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Creating A Learning Commons: A Study of the University of Puerto Rico, Rio Piedras Campus Experience of Information Literacy Competencies Integration into the University Curriculum

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Abstract :

This paper discusses the reasons for the development of information skills, the definition of the concept, and the importance of development of information skills in the academic field.

Presents the institutional framework supporting the development of information literacy skills and describes Río Piedras Library System structure. It presents data about program outcomes as well as: quantitative results such as - impacted students and course sections per year, faculty members participating in the project per year; and qualitative results such as - providing students with tools for academic success, more complete education, promote different information resources and increase their use, among others.

Keywords:

Information Literacy concept, Information Literacy Competencies teaching, Information Literacy integration into the university curricula, University of Puerto Rico - Río Piedras Campus Information Literacy project

Introduction: Reasons to Develop Information Literacy (IL) Competencies

Library instruction is a well known phenomenon, Systematic development of Information Literacy and competencies (skills), integrated into the university curriculum is actually imperative for many reasons, including:

- Exponential growth of information resources
- Internet and large-scale information traffic
- Electronic formats of information resources
- Current profile of university students, both undergraduate and graduate
- Focus of the contemporary education in student succes
- Virtualization of education.

Definition of IL Competencies: What are Information Competencies?

The definition of the Information literacy is a controversial concept.

There are some many terms associated with the meaning or definition for information literacy. Some are: computer literacy, information fluency, and digital fluency. Computer-aided tools and the proliferation of the electronic information resources contribute to a misunderstanding of the use of the concept as synonymous with technological competencies. Many librarians who studied the historical development of this concept. For example, Behrens (1994, 312) in her conceptual analysis of information literacy identified the competency with the "prerequisite" or characteristic of lifelong learning. De Pablos Pons (2010) mentioned informatics and information skills and informational and digital literacy.

For the purpose of this paper, we adopt three conceptual definitions of information literacy:

1. A UNESCO definition, "essential for individuals to achieve personal, social, occupational and educational goals. IL skills are necessary for people to be effective lifelong learners and to contribute in knowledge societies". (UNESCO, 2008).

2. An American Library Association (ALA) and Association of College and Research Libraries (ACRL) definition, "a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information." (ALA, 1989; ACRL, 2000).

3. A Middle States Commission on Higher Association definition, "an intellectual framework for identifying, finding, understanding, evaluating and using information." (p. 32).

Why Information Literacy?

Currently, the academic context in Europe and Latin America is based on generic and special competencies development, also recognized as the processes of Bologna and Tuning. Information literacy is seen as part of students' academic experiences and universities work to assist them in developing skills in critical thinking, language skills (oral and written), technological skills, etc.

As parto of the educational process academic libraries, both school and college, participate in and support education by helping students acquire competences, developing information literacy skills and in many cases computer literacy fluency.

In 1999 the Association of College and Research Libraries (ACRL) a division of the American Library Association (ALA), presented a working model for developing IL competencies. This model includes 5 standards, 22 performance indicators, and 87 outcomes. ACRL considers that:

"In implementing these standards, institutions need to recognize that different levels of thinking skills are associated with various learning outcomes--and therefore different instruments or methods are essential to assess those outcomes. For example, both "higher order" and "lower order" thinking skills, based on Bloom's Taxonomy of Educational Objectives, are evident throughout the outcomes detailed in this document. It is strongly suggested that assessment methods appropriate to the thinking skills associated with each outcome be identified as an integral part of the institution's implementation plan."

Institutional framework

The University of Puerto Rico (UPR) is the largest, oldest and most presitigious educational insititution in Puerto Rico, -include 11 campuses with approximately 65,000 students. Río Piedras Campus is the oldest and largest UPR Campus.

The Río Piedras Campus of University of Puerto Rico is a research institution founded in 1903. The University actually offers 15 doctoral programs, 58 master programs, 4 post master programs, 66 bachellor programs and 6 post bachelor programs. Our insititution have following faculties – Education, Business Administration, Humanities, Natural Sciences, General Studies, Social Sciences, Laws, Architecture and Graduate Schools of Planning, Communication and Library and Information Science.[1]

The UPR Library System structure includes 10 branch libraries and 10 special collections.[2] The Campus also has 3 branch libraries and special collections in Humanities.

Current strategic documents, incluging the UPR strategic plan, *Diez para la Década (2006-2016)[3],* and Río Piedras Campus strategic plan, *Visión Universidad 2016[4],* include several goals and objectives related to information literacy development.

Characterisitic number 10 of the institutional graduate profile indicates that: "a graduate will have developed the skills needed for searching, effective management and ethical use of information and the use of technology as a tool for creating, managing and applying knowledge." (Sub-section 11, p. 7)

Development of intormation literacy skills are also present in the Library System recent goals:

Goal 4: "Develop information literacy skills in the university community."[5]

The Río Piedras Campus of the University of Puerto Rico started planning and implementing education by competencies and its assessment in 2006. Our campus considers development

[1] http://www.uprrp.edu
[2] http://biblioteca.uprrp.edu
[3] http://www.upr.edu/?type=page&id=la_upr_diez_para_la_decada&ancla=diez_para_la_decada&r_type=items&r_id=0
[4] http://www.uprrp.edu/rectoria/vision_2016.pdf
[5] http://biblioteca.uprrp.edu/Mision.html
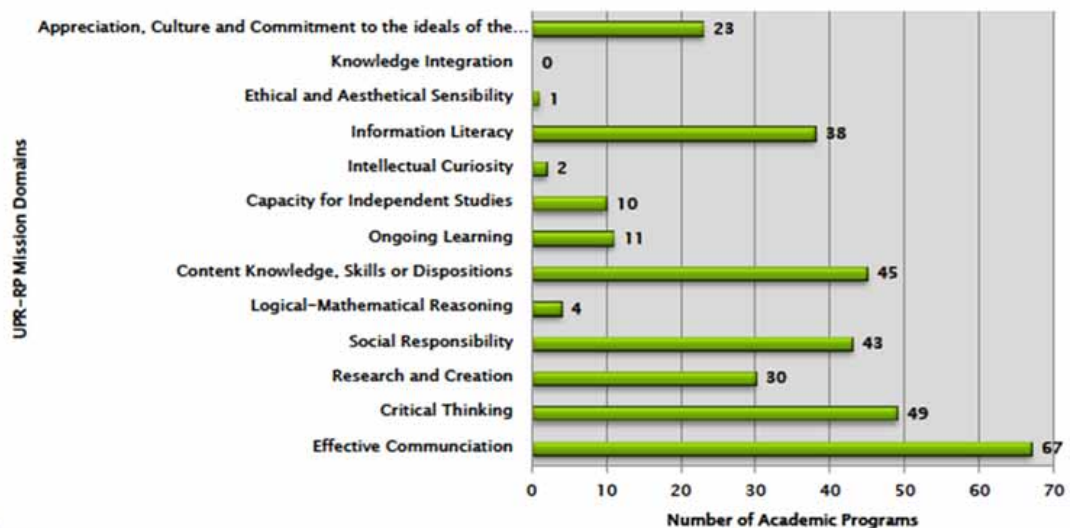
of thirteen different competencies at different levels of university curriculum and with different levels of proficiency of these skills.

The chart below shows the results of development of different skills in the Campus for the 2009-2010 and 2010-2011 academic years:[6]

Dominios evaluados por los programas académicos (2009-2010)

UPR-RP Mission Domains	Number of Academic Programs
Appreciation, Culture and Commitment to the ideals of the...	23
Knowledge Integration	0
Ethical and Aesthetical Sensibility	1
Information Literacy	38
Intellectual Curiosity	2
Capacity for Independent Studies	10
Ongoing Learning	11
Content Knowledge, Skills or Dispositions	45
Logical-Mathematical Reasoning	4
Social Responsibility	43
Research and Creation	30
Critical Thinking	49
Effective Communication	67

Oficina de Evaluación del Aprendizaje Estudiantil

Dominios de la misión de la URR-RP a ser evaluados por los programas académicos (2010-2011)

Oficina de Evaluación del Aprendizaje Estudiantil
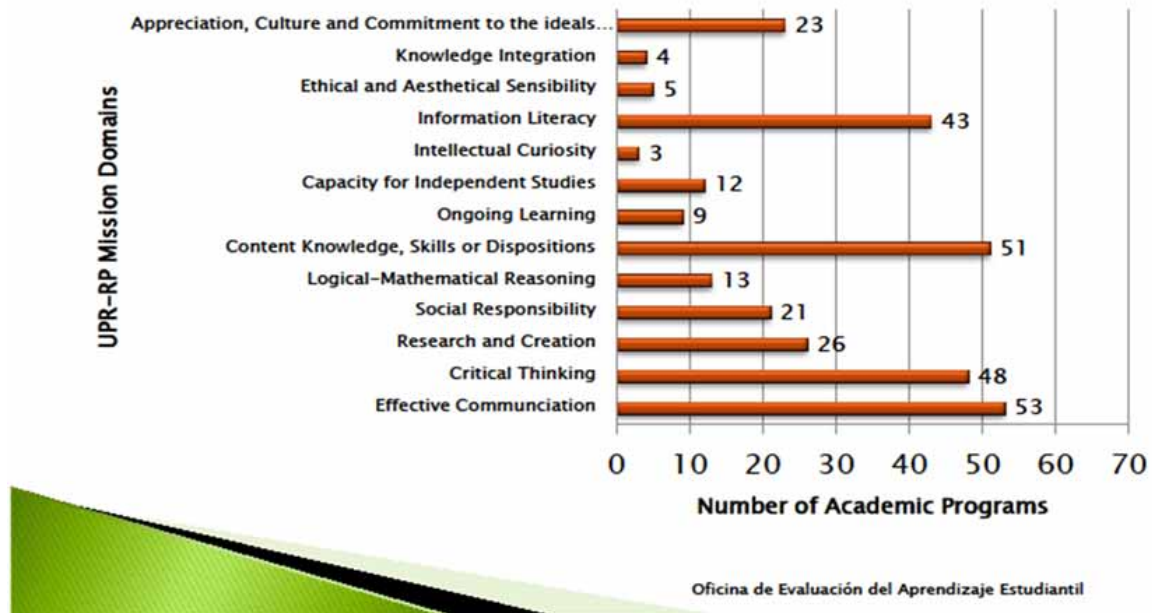
The statistical data indicate that the information literacy skills in conjunction with effective communication, critical thinking, content knowledge, and social responsibility skills, have the most significant and sustainable development on campus and are on the rise.

Description of University of Puerto Rico, Río Piedras Campus Library System Program for IL Competencies Integration into the Curricula (PICIC)

As indicated by the results of the assessment of student learning, information literacy skills development represents a significant part of the institutional effort for competencies-based education.

Library System Program for Integration of Information Literacy Skills into the University curriculum is a collaborative institutional project between librarians, faculties and faculty staff, Assessement Office of Students Learning, Center for Academic Excellence, and University Administration. The planning and implementation of the Program began simultaneously in 2007 in response to the needs of the Education and Business Administration Faculties (EF and BAF), and in 2009 in General Studies Faculty (GSF).

Our Library System PICIC has eight goals: to develop IL skills as part of first year students academic experience (undergraduates and graduates); to identify appropriate IL skills to develop in the campus and in each faculty acording its curriculum; to develop different assessment tools; to form collaborative teams to teach IL between librarians and faculty; to coordinate all IL effort (integrated into the curricumum and one shot section); and provide trained library staff needed to implement this project, etc.
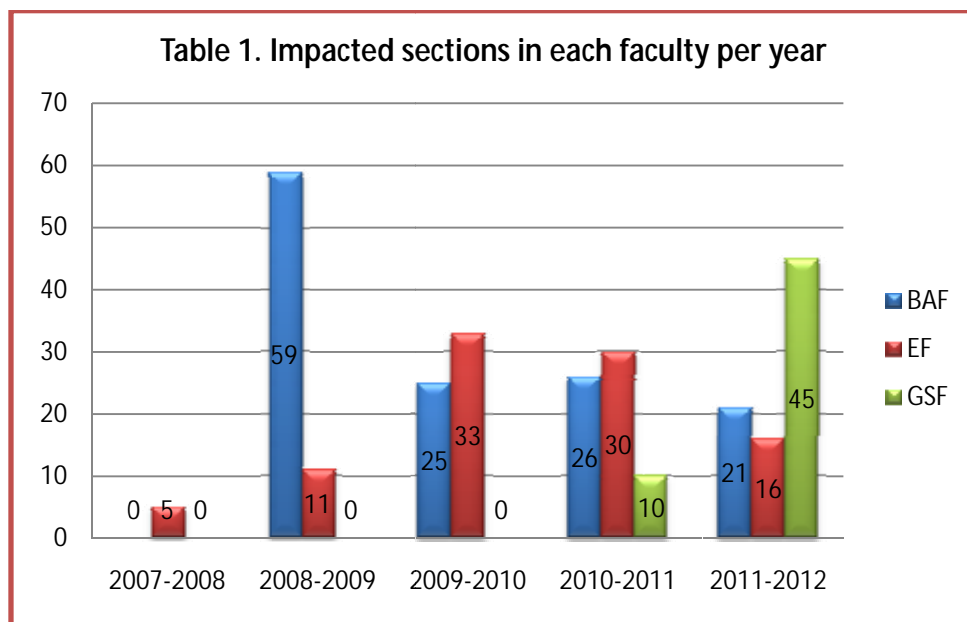
The program was planned in three stages: conceptualization, presentation and dissemination, and phased implementation (in six phases) of predetermined basic and intermediate skills. Staggered implementation including all Colleges and sections of new addmited students (undergraduate and graduate) is projected to be completed by 2015.
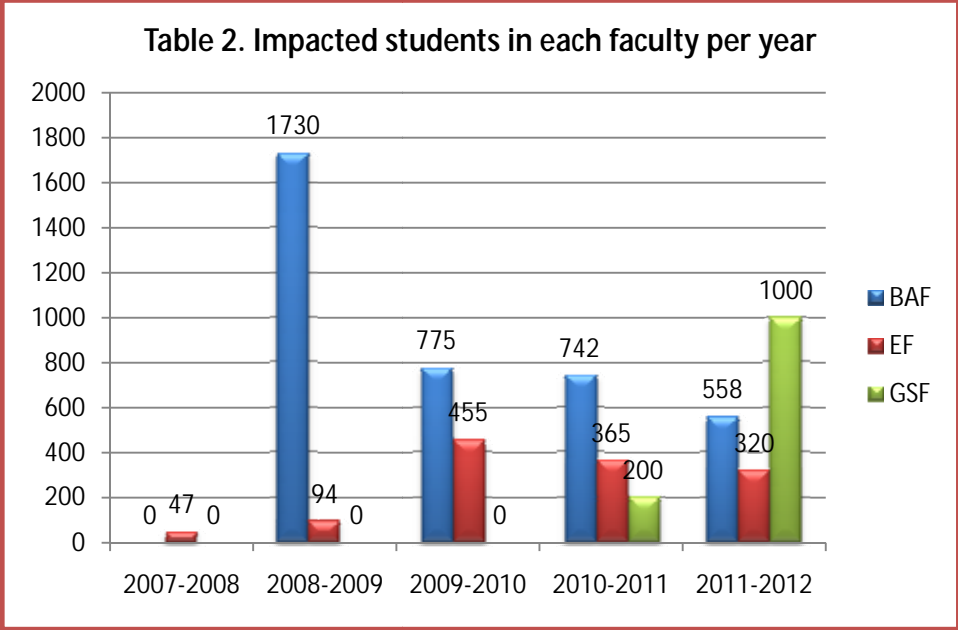
Our Experience in IL Cometencies Integration into the Curricula (May 2007- May 2011)

Each college selects the operating mode, learning objectives and activities that best fit the type of the students and their needs and the dynamics of teaching. The first semester (and if necessary first year) previous to implementation is intended to faculty members training and syllabi review.

Faculty members training consists of six- eight workshops from four to eight hours each including issues such what are IL skills and why develop them, how to review syllabi: learning objectives, strategies and activities formulation), IL assessment, available information resources, citation and bibliography styles, plagiarism, and ethical use of information.
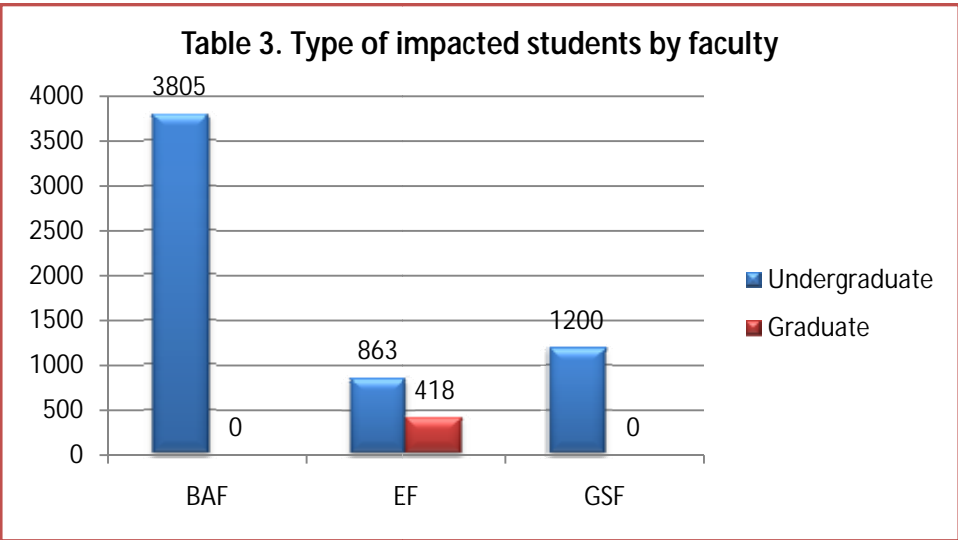
The quantitative results based on gathered statistical data of the first 3 stages of PICIC implementation are:
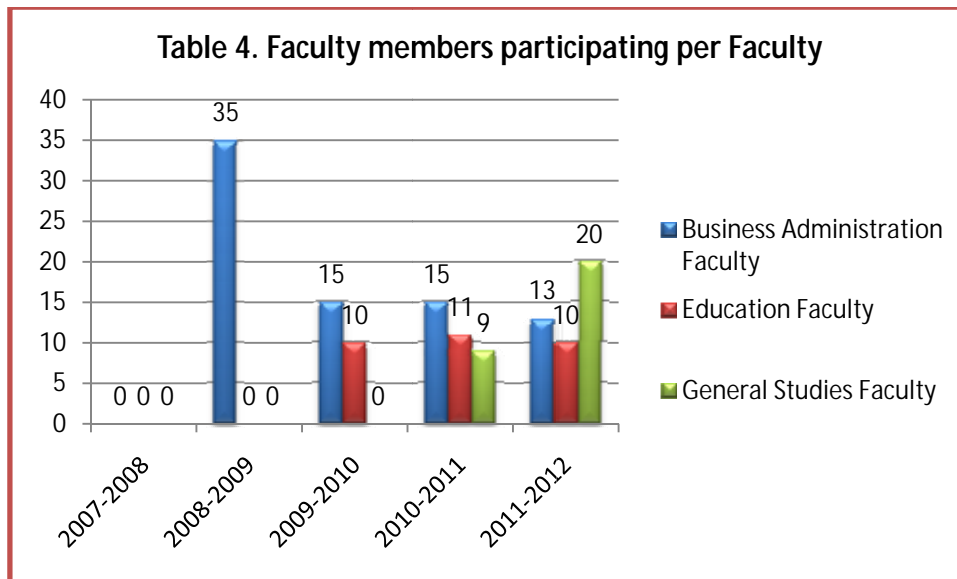

Table 1. Impacted sections in each faculty per year

Table 2. Impacted students in each faculty per year

A bar chart titled "Table 2. Impacted students in each faculty per year" showing BAF (blue), EF (red), and GSF (green) values across academic years:

Year	BAF	EF	GSF
2007-2008	0	47	0
2008-2009	1730	94	0
2009-2010	775	455	0
2010-2011	742	365	200
2011-2012	558	320	1000

In the 2007-2008academic year Education Faculty started to work with IL skills development in graduate students. Currently only this faculty is developing IL skills at the graduate level.

 The mode to work with Education Faculty graduate sudents is to organize three to four workshops (9 to12 hours) for all new admitted graduate students, as unofficial requirement before beginning with the course Research Methods. This is the reason that we can not measure impacted sections and faculty members participation.

Table 3. Type of impacted students by faculty

A bar chart titled "Table 3. Type of impacted students by faculty" showing Undergraduate (blue) and Graduate (red) values:

Faculty	Undergraduate	Graduate
BAF	3805	0
EF	863	418
GSF	1200	0

Table 4. Faculty members participating per Faculty

A bar chart showing faculty members participating per faculty across school years. Y-axis ranges from 0 to 40.

- 2007-2008: Business Administration Faculty 0, Education Faculty 0, General Studies Faculty 0
- 2008-2009: Business Administration Faculty 35, Education Faculty 0, General Studies Faculty 0
- 2009-2010: Business Administration Faculty 15, Education Faculty 10, General Studies Faculty 0
- 2010-2011: Business Administration Faculty 15, Education Faculty 11, General Studies Faculty 9
- 2011-2012: Business Administration Faculty 13, Education Faculty 10, General Studies Faculty 20

There has been a sustained growth after the first year program. The major emphasis for 2011-2012 is made in the GSF, which guarantees to impact many freshmen.

The qualitative outcomes of our PICIC are to:

- Provide students with tools for academic succes and lifelong learning
- Provide a more complete education
- Contribute to institutional efforts to improve the quality of teaching
- Creation of collaborative and multidisciplinary workgroups between faculty members and librarians
- Create synergy of work and trust
- Promote different information resources and increase their use
- Restocking of the libraries and librarians on Campus
- Improving the image of librarians and opinion related to their work
- Update librarians' professional knowledge and faculty training
- Be consistent with current international requirements and educational standards

Future of the PICIC

In 2011-2012 we are planning to initiate the development of IL in Humanities Faculty and Business Graduate School - master and doctoral programs. IL Program will expand to include in 2012-2013 - Faculty of Social Sciences and all graduate schools will be included from 2013-2015.

We aim to start simultaneously implementing intermediate IL skills to third and fourth year bachelor's students in Business Administration and Education Facultyies by 2014-2015.

In process is a research to measure the impact of IL skills development from three directions – students, faculty members and librarians.

The study will present the results of the project implementation: Business Faculty Library (2007-) , Education Library (2008-), General Studies Library (2009-). The work provides different points of view about the project based on three surveys of: faculty, students, librarians.

It also presentes the views of the project coordinators in the three faculties (Business, Education and General Studies) obtained through interviews.

We hope to know the impact of IL skills development considering different variables such as IL student learning, the quality of student work, the impact of teaching practices, the use of information resources, ethical use of information, librarians' teaching experience, and professional self-esteem among others.

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