

Information Culture and CETYS University WASC Accreditation: the Library as Stakeholder

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Abstract. This paper analyzes CETYS (Center for Technical and Higher Education) University's information culture experiences from the empirical perspective of the librarians. The goal is to analyze the development of information culture (IC) as well as the actions that have been undertaken and the proposals that are yet to be considered to consolidate IC. CETYS is immersed in an educational evolution and has succeeded in meeting the high standards of the Western Association of Schools and Colleges (WASC, USA). The institution viewed IC as an element that ought to distinguish and characterize graduates of any academic program that the university offers. IC is considered a seminal element to train professionals to understand their information needs, how to search, evaluate, and use information. The study of the IC outcome is assessed here, relying on the institutional plans and reports for five of the eight objectives where the librarians were involved. These achievements have enabled faculty, students, and librarians to prepare themselves for a cultural change around information.

Keywords: Information culture · Information literacy · Higher education
CETYS University

1 Introduction

As part of the action plan to achieve Western Association of Schools and Colleges (WASC) international accreditation, obtained in 2012, the *2020 Development Plan* of CETYS University [1] remarks that information culture is a Differentiating Element of the CETYS Graduate; and thus, it has been linked to the very mission of the institution since its inception, proposing to highlight this particular subject as a distinctive characteristic of its graduates. Also, IC is counted among the academic goals that are supported by the library and one of the six elements that characterize graduates from all educational levels, taught, and developed through innovative concepts and state-of-the-art teaching methods during their learning process. These initiatives will help graduates succeed in their professional lives and to achieve notability for counting with other distinctive EDEC's [1], besides IC, such as the following:

- Liaison
- Sustainability
- Internationalization
- Social responsibility
- Entrepreneurship and innovation

The role of librarians has been vital for the implementation of IC in the institution's academic and pedagogical process, to achieve the aforementioned goals, and to execute the corresponding actions; librarians' roles have also been as crucial participants, and have been submitted to change, analysis, and organized and systematic professional and labor processes. Given that it is more than half-way between 2010 and 2020, it is now time to assess and, from the perspective of the librarians, empirically study the actions undertaken through this IC initiative through assessing their impact and identifying unfinished actions with the goal of identifying pending objectives.

2 IC and Conductive Actions

According to Menou [2], IC is the ability of individuals or groups to use information in the best way. CETYS takes this concept and implements it through its' 2020 plan [1]. One of the first actions undertaken in 2009, directed to achieve international accreditation and the implementation of IC, was the creation of an Information Literacy Development course with the participation of librarians and faculty that achieved good progress and some results [3, 4]. As Lau [3] reports, the follow-up actions, involving librarians, outlined to WASC, for the development and implementation of EDEC's with IC, are:

1. *Standardization of personnel service capacity and competences:* The opportunity of participating with professional librarians able to supply the library services that the community demands with the same quality in every library in the system.
2. *Standardization of service capacity, based on the expected demand of the student population at each campus.* - Every library shall have the same standardized facility and service infrastructure that corresponds to the capacity and dimensions of each campus.
3. *Completion of the service catalog that shall be offered in the libraries at each campus.* - Increase the service catalog, currently limited by restrictions of space, personnel, and technology.
4. *A new personnel recruitment plan for the libraries in the CETYS system.* - Offer new services, requiring professional librarians, and increase the current workforce.
5. *A professional development plan for the personnel of all libraries in the CETYS system.* - Current library personnel shall be updated and professionalized.
6. *Formulate learning results, and the corresponding assessment mechanisms to evaluate the extent of knowledge of the services offered by the system libraries among the students, and the degree to which they are being used.* - Development, application, and assessment of bibliometric elements capable of measuring the impact of the actions undertaken, to aid in decision-making processes.

The institution's library system is one of the support elements provided for faculty members, supplying the necessary information resources for cultural development, research, and diffusion. Thus, the library works in tandem with the institution and as a participant in action plans (initiatives) that indicate the path and objectives to follow. These initiatives are budget allocations that permit the achievement of the goals set in the *2020 Development Plan*, a vital document for the CETYS evolution process. The four initiatives that libraries have to develop and execute for the implementation of IC are:

- A. *Infrastructure consolidation*. - Build optimal and versatile spaces that satisfy the demands of the community; improve and extend existing ones.
- B. *Improvement of the archives*. - Increase the quantity and quality of the library archives, stressing the format diversity and time relevance that the community requires. This includes print, digital, and remote resources.
- C. *Recruitment of professional human resources*. - Increase the current workforce with the recruitment of library specialists, or specialists in other areas related to the institution's academic offerings.
- D. *Personnel professionalization and training*. - Promote the intellectual and professional development of librarians through support grants for graduate studies, library science training, or through updating courses.

It shall be noted that the actions reported by Lau [3] directly coincide with the initiatives of the libraries; thus, action 1 is linked to initiative A, actions 2 and 3 are linked to initiative B, and so forth. This shows that the work, actions, and initiatives are coordinated towards the achievement of one sole common objective.

3 Achievements

The achievements of EDEC, in relation to its objectives, were reported by Lau [5], who included the diagnosis and consultation processes for the entire CETYS community. Two main diagnostic actions can be highlighted: a population-based study of information literacy; and a bibliometric analysis to the research and dissemination of publications with a bibliography of all current academic plans.

“A study called “Demanda y competencias informativas de académicos (DECIA)” (Faculty information demand and competence) was carried out, comprising the entire part-time and full-time teaching staff, during the first semester of 2012. The results revealed that the faculty requires greater informational and technological demand and competence, and that the impact of information literacy promotion in the classroom is low” [3].

The bibliometric analysis reported that: “analysis of faculty papers, and academic programs, to evaluate their use of information, shows that a major part of the teaching staff, that have published papers, requires more updated information, and better scientific content. The results also revealed that faculty members required more consultation of information, and more paper publication” [3].

The results of all these studies guided the determination of action measures. One of these was to create a list of strategies for faculty members to follow. To that end, a list of 50 actions was compiled, and a committee was created for the design and implementation of an Information Literacy Development category.

Another of the undertaken actions was the development and implementation of a six-credit course, called *Information Management*, mandatory for all first-semester students. This course was jointly developed with the librarians and it has been taught by them since the second semester of 2015.

As part of the evaluation of the student's literacy, the institution, through its' Center for Academical Development and Improvement (CDMA), devised and applied a pilot instrument in 2012 [6] for 469 students, obtaining results that were later contrasted with subsequent tests. In particular, this test, conducted at the institution with the help of the librarians, was designed to follow up on these evaluations in subsequent years. There was also the application of two tests that looked for evidence of the students' degree of information literacy skills at a given moment during their period at CETYS. One of these tests was the *SAILS* test, applied in 2013 to students who had a certain degree of English language knowledge, from a sample of 300 students from different semesters. The second test, applied in 2015, used the *iSkills* assessment system, and also measured student information literacy. It was applied to 554 students with some degree of knowledge of the English language. The results of both tests will be discussed later [6].

Finally, within the taken actions, the elaboration and publication of a writing and style manual stand out. Similarly, seven articles have been published derived from the research, diagnosis, and implementation processes that have produced good results. These publications demonstrate the progress achieved in CETYS on the topic of IC. Said articles are cited in this paper and have been exhibited in fora of such standing as ECIL.

4 Objective of This Research

The goals set with the international accreditation indicate that, by 2020 [1], qualitative and quantitative progress made in each one of the determined initiatives and objectives shall be shown. This compels the institution to set strategies to assess the efficiency and efficacy of the undertaken actions. This raises the following three questions that involve the three main beneficiaries of these goals and that will be answered by the results:

1. How is the faculty of CETYS University reacting to the challenge of improving their information literacy?
2. How are CETYS University students reacting to the challenge of improving their information literacy?
3. How are librarians performing with regard to strategies to consolidate the development of information literacy?

5 Methodology

CETYS University developed a critical mass of reports and studies concerning the topic of this paper [3, 6, 7]. To benefit from these resources, this paper was developed with a qualitative research approach where institutional and public documents were used and organized to answer questions posed by researchers and scholars [5, 8]. Additionally, an ethnographical approach was used [5, 8] to contextualize the impact of

the actions undertaken on the subject of libraries in the current general learning environment of the institution. Given that one of the authors of this paper is currently occupying a strategic position in the library and is part of the team in charge of the development of the corresponding EDEC, that experience was essential for information compilation and contextualization.

Information compilation was done between September 2016 and March 2017 and the analysis of the reports and documents cited in this paper has allowed the determination of some conclusions that will be reported later. Additionally, the authors of this paper have access to non-published internal reports of the institution such as results of DECIA, the local assessment instrument, the *SAILS* test, and *iSkills* hard data and recommendations found in these documents helped in the generation of the conclusions. Once information compilation was finished, it was analyzed in terms of IC, in accordance with the guidelines set by the accreditation agencies, and the current education model of CETYS University. This comparison made the determination of the degree of information literacy of library users possible.

6 Results

Regarding DECIA results, data found in this study show that faculty training is needed to make better use of the library. Additionally, they need to develop their information literacy further and use information technologies more [9] to be promoters of IC in the classroom themselves. The bibliometric analysis evidenced the obsolescence of the resources used to elaborate the analyzed publications and the basic and complementary bibliography of some academic programs. The high academic importance placed on textbooks for certain subjects is evidenced here as well [4].

The list of capabilities to be developed in teachers is completed and the assigned categories are determined, allowing for a more systematic and organized development [10]. Also, the Information Management course is already being taught with 485 passing the course to date.

The results obtained in the tests that measure the students' information literacy also showed interesting data. As in the case of the *SAILS* test, that showed [6] that the students had low information research abilities. The *iSkills* method demonstrated that some topics, such as information research and evaluation, are below average and similar results were found with the local assessment instrument [3, 6].

Both finished manuals have imposed a systematic and standardized order in the constant elaboration of written papers in class (reports, essays, research papers), and they have contributed to the fulfillment of the compromise of educating students with the competences that modern society demands [11, 12]. The same has happened with the publications and congress participations. This resulted in documented progress made in the subject [4, 6, 7, 9, 10, 13] with respondents starting to implement the good habit of documenting and reporting all research.

Regarding the results obtained from library initiatives, and based solely in unpublished internal reports of the institution, it can be seen that once WASC accreditation was achieved in 2012, facility and service renovations were carried out in the Tijuana library and a community library was built in Ensenada. The only pending

subject is the renovation and expansion of the Mexicali library, that has been delayed due to natural disaster (earthquakes).

The acquisition, updating, and extension of print, digital, and remote information resources have been steadily achieved without any setbacks and constant advancement has continued. Only once, in 2015, were the 2020 goals revised downwards because they were estimated well above the current perspective. Today, they are adjusted to more realistic figures and goals.

There are two reference cases already (Mexicali and Tijuana), and the percentage of library science specialists present at the beginning of the WASC accreditation process (5%) increased, reaching 33% to date. There are currently eight library science professionals in the institution: three at the postgraduate level, and five at the undergraduate level. Thus, the librarian team at CETYS University as the most professional in the state of Baja California.

We have the permanent support of the administrators of the institution to attend training courses and the necessary economical resources to fund the professional education of four future librarians who are currently pursuing graduate library science studies.

7 What is Left to be Done? (Recommendations)

Regarding library improvements, the construction and existing facility remodeling agenda must continue because the ever-increasing demand for services and space, at times, render the existing facilities insufficient. On the other hand, communication with faculty members has to be consolidated in order to promote the use of the library and its services. Consequently, it is also necessary to make progress in the improvement of the library collection, searching for better resources. The library service catalog will be completed by the second semester of 2017, involving a wider, permanent and programmed variety of courses, workshops, and seminars. As part of this course catalog, courses on information literacy development, use of information and quotation management systems, the ethical use of information, and plagiarism prevention will be permanent offerings. It is suggested to reactivate the information literacy program for newcoming faculty members, to help them achieve an optimal performance of their teaching duties, and to be up to par with the implemented IC.

The completion and consolidation of new library positions, such as a collection system developer and a library service coordinator in Ensenada, shall be continued with the recruitment of professionals. Regarding professional training, advances are satisfactory, even though they are made in line with educational processes. Currently, graduate-level education is being supported and these processes will last for a few more years.

The use of scientific publications, such as monographs, has to be promoted against the use of obsolete textbooks. Faculty research and publications have to be encouraged. As has been previously suggested [9], teaching has to be more efficiently linked to the use of information technologies and electronic resources through the use of the library portal. Research and article publishing have to be promoted, with libraries contributing

horizontally. The holistic IC model has to be consolidated [1]. The drive shall not wane with time, it must keep going.

Finally, the institution shall develop its own assessment instrument, in Spanish, that allows it to permanently assess the advancement that each graduate shows in the subject of IC. Based on results, the processes shall be adjusted, and goal corrections shall be suggested. Table 1 summarizes all this:

Table 1. Past, ongoing and pending actions and initiatives.

Actions - initiatives	Facts	Ongoing	Pending
1. Personnel competence standardization. A. Infrastructure consolidation	<ul style="list-style-type: none"> • Building construction, extension demodulation • 50 strategies 	<ul style="list-style-type: none"> • Category creation • Creation institutional assessment tools 	<ul style="list-style-type: none"> • Reactivation of information literacy development courses for faculty members
2. Standardization of service capabilities B. Improvement of the archives	<ul style="list-style-type: none"> • Information management course • Style manual • Information literacy development courses • Article elaboration 	<ul style="list-style-type: none"> • Info. management course • Promotion of the use of style manuals • Future article publication 	<ul style="list-style-type: none"> • Implement collection development • Foster research
3. Service catalog B. Improvement of the archives	<ul style="list-style-type: none"> • DECIA diagnosis • Bibliometrics • Constant archive improvement 	<ul style="list-style-type: none"> • New construction plans • Increase electronic collections 	<ul style="list-style-type: none"> • Add new services • Foster the use of the library among faculty members • Goal achievement
4. Recruitment of new personnel C. Recruitment of professional human resources	<ul style="list-style-type: none"> • Three new professional librarians 	<ul style="list-style-type: none"> • A coordinator 	<ul style="list-style-type: none"> • Consolidate staff
5. Professional development D. Human resource professionalization and training	<ul style="list-style-type: none"> • Constant training and support to graduate programs 	<ul style="list-style-type: none"> • Graduate studies 	<ul style="list-style-type: none"> • Finish and continue
6. Assessment instruments	<ul style="list-style-type: none"> • Applied: SAILS, iSkills, institutional 	<ul style="list-style-type: none"> • In development: proprietary instrument 	<ul style="list-style-type: none"> • Finish and apply

8 Conclusions

To date, halfway between the 2010 and the 2020 goals, CETYS University constantly makes efforts to comply with and uphold the objectives. Once the necessary and pertinent adjustments have been done, the work has to keep advancing. The institution is immersed in a change process and librarians are part of this process. The results obtained from the application of *SAILS*, *iSkills*, and the institutional instrument show data that reveal deficiencies that can be corrected through work and pertinent actions. These deficiencies include the low efficiency in information research evidenced by the *SAILS* test and the institutional assessment instrument where students showed acceptable information research skills, but showed deficiencies in information evaluation. These aspects showed improvement upon application of the *iSkills* system, and in comparison with the institutional instrument.

Regarding the information management course, still in existence, 485 students trained in information literacy have been enrolled in two semesters. Thus, the proposal of a strategy, and the design of a (quantitative) instrument to assess their learning, and the degree that information literacy has favorably influenced (qualitative) it, are in order. The degree of IC will be measured at the moment of graduation.

Regarding infrastructure, advancements in space demand, and adaptation of existing spaces to the needs of new technologies and services offered in the libraries have been minimal. In addition to this, there is an increasing demand for space, due to an increase in the student population mainly at the senior secondary and undergraduate levels that has caused the oversaturation of the existing spaces and insufficiency in some moments of the day.

The institutional instrument for assessment of information literacy, and thus the success of IC in the institution, has to be reevaluated and restructured. It will be elaborated in Spanish, in order to avoid the uncertainty that arises from not knowing whether results obtained with the *SAILS* test and the *iSkills* method are partly due to imperfect knowledge of the English language or if they truly show a lack of information literacy [6].

The role of the library and the professional librarian is essential throughout this process of IC achievement. Consequently, to achieve the goals for 2020, and implement them, librarians have to remain motivated as do the academic and student communities so that they demand better services and the support for their professionalization and training can continue.

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