

Relevance of a curricular articulation model to promote educational pathways in Chilean higher education

Pertinencia de un modelo de articulación curricular para favorecer las trayectorias formativas en la educación superior en Chile

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ABSTRACT

Keywords:

curricular articulation, learning pathways, higher education, curricular flexibility, educational model.

This study examines the relevance of implementing a model of curricular articulation in Chilean higher education as a strategy to promote coherent, flexible, and inclusive learning pathways. The analysis is situated within a context characterized by fragmented educational trajectories, weak continuity between educational levels, and structural barriers that disproportionately affect students from vulnerable backgrounds.

A qualitative theoretical and documentary review design was adopted, integrating academic literature, national and international regulatory frameworks, and current public policy documents. The search was conducted between May and June 2025 using specialized databases (Scopus, ERIC) and official institutional sources (MINEDUC, CNED, UNESCO), resulting in the selection of 43 documents published between 2017 and 2024. The analysis followed three stages: documentary exploration, thematic categorization, and critical synthesis.

The findings indicate that curricular articulation constitutes a key component in the construction of progressive educational pathways, supported by mechanisms such as prior learning recognition, curricular modularization, inter-institutional mobility, and the use of qualification frameworks. However, within the Chilean context, persistent structural, regulatory, and institutional constraints continue to limit its effective implementation, despite recent advances such as the National Technical-Professional Qualifications Framework.

Based on these findings, the study proposes a conceptual model of curricular articulation tailored to the Chilean higher education system, structured around three interdependent dimensions: pedagogical, institutional, and social. The main contribution of this research lies in providing an analytical and propositional framework to guide the design of curricular policies and practices aimed at reducing student dropout, strengthening academic progression, and enhancing the relevance and quality of higher education.

RESUMEN

Palabras clave:

articulación curricular;
trayectorias formativas; educación superior; flexibilidad curricular; modelo educativo.

La presente investigación analiza la pertinencia de implementar un modelo de articulación curricular en la educación superior chilena como estrategia para favorecer trayectorias formativas coherentes, flexibles e inclusivas. El estudio se sitúa en el contexto de la fragmentación de los recorridos educativos, la débil continuidad entre niveles formativos y las barreras que afectan especialmente a estudiantes de contextos vulnerables.

Se adoptó un diseño cualitativo de revisión teórica y documental, que integró literatura académica, normativa nacional e internacional y documentos de política pública vigentes. La búsqueda se realizó entre mayo y junio de 2025 en bases de datos especializadas (Scopus, ERIC) y sitios oficiales (MINEDUC, CNED, UNESCO), seleccionándose 43 documentos publicados entre 2017 y 2024. El análisis se desarrolló en tres fases: exploración documental, categorización temática y síntesis crítica.

Los resultados evidencian que la articulación curricular constituye un componente clave para la construcción de trayectorias educativas progresivas, a través de mecanismos como el reconocimiento de aprendizajes previos, la modularización curricular, la movilidad interinstitucional y el uso de marcos de cualificaciones. No obstante, en el contexto chileno persisten limitaciones estructurales, normativas e institucionales que restringen su implementación efectiva, pese a avances recientes como el Marco Nacional de Cualificaciones Técnico-Profesional.

A partir de estos hallazgos, se propone un modelo conceptual de articulación curricular adaptado al sistema chileno, estructurado en tres dimensiones interdependientes: pedagógica, institucional y social. La principal contribución del estudio radica en ofrecer un marco analítico y propositivo que permite orientar el diseño de políticas y prácticas curriculares orientadas a reducir la deserción, fortalecer la progresión académica y mejorar la pertinencia y calidad de la educación superior.

Introduction

In recent decades, higher education systems have faced increasing challenges related to the fragmentation of students' educational trajectories. This is expressed in the lack of continuity between the different levels of the educational system and in the poor internal coherence of curricula, which hinders academic progression and employability (Figueroa et al., 2019). The absence of effective curricular articulation mechanisms between different programs and training levels not only compromises the quality of learning, but also generates barriers to access, permanence and graduation for students, particularly those from vulnerable contexts (Bernasconi, 2017).

In the Chilean case, this situation is aggravated by the deep equity gaps that have historically characterized the education system. Despite efforts to expand coverage and diversify the educational offer, high dropout rates persist in higher education, especially during the first year of studies (CNED, 2023). Likewise, there is little connection between the different educational subsystems, which translates into a lack of fluid and cumulative educational trajectories that allow students to move between different educational options without loss of learning or time. This curricular disarticulation also limits the recognition of prior learning, hindering the development of a truly flexible, inclusive and student-centered education (Sáez and López, 2020).

In this scenario, the analysis of curricular articulation models acquires critical relevance. Several countries have promoted reforms aimed at integrating education levels through qualifications frameworks, continuity of studies programs and transferable credit systems, in order to favor more coherent, effective and relevant life-long trajectories (OECD, 2021). Chile has made progress in this area with the creation of the National Qualifications Framework for Technical-Professional Education (MNC-TP), however, its effective implementation still faces important challenges, both institutional and cultural (MINEDUC, 2022).

The purpose of this article is to critically analyze the relevance and need to develop curricular articulation models that contribute to the construction of coherent, flexible and successful educational trajectories in the Chilean higher education system. To this end, conceptual approaches, international experiences and national advances in the field are reviewed, assessing their applicability in the local context. This reflection seeks to contribute to the discussion on the pedagogical, institutional and political conditions required to strengthen curricular articulation as a key strategy to improve equity, quality and continuity of learning in higher education in the country.

Method

In the context of the current challenges facing Chilean higher education - marked by curricular fragmentation, disarticulation between educational levels and the need for more flexible and coherent educational trajectories - a central question arises: What is the relevance of designing a curricular articulation model to promote sustainable and equitable educational trajectories in Chile? This question articulates pedagogical, institutional and political dimensions, and calls for a critical review of the state of knowledge on curriculum articulation, both nationally and internationally.

The objective of this theoretical review is to critically analyze the relevance and applicability of curricular articulation models aimed at strengthening educational

trajectories in Chilean higher education. To this end, it is necessary to: a) review the main conceptual approaches to educational trajectories and curricular articulation in higher education; b) analyze international models of articulation and their relevance for the Latin American and Chilean context; c) identify progress, limitations and gaps in public policies and institutional practices in Chile related to curricular articulation; and d) propose a conceptual model of articulation relevant to the Chilean system, considering pedagogical, institutional and social foundations.

This study adopts a qualitative design of theoretical and documentary review, aimed at mapping, analyzing and synthesizing the current state of knowledge on curricular articulation and educational trajectories. This methodology was chosen because of its ability to integrate diverse academic and normative sources, and thus provide a critical and interpretative view of the phenomenon studied (Boote and Beile, 2005; Snyder, 2019).

The review was based on a systematic search of academic literature and public policy documents carried out between May and June 2025, through Google Scholar, Scielo, RedALyC, ERIC, Scopus and official sites such as MINEDUC, CNED, CNA Chile, UNESCO and OECD. Inclusion criteria were used:

- Publications between 2017 and 2024, except for previous key sources of high citation.
- Studies in Spanish and English with a focus on higher education, curriculum, educational trajectories and articulation.
- Official normative and technical documents in the Chilean context.

The main keywords used were: educational trajectories, curricular articulation, higher education, curricular flexibility, recognition of prior learning, articulation models. The final selection included 43 academic and normative sources, organized thematically through an analytical matrix that made it possible to identify recurrent axes, tensions and gaps.

The analysis was conducted in three phases. The first was the exploration and pre-selection of relevant documents according to inclusion criteria. The second was the critical reading and categorization of contents, using a thematic matrix organized around definitions, types of articulation, international models, national policies and challenges for Chile. The third was the synthesis and construction of proposals, through the integration of empirical and conceptual evidence, with emphasis on their applicability to the Chilean context.

The approach adopted was critical and interpretative, allowing us not only to describe the state of the art, but also to propose a conceptual approach based on the evidence analyzed. This approach articulates pedagogical, institutional and socio-political perspectives on the curriculum, placing the analysis within the framework of the transformations facing higher education in the face of the demand for greater equity, quality and formative articulation (UNESCO IESALC, 2022; Gairín et al., 2023).

Results

Educational Trajectories in Higher Education

The notion of formative trajectory in higher education refers to the educational path that a student follows throughout his or her academic life, encompassing both

curricular and extracurricular aspects that make up his or her training process. This concept implies a coherent progression through different levels, programs or institutions, with the aim of advancing towards defined formative and professional objectives (Tinto, 2017; Martínez and Rodríguez, 2020). A successful formative trajectory is characterized by its curricular coherence, that is, by the existence of logical and progressive relationships between learning, levels of complexity and academic demands, as well as by student retention and permanence, understood as indicators of continuity and effectiveness of the educational system (Cabrera and La Nasa, 2018).

Various structural, institutional and pedagogical factors affect the development of fluid educational trajectories. Among the elements that favor such trajectories are: the existence of curricular articulation mechanisms between programs and educational levels; the formal recognition of prior learning; the implementation of tutoring and academic support systems; and the availability of clear and timely information on possible educational paths (Guzmán-Valenzuela et al., 2021). Similarly, a curriculum structured by competencies, with clearly defined levels of achievement, facilitates the understanding and appropriation of the formative processes by the student body (Wheelahan, 2019).

In contrast, among the most frequent obstacles are identified the rigidity of curricula, the lack of articulation between institutions, the pedagogical discontinuity between educational levels and the limited institutional capacity to respond to the diversity of real trajectories experienced by students, especially those of first generation or from disadvantaged socioeconomic contexts (Espinoza and Gonzalez, 2020). The academic overload, the decontextualization of the curriculum and the absence of accompaniment also contribute to the fragmentation of trajectories and, consequently, to dropout.

In this context, curricular flexibility emerges as a key condition to promote more inclusive, relevant and sustainable educational trajectories (Gallardo et al., 2023). In this study, curricular flexibility is defined as the capacity of the higher education system to offer modular training structures, alternative progression routes and mechanisms for formal recognition of prior learning, allowing students to progress according to different paces, experiences and needs. This flexibility has three operational dimensions: (a) structural, referring to the modular organization of the curriculum and the existence of differentiated itineraries; (b) academic, linked to the recognition of formal, non-formal and informal learning; and (c) administrative, associated with inter-institutional mobility and the use of transferable credit systems.

From this perspective, flexibility does not imply a reduction in standards or a decrease in academic demands, but rather the adoption of mechanisms that allow for the reconciliation of diverse trajectories with common training frameworks and defined graduation profiles. This includes mechanisms such as the validation of learning acquired in different training contexts. In this sense, it is necessary to distinguish between formal, non-formal and informal learning. Formal learning corresponds to those developed in structured educational programs leading to official certification; non-formal learning is generated in organized, intentional and systematic training instances that do not necessarily lead to formal degrees; while informal learning is acquired through work, social or personal experience, without an explicit curricular structure (UNESCO, 2019).

In the proposed model, the recognition of prior learning is focused mainly on formal and non-formal learning, incorporating informal learning through rigorous evaluation procedures that make it possible to demonstrate transferable competencies, safeguarding the quality and coherence of the graduation profile.

Implementing effective curricular flexibility requires rethinking traditional pedagogical models and moving towards student-centered approaches, where curricular planning contemplates multiple entry and exit points, as well as modular structures that allow for the construction of staged trajectories. In addition, it is essential to ensure institutional governance that supports these transformations, through clear regulations, adequate resources and a sustained commitment to equity (Delors et al., 2016).

Conceptualization of Curriculum Articulation

Curricular articulation is a central strategy for building coherent, inclusive and sustainable educational trajectories in higher education systems. From a pedagogical approach, it is understood as the process through which logical, progressive and meaningful relationships are established between the different levels, cycles, programs and training modalities, with the aim of ensuring continuity of learning and avoiding its fragmentation (Villa and Poblete, 2018). From the educational policy perspective, curricular articulation is conceived as a systemic coordination mechanism between institutions, subsystems and regulatory frameworks, aimed at facilitating the transit of students and promoting the recognition of previous and acquired learning (Brunner and Ferrada, 2021).

Curricular articulation is not a univocal concept, but takes multiple forms depending on educational structures and national policies. In general, it can be classified into different types of articulation:

- *Vertical articulation:* refers to the progression between hierarchically organized educational levels, such as the passage from secondary technical-professional education to higher education or from higher level technical programs to university careers (Martínez and Lara, 2022).
- *Horizontal articulation:* refers to the integration between programs of the same educational level or between related disciplines, favoring complementary academic itineraries and lateral mobility of students (Sáez and López, 2020).
- *Diagonal articulation:* combines vertical and horizontal elements, making it possible to move between different levels and training areas, for example, between vocational training and continuing education.
- *Upward and downward articulation:* refers to bidirectional movements in the educational system, recognizing that students can advance to higher levels or return to other cycles to acquire new competencies (Gairín et al., 2021).
- *Inter-institutional articulation:* occurs between different educational entities, including universities, technical training centers and professional institutes, facilitating agreements for continuity of studies, homologations and shared routes.
- *Articulation by competencies:* focuses its logic on the achievement of measurable and transferable learning, enabling flexible routes based on learning outcomes and not only on time spent (Wheelahan, 2019).

These forms of articulation take on special relevance in contexts that seek to promote employability, lifelong learning and the inclusion of non-traditional students (understood as people whose trajectories are distanced from the linear educational path, including first generation students, workers who combine study and employment, people who resume studies after prolonged interruptions, those who have family responsibilities, as well as those who come from previous incomplete experiences

or non-formal training; these profiles tend to face greater barriers to access, continuity and progression in rigid curricular systems, so that articulation, recognition of prior learning and training flexibility acquire particular relevance to guarantee real conditions of equity and mobility.)

In this sense, competency-based approaches have made it possible to rethink curriculum planning from a logic of learning outcomes and professional performance, in coherence with national and international qualification frameworks (OECD, 2021). Competency-based education promotes personalized itineraries and facilitates the assessment of achievements in different contexts, allowing mobility and the reconfiguration of educational trajectories (Muñoz and Salas, 2020).

In addition, the recognition of prior learning (RAP) has been consolidated as a key tool for curricular articulation, allowing the formal validation of knowledge and competencies acquired in formal, non-formal and, to a limited extent, informal contexts. In the proposed model, PAR is conceived as a regulated academic process, based on explicit evaluation criteria, such as correspondence with the learning outcomes of the curriculum, demonstration of transferable competencies and verifiable evidence of performance.

The validation procedures consider academic evaluation instances such as portfolios of evidence, performance evaluations, technical interviews or proficiency tests, defined and supervised by the responsible academic units. Likewise, quality safeguards are established to ensure the formative equivalence between the recognized learning and the learning outcomes of the program, preventing curricular flexibility from implying a reduction in the required academic standards.

In Latin America, its development has been uneven, but there are significant advances in countries such as Colombia, Mexico and Chile, where regulations have been established for its implementation in the technical-professional field (UNESCO IESALC, 2022). At the same time, in recent years, micro-credentials have gained relevance, emerging as a disruptive innovation in higher education, offering modular certifications oriented to specific competencies, which can be accumulated to build flexible trajectories. These credentials, which respond to the needs of the labor market and lifelong learning, are articulated with formal training programs and favor inter-institutional recognition, thus facilitating mobility and employability (Oliver, 2021).

Curricular Articulation Models

A curricular articulation model can be understood as a structured set of principles, strategies and mechanisms designed to ensure continuity, coherence and progression of learning throughout educational trajectories. These models seek to integrate different levels, modalities and types of training -from secondary education to technical, vocational and continuing education-, overcoming the fragmentation of the education system and favoring a holistic view of learning (Delors et al., 2016).

From a curricular perspective, these models are based on approaches such as design by competencies, modularization of content, flexibility of itineraries and the incorporation of mechanisms for the recognition and validation of prior learning (RAP) (Martínez and Rodríguez, 2020). Its design requires a systemic logic that articulates pedagogical, normative and institutional dimensions, allowing the construction of integrated, cumulative and transferable formative routes, in tune with the principles of a student-centered education oriented to lifelong learning (UNESCO, 2019).

At the global level, multilateral organizations such as UNESCO, the OECD and the European Union have actively promoted policies to strengthen curricular articulation as a way to ensure equity, quality and relevance in higher education. The UNESCO Recommendation on Lifelong Learning (2015) highlights the need to create institutional frameworks that allow for the integration of diverse educational paths and student mobility through qualification systems, validation of prior learning and modular structures. Specifically, the OECD has emphasized the importance of the National Qualifications Frameworks (NQFs) as instruments that link education, training and employment. These frameworks make it possible to map and recognize competencies at all educational levels and facilitate international comparability (OECD, 2021).

In Europe, the European Qualifications Framework (EQF) has been a reference for implementing intersectoral and transnational articulation policies, promoting the portability of credentials, transparency of learning and academic and labor mobility (CEDEFOP, 2020). The Bologna and Copenhagen processes have been fundamental in the construction of articulation models based on credit systems (ECTS), degrees by cycles, mutual recognition of qualifications and flexible mobility routes. Countries such as Finland and Germany have developed mixed models that allow articulating vocational and university training, recognizing competencies and promoting dual learning (CEDEFOP, 2020).

In North America, Canada has successfully implemented models of articulation between community colleges and universities through credit transfer agreements, integrated curricula and provincial qualifications systems. In the United States, although the system is more decentralized, there are state initiatives that promote educational continuity through *articulation agreements* and *career pathways* (OECD, 2021).

In Latin America, the experience has been more heterogeneous. Colombia has advanced with the National Qualifications Framework and propaedeutic cycle programs that articulate technical, technological and professional levels. Mexico has developed the National Baccalaureate System based on competencies, while Chile has launched the National Framework of Technical-Professional Qualifications (MNC-TP), whose objective is precisely to facilitate the articulation between training subsystems and with the world of work, although its implementation is still in its initial stages (MINEDUC, 2022).

Based on these experiences, it is possible to identify a series of common elements that shape the guiding principles of the curricular articulation models:

- Recognition of previous learning (formal, non-formal and informal).
- Modularization of the curriculum and structuring by cycles.
- Transparency and comparability of apprenticeships through qualifications frameworks.
- Transferable credit systems and mobility mechanisms.
- Effective linkage between training and employment.
- Coordinated governance between institutions and productive sectors.
- Student-centered approach and flexible pathways.

These guidelines show that curriculum articulation is, above all, a complex process that requires political will, inter-institutional cooperation and pedagogical transformation. The adoption of articulation models not only aims to improve the efficiency of the educational system, but also to guarantee the right to continuous, relevant and quality education for all.

State of Curricular Articulation in Chilean Higher Education

In the last two decades, Chile has progressively advanced in the implementation of policies aimed at strengthening curricular articulation in higher education, although progress has been partial and heterogeneous. Law No. 21,091 on Higher Education (2018) establishes principles such as equity, quality and flexibility, and explicitly recognizes the need to foster integrated formative trajectories, including the recognition of prior learning and student mobility (MINEDUC, 2018). Along these lines, the National Education Council has promoted criteria to ensure curricular coherence in the licensing and institutional installation processes, and has published guidelines on mechanisms for articulation between levels, with special emphasis on technical-professional education (CNED, 2023).

A relevant milestone has been the development of the National Framework of Technical-Professional Qualifications (MNC-TP), promoted by the Ministry of Education in collaboration with the Ministry of Labor. This instrument seeks to define graduation profiles, qualification levels and common performance standards between institutions and productive sectors, thus favoring the continuity and relevance of educational trajectories (MINEDUC, 2022). However, its implementation is still incipient, with little effective linkage between institutions and sectors, and with difficulties in defining validation and mobility mechanisms.

In terms of quality, the National Accreditation Commission (CNA) has incorporated criteria that, although they do not directly regulate curricular articulation, they do value the existence of mechanisms for the recognition of learning, educational continuity and academic progression as part of the quality of the institutional curricular design (CNA, 2021). These criteria are considered in the accreditation processes of higher education institutions and training programs, which is why they have gained relevance in the national system.

At the institutional level, some universities and professional institutes have developed relevant initiatives aimed at program articulation. These include agreements for the continuity of studies between technical and professional careers, the design of modular curricula and the recognition of previous training paths through leveling or validation programs (Salinas et al., 2020). For example, the Technological University of Chile (INACAP) has promoted an articulation strategy based on a model of cumulative training cycles, which allows transition from technical to professional levels without loss of learning.

Likewise, institutions such as DUOC UC and IP Chile have worked on the development of vertical articulation mechanisms and recognition of prior learning, although these experiences have not been generalized or integrated into a national systemic policy (Espinoza and González, 2021). A constant feature of these initiatives is that they are voluntary, focused and dependent on institutional will, which limits their scope and impact.

Although the policies and experiences reviewed offer signs of openness towards articulation models, their applicability in the Chilean system faces important structural and regulatory tensions. First, the fragmentation of the higher education system - composed of universities, professional institutes and technical training centers, with differentiated structures and regulations - makes it difficult to build integrated educational trajectories. Added to this is the weakness of binding regulatory frameworks that oblige institutions to recognize learning among themselves or to coordinate their curricula (Bernasconi, 2017).

On the other hand, there are still theoretical and operational gaps in the formulation of articulation models adapted to the Chilean context. Although the NQF-PT

constitutes a significant advance, there are no clear pedagogical guidelines on how to effectively articulate formative levels in the curricular design, nor methodological orientations for implementing PAR or micro-credentialing systems within the formal framework of higher education (Guzmán-Valenzuela et al., 2023).

In addition, current regulations lack real incentives to promote cooperation between institutions, and specific evaluation frameworks have not yet been developed to measure the effectiveness of articulation mechanisms in terms of equity, progression and educational quality. Therefore, from a critical perspective, the applicability of a curricular articulation model in Chile requires not only technical adjustments, but also a transformation of the institutional paradigm that allows moving from inter-institutional competition to a collaborative system logic, where the student's trajectory is the structuring axis of curricular design and educational governance.

Discussion and Conclusions

The theoretical review carried out shows the centrality of curricular articulation as a strategy to strengthen the coherence, flexibility and progression of educational trajectories in higher education. Despite ample international evidence and recent regulatory advances in Chile, the national system still exhibits a structural fragmentation that prevents the consolidation of fluid and cumulative educational trajectories. This dissociation is expressed both between the different formative levels and within the institutions themselves, where curricula are often developed as closed, rigid structures that are disconnected from students' prior learning (Bernasconi, 2017; Guzmán-Valenzuela et al., 2023).

In this context, it is imperative to design a model of curricular articulation adapted to the conditions and challenges of the Chilean system, which will make it possible to move forward from isolated institutional efforts towards a systemic, coherent and sustained educational policy. This need responds not only to criteria of academic efficiency, but also to a logic of educational justice, recognizing that the absence of integrated trajectories has a greater impact on students from more vulnerable contexts, perpetuating historical inequalities in access, permanence and graduation (Espinoza and González, 2021).

The design of a curricular articulation model relevant to Chile should consider at least the following key elements:

- A binding and clear regulatory framework that defines minimum standards of articulation between institutions, levels and programs, overcoming the current voluntary nature.
- Shared pedagogical criteria that promote curricular coherence through the competency-based approach, modularization of programs and validation of prior learning.
- Formal academic mobility mechanisms, including transferable credit systems, recognition of micro-credentials and continuity of studies agreements.
- Inter-institutional governance spaces that allow for effective coordination between universities, professional institutes, technical training centers and public agencies.
- Evaluation and follow-up instruments, integrated to the institutional quality assurance systems, that allow monitoring the effectiveness of the

articulation mechanisms through indicators such as academic progression, retention, coherence between graduation profiles and learning outcomes, and the functioning of the RAP.

Beyond its technical implementation, this model requires a cultural change in the Chilean educational system: to move from a logic of competition between institutions to a collaborative logic centered on the student and on learning as a continuous and cumulative process. Designing and implementing a curricular articulation model in Chile could contribute significantly to reducing dropout rates, recognizing the diversity of prior learning and trajectories, strengthening the quality and relevance of the educational offer and promoting a culture of lifelong learning.

Nevertheless, the challenges are relevant. The lack of systemic coordination, institutional resistance to sharing standards and the weakness of the existing regulatory frameworks are obstacles that must be addressed with decisive public policies, adequate resources and a joint commitment of the system's stakeholders. Along these lines, there is an urgent need to promote new research to address the theoretical and empirical gaps identified, especially those related to the evaluation of the impact of existing articulation experiences and the design of pilot models that can be scaled up at the national level.

Following the theoretical review, a conceptual model of curricular articulation is proposed (see Figure 1) that contemplates three interdependent dimensions:

- *Pedagogical foundation:* based on the competency-based approach, modularization of the curriculum and training flexibility. It promotes a curriculum design oriented to transferable learning outcomes, with open structures that allow multiple routes of entry, progression and graduation. In addition, it integrates mechanisms for the recognition of prior learning (formal, non-formal and informal) and values the knowledge acquired outside the classroom (Wheelahan, 2019; UNESCO IESALC, 2022).
- *Institutional foundation:* the model proposes a governance framework based on collaboration between higher education institutions, training subsystems and public regulatory agencies. In this scheme, regulatory authorities play a key role in defining, supervising and safeguarding minimum educational quality standards. At the national level, agencies such as the Ministry of Education and its technical bodies, the National Education Council and the National Accreditation Commission are responsible for establishing regulatory frameworks, quality criteria and guidelines for curricular articulation, as well as for supervising compliance with them. These functions are in line with Brunner and Ferrada (2021), who emphasize the importance of systemic governance capable of articulating common policies and ensuring coherence among institutions. At the institutional level, the academic units and the internal quality assurance systems assume the operational implementation of the model, ensuring coherence between the graduate profiles, the learning outcomes and the articulation mechanisms.
- *Social foundation:* recognizing the diversity of trajectories of Chilean students and promoting equity through real opportunities for mobility, continuity and recognition. Here we are committed to a model that responds to the demands of the labor market, the inclusion of first-generation students, and the articulation between education and citizenship (Espinoza and González, 2021).

This model seeks to generate conditions so that students' educational trajectories are not determined exclusively by the rigidities of the system, but rather recognize the real trajectories of students, understood as the paths actually followed over time, marked by interruptions, re-entries, combinations between study and work, and learning acquired in different contexts.

The design of personalized training paths does not imply the absence of a common curricular framework, but rather the possibility of articulating different itineraries within shared training structures, with clearly defined learning outcomes and graduation profiles. This adaptation between educational offerings and diversity of trajectories does not imply a lowering of academic standards, but rather an articulated design that allows students to be led towards graduation profiles defined by competencies and socially relevant learning outcomes, regardless of the educational route followed. Likewise, the model coherently articulates the levels of technical-professional and university education, establishing a cumulative progression based on learning achievements, without implying disregarding the formative value of study time, which is recognized as part of the academic and professional maturation process.

The formative trajectories, in this sense, are not linear or uniform, but are constructed as personalized routes in a permeable system, where the student can advance, pause or reorient his or her process without loss of formative value. However, this diversification of trajectories does not imply a decrease in academic demands or a relaxation of achievement standards. On the contrary, the proposed model is based on graduation profiles defined by competencies and verifiable learning outcomes, which act as common references for all students, regardless of the training path followed.

Thus, curricular flexibility is articulated with quality assurance mechanisms that guarantee formative equivalence: the evaluation of competencies is based on explicit criteria, validated instruments and institutional procedures that safeguard the coherence between recognized learning, training activities taken and expected performance of the graduate. This ensures that the diversity of trajectories does not result in quality gaps, but in differentiated opportunities to achieve the same professional standards.

The model can be represented along five functional axes: 1) a modular curriculum articulated by competencies; 2) systems for the recognition and validation of prior learning; 3) regulated inter-institutional mobility; 4) an active national qualifications framework; and 5) articulating governance. Within this framework, the balance between common training and electives is defined on the basis of explicit pedagogical and professional criteria.

The common training is structured around a set of fundamental competencies and mandatory learning outcomes, directly linked to the program's graduate profile and professional standards. The optional nature, meanwhile, is oriented to the diversification of formative itineraries, allowing disciplinary deepening, progressive specialization or adaptation to specific work contexts, without altering the essential formative nuclei. Thus, curricular flexibility is expressed in the configuration of alternative routes, but not in the redefinition of minimum expected learning.

In order to advance towards the implementation of this model, the following lines of action are proposed at the institutional level:

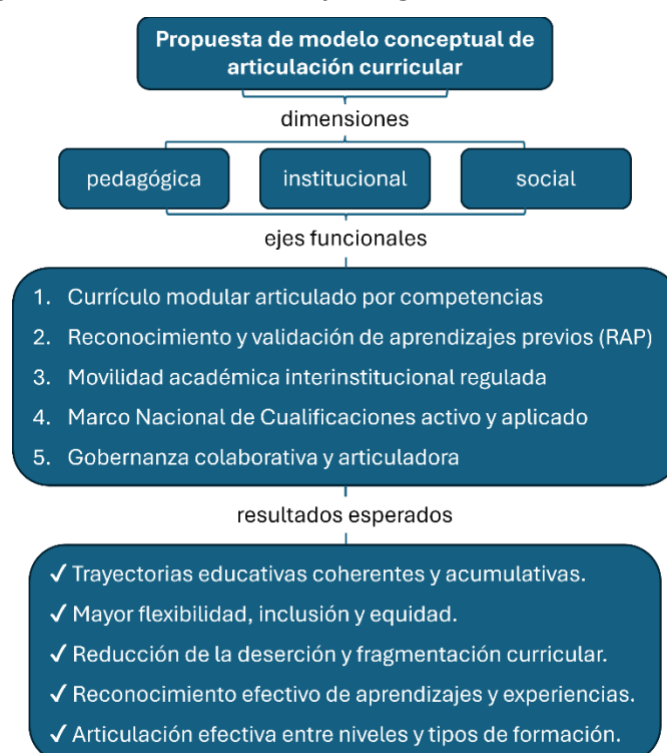
- Redesign curricula from a logic of articulation and progression, considering real student trajectories and transversal competencies.
- Establish technical units for curricular articulation, with the capacity to manage RAP processes, mobility and educational continuity.

- Generate formal links with other institutions in the system, based on common frameworks of quality, competencies and learning outcomes.
- Strengthen teacher training in flexible and student-centered approaches, including authentic and contextualized assessment.
- Integrate the analysis of student trajectories in the internal quality assurance and institutional planning processes.

This conceptual model does not pretend to be a universal recipe, but a proposal adaptable to the specific contexts of each institution, which recognizes the urgency of building a more interconnected, inclusive system focused on real trajectories, as a condition for advancing towards a more equitable, relevant and transformative higher education.

FIGURE 1

Conceptual model of curricular articulation for higher education in Chile.



Note. Prepared by the authors (Rodríguez and Almeyda, 2025).

The implementation of a coherent curricular articulation model adapted to the Chilean context could contribute significantly to improving the academic progression of students, understood as the continuous and efficient transit through the different stages of their education. By structuring cumulative formative trajectories, the model facilitates the understanding of the academic itinerary, decreases curricular overload and allows advancing with greater security towards the achievement of educational goals (Tinto, 2017).

Likewise, the strengthening of mechanisms such as the recognition of prior learning, curricular flexibility and inter-institutional mobility could increase student permanence, especially in traditionally excluded sectors or those with discontinuous

trajectories. This translates into higher retention, lower attrition and a better match between the educational offer and the entry profiles (Gairín et al., 2021).

For the proposed model to be viable and sustainable, higher education institutions must develop certain enabling conditions: a shared institutional vision, technical-pedagogical capacity, monitoring and follow-up systems, inter-institutional cooperation mechanisms and the inclusion of curricular articulation in quality assurance processes in education. In addition, the sustainability of the model depends on its ability to adapt to different institutional contexts, respond to transformations in the world of work, and integrate innovations such as micro-credentials, hybrid education and lifelong learning.

In conclusion, the analysis carried out in this article confirms the relevance and urgency of moving towards a model of curricular articulation for Chilean higher education. This model represents a fundamental tool for building coherent, inclusive and lifelong learning-oriented educational trajectories. Its relevance transcends the curricular, as it has a direct impact on educational policy, by requiring integrative regulatory frameworks; on institutional management, by requiring flexible and collaborative structures; and on pedagogical innovation, by promoting approaches centered on the student and his or her previous experiences.

Faced with the challenges of attrition, fragmentation and rigidity that affect the Chilean system, curricular articulation is emerging as a transformative strategy capable of improving the equity, quality and relevance of higher education. However, its implementation requires solid institutional conditions, intersectoral coordination and a collaborative culture oriented to the common good of education.

In view of the above, it is suggested that further applied research be conducted to evaluate pilot articulation experiences in Chile, as well as to develop comparative studies with international models that can be adapted to the national context. It is also essential to promote the development of specific pedagogical and methodological guidelines to guide institutions in the design, implementation and evaluation of articulation models that respond to the real needs of their student communities.

On the other hand, this study has some limitations that should be considered when interpreting its scope. In the first place, this is a theoretical-documentary research, so it does not incorporate empirical evidence derived from the implementation of the model in specific institutional contexts. Second, the analysis focuses on the context of the Chilean higher education system, which limits the direct generalization of the findings to other national systems with different regulatory frameworks and structures. However, these limitations are consistent with the objective of the study, which is oriented towards the construction of a conceptual and propositional framework.

Finally, from a feasibility perspective, the implementation of the proposed model does not necessarily imply a significant increase in structural costs, as long as it is based on the progressive strengthening of existing institutional capacities, such as quality assurance systems, curriculum management and mechanisms for the recognition of prior learning. However, its adoption requires institutional will, inter-institutional coordination and gradual implementation to safeguard the financial sustainability of the system.

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