

Project: From University to Work: Development of Professional Writing in Diverse Disciplines

Principal Investigator: Federico Navarro

This project was awarded four-year funding by the Agencia Nacional de Investigación y Desarrollo (ANID) of Chile. The project started in April 2025.

Note: this is an automatic translation into English made with ChatGPT of a text written in Spanish.

Development of Professional Writing in Chile and Latin America: A Pending Challenge

A review of Latin American and Chilean research from the last decade shows that studies more frequently address writing in undergraduate and graduate educational contexts, or scientific production generated in academic environments, than writing in non-academic professional settings (Bolívar et al., *in press*). Although research can be found on writing in entrepreneurial contexts (Navarro, 2015; Sabaj et al., 2023) and in health contexts (Arnoux et al., 2010) that seeks to characterize lexical-grammatical and discursive features of professional genres, its impact is still incipient. In addition, inquiry into professional communication in Latin America frequently favors the study of predominantly oral exchanges (e.g., Bonnin, 2019; Lazzaro-Salazar, 2022), with less attention to writing.

On the other hand, and as in the rest of the world, attention to the development of writing from academic to professional contexts is infrequent. In the words of Meza and colleagues, "even scarcer is research in which professional discursive practices are compared with those carried out within an academic institution, that is, between academic and professional discourse" (2023, p. 54). Natale and Stagnaro (Natale & Stagnaro, 2014; Stagnaro & Natale, 2015), for example, identify through a survey the discursive genres demanded in advanced stages of the industrial engineering program in Argentina in comparison with the professional insertion of graduates from that program; they find that 20 of the 33 genres required in the professional context are indeed used in university training. For his part, Narváez-Cardona (2015) conducts a case study of two graduates from the fields of journalism and advertising in Colombia to understand the development of their writing from the academic to the workplace context through questionnaires and textual samples; he finds that there are skills exclusive to the academic context (constructing stances and authorship), to the professional context (disseminating disciplinary content and writing on behalf of organizations), or to both contexts (systematizing quantitative and qualitative data; synthesizing sources). In Chile, Meza and colleagues (2023) compare author positioning strategies of law students and lawyers in the same discursive genre (statement of defense), and identify a greater variety and quantity of strategies in texts produced by professionals. Although these antecedents suggest great potential in contrasting discursive genres and writing strategies of students and graduates, research is still scarce, limited to a single institution or discipline, and offers exploratory data or data restricted to limited informants or discursive genres.

In addition to the limited research on professional writing in general, and on continuities and contrasts in the development of professional writing in different disciplines in particular, there is little knowledge about the curricular integration of writing development in curricula

and graduate profiles. These institutional curricular documents formalize before the State and society the formative commitment of degree programs (Stanny et al., 2015), and are an indicator of interest for understanding the role of writing in the teaching and learning of professionals. Some research on the curricularization of writing in graduate profiles (Navarro et al., 2020) and in curricula (Ávila Reyes et al., 2022) in Chile, based on document analysis and interviews with faculty and students, concludes that degree programs generally do not institutionalize the teaching of writing, or do so implicitly and in a technically weak manner, although numerous institutions publicly state communication as a hallmark competence (e.g., Universidad de Chile or Universidad Católica de la Santísima Concepción; cf. Navarro et al., 2020) and valuable opportunities are found to foster the use of writing to enhance learning.

In sum, it is urgent to conduct research that connects and contrasts academic and professional writing across diverse disciplines, institutions, and contexts, with attention to writers, discursive genres and writing strategies they use, and the curricular documents that accompany formative processes. Research of this type will make original contributions to knowledge about academic and professional writing, from a life course development perspective. At the same time, such research will help guide processes of curricular innovation and accreditation that foster opportunities to develop meaningful writing linked to professional practice for advanced university students.

RESEARCH QUESTIONS AND OBJECTIVES

As this is a qualitative study with emergent categories arising from the analysis itself, the research will be guided by research questions rather than hypotheses:

1. What do advanced university students and professionals in engineering, health, and education from two differentiated Chilean universities write? (Objective 1)
2. What writing strategies do advanced university students and professionals in engineering, health, and education from two differentiated Chilean universities use? (Objective 2)
3. How do texts and strategies vary according to stage (university or professional), discipline (engineering, health, education), and institution (regional, public, moderately selective or metropolitan, private, highly selective)? (Objective 3)

General Objective

To understand the development of professional writing in university education and in the labor market insertion of professionals from diverse disciplines.

Specific Objectives

1. To identify the discursive genres written by advanced university students and professionals in engineering, health, and education in two differentiated Chilean universities.
2. To identify the writing strategies of advanced university students and professionals in engineering, health, and education from two differentiated Chilean universities.
3. To identify contrasts and continuities in discursive genres and strategies according to stage (university or professional), discipline (engineering, health, education), and

institution (regional, public, moderately selective or metropolitan, private, highly selective).

SCIENTIFIC OR TECHNOLOGICAL NOVELTY OF THE PROPOSAL

This research will contribute to knowledge about professional writing in different disciplines, an object of study that is still incipient, especially in Latin America. In addition, the research will focus on the development of professional writing throughout the last years of university education and the first years of insertion into work environments, an original methodological focus with few published antecedents. Moreover, the research will not be restricted to a single discipline or institution, but will systematically compare three fields of knowledge of educational, social, and productive importance (engineering, health, and education), as well as two regions of Chile and two differentiated institutional profiles. This scope, feasible within a four-year funded project, will make it possible to offer a characterization that goes beyond exploratory or local approaches. It should also be noted that the research will triangulate evidence collected from initial and follow-up interviews, from conversations about texts from each context provided by writers, and from documentary analysis of curricula and graduate profiles. In this way, robust and well-grounded descriptions will be offered. For these reasons, the project is expected to generate high-impact publications in national and international journals to contribute to knowledge on this topic.

In addition to contributing to scientific knowledge about the development of professional writing in diverse disciplines, this research will offer pedagogical and curricular inputs, with theoretical updating and empirical grounding, that do not currently exist. The generation of a digital guide to professional writing and of curricular recommendations, aimed at engineering, health, and education programs, will contribute to program innovation and accreditation at both the national level (health, education) and the international level (engineering), as it will allow a better understanding of the real writing demands of the work environments in which professionals in Chile perform.

Data Collection

YEAR 1: After the formation of the research team, the ethical evaluation of the project, and a systematic review of recent literature on the development of academic and professional writing, during the last quarter of year 1 the curricula of the programs of interest will be collected. Courses corresponding to the last two years of the programs will be selected, together with the graduate profiles, so that they coincide with the formative period of the interviewed students. It is estimated that the corpus will consist of approximately 120 brief texts, around 20 per program and institution.

YEAR 2: During the first quarter of year 2, an initial semi-structured interview will be designed and submitted for expert consultation. Subsequently, one student informant and one graduate (with random selection of program and institution) will be sought to pilot the instrument. The interview is based on an instrument developed in a previous research project (Calderón Araya et al., 2023).

During the second and third quarters of year 2, the initial interview of approximately 45 minutes will be conducted with the 36 students and recent graduates. To recruit informants,

a general invitation email will be sent using contact information provided by the participating Faculties and Schools, and among those who express interest in participating, students will be selected considering diversity of gender and socioeconomic level, obtained through a brief survey. Interviews will be conducted online with two members of the research team (roles: one person conducts the interview and the other takes field notes). Prior to the interview, informants must sign an informed consent form and provide texts of their choice for discussion. Interviews will be audio recorded, transcribed, and digitized.

YEAR 3: Based on the analysis of the initial interviews, a follow-up semi-structured interview will be designed, common to all interviewees, with the aim of saturating categories of interest and exploring emergent categories and themes not anticipated. In this interview, participants will also be asked to bring one text from their current context (university or professional, respectively) that they enjoyed writing and another that they did not enjoy writing (Eodice et al., 2016), in order to contrast with the initial selection of successful or unsuccessful texts. The 36 follow-up interviews, with similar duration and logistics to the initial interviews, will be conducted during the third and fourth semesters of year 3.

In total, 72 interviews will be conducted, totaling approximately 54 hours of audio, and 120 curricular texts and 144 texts (academic and professional) produced by students and graduates will be compiled.

Data Analysis and Methodological Integrity Procedures

Both the transcribed interviews and the corpus of curricula will be coded using a computer-assisted qualitative data analysis program (QSR NVivo 14), based on a set of categories that respond to the research questions and to previous studies (Ávila Reyes et al., 2022; Navarro et al., 2020). The category discursive genres will allow the identification of typified classes of texts curricularized in curricula or mentioned by interviewees, while the category strategies will allow the identification of procedures aimed at achieving writing goals, whether implicit or explicit, intentionally from curricula, especially in learning objectives and competencies, or mentioned by interviewees. Finally, the category contexts, which is coded together with the other two, allows identification of whether discursive genres and writing strategies are oriented toward the academic environment, professional performance, writing outside educational or professional contexts, or remain undefined.

Additionally, in the analysis of initial and follow-up interviews, thematic coding will be conducted with the following a priori categories, intentionally addressed in different segments of the interview protocol and aimed at answering the research questions: valuations of writing; literacy sponsors (Brandt, 2001); digital writing; learning opportunities; learning obstacles; learning needs. Finally, it is expected to qualitatively identify emergent categories in the interviews, not anticipated in this design, that shed light on the stated research questions.

To ensure methodological integrity, several procedures will be followed: identification of emergent categories through content analysis; calibration of analysis; inter-analyst reliability; and coding audit (Levitt, 2019). The identification of emergent categories, the joint responsibility of the principal investigator and the co-investigator, is an iterative process based on content analysis (cf. antecedents in Ávila Reyes et al., 2023). Calibration is based on the development of a codebook, with category definitions, criteria, and real

examples from the corpus, which is used in iterative team training exercises until an acceptable level of agreement is achieved. Inter-analyst reliability allows recording and reporting the relative success of calibration; specifically, 25% of the corpus of curricular documents (30) and of the interviews (18) will be double coded in order to achieve a kappa coefficient demonstrating moderate to high agreement (Altman, 1999). Finally, the audit, conducted by the principal investigator, seeks to obtain an overall view of the coding in order to make adjustments and improve consistency.

Institutional Description

The study will be conducted in two regions of Chile in order to obtain data from differentiated environments in institutional, social, educational, and productive terms. Universities belonging to the Consejo de Rectores de las Universidades Chilenas (CRUCH) were selected that offer programs in engineering, health, and education and that display differentiated institutional profiles (based on Navarro et al., 2020).

University 1 is a regional, public, and secular institution, with medium selectivity in student admission to its programs, of recent creation (21st century), and with a relatively small student population (fewer than 10,000 students). It occupies position 39 in scientific production among Chilean universities. University 2 contrasts with University 1 across all these dimensions: it is a metropolitan, private, and Catholic institution, with high selectivity in student admission, over a century old (founded in the 19th century), with a large student population (more than 30,000 students), and is the national leader in scientific production in Chile. These institutional characteristics are used in research question 3 as contextual factors for contrasting curricula, but they also function as a proxy to address differences between cases (students and graduates). Complementarily, in the initial interviews, other sociodemographic and educational characteristics specific to each informant will be collected for descriptive and explanatory purposes, as well as to deepen the follow-up interviews.

With the institutions and disciplinary areas already defined, the research will focus on professionally oriented degree programs present in both universities, in order to enable an in-depth examination of their curricula. In the area of health, Medicine will be studied, as it is a program with mandatory accreditation in Chile, that is, of importance for public bodies that supervise higher education in the country, in addition to being a program of high symbolic and social impact within the national productive system. In the case of education programs, Elementary Education Teaching was selected because it is not only a program with mandatory accreditation, but also of social relevance for supplying professionals to the compulsory education system in Chile. Finally, in the case of engineering, Industrial Engineering was selected because it is a program with high enrollment and significant influence across diverse roles and sectors of the Chilean productive system.

Once the degree programs were determined, a cross-sectional design was adopted (Ávila Reyes, 2021) that seeks to include three informants per program and stage in each institution, as detailed in Table 2. This means that for the stage variable there will be 18 advanced student informants (eighth semester or higher) and 18 recent graduates; for the discipline variable there will be 12 informants for Medicine, 12 for Elementary Education Teaching, and 12 for Industrial Engineering; and for the institution variable there will be 18 informants from each selected university.

Digest of Key Theorists

Introduction

In knowledge-intensive societies, writing is essential for carrying out the diverse tasks of professional practice (Brandt, 2015). Indeed, professions unfold in an environment of increasing textualization, in which writing mediates most activities (Lillis, 2023; Montolío & López, 2010). Whether drafting discharge summaries in health settings, pedagogical reports in school settings, or feasibility studies in engineering settings, writing is the means through which many actions in the professional domain are carried out. Despite the centrality of writing in professional work, it remains unknown to what extent universities prepare students for the highly specific forms of communication they will need to use upon graduating.

Disciplinary Writing in Higher Education

Writing is essential for academic performance in university studies: it is a key tool through which students construct knowledge, demonstrate learning outcomes, and communicate according to the expectations of professors and degree programs, within a complex process of gradual enculturation into the forms of communication of their future professional domains (Navarro, 2021; Nesi & Gardner, 2012; Prior & Bilbro, 2012). However, institutions have not always recognized this centrality of writing in curricular designs and, on the contrary, often relegate it to the hidden curriculum (Moon et al., 2018).

The curricular reform movements known as WAC (writing across the curriculum) and WID (writing in the disciplines) have, from the late 1960s to the present, established the idea that writing is a type of knowledge specific to disciplines (Kelly et al., 2023; Townsend, 2016). Their premise is that opportunities should be increased for students to write productively and meaningfully in all courses and programs (Bazerman et al., 2016; Carlino, 2013). This disciplinary character opposes the traditional idea of teaching writing in courses outside the curriculum. Instead, it emphasizes the need for disciplinary faculty to assume responsibility for supporting writing development (Cox et al., 2018). Two emphases are defined in this model: writing to learn, which uses writing as a means of learning disciplinary content; and learning to write, which teaches students to write according to the conventions of their professional domain (Ávila Reyes et al., 2022). Training in writing, then, affects both university and professional performance (Anson, 2015).

The consolidation of this approach has enabled a robust development of research on the teaching of university writing in diverse parts of the world (Adler-Kassner & Wardle, 2015; Arnold et al., 2022; Gustafsson & Eriksson, 2022; Hall & Horner, 2022; Jordan, 2022; Martins, 2015; Thaiss et al., 2012; Thomas, 2021). Correspondingly, in Latin America various initiatives for teaching and supporting university writing have been established, such as courses, writing centers, and writing programs or programs with an emphasis on writing (Ibáñez & González, 2017; Molina Natera, 2015; Moyano & Vidal Lizama, 2023; Ochoa & Rengifo, in press). This interest has strengthened a research field centered on writing in higher education in the region (Navarro & Colombi, 2022).

Life Course Development of Writing

In the last decade, the need has been established to integrate a perspective on writing development across the life course in order, in Bazerman's words, to "appreciate the particular

contribution made by each level and guide us in the design of appropriate tasks for each level and toward broader curricular trajectories" (2013, p. 421). Indeed, if the development of a mature and effective writer requires expanding repertoires of resources and strategies for participating in situations and addressing diverse audiences, then it is necessary to investigate how such development occurs at advanced levels such as higher education, but also beyond the academic sphere in the exercise of professions (Rogers, 2010), as well as to explore its connections with writing opportunities and experiences in earlier schooling stages (Schleppegrell, 2004) and in private and community environments (Barton & Hamilton, 2012). This life course perspective on writing development, which combines cognitive and sociocultural notions, is currently expanding worldwide, as demonstrated by several edited volumes published in recent years (Bazerman et al., 2018; Dippre & Phillips, 2020, 2024).

Research conceptualizes writing development from a sociocultural perspective as a process that is neither linear nor cumulative, but rather recursive, with advances and setbacks (Carroll, 2003; Krogh & Jakobsen, 2019; Ruggles Gere, 2019). This development involves the use of resources and the construction of repertoires and mediational tools across diverse times and spaces, and therefore requires adopting a complex analytical perspective that accounts for multiple contextual factors (Ávila Reyes et al., 2021). Complementarily, Krogh and Jakobsen (2019) suggest considering aspects such as agency, writers' identities, and the construction of one's own voice.

Some conceptual tools useful for understanding writing development across the life course include the strategies writers mobilize at different stages. Strategies are defined as procedures applied consciously and intentionally within a plan in order to achieve a set goal (Didactext, 2003, 2015), for example, planning, drafting, making inferences, or selecting important ideas (cognitive strategies), as well as watching a video on a topic to expand knowledge, analyzing environmental factors that threaten the writing process, or discussing the task with others to check one's own understanding (metacognitive strategies). The concept of strategies shows great potential for understanding how writers develop and adjust their procedures for writing as they move from the academic environment to the professional environment.

On the other hand, the concept of discursive genre is useful for mapping writing needs across different stages and contexts of writing development. Discursive genres are defined as recurrent and typified classes of texts, more or less stable, belonging to different social spheres that hold expectations about them. They are characterized by the communicative goals they pursue, linked to the needs of those social spheres, and by the topics they address, their structure, and their discursive features (Navarro, 2019). Rose and Martin (2018), for example, mapped discursive genres in the school system in Australia, while Nesi and Gardner (2012) identified genre families in the higher education system of the United Kingdom. These contributions have made it possible to systematically organize classes of texts differentiated by purposes, disciplinary areas, and formative stages, although genres also exhibit relationships of transfer, transposition, and transformation across different spheres (Maybin, 2017). Identifying and mapping discursive genres by areas and stages would allow a better understanding of how writers develop from the demands and opportunities of the university toward the exercise of their professions.

Professional Writing

Recent research on writing distinguishes between the academic domain and the professional

domain. Academic writing is involved in processes of learning, communication, and participation leading to the attainment of a degree in formal educational contexts, while professional writing operates in the exercise of disciplinary knowledge in workplaces, generally after obtaining a qualifying degree (Bolívar et al., *in press*). Although this definition is useful, the academic and professional dimensions often overlap. First, there are some forms of academic writing that simultaneously entail a first experience in professional writing, as in the case of the doctoral dissertation (Russell, 2013). Second, certain discursive genres, such as the research article, belong to the domain of professional writing (in this case, scientific), but are produced and read in academic environments. Finally, many studies on the academic writing of undergraduate and graduate students seek to identify incipient features of professional writing (Meza, Lillo-Fuentes, et al., 2023), especially in pre-professional practices (Narváez-Cardona, 2023; Venegas, 2021) or in advanced formative levels (Calle-Arango et al., 2021).

International research focusing specifically on writing in professional domains has multiplied over the last two decades. On the one hand, the seminal works of Candlin (2002) and Candlin and Sarangi (2011) describe how writing and communication operate in workplaces such as health (pediatric visits, patient complaints, medical reviews), law (interrogations, judicial rulings), and finance (corporate emails, job interviews), among others. More recently, several special issues of scientific journals have examined the situated characteristics of communication in workplaces (Lillis & Maybin, 2017b; Nissi et al., 2023; Sánchez-Jiménez & Meza, 2022) and its learning (Sen Vengadasalam, 2023b).

Despite this significant body of work, much less is known about the relationship between academic writing at university and the development of professional writing at work. In a pioneering study conceptualizing the learning of professional writing, Davies and Birbili (2000) argue that university education must prepare students for the situated uses of writing required upon entering the world of work, since aspects such as knowledge transfer and both metacognitive and conceptual understanding of writing are crucial for individuals to adapt their writing skills to workplace settings. Cassany and López (2010) also recommend that university curricula orient toward professional writing from early stages of training and incorporate strategies for learning to write across the life course. In their study, they contrast the writing of young people in translation and industrial engineering in their final university year and their first year of entry into the labor market, through interviews and text analysis, showing that professional and academic domains differ notably in the discursive genres written and in the conditions of production and reception. This disconnection between the teaching of writing at university and written performance in professions had already been anticipated by Beaufort's influential research (1999). Subsequently, Hollis-Turner and Scholtz (2010) deepened this line of inquiry through analysis of texts from both domains and interviews with students, professors, employees, and employers. They demonstrated that strong patterns of misalignment exist between university and professional writing in the business field. In a similar line, Sen Vengadasalam (2023a) documents the existence of a gap between academic writing and workplace writing. To reduce it, he suggests aligning with industry standards, making intentional use of technological tools in training, and developing awareness of different audiences, a recommendation also emphasized by Yancey et al. (2019).

To address these gaps, the promotion of transfer of writing skills from one context to another is a key aspect, but one that has received little attention in university curricular development (Beaufort, 2007). The transfer of writing skills is defined as the ability to apply prior knowledge and

experiences from university in a new professional environment (Yancey et al., 2019). Evidence of effective transfer is proposed in a study examining the performance of graduates from doctoral programs who enter industry. Time and effort devoted to writing during doctoral study leads to a deep understanding of how genres function, and this knowledge enables doctoral graduates to adjust their writing to new non-academic professional situations (Inouye & McAlpine, 2022). Among teaching devices to prepare students for writing in workplace settings, the use of discursive genre as an organizing principle stands out, both to guide rhetorical responses, as a research method for identifying writing patterns, and as a tool for highlighting needed skills and adapting to workplace cultures (Juergensmeyer, 2022). Likewise, the use of digital tools allows recreating a workplace environment in the classroom, with real purposes and specific audiences (Sharma, 2022). In addition, Beaufort's research (1999, 2004, 2005, 2007) made it possible to develop a model of literate expertise with five interrelated domains of knowledge that can serve as a basis for teaching devices and the transfer of knowledge about writing: knowledge of the writing process, knowledge of content, rhetorical knowledge, knowledge of genre, and knowledge of the discourse community.

On the other hand, the recent emergence and massive adoption of generative artificial intelligence in its role as assistance in text production is producing changes and effects in professional writing that have only recently begun to be understood by specialized research and educational institutions (UNESCO, 2023). For example, an experimental study showed that the use of ChatGPT increased productivity in workplace settings by reducing time invested by 40% and improving the quality of results by 18% (Noy & Zhang, 2023). However, studies addressing the learning of professional writing in the era of artificial intelligence remain scarce.

Glossary

(cf. previous section).