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Analysis of the Interdepartmental Model in the Bachelor's Degree in Design for Graphic Communication

Análisis del modelo interdepartamental en la licenciatura en Diseño para la Comunicación Gráfica

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Abstract

This article presents the results of the analysis of the interdepartmental model (Macedo et al., 2023) implemented by professors of the Bachelor's Degree in Design for Graphic Communication at the Centro Universitario de la Costa of the Universidad de Guadalajara, through the cognitive closure project. The objective was to evaluate the relevance of the interdepartmental model, implemented as a mechanism for curricular and formative integration within a complex and systemic perspective of the Curriculum. A mixed-methods study, primarily qualitative, was carried out using non-participant observation, structured surveys administered to students and professors, and documentary analysis supported by tools such as Atlas.ti. Findings reveal significant progress at intermediate and autonomous levels, especially on the use of argumentative methodologies, systems thinking, and strategic management. However, the need for improvement and greater efficiency was identified in the integration of the Curriculum, particularly regarding the lack of alignment between the Learning Units (LU) and the projects, as well as methodological adjustments at the basic levels. It is concluded that the interdepartmental model is valuable for consolidating situated and complex learning; however, it requires a more cohesive plan, continuous faculty support, and stronger integration between theory, practice, and professional context. Finally, the proposal provides empirical evidence to redesign integrative assessment strategies.

Keywords: Graphic design, teaching and training, learning assessment, educational achievement, integrated curriculum

Resumen

Este artículo presenta los resultados del análisis del modelo interdepartamental (Macedo et al., 2023) implementado por docentes de la licenciatura en Diseño para la Comunicación Gráfica del Centro Universitario de la Costa de la Universidad de Guadalajara, a través del proyecto de cierre cognitivo. El objetivo fue evaluar la pertinencia del modelo interdepartamental, el cual se instrumenta como mecanismo de integración curricular y formativa en una perspectiva compleja y sistémica del Plan de Estudios (PE). Para la investigación, se aplicó investigación mixta, primordialmente cualitativa, con métodos de observación no participante y encuestas estructuradas a estudiantes y docentes, además de análisis documental con apoyo de herramientas, como Atlas. Ti. Los hallazgos evidencian avances significativos en niveles intermedios y autónomos, especialmente en el uso de metodologías argumentativas, pensamiento sistémico y gestión estratégica. Sin embargo, también se identificó la necesidad de mejora y eficiencia en la integración del pe, falta de alineación entre Unidades de Aprendizaje (UDAs) y los proyectos; además de ajustes metodológicos en los niveles básicos. Se concluye que el modelo interdepartamental es valioso para consolidar el aprendizaje situado y complejo; sin embargo, requiere una planificación más cohesionada, acompañamiento docente continuo y una integración más sólida entre teoría, práctica y contexto profesional. Finalmente, la propuesta aporta evidencia empírica para rediseñar estrategias de evaluación integradora.

Palabras clave: Diseño gráfico, enseñanza y formación, evaluación del aprendizaje, logro educativo, currículo integrado

Introduction

This work presents the results of the analysis conducted on the interdepartmental model designed to integrate the educational program of the Bachelor's Degree in Design for Graphic Communication (LDCG) at the Centro Universitario de la Costa (CUCosta) of the Universidad de Guadalajara (UdeG) into the curriculum. Its function is to catalyze the teaching–learning processes evidenced in the end-of-semester activities, as observed through the interdepartmental project developed between January and May 2024. In accordance with the designed didactic-pedagogical strategy, integrative projects were presented in an executive presentation format over the course of one week. This made it possible to observe, analyze, and measure the semester results and, at the same time, verify the planned scope in terms of increasing complexity. This structure is defined by levels of achievement and their incidence in semester modules that group horizontally integrated LU, forming a cycle throughout the student's training.

In the context of higher education, training graphic designers involves new forms of curriculum design that respond to complex, globalized, and changing environments. In contrast, despite the theoretical and educational advances, challenges persist in implementing the competency-based approach in real-world experiences. Based on this scenario, the aim is to identify the impact of the interdepartmental model on student development and the consolidation of the educational program's graduate profile. In line with this approach, the research addresses the consistency and relevance of this training strategy. To this end, the interdepartmental project is analyzed in terms of its methodological consistency, skills development, and links to the graduate profile, based on data obtained in the 2024 A cycle, between January and May.

The research was developed with a mixed focus, mainly qualitative, applying structured surveys with open-ended questions and Likert scales to students and professors. For data cross-referencing, the non-participant observation method was implemented during project presentations and the documentary analysis of 32 projects corresponding to the eight semesters and their four levels of achievement. Observables are evidence of acquired knowledge. During the data collection, binnacles and audio recordings were methods and support tools.

To explain this, a complexity approach was considered, and semantic analysis was performed using Atlas.ti, the quantitative data analysis with Excel and data representation with Flourish.

It is aimed to analyze the actual reality both of the model as well as the relevance of the applied interdepartmental project and, if possible, to implement strategies to consolidate an inclusive vision that strengthens the critical, creative, ethical, and professional training of students in this program. This proposal pretends to be a replicable institutional benchmark for other degree programs with a project-based approach.

Characterization of the academic program

LDCG is a higher education program, offered by the Universidad de Guadalajara (UdeG) on its campuses Centro Universitario de la Costa CUCosta, at Puerto Vallarta, and at the Centro Universitario de Arte, Arquitectura y Diseño (CUAAD), in the Guadalajara metropolitan area. This Curriculum is one of the twenty offered at the bachelor's level at CUCosta. It is aligned with the University of Guadalajara's higher education competency-based model and the training needs of Graphic Communication Design students. It should be noted that the implemented curricular design was a result from the collaborative work between the curriculum committee and teaching staff of this Curriculum, under the guidance of experts and institutional guidance. Table 1 describes the structure of the curriculum:

Table 1.
Pedagogical dimension, LU, collegiate work and projects

Pedagogical dimension, LU, collegiate work and projects			
↓ Levels of achievement: basic, intermediate, advanced and autonomous			
↓ Skills: professional and cross-disciplinary			
↓ Projects of increasing complexity (simulations, real-life scenarios, and cognitive closure)			
		Institutional identity and branding	Digital design
47 LU	2 LU	8 LU	↑ 2 Orientations
Compulsory private elementary education	Compulsory specialization	Optional training area	Selective specialized training
↑ Curriculum comprises 68 learning units, divided into:			
↑ Collegial collaboration among teaching staff, academic departments and program coordination			

Note: Compiled by authors.

In addition to fostering evaluation, feedback, and continuous improvement, this model was designed to standardize and correlate theoretical and practical knowledge and to involve various individuals with this process, among whom the following stand out: students, professors and administratives.

To support the pedagogical dimension, a student-centered approach is integrated into the curriculum, which is built on a constructivist approach and articulated through systemic complexity. Grounding the educational process involves addressing theories that come from various disciplines and sciences that make up its epistemology. Its perspective on action, in line with increasing complexity, is progressive in nature, with the externalization of knowledge in practice. It needs to be aligned with the interdisciplinary and transdisciplinary nature of design and characterized by the creative solution of problems that occur in different dimensions and scales.

In educational contexts, according to Lenoir (in Pons, 2024), interdisciplinary highlights the need to seek a conceptual synthesis that allows for the integration of different perspectives in order to address a problem, an object of reflection. On the other hand, interdisciplinary, from the perspective of Pons (2024, p. 4[1]), "proposes the construction of knowledge [...] beyond disciplines, that is, seeking cross-cutting axes of reflection and action that transcend disciplinary knowledge, while at the same time bringing in what could be useful from the disciplines."

In Design Council & The Point People (2021, p. 10), the following is proposed: "we need a new practice that transcends rather than merges design and systems thinking and moves us beyond hubristic or rationalist approaches to systems, a mindset of thinking, not doing, and of practices that fix the current rather than create an alternative.". In that regard, its implementation defines the scope of competencies, the active development of knowledge, and teaching-learning processes in line with current realities and open to change.

Problem-based learning (PBL) and situated learning are considered relevant to the student's educational process, provided that the problems and situations addressed are relevant to the student's own environment. Comprehensive communication skills and broader organizational processes are also considered essential in project development.

The approaches that largely define the curriculum design of the CUCosta's LDCG Curriculum are outlined by Tobón (2013) from the following perspective:

[1] T. note: The cited pages refer to the original version of the book and may be different in the original language.

- The complex approach emphasizes the fact that competencies are complex performance processes for problem solving, in accordance with what is set out in the "living curriculum," which is the sustainable vision: respect for the environment and human beings, ethical and social development. Thus, this approach is established in accordance with a multidimensional understanding of the curriculum, considering the relationship and interaction between the different actors, the institutional aspects that define it, its alignment with the educational model, and the training needs in disciplinary contexts of graphic design. An aspect to emphasize is the comprehension of a program that seeks to address emerging approaches in this field of action and which requires constant improvement; all this in order to systematically understand the teaching-learning process in its various aspects.

- In the constructivist approach, the emphasis is placed on assuming competencies as abilities, knowledge, and skills to resolve difficulties in processes related to practice. It involves relating the current conditions and situations of a changing market to the adaptive training of students and the development of skills to face current and future challenges.

For the training of Graphic Communication Design students, the development of complex thinking is considered essential, based on the theoretical approach of Morin (1990), the complex systems of García (2013), and the increasing complexity of Rivera (2013, 2017, 2018).

Thus, articulating the teaching-learning process at the higher level may involve understanding it as a dynamic of increasing complexity in which key aspects must converge, such as uncertainty in terms of adaptability and the establishment of long-term strategies; transdisciplinarity in the articulation between knowledge and projects; feedback, self-organization in learning, and improvement based on experience; discussion and discernment that enable the development of critical thinking; and systemic thinking as an articulating axis that leads to the generation of a comprehensive and predictive vision to assess the possible repercussions of the designer's practices in the future.

From Morin's (1990) perspective, complexity and its interrelation with teaching and learning involves the atomization of its multiple components, causes, and effects, as well as its global vision, which is significant for facing the challenges of the 21st century. In that sense, learning, in Graphic Design's contexts, due to its very disciplinary nature, can be approached as a disruptive and transformative process. This stance requires thinking in terms of open, complex, and systemic systems, subject to constant flows of information and cultural, technological, and social influences.

In addition, teaching graphic design involves implementing non-linear and iterative models in training and project development.

Complexity is also located on the necessity to respond to transformational changes that have an effect on today's society according to new perspectives of design and communication, with integral approaches that imply social responsibility, inclusion and sustainability.

Educational program and its implementation in the interdepartmental model

In the Bachelor's Degree in Graphic Communication Design at CUCosta at the University of Guadalajara third accreditation assessment was carried out in 2023, based on the instruments of the Consejo Mexicano para la Acreditación de Programas de Diseño (COMAPROD).

In the informative summary of the Curriculum (Macedo *et al.,* 2023), it can be observed that the implementation of the program, in its educational approach, is consistent with the premises of constructivism and the principles of complex thinking, and that it is particularly related to the key factors that define increasing complexity and that have to do with the improvement and transformation of learning in terms of higher education.

To put the approach at this level into context, it is important to relate increasing complexity as a process that articulates, in global terms, both the development of knowledge and teaching and learning from the perspectives of Urteaga (2010) and Rivera (2018).

Urteaga (2010) defines this process as the growing complexity of social and human systems, manifested in the ever-widening gap between an irreducible empirical reality and partial intellectual representations, which requires knowledge to be organized in a comprehensive manner—through open systems, information, self-organization, uncertainty, and dialogical logic—in order to understand phenomena that cannot be fragmented without losing their meaning.

Rivera (2018), meanwhile, considers that increasing complexity can be understood as an educational and project-based process that recognizes the multidimensional, systemic nature and, in some ways, a scenario of uncertainty regarding environmental problems.

To put these ideas into educational practice, the full exercise of critical thinking is required. A contextual approach, the integration of collaborative methods, and the development of strategic intervention tools are necessary. In this regard, it should be emphasized that graphic design education, as defined in the UdeG's LDCG CUCosta plan, is not limited to the theoretical and practical transmission of knowledge, but is the result of the articulation of multiple dimensions and the development of skills that are interrelated horizontally, vertically, and transversally.

On the other hand, these skills are related in different complexities and levels of achievement. From there, an integral approach to have an effect on the student's training and in the scope of a graduate profile aligned with strategic design principles. Didactically, the program focuses on solving communication problems based on understanding, analysis, projection, and production of proposals and solutions implemented for various media, audiences, and cultural contexts. These assumptions are based on the graduate profile described in Opinion I/2019/172, which states the following:

> The graduate of the bachelor's degree in Graphic Communication Design will be a professional capable of identifying, analyzing, and diagnosing graphic communication needs to plan, propose, produce, and coordinate functional and effective graphic design projects focused on users, through print, digital ,and alternative media, based on a creative and methodological process, that solve communication problems at local, national and international levels in favor in the social and productive sphere, taking into account ethics, social liability, innovation, sustainability, acting with sensitivity and a critical attitude toward the environment and human beings. (Universidad de Guadalajara, 2018, n.p.)

In this regard, it is noticed that the formative orientation in the Curriculum has a high level of complexity both in its characterization and implementation, as it involves the integration of cognitive, sociocultural, technological and symbolic processes in terms of dynamic and critical learning. Added to this is the application and testing of the knowledge acquired in comprehensive projects carried out by professors and students in a large percentage of the learning units. Thus, graphic design training is designed to produce professionals capable of adopting a complex vision for a better understanding of their environment and communication processes, enabling them to propose solutions from an ethical and creative perspective.

With regard to curriculum design, it is extremely important to mention that, in the workshop Building Operational Programs from Strategic Design, taught by Tiburcio (2019), the teaching staff developed the principles for implementing the curriculum based on professional skills—such as Project Processes, Morphological Expression, Theoretical-Methodological Basis of Communication, Design Management, and Technological Basis—as well as cross-cutting competencies in the formation of attitudes. Both groups include elements that are distributed across the curriculum in four levels of achievement, with objectives based on higher-order cognitive processes, arranged gradually according to their complexity—basic, intermediate, advanced, and autonomous. In this way, such model of implementation articulates the Curriculum's approach in relation with the Learning Units, with the corresponding competences and elements.

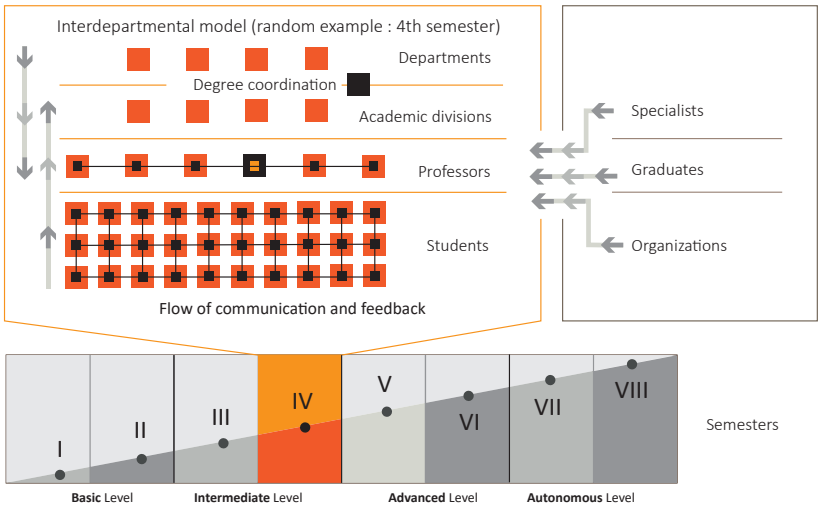
To further refine the model, it is proposed as an advanced teaching and learning strategy within the curriculum. In this way, it is proposed as a comprehensive assessment process not only to demonstrate the knowledge acquired by students, but also to serve as a mechanism to detect possible gaps in skill development. In this way, a model is proposed that operates through collaborative logic based on effective communication, involving a management and communication system that brings together planning, design, and implementation.

Considering all of the aforementioned, from the theoretical approach of the model, we aim to address the following:

- Reinforce problem-based learning and situated learning by placing students in a scenario mediated by the level of achievement expected for this purpose.
- Promote the methodological coordination of the curriculum with goals toward the graduate profile.
- Strengthen the focus on applied rhetoric, problem solving, and strategic design.
- Promote comprehensive peer review that brings together different perspectives, bringing together professors from different areas, specialists, and graduates to enable continuous improvement.
- Establish it as a formative assessment strategy determined by a gradual process, becoming more complex at each level, with the aim of correlating achievements with the graduate profile.

See Figure 1 for more information.

Figure 1.
LDCG interdepartmental model CUCosta of the UdeG



Note: Compiled by authors.

Implementation of the interdepartmental project

A mixed-methods study was designed, primarily qualitative, using ethnographic, exploratory, analytical, and descriptive methods.

To define the qualitative approach, we considered the approach of Álvarez-Gayou (2012), who defines it as a cross-sectional ethnographic process, an interpretative framework of reference in which studies are conducted at a specific point in time on the groups being researched, rather than on interactional processes developed over time.

The analysis is addressed from the paradigm of complexity that, from Bautista's (2011, p. 67) perspective, "is understood as a fabric of inherently associated heterogeneous elements, presenting the paradox of the one and the many. [...] It attempts to situate everyday observations and link them to scientific research in order to encompass the real world with a comprehensive view.

The purpose is to explore and analyze the scope of the interdepartmental model in relation to the graduate profile and its consistency with the program's curriculum design. The question is framed as follows: What is the current status of the interdepartmental model, and what effects does it have on the fulfillment of the objectives and teaching-learning processes that make up the curriculum design?

For data collection, the non-participant observation method was applied, using logs as instruments for recording incidents and audiovisual material with a video camera. The following sources were consulted: summary of the educational program, grids of professional and cross-disciplinary competencies, academic offerings, class programs, and project information documents. Surveys for professors and students were administered in digital format using Google Forms as a method for digital information management. Atlas.ti was used for qualitative data analysis, Excel for quantitative data processing, Flourish for data representation, and AI tools for correlating indicators, patterns, and trends between qualitative and quantitative data.

Study subjects

Study subjects are integrated into a sample consisting of 191 students from the Graphic Communication Design degree program at CUCosta, UdeG, distributed across eight semesters, and eight professors who teach learning units comprising the educational Curriculum and coordinate the academic activities underlying the project.

Study purpose

The interdepartmental model was observed through the interdepartmental project conducted during the January–May 2024 school term, applied across all eight semesters of the bachelor's degree program.

It should be noted that single groups were implemented. It includes eight executive project documents, one per semester, which describe the characteristics of the cognitive closure activity and the participating LU, the project design, and student performance in interdepartmental projects and their multimedia presentations.

Methods, techniques and tools

The eight coordinators of the interdepartmental project participated in the teacher survey in each semester. Therefore, consideration is given to the documents of the executive projects that comprise its development and which set out its typological characteristics, the objective, the participating LU, the methodological proposal, and implementation in stages of development. The sample consists of eight executive documents developed by academics from each level.

The second instrument consists of the presentation of projects by work teams in each of the different cycles, where the results obtained are observed in accordance with what was proposed in the projects during the presentation sessions in the auditorium, from 9 a.m. to 2 p.m., during academic activities.

For incident reporting, the non-participatory observation method was used in project presentations in order to objectively observe the research and analysis, visual proposals, arguments, and justifications presented by the students. During the various sessions, a structured logbook was used to record the analysis of the incidents, both in terms of graphic content and their correspondence with the level of achievement, consistency, and scope of their proposals. The application was accompanied by audio recordings to preserve the arguments more accurately and complement the logbook.

Thirty-two student projects were analyzed and correlated with the eight interdepartmental experiences. Two tools were designed with Google Forms digital format. For students, the voluntary response rate determined the convenience sample, while for professors, the sample consisted of the eight project coordinators. Both were applied remotely, distributing them by a WhatsApp link in the closed LDCG group CUCosta. For professors, as an alternative, they were sent via institutional email.

In the specific case of the teacher survey, the method implemented was mixed-method evaluative research, with an emphasis on an exploratory-descriptive strategy, appropriate for investigating professors' perceptions of the model implemented in the interdepartmental project process.

With regard to the design, a structured tool was used with open-ended questions, Likert-type items rated from 1 to 10, and multiple-choice questions for the triangulation of qualitative data on opinion and argumentation, and quantitative data for the assessment of performance and use of tools. The tool was organized in five thematic sections: 1. Problem complexity in relation to the achievement level, 2. Use of technological and analog tools, 3. Creative process and coherence of results, 4. Applied methodologies, and 5. Agreements and teacher participation.

With regard to the applied survey to students, it was designed to evaluate the formative experience regarding the interdepartmental model, considering both quantifiable perceptions and qualitative contributions, to generate an explanatory context of the interdepartmental model in accordance with the application. The survey included closed questions with a Likert scale (1 to 5) and open questions organized into thematic sections to capture qualitative information and thus facilitate the subsequent concentration and analysis of the information (see Table 2).

Table 2. Pedagogical dimension, LU, collegiate work and projects

Students participating in this application							
Basic level		Intermediate level		Advanced level		Autonomous leve	
1st semester	2nd semester	3rd semester	4th semester	5th semester	6th semester	7th semester	8th semester
17	9	7	8	5	1	8	9
64 students total							

Note: Compiled by authors.

Results

Analysis of the documents of the interdepartmental project

Integration of projects where learning units are shown separately, itemizing their own requirements and evaluation system, which can produce a disjointed and confusing document.

The main problem is observed in the early identification of documents lacking a coherent project structure or development, and in some cases, essential information. It is also observed that some documents do not have the necessary formality, structure and quality that also serve as examples and guide students more effectively.

In this regard, the following findings were made:

Interdepartmental project I - Basic Level This project focuses on design problems related to branding, labeling, and digital design.

User perception and the relationship with the company are not considered, which reduces the communicational relevance of the project. Methodological development is limited to a linear sequence (conceptualization-composition-production), with no evidence of iterations or validations. It is recommended to strengthen typological differentiation from a user experience perspective.

Interdepartmental project II - Basic level. The second project deals with publicity, publishing and digital design. Even though typologies are correctly identified, they are not deeply developed nor a contrast is established between them. Sociocultural dimension is omitted, which is fundamental for problem analysis in design. Morphological representation, mentioned as purpose of complexity, is not reflected on the activities. The project requires a more structured analysis of media, languages, and formats for each typology.

Interdepartmental project III - Intermediate Level This project proposes graphic communication systems based on a situational diagnosis. The use of figures of speech is introduced, but without clearly integrating them into the general methodology. There is a lack of explicit articulation between digital and printed media, and between the learning units. In spite of its methodological potential, the document is excessively descriptive and requires to synthesize its expected phases and products. It is suggested to reorganize the content with tables that connect LU and deliverables.

Interdepartmental project - Intermediate level. This project looks to develop situated proposals, settled out from the social design. However, the document's order is hazy, having methodological phases poorly structured. Even though the rhetorical discourse is introduced as an argumentative basis, it is neither articulated with products nor with the LU. It is required to delimit the type of social problem, context and impact indicators. The offer is valid, but it requests more structural clarity and alignment between discourse, means and evaluation.

Interdepartmental project V - Advanced level. This project consolidates the use of argumentative methodologies, as the rhetoric one is, and proposes a clear relationship between client, user, and the persuasive communication. It integrates conceptualization, composition and production phases with explicit indicators. Even so, there is an absence of matrix display on how LU participate on each phase. The level of demand is appropriate at the advanced level, including impact and sustainability indicators.

Interdepartmental project VI - Advanced level. It is focused on problematization located by communicational controversy diagnosis. We can observe significant advances on the LU's integration and the role delimitation.

The project is structured from rhetorical and methodological perspectives, although it could be reinforced with validation processes involving real users, prototyping evidence, and linkage with the strategic approach.

Interdepartmental project VII - Autonomous level 1. It proposes a complex resolution with a focus on quality of life, integrating repeating, agile methodologies and articulation between LU phases. Indicators of professionalism, transversality, and presentation are included. It is recommended to strengthen validation through user testing. It represents a solid project regarding a systematic approach and educational relevance.

Interdepartmental project VIII - Autonomous level 2. It has a formal structure, but lacks methodological foundation. The type of problem is not specified, it is not linked to design methodologies, and creative processes or diagnoses are not identified. Even though the document has phases and deliverables, its pedagogical value is limited due to the argumentative weakness and the lack of coordination between LU. It requires a redesign from the approach to the problem to the assessment tools.

In a broad sense, consistency between interdepartmental projects and the expected complexity level is partial. Design projects V, VI and VIII state its methodological, discursive and formative structure according to its levels (advanced and autonomous), while projects I and II (basic level) and VIII (autonomous 2) show substantive inconsistencies. This includes methodological absences, lack of articulation between learning units and short evidence of creative processes. It is recommended that pedagogical design criteria be strengthened to ensure that each project responds to the competencies and objectives of the corresponding achievement level.

Analysis of the documents of the interdepartmental project

The analysis considered a combination of project documentation (files and visual evidence), oral and visual presentations of the projects, and students' verbalizations during their presentations. These elements were compared with the professional and cross-disciplinary skills expected for each training cycle (from the first to the eighth semester), in accordance with the degree program's curriculum. The observable indicators defined for the analysis were as follows:

Level of achievement achieved;

- Complexity of the project in relation to the formative cycle;
- Development of professional and cross-cutting skills;
- Clarity and coherence of the design process;
- Structure, depth, and clarity of the project presentation;

- Global quality of the developed projects;
- Soundness and relevance of graphic proposals; and
- Technical and discursive quality of presentations.

This methodological approach made it possible to identify patterns of progress in levels of complexity, as well as critical areas for improvement in the articulation between project development, its graphic results, and students' ability to conceptually communicate their work.

The results of Interdepartmental I allow us to conclude that first-semester students partially achieved the objectives set in terms of professional and cross-disciplinary skills. Greater emphasis is required on developing technical vocabulary, argumentative articulation, and analytical depth in the design process. The current model promotes initial understanding of the project phases, although with limitations in the connection between research, proposal, and graphic result. These findings confirm the need of inclusive teaching strategies that strengthen analytical capacity, effective oral communication, and project-based thinking from the start of professional training.

The projects presented in Interdepartmental II reflect a formative process in transition between initial morphological exploration and more complex project articulation. Although progress has been made in organizing collaborative work and structuring visual proposals, significant deficiencies remain in contextual analysis, argumentation, and methodological application. It is necessary to enhance training on applied research methods to design, visual argumentation and the appropriation of project discourse. These aspects are key to consolidate second-cycle professional competencies at the LDCG.

The qualitative analysis of the interdepartmental project III reveals intermediate performance consistent with the expected curriculum level for the third semester. Although fundamental skills from the third cycle are evident, the integration between analysis, rhetoric, and technical execution could be strengthened. We recommend explicitly incorporating printed media, improving conceptual reasoning, and establishing a clearer link between communicational intent and graphic design. These findings allow us to reflect on the importance of reinforcing discursive and methodological mastery at intermediate levels to consolidate a more critical and articulated design practice in later phases.

Results of the interdepartmental IV prove a learning progression consistent with the objectives and level of achievement. Articulation between context, problem and offer is visible, although there are areas for improvement in terms of methodological integration and terminology mastery.

Key competencies are beginning to take shape, highlighting the need to strengthen project-based thinking, in-depth analysis, and discursive innovation for future stages of education. This analysis suggests that improvements in documentation and methodology will allow for greater consistency between the design process and the products generated.

The qualitative analysis of the projects developed by fifth-semester students in Interdepartmental V shows progressive development toward autonomy in terms of strategic design and sustainability. Projects that integrate multiple dimensions of the problem—rhetorical, technical, and environmental—demonstrate higher graphic quality, clarity of presentation, and analytical depth. However, there is still room for improvement in clarifying the relationship between the participating LU and the results obtained, as well as in strengthening the terminological and methodological mastery of all teams. The progression in the level of achievement and complexity in these projects supports the relevance of the competency-based approach.

In Interdepartmental VI, proposals were observed that articulate conceptual clarity, situated complexity, and relevant graphic solutions. However, weaknesses persist in some teams, particularly in the ability to theoretically support design decisions, structure the methodological process, and present with terminological accuracy. These findings reinforce the importance of strengthening the use of analytical methods, the correlation between diagnosis and solution, and the integration of strategic and communication tools. Likewise, it is recommended to encourage intermediate evaluation and self-evaluation practices that improve the clarity and cohesion of deliverables, both conceptual and visual, within the complexity frameworks expected for this level of training.

The results of Interdepartmental VII show a significant evolution in the development of professional competencies specific to the seventh cycle. Most students demonstrated complex analytical skills, mastery of strategic resource management, and a solid foundation for their proposals. However, there are still areas for improvement in the prioritization of information, the development of pilot tests, and the clarity of the methodological framework. These findings validate the consistency between the level of achievement and the curriculum design, consolidating the relevance of the interdepartmental approach as a training space for the integration of knowledge in the context of real graphic communication problems.

Problems from the interdepartmental VIII represent the culminating stage of the formative process in the Graphic Communication Design program, which implies a high level of autonomy, integration of skills, and capacity for strategic synthesis.

In this sense, it is observed, from an analysis, that students have succeeded in articulating complex design processes, linking deep diagnostic analysis with value propositions in real contexts. In particular, there has been a substantial improvement in the management of conceptual and graphic resources, as well as in the structuring of presentations with hierarchical clarity and communicative effectiveness. The projects stand out for their degree of contextual relevance and methodological rigor, demonstrating mastery of the relevant skills, especially in the areas of strategic design, creativity, management, and effective communication. However, some projects still present areas of opportunity in terms of argumentation and critical depth, suggesting the need to strengthen support mechanisms and ongoing evaluation. Overall, the results validate the potential of the interdepartmental approach to consolidate comprehensive skills in complex and demanding contexts.

Survey applied to professors

With regard to this instrument, it is evident that the interdepartmental project is purposeful and structurally robust; however, operational inconsistencies have been identified regarding complexity across achievement levels, which may require a review and adjustment of the projects. With regard to the specialized use of tools, an adjustment is needed in terms of didactic progression to ensure continuity between levels. In terms of methodology, clearer inter-academic agreements are required, supported by educational management to facilitate them. On the other hand, teaching support should be reinforced to reduce discontinuities between levels and phases. Moreover, it is required to define the creative process, and review variations that occur between groups and design phases.

As an alternative, it could be established, within the design of the project, a didactic-pedagogical process validated by academia with regard to methodological coordination by level, a framework for teacher support between levels, and a common rubric differentiated only in some indicators related to achievement levels, design phases, and training paths.

Although adding work for professors involves significant planning, it is extremely important to consider promoting metacognitive reflection and, if possible, the use of incident logs. Finally, an alignment of objects with evaluation instruments is required and greater consistency between complexity levels for the overall view of the Curriculum.

The results are described below by thematic sections:

Complexity of the problem in relation to the level of achievement

- A consensus was identified regarding the relevance of the problem in relation to the level of achievement applied, an argument validated by six of the eight evaluations carried out.

- Discrepancies were identified at intermediate and autonomous levels, which may have been influenced by the lack of correlation between previous content and project requirements.

It is likely that dropout rates are related to the difficulty of the problem, lack of support, or inconsistencies in the organization. It is likely that dropout rates are related to the difficulty of the problem, lack of support, or inconsistencies in the organization.

Use of tools

- The most used digital tools during the process were a computer, a design software, specialized and printing applications.

- The analog tools used were as follows: logbooks, sketchbooks, and hand tools.

- In the case of technological tools, a high rating of 6 to 10 was identified; however, there is little differentiation between levels, suggesting that they are not progressively scaled or specialized.

- A trend toward specialization at higher levels was identified, although with little diversity in tools. Henceforth, this may limit creative exploration.

Creative process

- The greatest variability is in prototyping and sketching.

- Process-result consistency has an average of 7.3, indicating acceptable alignment, a situation that is trending toward improvement.

- The correlation indicates that where less use of analog tools was reported, ratings for development and prototyping also declined, highlighting the need to strengthen visual-motor translation processes and methods for representation.

Methodologies

- The use of rhetoric predominates at intermediate and advanced levels, and Design Thinking at basic and autonomous levels.

- There is methodological fragmentation: some teams worked without a common strategy, which implies a review of the methodologies applied.

- The need was identified to align methodologies by level of achievement, with prior academic agreements and more systematic monitoring.

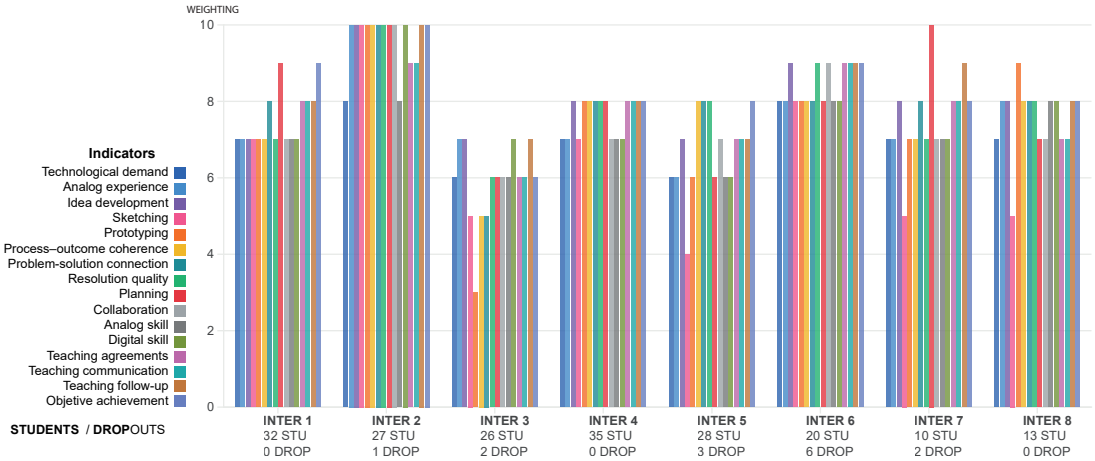
Teacher participation

- Participation, communication, and follow-up ratings can range from 6 to 9.

- The opinions pointed to a lack of continuity and collegial communication, which affected methodological consistency and the student experience.

See Figure 2, which compares interdepartmental results.

Figure 2.
Comparison of results between interdepartmental projects



Note: Compiled by authors.

Survey applied to professors

The data obtained from this instrument's application reflect variations in the perception of how well project objectives were achieved by level of progress:

Identification of the use of technological and analog tools. The collected data show that tool appropriation, both technological and analog, follows a coherent path aligned with curricular progression and increasing complexity.

In the first semesters, the use of basic resources such as pencil, paper, scanner and editing software (Adobe Illustrator, Adobe Photoshop) prevails, reflecting basic technical literacy. Starting in the third and fourth semesters, devices such as graphic tablets, prototyping software (Figma, XD), and content management systems (Canva, Miro) are incorporated, demonstrating a transition towards collaborative digital environments. At advanced levels (fifth to eighth semesters), students report the strategic use of tools for user research, interaction simulation, audiovisual editing, and project management (Notion, Trello, Premiere, After Effects), as well as partial integration of platforms for prototype validation.

However, the qualitative analysis identifies a gap in critical understanding of these tools; their use remains mostly instrumental and, in many cases, determined by the dynamics of the teacher or the customs of the group, rather than by a selection based on strategic objectives. Furthermore, the interdisciplinary use of technology and adaptation to diverse contexts are still developing. Quantitatively, central tendency measures show overall competency ratings on a 10-point scale, it ranges between 6.0 and 8.3, with moderate progression per semester. The trend averages between 7 and 8, which is an indicator of satisfactory functional adoption, but still with room for improvement in both critical reflection and innovation in the use of media.

Knowledge and skills to develop projects. In this dimension, students show a meaningful evolution in their understanding and implementation of design processes. During the first semesters, the skills identified focus on recognizing basic needs, performing preliminary assessments, and generating graphic solutions. Starting in the third semester, concepts such as user focus, planning, hypothesis validation, and communication strategy development are identified. In the upper semesters, there is evidence of systematic project-phase management, the use of timelines, definition of objectives, and coordination with technical, social, and strategic criteria.

Qualitatively, progress is evident in the design learning process, although there is not always clear evidence of integration between theory and practice. Some limitations persist in the coordination between research, conceptualization, and implementation, especially when learning units are not sufficiently coordinated.

Creative process. Analysis of the survey results shows a progressive evolution in the development of creative thinking throughout the training process. In the first semesters (first and second), students focus primarily on generating ideas without evidence of a clear methodological structure, although basic elements of *Design Thinking are observed*.

From the third semester onwards, references to prototyping are incorporated, and in the fourth semester a basic Design Thinking approach appears, emphasizing argumentation and environmental modeling. In the higher levels (fifth to eighth semesters), greater cognitive complexity is evident, where projects begin to integrate components such as communicative intent, strategic decision-making, addressing complex problems, and interdisciplinary work.

Although *Design Thinking* is the most frequently mentioned creative methodology, there is evidence of a lack of conceptual mastery regarding its specific phases and purposes. The rhetorical approach appears consistently in students' narratives, though with little distinction among its stages. From a quantitative perspective, based on central tendency measures, the average performance rating in this dimension ranges from 6.5 to 8.7 in the higher semesters, with progress observed between semesters. The mode and median converge at intermediate levels (values between 5 and 7), indicating a solid foundation with room for improvement.

Design methodology. Regarding to the application of design methodologies, the results show a development trend that is progressively improving. In Interdepartmental I, the methodology is not explicitly recognized; however, students describe the phases: research, conceptualization, analysis, and problem definition, as well as basic tools such as brainstorming, briefs, surveys, and prototyping. Starting in Interdepartmental II, the use of *Design Thinking*, the Lasswell model, and in some cases Design Sprint begins to be mentioned more systematically. However, conceptual confusion persists regarding their phases, scope, and the distinction between method, technique, and strategy.

At intermediate and advanced levels, the use of more comprehensive methodologies is consolidated, including SWOT matrices, empathy maps, audience analysis, Lean models, user validation strategies, and agile methodologies. This evolution shows a stronger link between methodological decisions, project strategic objectives, and the quality of results. From a quantitative perspective, the first semesters have averages between 5.0 and 6.5, with sustained increases through the higher levels. In advanced semesters (sixth to eighth), the averages range from 7.8 to 9.2. However, gaps are still identified due to a lack of cross-cutting coordination between the involved LU, which could limit the effectiveness of methodological integration processes.

Establishing and perceiving agreements. This section evaluates students' ability to generate functional agreements during teamwork, as well as their perception of compliance. At the basic levels, agreement-making is limited to the distribution of tasks. Starting in the third semester, references emerge to the use of mechanisms such as minutes, schedules, and collective organization platforms (Google Docs, Trello), reflecting an increase in the formalization of commitments.

In advanced semesters, there is greater awareness of the importance of consensus management, fulfillment of responsibilities, and conflict resolution. However, qualitatively, there is still a perception of inequality in the workload and leadership assumed by a few members, which poses challenges in the consolidation of self-managed teams.

In quantitative terms, average ratings range from 5.0 in the initial semesters to 8.0 in the final semesters, with greater dispersion in the intermediate levels. This suggests significant differences between teams in terms of the development of cross-cutting skills and collective organization.

The results show that the interdepartmental model is valued by students mainly for its ability to articulate practical and contextual skills. However, areas for improvement in interdepartmental planning and management that affect the educational experience have been identified. To consolidate its relevance, greater pedagogical articulation, clarification of objectives between LU, and strengthening of teaching guidance are recommended. Finally, this informed diagnosis provides a basis for future educational interventions and progress toward a more effective model of interdisciplinary and strategic learning.

Conclusiones

The analysis of the interdepartmental model applied through the integrative project implemented in the LDCG program at CUCosta, UdeG, provides insight into the positive implications of a comprehensive assessment model, as it avoids fragmentation of the curriculum by linking learning units in multiple ways and aligning them not only with educational purposes but also with academic and institutional management processes. The Curriculum derives from a teaching-learning model that also promotes external evaluation and continuous monitoring of its development over time.

From the perspective of this research, the interdepartmental project demonstrates the theoretical-practical correlation of knowledge. Accordingly, the principles of theoretical foundation are evident both in the construction of the teaching–learning process and in the design of the operational model itself, which is based on the complexity of interactions across different dimensions. Hence, the constructivist and complex approaches are relevant in their application.

On the other hand, this research made it possible to identify that the methodological project strategy, designed to highlight the teaching–learning process, remains consistent as long as agreements are upheld and a system of continuous improvement is maintained. In addition, it provided the opportunity to observe that, although the progressive development of competencies in increasingly complex contexts is relevant, it still requires continuity across cycles and levels of achievement.

Data analysis confirmed that the interdepartmental project calls for a flexible curriculum model centered on situated and problem-based learning. It also depends on teacher collaboration, departmental support, and effective student engagement—both in learning and in feedback on teaching—within a comprehensive assessment framework.

Furthermore, it should be noted that the enables clear observation of students' progressive advancement from the basic to the autonomous level.

As a result, opportunities and areas for improvement were identified and will be further analyzed during end-of-cycle feedback.

The results show that the interdepartmental model is an indispensable pedagogical strategy for achieving cognitive closure; that is, each activity designed to build the graduate profile ensures an effective correspondence with the professional competencies derived from each Learning Unit (LU) and each level of achievement. At the advanced and autonomous levels, a more solid integration between diagnosis, methodology, graphic production, and theoretical foundation was identified, as well as a greater appropriation of professional competencies (project processes, argumentation, design management) and cross-cutting competencies (critical thinking, effective communication, collaborative work), in addition to greater clarity in methodological progression.

This finding confirms the relevance of the competency-based approach as the backbone of the curriculum. However, critical areas for improvement were also identified, particularly at the basic and intermediate levels, where there was a lack of clarity in methodological processes, poor coordination between teaching units and projects, and a need for integration between theory and practice. These inconsistencies suggest the need to strengthen institutional support processes for professors, cross-cutting planning in their operational programs, and at least a matrix coordinated by the curriculum committee to avoid content gaps, overlaps, and inconsistencies in the complexity of the problems addressed. Finally, there is a need to establish rubrics with a general basis and specific indicators according to achievement levels.

Likewise, a predominantly instrumental use of technological and methodological tools was identified, which reflects a pedagogical challenge in fostering the critical and reflective integration of media and methodologies, especially in the early stages of the students' training.

According to the findings of the research, the interdepartmental model, implemented through the interdepartmental project, provides a pedagogical platform aligned with comprehensive training, enabling graphic designers to respond creatively and strategically to complex problems through a dynamic, flexible, and holistic approach.

It is important to mention that, according to empirical data collected during feedback with professors, it is considered that the interdepartmental project, although a coherent strategy for demonstrating the interdepartmental model, presents fundamental weaknesses in its teaching strategy and in its organizational and communication dynamics, which may affect its effectiveness.

Finally, the components for improvement by level of achievement are described:

- Basic level, integration of rubrics with observable criteria for formative assessment, reflection and closure activities (metacognition), and intermediate validation with feedback.

- Intermediate level, integration of visual evidence of creative processes (sketches and tests), systematization of rhetorical deliverables, and traceability among LUs to facilitate implementation.

- Advanced level, integration of pilot tests, indicators of impact and communicational sustainability, and cross-feedback among peers, students, and professors.

- Autonomous level, integration of logs for recording decisions and creative management, inclusion of an explicit ethical and social responsibility framework, and incorporation of process and outcome meta-evaluation instruments.

In conclusion, the interdepartmental model requires the optimal application of management processes, dynamic communication systems, and a deep understanding of the pedagogical dimension. All of this validates its effectiveness as an educational strategy that enables the achievement of institutional and formative objectives. Implementing it entails analyzing the educational program and developing an articulated curriculum design that fosters both a global and detailed understanding of its multiple components. Although this requires time and synchrony among the different actors, positive results have already been observed from the outset.

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