

Publishing output in the field of didactics of the Universidad Estatal a Distancia de Costa Rica: A diagnosis on the basis of the content model of industry

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ABSTRACT

This paper analyzes the publishing output in the field of education at the *Universidad Estatal a Distancia de Costa Rica* (UNED), a public, distance-learning institution of higher education. Researchers examined the Written Didactic Materials Production Program (PROMADE by its Spanish-language acronym) using a methodology based on a digital convergence model. *Content industries* include all the output targeted for new information and communications technologies and digital convergence for the purpose of enhancing social inclusion. They also include the interactivity and mobility made possible by mobile phones, portable computers, tablets and other electronic devices.

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RESUMEN

La producción editorial didáctica de la Universidad Estatal a Distancia de Costa Rica: un diagnóstico a partir del modelo de industrias de contenidos

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En este artículo se analiza la producción editorial didáctica de la Universidad Estatal a Distancia de Costa Rica (UNED), institución pública que imparte enseñanza a nivel superior en la modalidad a distancia. Se estudia al Programa de Producción de Material Didáctico Escrito (PROMADE) a partir de una metodología basada en el modelo de industria de contenidos para la convergencia digital. Las *industrias de contenidos* comprenden toda la producción pensada para las nuevas tecnologías de la información y comunicación, la convergencia digital y plantean la inclusión social. Incluyen la interactividad y movilidad posibilitadas por celulares, computadoras portátiles, *tablets*, entre otros dispositivos electrónicos.

Palabras clave: Producción didáctica; Edición universitaria; Industrias de contenidos; Costa Rica.

THE CASE STUDY

The Distance University of Costa Rica (UNED) was created in 1977 on the basis of the educational models of the UNED of Spain and the Open University of Great Britain, in order to serve geographically dispersed populations who labor under significant time constraints.

The distance education model of the UNED entails three variables: the students, the teacher and the contents of knowledge. The student is the actor and main component; the teacher unfolds the individual figure of the traditional teacher in a subset of functions performed by various persons, such as academic editors and authors of the modular didactic units; and the contents mediate the relationship between student and the knowledge, which is why it

emphasizes the way they get in touch with the student (*Modelo Pedagógico...*, 2007: 28).

The UNED has four faculties: Exact and Natural Sciences, Business Administration; Pedagogy, and Social Sciences and Humanities. It also has a postgraduate studies department and forty-five university centers distributed throughout the country that are in charge of teaching tasks. The university centers are the gathering point for students enrolled in the distance learning methodology, and where administrative tasks are performed and other student services provided.

The teaching practice in this institution is oriented to facilitating searches, and processing and assimilation of new concepts by the student. According to current trends in distance learning, the student-teacher interaction is characterized by the transformations described below:

- a) A change from the “one professor to many students” scheme to a scheme of “one student to many professors”; in which the professors serve as diverse and dispersed sources of knowledge and orientation.
- b) An intensification of interdisciplinary work and teamwork in the functions of the distance learning teacher, which entails academic planning, design and production of modular didactic units, facilitation of learning process, and evaluation and self-regulation of learning.
- c) Effective coordination of the actors in charge of the diverse actions associated with the design and production of modular didactic units, supported by pedagogical experts and epistemological principles.

The Modular Didactics Units (MDU), defined as “the basic print materials that develop the fundamental concepts of each course and whose didactic elements are oriented to helping the student learn to learn” (Lobo Solera and Fallas Araya, 2008: 63. Italics are in the original), was the watershed for the creation in May 1977 of the first UNED Office of Publications and in 1979 of the Publishing Department of the National State Distance University of Costa Rica (EUNED), oriented toward the publication of institutional text books. For 35 years, the EUNED has managed the editorial line of the institution to which it belongs and also publishes its own brand of books. Moreover, it is one of four university publishing concerns in the country.

The production of didactic materials

The production of didactic materials in UNED can be traced to 1977, when text books were published for five basic courses. During this early phase (August 1977- February 1978) the first editorial regulatory documents were issued by the university. These regulations remained in place for the next two decades. These documents include the Didactic Units Drafting Contract, Regulations for Selecting Authors and the Methodological Instruction Manual, the first guide for authors in the institutions.

In August 1979 the Academic Production Office, later renamed the Didactic Materials Production Office, was created. This office belongs to the Academic Vice-Rector's Office, which is in charge of planning, implementing, articulating and evaluating the tasks associated with the processes of teaching and learning in the UNED.¹

Currently, DPMD groups five programs: 1) The Written Didactic Material Production Program (PROMADE); 2) Audiovisual Didactic Material Production Program; 3) Electronic Multimedia Production Program; 4) Videoconference and Audiogram Program; and 5) Online Learning Program. These programs justify the actions of the 2011-2015 work program, which contemplates six lines of actions:

- 1) Creation of an Editorial Board of Didactic Materials;
- 2) Project Management System;
- 3) Reorganization;
- 4) About the PROMADE-Editorial Direction Office Relationship;
- 5) Integrated Platforms for Producing and Distribution of Online Contents, and
- 6) Educational Radio and Television (Muiños Gual, 2011: 1-10).

Of the five programs ascribed to the DPMD we will focus on Written Didactic Material Production Program (PROMADE), whose output bears the EUNED editorial seal, in addition to the works it publishes, and magazines and other publications which will not be discussed in this paper.

1 Universidad Estatal a Distancia de Costa Rica, <http://estatico.uned.ac.cr/academica/objetivos.shtml>

The Written Didactic Material Production Program (PROMADE) has a coordinator and twenty professional academic editors. These professionals cover the academic offerings of the four UNED faculties and the National Distance Learning College (CONED) that offers high school studies. The academic editors² oversee the quality of the materials by means of an appropriate academic mediation that encourages autonomous, self-regulated and -directed learning. Since its foundation in UNED, PROMADE has been a hub for the production of those texts that are the main object of didactic consumption by the university students. Because of their quality, relevance and actuality, the didactic contents of the materials produced by PROMADE are in high demand in the public and private institutions of middle and higher learning in the country.

The work of PROMADE operates on the basis of:

[T]he academic publishing, above all, fulfills the function of incubators and creators of work that ultimately shall reach the hands of students. The seed of all didactic units lies in the curricular design, the basic plan that guides the production of the material (whether a book, a manual, anthology or study guide) and which must be met in all aspects of content, methodology, quality and depth. The academic editors take this work plan as the starting point and accompany the author during the process of transforming the design of the academic work. (“Presentación del Programa...”, 2012)

In contrast to the other materials for didactic purposes published by university publishing departments in Latin America and the rest of the world, the production process of the Modular Didactic Unit evidences a set of complex associations between the academy, evaluation diligences and editorial tasks. The process initiates with the creation of the academic major by the Office of the Academic Vice Rector. Then the curricular design is executed in the Curricular Support and Learning Evaluation Program (PACE), which works on

- 2 The academic editors are the coordinators of the production teams and are in charge of ensuring compliance of the didactic mediation in every dimension of the editorial process. The academic editors are the first readers and critics of the work. They propose changes in terms of structure, expanding or narrowing the topics and contents, inclusion of complementary activities and self-evaluations, resources for calling the attention of students, reading breaks, and metaphors and visual iconography. The final objective is the creation of a didactic reading environment with tools to facilitate self-regulated learning of students who study in the distance learning program. Once the preliminary draft is ready, the editor takes it through the evaluation and validation process, which entails incorporation of corrections and winding up all materials to be included in the final version. Only when the work is ready to be placed on the book shelves of bookstores and/or distributed by the respective institutional office has the editor concluded his duties.

it with a specialist and the faculty.³ When it is approved and delivered to the class professor, he or she goes to PROMADE with a Production Application.⁴

In PROMADE, the Coordination Office selects an academic editor, who brings together the work team to introduce the process and instructs the authors to draft the Global Plan (proposal of contents regarding the curricular design of a course, including the compliance program). On the basis of this review and approval of the Global Plan, the authors begin to draft the text. After they deliver every chapter, the academic editor asks the other team members to make observations of the draft in accord with their respective areas of expertise. This feedback is the pillar of the process, in that for each chapter the specialist, the titular professor, the program heads and academic editor deliver observations that the authors should contemplate and/or incorporate into subsequent drafts.

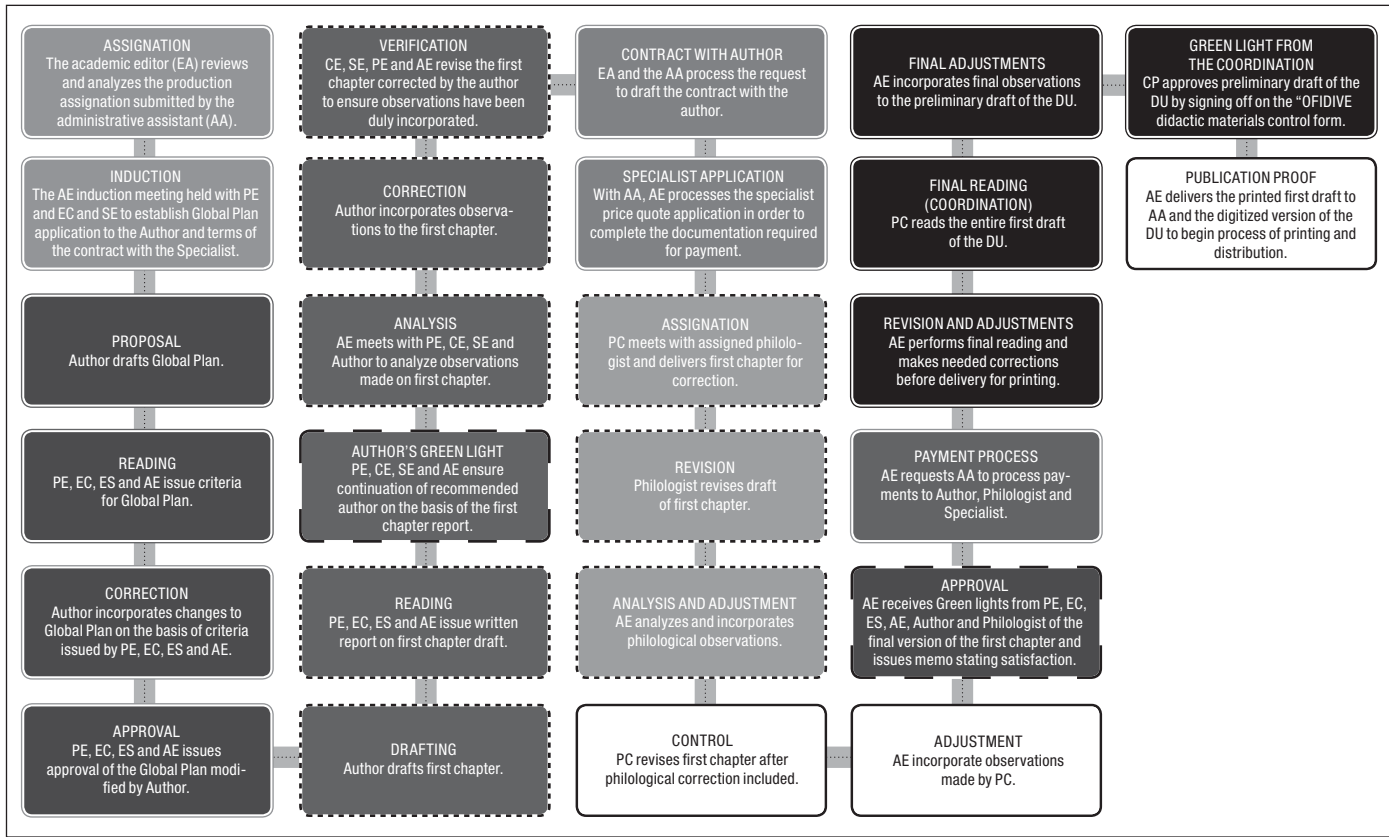
After this review, the entire team of authors and academic editors continue to perfect each chapter, resubmitting the improved drafts until the objectives traced out by the Global Plan are met. After this, the style correction is performed by a member of the PROMADE philology team. The Coordination gives its approval to this preliminary version⁵ is distributed for validation to the academic and student community. Once the preliminary version is validated, the layout and design of the Modular Didactic Unit is executed. The process concludes with the official delivery of the new didactic unit to the university community. The Academic Production Process performed in PROMADE is done in accord with the following flowchart and the “Guidelines for Production of Didactic Materials” proposed in August 2011.⁶

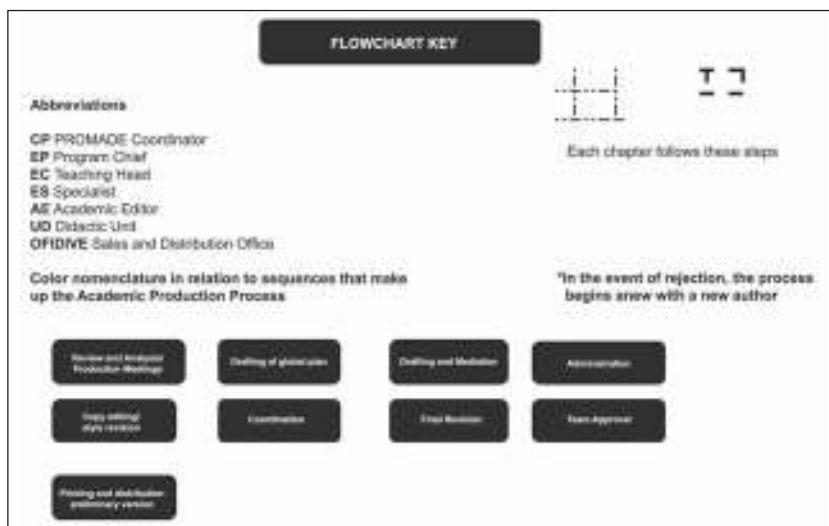
3 PACE is the agency that provides systematic guidance in matters of curricula and evaluation of learning and extension programs in both undergrad and postgrad programs of UNED. Among its duties, we find: “evaluation of the use, management and relevance of the didactic means applied in the teaching and learning processes of the university” (Programa de Apoyo..., 2012).

4 The Production Application submitted to PROMADE is a format implemented 35 years ago, over which time it has been progressively polished. It now contains eight parts: data on the material requested; data of authors; data of specialists (only for didactic units); teaching data; general information of the programs that use the material; application authorization data; and data needed for internal uses of PROMADE. According to the Program Coordinator, the Production Application “is for a better organization of work and to see how our production behaves in general” (Gustavo Hernández Castro, interviewed by author, July 2012, San José de Costa Rica).

5 A preliminary version of a Modular Didactic Unit is a draft done in Word. This draft is subjected to the validation process. For this purpose only enough copies are made for use in the four-month course. It is sent to the Office of Distribution and Sales (OFIDIVE) of the university in PDF for printing. It is not for sale.

6 In 2011, the Coordinator of the Written Didactic Materials Program issued the: “Guidelines for Producing Written Didactic Materials,” which gathers all of the recommendations established for producing written didactic materials. In order to facilitate the identification of the area of application, they were organized in accord with the type of didactic materials to which they refer.





This instrument is complemented by the “Description of the Academic Production Process of PROMADE,” which synthesizes the number and sequences of activities, steps, duties, business days, observations and documentations entailed in the process. Finally, it is emphasized that 96 is the average number of business days needed to publish the first chapter of a Modular Didactic Unit; 55 is the number of business days to produce each chapter after the second chapter; 24 is the number of steps that demand time in business days and 17 months, or 371 business days, is the estimated time of production for a Modular Didactic Unit of six chapters or 360 pages.

In Latin America there are very few university publishing departments or programs that have standardized editorial processes beyond the adoption of simply editorial policies. PROMADE is one of these few exceptions. During the last stage of establishment of the program coordination, the Didactic Units Production Systematization and Standardization Commission was established. Between mid-2011 and April 2012, this commission produced the following instruments regarding the reception of documents, author and specialists contracts, and payment paperwork, among others:⁷

- Hiring of authors and reception of associated documents.
- Document reception procedures and specialist payment processing.
- Data entry and registration of active production (RPA).

7 These documents were updated in April 2013, but continue to be modified.

- Delivery of Academic Materials to the Office of Distribution and Sales.⁸
- Drafting and update of the positions for PROMADE. Two are formats that sustain this practice: the functional questionnaires of the jobs in PROMADE and the descriptive systemization sheet of the job positions in PROMADE.
- Management of Classified Print Information. The preparation of this material is based on the *General Internal Control Act* (Law No. 8292); *the Manual of general standards for public sector auditing* (M-2-2006-CO-DFOE); *the Manual for the performance of audits in agencies and organs subject to oversight of the General Controller of the Republic* (approved by the UNED University Board on May 16, 1986) and the *Internal audit regulations* (approved by the UNED University Board on October 30, 1986).

Since the PROMADE is an office of the Didactic Materials Production Directorate (DPMD), it is also subject to the general dispositions of this dependency, which entails its coordinator serving on the Commission of Research of the Didactic Materials Production Directorate (COMI-DPMD). This commission, created in June 2011 is charged with generating research proposals associated with its functions as a Directorate and linked to the work of its five programs. These proposals must be situated in some of the lines of research defined by the Research Vice-Rector of the University. The importance of the production of Modular Didactic Units (MDU) as instruments of dissemination of knowledge with the EUNED seal was highlighted in *2005-2011 Final Management Report* of the Publishing Directorate. From 2005 to 2010, the executive director reported that, 2,534 Modular Didactic Units (titles) were produced, which is equal to 1,166,431 printings and 592,790,717 million pages. The printing of this body of material was achieved at a cost of 2,102,742,028.18 colons, accounting for 69.35% of the total income of EUNED. The MDU accounted for 83.14 % of the total editorial output catalogued as “books” during this period.⁹ The aforementioned report also stated that books were the most expensive productions at 9.66 colons per page, while

8 In August 1977, UNED the Operations Directorate, which eventually became the Office of Distribution and Sales (OFIDIVE) of the university. This office pursues two general objects: 1) efficiently meet schedule of distribution to university centers over the entire year; 2) generate revenue through the sale of books and audiovisual material. The office distributes materials to the students enrolled in the university. Once students have paid the enrollment or reenrollment fee in the central office or university center nearest their home or work, they receive their course materials (didactic units, multimedia, audiovisuals, etc.)

9 The editorial production of UNED is comprised of: Books (Modular Didactic Units, catalogue books, other books) and other materials (student material, journals and other printed materials).

magazines cost of 8.03 colons per page. Meanwhile, Modular Didactic Units cost 3.55 per page (Muiños Gual, 2011: 4, 14).

Moreover, the *Report on the Work of the Didactic Materials Production Directorate* for the period of July 2011 to July 2012 and *Action Proposals to 2015* (Román, 2012: 6) highlight the fact that PROMADE is still the center of attention of didactic production in UNED; since to June 2013, the number of productions requested through this program by schools in contrast to the remaining four was that which is shown in *Table 1*.

Table 1. Number of productions requested by school to each of the five didactic material production programs.

School	PROMADE	Online learning program	Audiovisual material production program (production hours)	Electronic multimedia production program	Videoconference and videography program	Total per school
Business Admin School	82	49	0.0	0	21	152.0
Educational Science School	24	258	9.5	8	17	316.5
School of Exact and Natural Science	130	439	124	14	27	734
School of Social Sciences And Humanities	79	354	14.8	11	42	500.8
Total per program	365 [sic]	1 100	148	33	107	1 753

Since 2009, the DPMD issues a statistical analysis of the supply of didactic materials supporting the Academic Program (PAC), allowing one to predict the demand for didactic materials in a given term or school year. The aspects taken into account are: 1) Academic offerings of the PAC in course; 2) Registry of Active Productions in the Registry of Active Productions Program (RPA) for the National Distance Education College (CONED), and 3) Registry of productions in the RPA for the Postgraduate Studies Systems.

After 2012, a new tool was added to help more efficiently control the didactic materials ordered by the UNED School and the Faculty. This tool is the Didactic Materials Production Sheet. The Sheet analyzes the orders submitted by more than 90 heads of faculty offices of the institution using Excel spreadsheets. The program consists of two parts: the first shows graphs of each program of the DPMD, and the second shows a line that represents all of the services demanded by a specific course. The Faculty Directors, the DPMD Director, and the heads of the five programs of the Academic Vice-Rector's Office all have access to this tool. The Sheet, however, does not gather everything each program does, because they are not integrated into the SEP, CONED, the Extended Learning Directorate, Language Center, University Agenda and Youth Agenda, which are offices that also submit requests to the Directorate.

In the section of PROMADE of the July 2011-July 2012 *Report on the Work of the Didactic Materials Production Directorate and Action Proposals to 2015* mentions that as of June 2012 the Program was working to conclude the following works:

- *The Manual of Administrative Procedures* in accord with the requirements of Internal Control and International Quality Standards (ISO).
- *Module of the Publication Standards Manual (style manual) and Module on Typography and Ortho-typography*, the latter of which is currently in the validation and consultation stage in the university community (Román González, 2012: 6).

METHODOLOGY

University publishing can be thought of as a cultural industry, cultural field, creative industry and content industry. In this paper, we discuss university publishing as a content industry. The content industries comprise productions borne of new information and communications technologies and digital convergences, while asserting the values of social inclusion. That is, they entail new business models, such as multimedia conglomerates¹⁰, new tech-

10 Multimedia conglomerates are the result of mergers of and strategic alliances among companies headquartered in diverse countries and devoted to cultural products, information and entertainment. One of the fundamental features of these media groups is that they went from being instruments of the State and capitalist groups to imposing their own political and economic agenda. The interested reader can consult Guerra González (2009).

nological structures, new languages for these digital media, new ways of interacting with diverse audiences and new professionals called new cultural intermediaries, who trained to attend to these new demands.¹¹

The content industries are planned and developed without regard to time, space or geographic location. They include interactivity and mobility made possible by mobile telephony, portable computers and tablets, etc. Said subset of actions occurs in the editorial field with the publication of texts in specialized websites, the concentration via email of copyright sales, diversified formats, such as eBook, ePub, and on demand printing and marketing in social networks. The communication and journalism expert Cosette Castro has stated: “that which marks the defense of this category is the possibility of citizen participation, and the immense amount of information that the inhabitants of the orb may receive on a daily basis (other than what they receive in print and audiovisual media)” (Castro, 2008: 15-18).

The content industry category is worked in detailed by specialists in Economy of Culture, a sector of the economy devoted to defining policies and strategies for products that have both economic potential and symbolic value (messages, identity and values). Economy of Culture studies the generation of intellectual property and copyright, which are fundamental elements in the business of books and subsidiary rights.¹² Worldwide, it is a core discipline in the Management and Development of Culture. It has been studied and applied in Latin America by Xavier Huamayave, Ernesto Piedras Feria,

11 The new socio-economic conditions emerging in the last decade of the twentieth century compelled a shift in cultural processes such as publishing within the context of a market, requiring analysis of new concepts and explicative frameworks. At the end of the 1990s, American researcher Mike Featherstone reexamines Bourdian's category of cultural intermediaries, using the prefix “neo,” to describe the subset of new professions linked to symbolic production in the late capitalist era and the context of the social transformations associated with the crisis in the Welfare State, new political movements, and the idea of the market as the sole regulator of daily life, and the emergence of what authors such as Chilean Oscar McClure and the Spaniard Ludolfo call the new middle classes.

The cultural are agents that make information circulate rapidly between areas of culture that were once closed off (cultural fields). In a society with a propensity for consuming symbolic merchandise, where taste and discriminating preference are the order of the day, the capital of knowledge or culture enables groups of persons to understand and classify the new goods appropriately and show how they are used to wide array of audiences and consumers (Featherstone, 2002: 55-56). In the spectrum of commercial publishing, these new cultural intermediaries are individuals and institutions that condition and direct the supply of publications to be consumed. They are the emerging actors in the chain of book production, such as literary agents, translators, content digitization companies, digital libraries, graphic artists, institutional buyers, etc.

12 Subsidiary rights accrue from the sale of the contents and even the personages of cultural products to filmmakers, publishers of popular books, book clubs, foreign editions and manufacturer of such things as tee-shirts, posters, mugs and greeting cards (Cole, 2003: 113).

Néstor García Canclini and Ana Carla Fonseca. The analysis of the economic dimensions of culture entails two contradictory points of view. The first is linked to the market and holds that despite their particularities, they share many features with industries in other economic sectors and should be treated similarly. The second perspective, aligned with the defense of public management of art and culture, assumes that despite its economic dimensions this sector cannot be treated like any other, because it has social and human repercussions that should take precedence over pecuniary considerations.

The view that culture is the heritage of humanity resides in this conception and is in line with the tasks of the public university.¹³ For content industries that exist in the digital convergence, cultural economists employ the following indicators: 1. Knowledge; 2. Immediacy; 3. Digitalization; 4. Virtualization; 5. Disintermediation; 6. Network interconnection; 7. Innovation and 8. New roles of actors.

By using this methodology, the following questions are answered:

- a) What is the impact of the knowledge produced and/or disseminated in UNED in view of its originality, target audience, type (academic or scientific), nature (public or private), etc.?
- b) Which editorial process in UNED offers the value of immediacy?
- c) How is digitalization assumed in the case of selected study with regard to hardware, software, specialized human resources, types of digital publications, presence of retro/digitalization, diversification of contents and rights of use in diverse media?

The methodology employed is qualitative in nature and reveals the institutional dynamics of the editorial program that despite being educational in nature nonetheless is influenced by what occurs in the global publishing system. In this way, we shall describe the value to be qualified, and details of how it is assumed in PROMADE as follows:

Knowledge Indicator

According to María Alejandra Tejada Gómez, some of the criteria used to quantify the impact of knowledge are:

13 Data base of the Asociación de Gestores y Técnicos Culturales de la Comunidad de Madrid, <http://www.agetec.org/ageteca/economia.htm>

- Is the knowledge is produced or reproduced?
- For whom is the knowledge produced?
- Is the knowledge academic or scientific?
- Public or private?
- Local or national?
- Regional or global?
- Is the knowledge democratized (Open access) or restricted (copyright)? (Tejeda Gómez, 2009: 305)

According to these criteria it can be said that the knowledge generated in PROMADE under the EUNED seal is “original,” since it is developed at the request of an academic department in accord with the needs to develop curriculum. Moreover, its validity and relevance for students enrolled in the State Distance University is corroborated institutionally by means of two assessment instruments. Using the first of these, PROMADE assesses students’ use of the didactic print material in order to improve the didactic proposals in accord with the pedagogical model of the UNED. The second assessment has the tutor assess the written didactic materials. The information obtained is confidential and for the exclusive use of the institution.

Owing to copyright restrictions, less than 5% of the material produced by PROMADE is available free online through the platform of didactic resources (<http://reccdidacticos.uned.ac.cr/>). The sale price to the public of the Modular Didactic Units, however, is only about 10,000 colons, or approximately 20 USD¹⁴, which encourages readers to purchase them, thereby promoting the democratization of knowledge.

The sale price of the Modular Didactic Units is set on the basis of costs edition, printing, distribution and copyright. On the basis of these factors a multiple is established that provides a profit of 1.75%, which is practically negligible. The outlays made by UNED are covered by state subsidy.

Immediacy Indicator

In the traditional economy, a new invention can ensure a revenue stream for decades. In the new economy, immediacy is a fundamental property that

14 The discount prices for a didactic text for higher education published by a commercial publishing house is about 17,000 colons, or 34 USD.

generates competence and supply of new services in all sectors, whether in the field of communication or medicine. As the internet has modified the relationships of persons and companies by facilitating the immediate exchange of knowledge and services, obsolescence is the variable to be avoided. In the field of book publishing for the educational market, such as the Modular Didactic Units of PROMADE, the drafting and constant updating of books is an ongoing effort to prevent obsolete materials from reaching students' hands. For this purpose, control tools have been designed such as the previously discussed Didactic Materials Production Sheet. These are used with statistical analytic software to manage academic editorial production.

In this line of thought, it is crucial to strengthen the Didactic Resources Portal in order to potentiate immediacy of the academic contents of the Program. It becomes indispensable to keep the contents of said online platform up to date so that they can be consulted easily by both students of the UNED and the public not affiliated with the university. The initiative has not yet begun to materialize, because the Program's publishing contract still does not provide for dissemination of partial or complete works in diverse supports. *The July 2011-July 2012 Report on the Work of the Didactic Materials Production Directorate and Action Proposals to 2015* sets the following objective:

The existing contractual paradigm with authors at UNED must be changed. Currently there is a single contract format for commissioning work that limits PROMADE and the Academy from receiving contents written by authors in accord with work schedules and from using the contents written by authors. For example, an author who writes four chapters of a total of six and then decides not to finish the remaining two currently bars PROMADE from using the four existing chapters even though they are paid for in full. To address such problem, the following contract options should be employed in addition to the currently existing commission contracts: a) Content acquisition contracts, which currently exist; and b) Joint authorship contracts.

Digitalization Indicator

Previously, analogical, physically supported information required people to move to conference rooms. It required the use of cash and checks. Information was broadcast over analogue television and radio signals, and analogue telephone line. It also required the use of standard mail services to send letters and hard copies of files, etc. In the new economy, text, image and audio files are digital. Meetings are held virtually. Checks and cash have been substituted by credit cards and online payment services such as PayPal.

The field of publishing now has two types of digital publications: the first group entails reproduction of print material in image format. This is done using programs such as Adobe Acrobat (PDF files), which allow editors and booksellers to offer the buyers a product that is identical to the original hard copy book or magazine on an electronic support such as laptop screen or tablet.

This system offers the advantage of retro-digitalization, a process that uses an optical scanner to digitize the hard copy original and thereby preserve it partially or completely for subsequent commercial sale or dissemination through diverse digital channels.

The second group of publications arises from the new functions of emerging software and reading supports. This group includes materials that can be viewed on portable devices such as electronic books. The Didactic Materials Portal of the Didactic Materials Production Directorate exemplifies the effort to release digitized materials under the UNED stamp. This system publishes texts in PDF, SWF and EPub formats. To march 2014, this portal hosts 129 documents dealing with topics of 13 disciplines. It also hosts one preliminary version of a Modular Didactic Unit and nine reference books, in addition to the production of the other four DPMD programs.

Digitization allows low demand printing of magazines, books and institutional paperwork, which reduces overhead. The *2005-2011 Final Management Report of the Publishing Directorate* (Muiños Gual, 2011: 27) highlights the comparative advantages of low-demand digital publishing over offset printing as follows:

- a) This allows changes to be made in contents from one run to another without incurring costs of materials, thereby enhancing ongoing efforts to test didactic materials and keep them up to date.
- b) This prevents the accumulation of inventory and lowers the risk of losses due to obsolescence.
- c) Online digital printing technologies allow printing, pagination, folding and binding of books and pamphlets to be performed from a single workstation.
- d) It is an environmentally clean, friendly technology.

During the period of 2005 to 2010, UNED invested 371, 133, 948.00 colons (approximately USD 743, 000.00) in the acquisition of digital printing technologies. After a period of two years of operation in which the efficiency

of the equipment acquired was analyzed, the following elements were put into place: 1) a sustainable didactic materials production strategy that takes into account five variables: print run, use of color, production capacity, number of pages and service life of the materials; and 2) institutional production policies (Muiños Gual, 2011: 30-31). This investment also allows UNED to commercialize the services of its print shop to outside parties.

For the period 2011-2014, EUNED proposed an investment plan in this area within the framework of the loan¹⁵ extended by the Inter-American Development Bank (IDB) to the National Board of Rectors (CONARE) and the member universities. In accord with projections of its general director, the economic injection of the black and white printing, scanners for prepress and publishing, management and production software, and photographic camera would place the UNED and its print shop at the forefront of publishing in Costa Rica (Muiños Gual, 2011: 61).

For its part, DPMD made renewal of technological equipment a priority in its *July 2011-July 2012 Report on the Work of the Didactic Materials Production Directorate and Action Proposals to 2015*.

In the last five years, PROMADE has been allocated second hand equipment from PEM and PAL. The donation application was filed on February 16, 2012 with the Academic and Executive Vice Rectories. With this change, the academy would be strengthened by: 1) online interaction with publishing programs that allow real-time communication with content authors; 2) upgrading of online didactic materials without need of incurring overhead of hardcopy printing.

The renewal of equipment has also allowed PROMADE, DPMD and the institution to launch a specialized digital magazine that serve as a meeting point and systemization of more than 30 years of experience in the production of didactic materials. Using these spaces for reflection, today universities around the world are strengthening their academic publishing initiatives. (Román González, 2012: 6)

The publishing of eBooks is still pending because the university has not resolved certain legal hurdles regarding copyright. Because the project was ap-

15 In 2009 CONARE presented the Higher Education Improvement Project to members of the executive cabinet. The project contemplates and agreement with the World Bank to secure financing for 200 million USD to be distributed equally among four participating universities and to support the following areas: 1) expansion of student enrollment and classroom capacity in high-demand majors; 2) reinforcing the scientific-technological capacities and expanding physical infrastructure, equipment, grants to professors and expansion of student services, including residences. These goals are directly associated with the National State University Higher Education Plan for 2011-2015.

proved by the University Board in 2011; however, training of UNED, PROMADE and OFIDIVE personnel in this area was begun in August 2012 through the auspices of Latin American companies such as Versal headquartered in Mexico.

Virtualization Indicator

Virtualization allows the virtual extension of the institution for the purpose of dissemination, promotion and commercialization of its products and services. This facet is contemplated by PROMADE and the EUNED in the figure of the virtual book store which is designing the internet sales area of OFIDIVE. Originally scheduled to launch sales of hard copy books in the second half of 2013 and expand into sales of eBooks in 2015, by May 2014 the launch of both modalities was still pending because of unresolved legal and technological problems.

Disintermediation Indicator

Several intermediation functions in the digital network have disappeared. The main break is in the area of distribution, which was traditionally controlled by large companies (gatekeepers¹⁶) that for many sectors created a bottleneck between products and the market. With the development of the internet, new, smaller companies and institutions leap over traditional distribution channels. That which was at first a strategic sales advantage for large companies is now their main liability, because they are forced to keep up diverse, costly distribution channels that no longer provide control of the market. In contrast, new companies emerging in the internet age are able to distribute without fixed structures and at low cost (Casani, Rodríguez-Pomeda and Sánchez, 2012: 56).

The disintermediation of PROMADE materials is limited. It continues to distribute its materials through traditional channels such as physical libraries. In addition to the distribution among enrolled students, OFIDIVE distributes in its own bookstores run by the Library Supervision Office, and administration bookshops of the university centers and private commercial bookstores. This work is performed by the Sales Promoter.

OFIDIVE runs the following our bookstores: Mercedes de Montes de Oca, San José Centro, Heredia Centro and Cartago Centro. There is a fifth book-

16 An analysis of university editors in the role of guardians of knowledge can be found in McGinty (1999).

store that operates under the terms of an agreement with the Ministry of Public Works and Transportation. This store sells the *Driver's Manual*, *the Public Transportation Manual*, and *the Driver's Manual in CD* and other books from the catalogue. These establishments are staffed by a manager and two employees. The manager reports directly to the supervisor of Bookstores by means of a billing system that is updated on a daily basis.

It is important to point out that the university bookstores not only sell books and magazines published by UNED, but also books and magazines published by other universities and publishers. Owing to the exponential growth of its collection,¹⁷ the space devoted to exhibition of external materials has been reduced. Currently, these bookstores offer external books on a consignment basis, provided they have good turnover rates.

The second type, i.e., administration bookstores in university centers, consist of one in Cañas (Guanacaste) and another in Alajuela. These bookstore are equipped with administrative personnel and exhibition space of 20 x 25 m. They sell books exclusively on a consignment basis and receive management advice from OFDIVE through the Bookstore Management Office. In the medium term, this strategy aims to implement the regionalization plan of the university editorial collection.

One of the obstacles OFDIVE has encountered in the past with regard to commercialization of its materials is the legal apparatus of UNED, which does not allow credit to be extended to interested buyers. To attenuate this snag, bulk sales to and purchases from foreign parties are transacted through the State Distance University Foundation for Development and Promotion of Distance Learning (FUNDEPREDI), whose mission is to “facilitate the management and search for funding to promote the development of research, teaching, extended learning and supply of services associated with UNED activities.”¹⁸ The paperwork entailed in purchasing and sending packages abroad through the intermediation of the Foundation¹⁹ requires about 15 business days. Packages are sent by the national postal service of

17 The catalogue of EUNED bookstores contains active 1,180 titles.

18 Fundación de la Universidad Estatal a Distancia para el Desarrollo y Promoción de la Educación a Distancia, <http://fundepredi.org/Quienes-Somos.html>

19 In addition to UNED, three other Costa Rican State universities sell published materials through the auspices of their respective foundations. The National University operates the Foundation for Academic Development (FUNDANA); the UCR operates the Costa Rican Research Foundation (FUNDEVVI) and the Costa Rican Technological Institute runs the Technological Foundation of Costa Rica (FUNDATEC).

Costa Rica or DHL. Individual purchases by foreign customers are handled immediately through the company Mall506,²⁰ a Costa Rican consortium that rents virtual spaces to third parties for commercial, promotional and other activities.

For wholesale transactions within Costa Rica, OFIDIVE works in conjunction with the University Treasury Office's Credit and Collection Unit, which is authorized to extend credit for and collect monies from the sale of books. The line of credit is adjusted to the needs of the client and can be authorized for terms of 8, 15 and 30 days. OFIDIVE uses three payment modalities: cash, credit and consignment. Despite this apparent flexibility, the Bookstore Supervisor points out that: "...the discount cap in accord with statute is 30%. Larger discounts can be made, but these must be requested at a level above OFIDIVE, such as the Vice Rector's Office."²¹

The rules in UNED governing the commercialization of internally and externally published materials are provided in the *Regulations for the Sale of Materials Produced or Acquired by UNED*, which was approved by the University Board on May 31, 2011. Article Ten of this regulation referring to discounts was modified on July 11, 2003. These regulation includes *the Procedures for Credit and Collection of Materials Produced or Acquired by UNED* (June 17, 2000), which is implemented by the Credit and Collections Unit of the University Treasury Office.

OFIDIVE works on the basis of a five-year plan and a budget allocated annually in accord with the needs detected in its diverse areas. It does not have a marketing department. It is tasked with the job of purchasing books requested by the Academy, which because of time or intellectual resource constraints cannot be produced by PROMADE.

Indicators appearing in the *2005-2011 Term Management Report of the Editorial Directorate* (Muñíos Gual, 2011: 19) show that from 2007 to 2008 the purchase of books increased from 322 608 948.21 colones to 454 953 067.44 colons, respectively; while in 2009 forty external books and only eleven Modular Didactic Units were added to the catalogue. OFIDIVE observes that three quarters of EUNED's time and that of its functionaries are devoted to supplying the demand of the student population. The movement of cata-

20 Mall506, <http://www.mall506.com/uned/index.php>

21 Author interview with Erick Escalante in August 2012, San José de Costa Rica.

logue text books in correlation with the Modular Didactic Units is exclusively 25%. The MDUs in Exact Sciences are the biggest sellers because they are required of students enrolled in the National University, the University of Costa Rica and other private universities in the country.

Network interconnection indicator

PROMADE does not have social networks. As such, the so called “integration interconnection,” defined by the set of production and consumption function of the participants (Casani et al., 2012: 60), is still in diapers in this publishing program. One of the direct causes of this situation is the institutional control of information in diverse UNED dependencies, schools and programs, requiring all information to be disseminated through the network to be reviewed and approved by the Institutional Office of Marketing and Communication and the Directorate of Technology, Information and Communications.

Innovation Indicator

Innovation is the key work in all sectors of the economy for digital convergence. In terms of content industries, it is the duty of companies to develop innovative products for all kinds of media, because the creative potential of these industries is greater than that of the analogue media. Creativity --understood as the individual ability or talent for creating wealth and employment by means of generating and exploiting intellectual property (Piedras, 2008: 29)—is the main source of value in the new economy and the raw material of all innovation. As such, the publishing industry must innovate in the acquisition of rights, supports, sales approaches and distributions if it wishes to survive and remain competitive. An example of this is the “hunt for author” in social networks such as Facebook or Twitter carried out by publishing houses, such as Intangible and Sinerrata, or the Twitter Fiction Festival organized by Twitter in November 2012 (“Editoriales buscan...”, 2012; Wolford, 2012).

The digital convergence confronts institutions and companies with the duty to conceive of innovative products and services. PROMADE has innovated with regard to distribution of didactic materials with the creation of the online Didactic Materials Portal with the scope and limitation already described.

Indicator of New Roles of Actors

In this new age, there is a strong tendency to individualization through personalized actions. In conjunction with the digital convergence and from the standpoint of social inclusion, this envisions the phenomenon of audiences making the transition from consumers to producers of contents. The transition from the traditional book industry to one of contents entails a chain or editorial ecosystem with less intermediation and greater specialization within the production steps. Thus, at UNED we speak of inclusion of their academic staff as editors of the Modular Didactic Units (PROMADE), while the participation of local and national intellectuals is concentrated in writing cultural works. The diminishing participation of independent creators and of the general public in functions associated with creation and dissemination of contents is noteworthy.

Among the goals for the period of 2013-2015, PROMADE seeks to:

- *Formalize the style correction area of PROMADE through the Human Resources Office.* The job of style corrector is a specialization that the institution must acknowledge. Currently, the functions of style corrector are done by the academic editor, who are not necessarily qualified to do the job. The philology team in PROMADE revises all of the didactic materials and helps with style correction in the remaining programs of the Directorate, the Postgraduate Studies System, the University Board, the Office of Communications and Marketing, and other areas of the university.
As such, PROMADE will have the Human Resources Office perform a study in order to orient the new profile, competencies and function of the Style Correction position in PROMADE and DPMD. A similar process was carried out in the Publishing Department to establish the position of Philological Editor of the catalogue works.
- *The external editing team must be strengthened in order to increase the production of didactic materials such as study guides, laboratory manuals and other complementary materials,* in order to allow academic editors concentrate exclusively on Didactic Units (Román González, 2012: 6-7). (Italics added)

All of the dependencies and programs of UNED and the Costa Rican public administration are effectuating their respective annual plans by means of the

Annual Operative Plan (POA).²² The EUNUD annual plan for period 2005-2011 had the stated objective of: “elaboration, production and distribution of print, audiovisual and computer assisted didactic materials required for university teaching programs, extended learning programs and the area of postgraduate studies.” (POA, 2011: 6).

Likewise, it continued to pursue ten specific objectives that contain scheduled goals, measurement units, and progress in compliance and relevant observations on fulfillment of semester goals. Of the ten objectives, five showed 100% compliance or better.

1. Produce and reproduce the printed of educational materials for students of the UNED (184%).
2. Meet the demand for assorted minor print matter to support the proper operation of departments and meet the priorities of the institutions and their commitments (131%).
3. Promote the EUNED brand by means of print material (177%).
4. Planning and programming of production (160%).
5. Promote the EUNED brand by means of onsite presentation of new works (100%).

Another four have been fulfilled at a level above 90%:

1. Produce and reproduce material for student body of the diverse academic periods (96%).
2. Improvement of the procedures employed in the diverse activities of the EUNED (95%).
3. Development of the sale of services for securing income through the optimal exploitation of EUNED’s low cost, high quality production capacity (95%).
4. Promote the EUNED brand in mass media (93%).

Failure to meet outstanding objectives was attributed by the Executive Editorial Director to causes outside of his control. Specifically, the tenth objective regarding the regularity of university journals over the period of 2005-

22 With regard to the mission and vision of UNED, POA is a fundamental management guide for agencies, which in line with the 2011-2015 National State University Higher Education Plan and the 2011-2015 Institutional Development Plan (PDI), allows improvement of university administration.

2010 was not met. Journals such as *Innovaciones Educativas* and *Repertorio Científico* failed to be published for more than one year or more (Muñõs Gual, 2011: 23, 58).

On October 26, 2012, UNED published the institutional bulletin *Acontecer* (Happenings), nine new initiatives that are part of *Institutional Improvement Plan* --derived from the *Higher Education Improvement Project*-- both of which seek to make institutional management more dynamic for the purpose of improving higher education distance learning across the country. Of the nine initiatives, those that are associated with PROMADE are as follows:

4. *Improve the equity of access of students to digital learning resources and Internet.* With an investment USD \$600.000.00, the aim is to assign technological devices to economically marginalized students. The initiative will benefit between 2000 to 2500 students and shall those who do not have social support networks (single mothers, disabled and indigenous) shall have priority. Another 800 to 1000 devices shall be made available in the academic centers (libraries) of the university centers and educational areas of prisons. These devices will not have internet access but will provide access to multimedia materials resided in a storage unit. Students needing internet access will be given a 1 mb data card. Additionally, those who do not enjoy internet access or a data card shall receive a USB memory stick with their device containing all of the digital resources required in the coursework. This option shall also be made available to prisoners.
[...]
7. *Diversification and broadening the production of multimedia and internet content.* With an investment of USD \$2.080.000.00 for upgrading of technical resources, the positive effects of the audiovisual language in cognitive process of the student in the learning process shall be guaranteed. [...]
9. *The information system for supporting decision making and institutional management.* An investment of USD \$2.599.500.00 allocated to strengthen, improve and modernize the institutional information systems and specifically those associated with the areas of Human Resources, Academic Administration, Student Administration and Finance and Accounting; and for the purpose of integrating them into and satisfying the needs of information and services required by students, academics, administrators and university authorities in a timely way.

Additionally, as part of this initiative, the quality of the data recorded in data bases shall be updated and improved, and modifications will be made to include new information relevant for making management decisions. (“Nueve iniciativas ...”, 2012)

CONCLUSIONS

[...] University publishing departments [...], and especially those sponsored by the State, have a social function to intervene against the hyper-concentration of private capital and multinational corporations, which control most of the authors and titles, by promoting small independent authors who do not enjoy projection beyond local borders of their regions.

CARLOS GAZZERA, EDITORIAL DIRECTOR OF THE
NATIONAL UNIVERSITY OF VILLA MARIA IN ARGENTINA

The Written Didactic Material Program of UNED is a pioneer in content generation, management models, technological incorporation and human resources training in Costa Rica and Central America. It guarantees quality academic content by means of planning and development performed by the academic editors who are specialists in diverse disciplines. From 2011 to date, UNED has gone through a process of unification and improvement of editorial criteria, including the creation of job profiles, scheduling of editorial production and printing of works, and research. The objectives that have not yet materialized have been encumbered by time constraints associated with the university's institutional bureaucracy, something that is quite common in public higher education institutions in Latin America. This contrasts with private publishers of academic material. One of the most relevant aspects of this program is the implementation of a methodology for presenting contents in the Modular Didactic Unit. This is understood as the subset of didactic materials and resources with the sole purpose of taking into account the type of student, which assumes that the MDUs should be based on the didactic communication model in accord with the following features:

- To have a clear, explicit structure in place.
- To allow the student understand and take ownership of learning goals, facilitating establishment of connections with previous experience, interests and expectations.
- To present contents with a didactic structure that the student can own.
- Stand on the basis of thematic nuclei of the professional reality and, if possible, that are associated with the context of the student and the world or professional practice, in such a way that the student can find meaning in the knowledge and project it functionally.
- To incorporate self-regulation, requiring students to take ownership of assessment criteria by assuming the self-observation and planning abilities entailed in the task of studying for a degree.

- A flexible structure that enables the conformation of a body of theoretical and practical knowledge that stands up over time.

Even though there are aspects of the content industry model that are deeply rooted in the daily work of PROMADE, such as specialized knowledge and digitalization, the values of immediacy and disintermediation must be pursued further in order to catapult the Program's products in the form of accessible materials in diverse digital and analogue formats as required by the didactic mediators. Nonetheless, values such as the role of actors shall be severely limited in this editorial system, because of compulsory quality and legitimacy standards governing the participation of authors, reviewers and editors upon which the learning-teaching process of the UNED educational model is founded.

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