23	34%	24	41%	23	35%	24	44%	23	52%

Prospective Plans

In order to continue supporting and promoting an ongoing culture of assessment, the OEAE staff must attend to the following situations or strongly consider the following recommendations as part of the prospective plans for the following year:

- Ask each academic program to assess the assessment process going on in their academic programs including the Curricular Matrix and the Five Year Plan in light of the results and experience of the last assessment cycle.
- Ensure that each academic program will implement transforming actions resulting from this year's assessment processes (2013-2014) in next year's (2014-2015) assessment plans.
- Implement the online assessment pilot project in at least four academic programs.
- Administer the effective written communication test to a sample of senior students enrolled in advanced courses to provide a uniform way to gather information about this learning outcome in order to develop a profile of graduating candidates' effective written communication skills.
- Strongly recommend the use of multiple measures in multiple instances for each learning outcome assessed in order to ensure that students are provided with sufficient opportunities to achieve the expected outcome.
- Include learning objectives of the student learning outcomes to be assessed in the course in the syllabus.
- Recommend undergraduate academic programs include effective communication, critical thinking, social responsibility, research skills, and information literacy in next year's Student-Learning Assessment Plans, if they had not measured these learning outcomes in previous years' assessment cycles or want to reinforce student learning of these skills.
- Recommend undergraduate academic programs that obtained a low or negative result in their assessment of a specific learning outcome reassess them in the next assessment cycle (2014-2015) after implementing the proposed transforming actions.
- Recommend undergraduate academic programs assess group work and leadership as discipline related skills in the 2014-2015 assessment of student learning cycle.
- Ask each academic program to use the Information Sheets to inform the data gathered.
- Ask academic programs to assess student learning outcomes by criteria.
- Enforce the use of a uniform rubric to assess a learning outcome in more than one course of the academic program.

Recommendations for strengthening the Student-Learning Assessment process in the undergraduate academic programs of the UPR-RP Campus

To strengthen the Student-Learning Assessment in the undergraduate programs:

- The Campus needs the Office of Student Learning Evaluation to be staffed by a full-time Assessment Coordinator, at least one full-time Assessment Analyst, at least one Research Assistant and a full-time Administrative Assistant to provide the much needed assistance to professors in this endeavor.
- A proven and sound commitment with the process is needed from the upper level administration, Deans, Associate and Assistant Deans, and Department Chairs from all Colleges and Schools by:
    - Allotting funds for Assessment Coordinators or release time for this endeavor if a genuine, thorough, and reliable process is expected.
    - Requiring the dissemination of assessment activities and results of the academic programs in faculty meetings, departmental meetings, conferences, Student Council activities, and electronic pages.
    - Supporting the participation of faculty members in national and international assessment workshops and conferences.
    - Evidencing the existence of a solid and responsible administrative support to the student-learning assessment process.
    - Supporting the enforcement of curricular activities drawn from the transformative actions recommended to improve student learning.
    - Providing or facilitating the activities geared towards improving student learning.
- Assign funds to implement the online student-learning assessment pilot project that resulted from the *Development of web-based applications* course (MATE 4996) to facilitate and modernize the Campus assessment process.
- Increase the number of persons (professors and students) that participate in the student-learning assessment process in each undergraduate academic program through the Deans' and Department Chair's commitment.
- Ensure that the Student-Learning Assessment Plans include an increase in the number of courses assessed in each academic program each year in order to provide an expanded view of the assessment process throughout the baccalaureate degree, and hence of the improvement of student learning.
- Evidence Campus commitment with the implementation of transforming actions proposed by different academic programs that are the result of years of student-learning assessment efforts.

So far, after the end of the fifth assessment cycle, evidence of student achievement rendered by the undergraduate programs that participated in the Campus Assessment Project demonstrates a significant improvement in student learning and a solid academic preparation at the baccalaureate degree level.

List of the Appendices

- Appendix I – http://oeae.uprrp.edu/wp-content/uploads/2015/02/Appendix-I-Evaluation-of-Student-Learning-Plan-Approved-by-the-Academic-Senate-in-April-2006.pdf
- Appendix II – http://oeae.uprrp.edu/?page_id=906
- Appendix III – http://oeae.uprrp.edu/wp-content/uploads/2015/09/Appendix-VI-Undergraduate-Curriculum-Review-at-the-Rio-Piedras-Campus-Profile-of-the-Baccalaureate-Graduate.pdf
- Appendix IV – http://oeae.uprrp.edu/?page_id=868
- Appendix V – http://oeae.uprrp.edu/wp-content/uploads/2015/02/Definition-and-learning-objectives-Information-Literacy.pdf
- Appendix VI – http://oeae.uprrp.edu/wp-content/uploads/2015/09/LINK-2013-14-Rev-26oct2015-FCTable-of-Assessment-Findings-and-Transforming-Actions.pdf