

“Articulation as a harmonious and efficient development of the formative process of people throughout their lives. The case of Curricular Harmonization of two Higher Education Institutions in the region of Tarapacá”

Verónica Muñoz Belmar ^{1[0009-0003-8210-892X]} and Jessica Barraza Rivera ^{1[0000-0003-2134-5799]}

¹ Universidad Arturo Prat, Iquique, Chile

vemunoz@unap.cl, jebarrazar@unap.cl

Abstract. Summary. This article presents the Curricular Articulation process developed between Universidad Arturo Prat and Centro de Formación Técnica de Tarapacá, within the framework of agreement established between this university and the Ministry of Education, in accordance with the provisions of Law 21.091 on Higher Education. This is a relevant milestone at national level, since it is the first articulation between a State Technical Center and a University. The work methodology implemented, consisted of a series of workshops between the curricular teams in order to address an analysis of inter-relatedness of the curriculum at macro, meso and micro level between technical and continuing education programs, from which conclusions and recommendations were drawn to generate curricular adjustments in these programs, thus contributing to strengthening the regional technical human capital

Keywords: Technical education – Articulation - Curricular Harmonization – Training Path.

1 Introduction

In 2016, under Law 20.910, fifteen State Technical Training Centers (CFT) were created throughout the country (MINEDUC: 2015). Among them, the so-called Centro de Formación Técnica de Tarapacá, located in Alto Hospicio - Chile.

In accordance with Law 21.091, Universidad Arturo Prat establishes with the Ministry of Education an "Agreement for Strengthening and Development of Academic, Administrative and Financial Capacities of the State CFT of Tarapacá". Therefore, DACID (Dirección de Armonización Curricular e Innovación Docente), together with the curricular team of the State CFT Tarapacá, initiates a process of Articulation, through the Curricular Harmonization of its education journey.

2 Theoretical Framework

The phenomenon of globalization and technological advances brings uncertainty in the labor market. Therefore, the articulation between the different training levels constitutes an urgent challenge for the Chilean education system (Sevilla, Fa-rías and Weintraub, 2014). In this context, the Global Agenda for Lifelong Learning, emerges as a

solution to the increasing demand for continuous and flexible training (Sevilla and Montero, 2018).

To improve the quality of life of the population, it is essential to strengthen the training of human capital, diversifying the training offer of higher education, increasing its coverage and increasing its quality, seeking the retention of a target audience with high dropout rates (López, Ortiz and Fernández: 2018).

Articulation is a tool that allows a successful transit, through efficient formative routes that recognize previous knowledge and competencies, establishing levels of curricular equivalence and convergence between the different formative modalities (López, 2018). This is called curricular harmonization (Shaw, 2012), and its implementation is associated with efficiency, timeliness and status, allowing the development of continuous education programs (Hass, 1999).

3 Methods

This inductive study is approached through the Case Study method (Bisquerra, 2009; Sampieri, 2006). Its main objective is to describe the process of Articulation between TNS Training Plans of the State CFT Tarapacá and those belonging to the Continuous Study Modality of the UNAP.

The work methodology corresponded to a Diagnosis of Significance, through four stages: i) background and information gathering. ii) selection of techniques and tools. iii) collaborative work workshops. iv) systematization of results and proposals.

4 Results

The macro-curriculum established degrees of equivalence between the Institutional Educational Model of UNAP and the Institutional Educational Project of CFT Estatal Tarapacá, sharing a student-centered competency approach, with a common focus on social integration and interculturality, commitment and collaboration with other actors in the region and Continuing education. Both institutions share Transversal Competencies.

At a Meso curricular level, the equivalences and convergences in the subjects of recognition are translated into performances or learning results – that may be presented partially in different subjects.

The use of learning methodologies is coherent with the declared learning results, being the most used: problem-based learning, problem solving, case study-based learning, exercise and project-based learning.

In regards to the evaluation strategies, the State CFT conceptually divides them into indirect methods and direct methods, using mainly case analysis, role-playing, debates, presentation exercises, interviews, and portfolio of evidence.

5 Discussion

Successful articulation processes, with recognition of previous learning, is fundamental for Continuing education from technical studies programs of State CFT to UNAP careers. In the curricular area, success is guaranteed with plans that are at least 80% harmonized.

In the case of TNS Parvularia, contents related to Migration and Interculturality in early childhood should be incorporated; TNS in Public Administration and Business Administration require elements of Entrepreneurship and Innovation, Prototyping and Marketing; TNS in Logistics should deepen in Strategic Logistics Plans, Consumer Behavior in the Market and contents related to Industry 4.0 and Internet of Things.

6 Conclusions

Current accreditation standards promote articulation between different undergraduate training levels in Higher Education Institutions. However, there are few concrete experiences in which curriculum harmonization is addressed for articulation with recognition of prior learning.

This experience corresponds to an important milestone in the Northern Macro-zone, for human capital development, considering that it materializes a real articulation between a State Technical Training Center and a Public University.

Therefore, the application of this methodology between two higher education institutions in the north of Chile constitutes a real contribution to curriculum studies, since it guarantees the harmonization of the study programs of macro, meso and micro curriculum, allowing progress towards a broader, more inclusive and quality education in the country.

7 Limitations and Future Research

The main limitation of this study is a low knowledge of curriculum concepts among the institutions participating in the articulation, which hindered the effectiveness of the initial stage of the process.

The challenges for future research involve the systematization of the results as progression indicators. In addition, this experience has served as a model for articulations at other educational levels.

References

1. Biggs, J. (2006). *Calidad del Aprendizaje Universitario*. Narcea, S.A Ediciones. Madrid España. <https://vdocuments.mx/biggs-john-2006-calidad-del-aprendizaje-universitario-narcea-sa-de-ediciones-espana.html?page=56>
2. Bisquerra Alzina, R. (2009). *Metodología de la Investigación Educativa*. Editorial La Muralla. https://www.academia.edu/38170554/METODOLOG%C3%8DA_DE_LA_INVESTIGACI%C3%93N_EDUCATIVA_RAFael_BISQUERRA.pdf
3. Centro de Formación Estatal Tarapacá (2019). *Proyecto Educativo Institucional 2019*. <https://www.cftestataltarapaca.cl/documentos/PEI-CFT-ESTATAL-TARAPACA.pdf>
4. Eleva (2018). *Eleva 02: Aprendizaje en el lugar de trabajo: Una Herramienta para Enseñar en Contextos Reales*. Eleva y Fundación Chile. <https://fch.cl/wp-content/uploads/2019/05/elevaN2-Aprendizaje-en-el-lugar-de-trabajo-1.pdf>
5. Flick, U. (2015). *El diseño de Investigación Cualitativa*. Ediciones MORATA, S.L. <https://dpp2017blog.files.wordpress.com/2017/08/dise3b1o-de-la-investigacion3b3n-cualitativa.pdf>
6. Fundación Chile (2019). *Articulación en Educación Técnica. Clave para el Desarrollo de Trayectorias Efectivas*. <https://fch.cl/wp-content/uploads/2019/05/eleva-n1-Articulacion%CC%81n-en-educacion%CC%81n-tecnica.pdf>
7. Hass, A.R. (1999). *Tendencias en la Articulación para la Educación Técnica y profesional en la Región del Sudeste Asiático*. UNESCO UNEVOC Centre.
8. López, K., Ortiz, I. Fernández, G. (2018). Articulación de itinerarios formativos en la educación superior técnico profesional. Estudio de un caso en una universidad chilena. *Perfiles educativos*, vol. XL(160). <https://www.redalyc.org/journal/132/13258778011/html/>
9. Ministerio de Educación (2018). *Estrategia Nacional de Formación Técnico-Profesional*. Ministerio de Educación Gobierno de Chile. <https://bibliotecadigital.mineduc.cl/handle/20.500.12365/2217>
10. Ministerio de Educación (Viernes 4 de Diciembre de 2015). *Historia de la Educación Técnico-Profesional*. <https://www.tecnicoprofesional.mineduc.cl/secretaria-tecnico-profesional/historia/>
11. Ministerio de Educación (2016). Marco nacional de cualificaciones para la Educación Superior. <https://acreditaci.cl/wp-content/uploads/2017/06/MNC.pdf>
12. Ministerio de Educación (2017). *Marco Nacional de Cualificaciones Técnico - Profesional*. <http://www.tecnicoprofesional.mineduc.cl/wp-content/uploads/2018/03/Marco-de-Cualificaciones-T%C3%A9cnico-Profesional.pdf>

13. Phillips KPA (2006). *Estudio nacional para mejorar los resultados en la transferencia y articulación de créditos desde la educación técnica y vocacional a la educación superior. Informe de la etapa 1*. Departamento de Educación, Ciencia y Formación. Australia.
14. Sampieri, R., Fernández - Collado, C. y Baptista Lucio, P. (2006). *Metodología de la Investigación* (4ta ed.). McGrawHill. México.
15. Sevilla, M.P. y Montero, P. (2018). *Articulación de la educación técnica formal, no-formal e informal: garantías de calidad para un continuo educativo* (Nº9). Serie Cuadernos de Investigación en Aseguramiento de la Calidad. Comisión Nacional de Acreditación. <https://www.cnachile.cl/SiteAssets/Paginas/cuadernos/Cuaderno%209.pdf>
16. Sevilla, M.P., Farías, M. y Weintraub, M. (2014). *Articulación de la educación técnico profesional: una contribución para su comprensión y consideración desde la política pública.* (Nº41) Calidad en la educación, pp. 83-117.
17. Shaw, C. (2012). *The influence and outcomes of high school to college transition policy (for career and technical education students in Massachusetts (PhD Dissertation)*. Boston: Northeastern University.
18. Solar, M.I.; Sánchez, J.; Zúñiga, M.; Álvarez, S.; Fonseca, G.; Herrera, R.; Castillo, C.; Casas, M.; Poblete, A. & González, E. (2013). Conceptualización y algunas experiencias internacionales sobre articulación. En Centro Interuniversitario de Desarrollo CINDA (Ed.), *Articulación entre el pregrado y el postgrado: Experiencias Universitarias* (pp. 17- 48). CINDA. <https://cinda.cl/wp-content/uploads/2013/03/articulacion-entre-el-pregrado-y-el-postgrado-experiencias-universitarias.pdf>
19. Universidad Arturo Prat (2020). *Modelo Educativo Institucional de la Universidad Arturo Prat. Guía orientadora para la comunidad universitaria.* (2da ed.). Dirección de Armonización Curricular e Innovación Docente DACID. https://www.unap.cl/prontus_unap/site/docs/20200630/20200630191503/modelo_educativo_institucional.pdf
20. Universidad Arturo Prat. (2020) *Plan Estratégico Institucional 2020 - 2025*. Dirección General de Planificación y Desarrollo. https://www.unap.cl/prontus_unap/site/docs/20140410/20140410093426/plan_estrategico_institucional_2020_2025_v11_2021.pdf
21. Ley 21.091 de 2018. Sobre Educación Superior. 11 de mayo 2018. CVE 1404565.
22. Ley 20.910 de 2016. Crea quince Centros de Formación Técnica Estatales. 21 de marzo 2016.