

**HARMONIZATION IN PROFESSIONAL TECHNICAL HIGHER EDUCATION.
THE EXPERIENCE OF CFT UV AND STATE CFT OF VALPARAÍSO
ARMONIZACIÓN EN LA ENSEÑANZA SUPERIOR TÉCNICA PROFESIONAL.
HARMONIZATION IN PROFESSIONAL TECHNICAL HIGHER EDUCATION.**

Verónica de las Nieves Lorca Caro

Universidad de Valparaíso, Chile

(veronica.lorca@uv.cl) (<https://orcid.org/0000-0001-6714-3581>)

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ABSTRACT

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State efforts to strengthen Vocational Technical Higher Education have been important, targeting a socially and economically vulnerable student population. The Technical Training Center of the University of Valparaíso, historically involved in the training of technicians, together with the Valparaíso State Technical Training Center, legal continuator of the same process, generated continuity in the training offer, in terms of harmonization and articulation, as part of a State policy, whose objective was to enhance the employability of graduates in the region. The research is developed under a qualitative, descriptive and exploratory methodology, where the authorities of both institutions that participated in the harmonization process are interviewed, information that was analyzed through the Atlas TI software and incorporating the Documentary Registry with the purpose of knowing information of the governance of institutions. The exploratory scope allowed us to shed light on how the harmonization was created, describing a work framed in an agreement where the institutions commit to delivering an academic offer in accordance with the requirements of the productive sector of the Valparaíso region, which accounts for an innovative, transparent act with great benefits for students.

RESUMEN

Palabras clave:

armonización, Enseñanza Superior
Técnica Profesional, Centro de
Formación Técnica.

Los esfuerzos estatales para fortalecer la Enseñanza Superior Técnica Profesional han sido importantes, apuntando a una población de estudiantes social y económicamente vulnerable. El Centro de Formación Técnica de la Universidad de Valparaíso, involucrado históricamente en la formación de técnicos, junto al Centro de Formación Técnica Estatal de Valparaíso, continuador legal del mismo proceso, generaron la continuidad a la oferta formativa, en cuanto a la armonización y articulación, como parte de una política de Estado, cuyo objetivo fue potenciar la empleabilidad de los egresados de la región. La investigación se desarrolla bajo una metodología cualitativa, descriptiva y

exploratoria, donde se entrevistan a las autoridades de ambas instituciones que participaron del proceso de armonización, información que fue analizada a través del software Atlas TI e incorporando el Registro documental con el propósito de conocer información de la gobernanza de las instituciones. El alcance exploratorio permitió dar luces de cómo se gestó la armonización, describiendo un trabajo enmarcado en un convenio en donde las instituciones se comprometen en la entrega de una oferta académica acorde a los requerimientos del sector productivo de la región de Valparaíso, lo que da cuenta de un acto innovador, transparente y con grandes beneficios para los estudiantes.

Introduction

The international experience in relation to harmonization already has a long history, for this purpose agreements were established with different regions globally in Higher Education, "Latin America and the Caribbean (1974), the Arab States (1978), Europe (1979), Africa (1981) - through the Arusha Convention - and Asia and the Pacific (1983)", Association for the Development of Education in Africa (2015, p. 2). In this context, it is pointed out that harmonization is not synonymous with uniformity, standardization, regulation, condensation, homogenization or unification of all higher education systems. Rather, harmonization refers to the coordination of educational programs with agreements on minimum academic standards and the guarantee of equivalence and comparability of qualifications between and within countries. Thus, the experience developed in other countries has been a process based on the trust and confidence of the parties, and there must be, as a *sine qua non* condition, consensual agreements that imply elements of portability and transfer of qualifications between the parties.

With regard to harmonization, most experiences point to favorable results because it has been understood that the most important factor contributing to the success of the harmonization process in higher education has been the participation and consensus building at the level of national agencies, the public and key stakeholders. This has been the case in the European Economic Community, where, following the Bologna agreements, the effects in terms of harmonization have been positive, and new suggestions and strategies have even been incorporated,

Lisbon defined organizational, legal and methodological measures to create a single European education and research area within the Bologna Process. It was an important step in improving the education system in Europe and ensuring its compatibility and comparability between countries (Bykowska et al., p.543).

Specifically in Central America, Costa Rica presents a case of harmonization in the university curriculum, including "General Studies" in the training plan of three state universities. Through an agreement between the universities, the courses that comprise the General Studies are recognized in the other two universities, regardless of the institution that taught them, the method used and the subjects studied.

In Chile, harmonization is seen as a response to public policy on the need for institutions to agree on harmonization processes and provide the educational community with an academic offer in accordance with the training needs of the territories and, consequently, of the country.

Under this scenario, the State CFTs initiate their academic activities to strengthen Higher Technical Professional Education (hereinafter ESTP), associating with technical training centers (hereinafter CFTs) related to State universities, who through harmonization agreements share training models and institutional experiences, "but respecting the institutional particularities and the characteristics of the regional societies to which the curricula of the institutions respond" (De Armas et al., 2021, p. 61).

Thus, the Valparaíso Region State Technical Training Center (CFT) and the University of Valparaíso Technical Training Center (CFT) have signed an agreement on harmonization and coordination with the aim of developing a training proposal that identifies the real training needs in the region and responds to public policy on higher technical education, so that there is only one public and state CFT in the region, as pointed out by Rodrigo Jarufe, rector of the Valparaíso Region State Technical Training Center: "a mandate in the law that speaks of the harmonization of institutions, of the technical training centers that were created (...) by state universities."

(University of Valparaíso, November 9, 2018). In the same vein, Aldo Valle, as an authority at the University of Valparaíso, points out that:

What we are doing precisely is to give shape to an act of harmonization (...), with the purpose that in the region we harmonize, add, integrate efforts, capacities, experiences, and in this way we have in the Valparaíso Region the best offer of technical training of a public nature (Universidad de Valparaíso, November 9, 2018).

Therefore, both institutions undergo a process of curricular harmonization to establish coherence between different curricula, committing to the development of a harmonized path of the curricula, with an integrative and systemic approach, taking into account the fundamentals of the competency-based model, i.e., learning oriented to know how to know, know how to do and know how to live together.

The success of curriculum harmonization efforts requires conditions that are essential for it to become a reality. It is not enough, then, with the will to harmonize the curriculum; it is also necessary to consider the need for minimum conditions that prepare for this harmonization and for the change of mentality that it implies (Díaz, 2006, p. 25).

Although there are no experiences that account for harmonization in the ESTP, the description provided by Rivera (2022, p 7), clarifies the advantages that this process entails, "the need for connection between the labor market and training in a broad sense of competencies, through harmonization between levels that facilitates upward mobility of labor trajectories", the purpose on which both educational institutions are focused,

At this point, attempts of articulation between actors are observed emerging (...) new relevant actors, such as state CFTs and Local Public Education Services, which are an expression of the changes brought about by the education reforms implemented between 2015 and 2018, through which it is possible to integrate territorial criteria, sustainability of the TVET system (Rivera, 2022, p. 7).

There is no doubt that the interest of ESTP institutions in harmonizing their educational offerings lies in the opportunity to update their curricula, incorporating the recognition of educational processes, certifications and homologations of academic units that promote student mobility.

Conceptual Framework

In reference to curricular harmonization, circumscribed to the academic and professional field developed by the educational institutions, it has generated articulated and harmonized instances to structure redesigns and innovations, optimizing the training offer and ensuring quality training under these premises, it can be added that,

Harmonization can be understood as a process of ensuring articulation, both horizontally and vertically, between programs and institutions among various higher levels of education systems. In other words, it is the process of establishing benchmarks for qualifications, programs [...] and certifications (Woldegiorgis 2013, p 15).

Therefore, having ensured articulation in its different guidelines (horizontal and vertical) and whose reference points have been satisfactorily established, it is possible to review several proposals that define it, thus corroborating that "almost all literature describes the harmonization of higher education as the establishment of a common frame of reference to facilitate comparability, compatibility and mutual recognition of higher education systems (Knight, 2012; Okeke, 2012; Eriksen, 2003; Hoosen et al, 2009; DeLong

and Dowrick, 2002, cited by Girma, 2019, p. 92), in parallel to what is described by Girma, "harmonization refers to the coordination of educational programs with agreements with minimum academic standards and ensuring equivalence and comparability of qualifications between and within countries" (AAU,2007 cited by Woldegiorgis, 2013, p. 15).

Consequently, harmonization becomes relevant when the institutions agree to review their postulates and training proposals in order to establish areas of productive development in the region, which is why it is understood that,

Harmonization of higher education is essentially a process that recognizes the significance of regional cooperation in education and the importance of establishing a "knowledge area" in which activities and interactions in higher education, mobility and employment opportunities can be easily facilitated and increased (Sirat et al., April 14, 2014).

Therefore, in order to carry out the regional cooperation process, harmonization and its intrinsic relationship with the elements it contains, such as:

A multidimensional and multi-stakeholder process that takes place at different levels of the system and promotes integration in the region. [...], in curriculum development, educational standards and quality assurance, joint structural convergence, coherence of systems, as well as compatibility, recognition and transferability of degrees to facilitate mobility (Hahn & Teferra, 2013, p. 127-128).

The harmonization work, represents an articulation a point of curricular convergence whose purpose is to tend to the recognition of completed formative processes or in the evidence of units and results of learning achieved, "the duration of studies, in the minimum contents, in the levels of deepening in each level of studies, in the unit of measurement of the effort that learning requires (...) in the guarantee quality of the programs" (Videa, Escobar and De Armas, 2019 cited by De Armas et al, 2021, p. 61- 62), therefore harmonization "establishes a certain convergence between different curricula" (De Armas et al., 2021, p. 61), the result of which are innovative programs formulated through competencies that represent the training needs of the production sector "which implies harmonizing in terms of the competencies developed in the study process of a career" (Díaz, 2006, p. 25). In concomitance with the above, the harmonization is understood as a mechanism that analyzes the formative development within each institution, with its processes of self-evaluation and evaluation of plans and programs, allowing the academic authorities to define a work route that circumscribes the harmonization in the educational institution, thus Fiallos et al. (2020, p.25) defines it as:

Construction of a common space for higher education that, in addition to the search for consensus, will facilitate the recognition of people's qualifications and competencies, both to continue their studies and their working life and to increase mobility in the region.

In this work initiated by educational institutions, the consensus aims essentially at "the incorporation of a credit system and common criteria for curricular harmonization in order to set standards and generate confidence and inter-institutional convergence" (Latin American and Caribbean Space for Higher Education, 2009a cited by Calvo, 2009, p. 15).

Thus, those who participate in the harmonization process focus on contrasting educational models, to glimpse common connections in the understanding that it is a "process of convergence between compatible curricular designs that make possible the articulation between the levels: mega, macro, meso and micro curricular that promote

interdisciplinarity and internationalization with the purpose of contributing (...) with quality education"(González, 2019, p.133), proposing collaborative actions that generate an "understanding and convergence of educational structures, the creation of opportunities for flexible training itineraries in higher education and homologate curricula in their curricular content" (Fiallos et al. 2020, p.25). This is understood when there is coordination to harmonize the curricula, which implies the unification of curricular contents according to the graduation profile of related careers, validating and recognizing academic certifications.

Method

Considering the research question: How does the process of harmonization between CFT UV and CFT Estatal de Valparaíso influence the labor insertion of students? whose general objective is: To describe the harmonization process carried out between CFT Estatal de Valparaíso and CFT UV in 2019, corresponds to execute a qualitative, descriptive and exploratory research, "qualitative research focuses on understanding and deepening the phenomena, exploring them from the perspective of the participants in a natural environment and in relation to the context (Hernández et al., 2010, p. 364). Therefore, it is explained as a process through which the information gathered by the researcher, establishing relationships, interpretations, inferences and conclusions. "The qualitative paradigm, the researcher is oriented not only to acquire information, but to learn from experiences and points of view of other individuals, assess processes and generate theories from the perspective of informants (Alejo and Osorio, 2016, p. 75). According to the descriptive approach, according to Guevara et al. (2020, p. 171) explains that, "The objective of descriptive research is to get to know the situations, customs and prevailing attitudes through the accurate description of activities, objects, processes and people", and that it is framed in the interviews conducted with the authorities of both institutions. In the exploratory scope, considering that it is an unpublished research in CSP "it is applied to phenomena that have not been previously investigated and there is an interest in examining their characteristics" (Ramos, 2020, p. 2).

Sample

Related to the sample, this "corresponds to a portion of the population that is taken to conduct the study, which is considered representative"(Hurtado, 2000, p. 154) for the development of the research a non-probabilistic intentional or convenience method was established based on the "convenience accessibility and proximity of the subjects for the researcher"(Manterola and Otzen, 2017, p. 230) that for the research concerns the authorities of the CFT Estatal de Valparaíso: Academic director, deputy director of institutional management, deputy director of teaching, head of curriculum and former authorities CFT UV: deputy academic director and head of career and teacher TNS in Nursing; also, 3 professionals who taught in both institutions and 2 students who entered the CFT UV and finished their studies at the State CFT of Valparaíso. A total of 11 interviewees provided a holistic view of the harmonization carried out by the institutions, and the authorities also provided documented information on the educational model, study plans and programs, and academic regulations, among other documents, to provide a context for the harmonization carried out.

Instruments

In the research, a semi-structured interview prepared *ad hoc*, previously validated by experts in the area of education, was applied to the directors of CFT Estatal de Valparaíso and former directors of CFT UV, it was subsequently used with teachers and students who participated in this process, i.e. started the training activity in CFT UV, finishing the technical career in CFT Estatal de Valparaíso. The interview with the actors who participated in the harmonization allowed gathering information on the harmonization executed, considering that "semi-structured interviews, despite having a previously established script, are flexible and allow the researcher to delve deeper into a relevant or interesting aspect for his research (Tracy 2013 cited in Mendoza, 2018, p. 88). The interview covered topics such as conceptualization of harmonization, objectives, differences and similarities between curricula, institutional collaboration, student participation, evaluation of the effectiveness of harmonization, benefits; a total of 15 questions. These were carried out through zoom, previously defined with the participants, date and time of the meeting.

Data Analysis

According to the qualitative research, the interviews with the directors of the State CFT of Valparaíso, former directors of the CFT UV, teachers and students who worked in both houses of study were analyzed with the Atlas TI software, version 23, to detect conceptual relationships, codes and categories that delimit the analysis of harmonization. This software analyzed the interviews (transcribed and previously uploaded in PDF format) and processed the information by analyzing the contents and opinions expressed in them, establishing codes (thematic lines) that were finally grouped into 4 categories for the final analysis: harmonization, areas of knowledge, seal competencies and public policies; in parallel, the institutional documents provided by the authorities were reviewed. These were ordered and analyzed through the documentary record technique and according to Morales (2015 cited in Martínez, 2023, p.70), "it is recognized as a scientific procedure and obeys a process that is characterized by being systematic to investigate, collect, organize, analyze and interpret information about a topic". The work carried out by the harmonization committee is based on the review of educational models, academic offerings, curricula and programs and, from this examination, to connect the findings with the categories derived from the IT Atlas.

Results

The results of this research show an unprecedented process of curricular harmonization in ESTP.

The interviews conducted with authorities, teachers and students were analyzed in the Atlas IT software, which yielded the following categories: harmonization, areas of knowledge, seal competencies and public policies. The work of the harmonization team focused on qualitatively analyzing each category through the interviews and reporting on the harmonization process with the information from the documentary record.

Regarding the harmonization category, two topics were considered to complete this category: harmonization between CFT UV - CFT Estatal de Valparaíso and Effectiveness of harmonization.

Table 1

Authorities CFT Valparaíso State CFT, former authorities CFT UV, teachers and students

Categories	Interviewees	NO
Harmonization	Deputy Director of Institutional Management CFT Estatal de Valparaíso	1
	Deputy Director of Teaching CFT Estatal de Valparaíso	2
	Head of Curriculum CFT Estatal de Valparaíso	3
Areas of knowledge	Academic Director CFT Estatal de Valparaíso	4
	Former Deputy Academic Director CFT UV	5
	Former head of career and professor of TNS in Nursing CFT UV - CFT Estatal de Valparaíso	6
Competencies seal	CFT UV - CFT State of Valparaíso	7
	CFT UV - CFT State of Valparaíso	8
Public policies	CFT UV - CFT State of Valparaíso	9
	Student CFT UV - CFT Valparaíso State CFT	10
	Student CFT UV - CFT Valparaíso State CFT	11

Qualitative Analysis Corresponding to the Category Harmonization

With the result of the qualitative analysis, harmonization proposes a construction that brings together the competencies declared in both institutions "in order to establish a practice of academic harmonization for collaboration and mutual recognition among the various higher education institutions" (Alvarado et al., 2009, p. 3), considering common spaces that evidence similar training routes between both educational models.

In concomitance with the above, interviewee No. 5, defines harmonization in a conceptual way as:

The review of training plans and programs and the establishment of convergences related to the meeting points between thematic units, learning outcomes and allocation of theoretical and practical hours for the achievement of learning among the institutions that agree to share their educational models.

In the same vein, interviewee No. 1 circumscribes harmonization to the work carried out by the harmonization committee:

The concept of harmonization was understood as harmonizing the different moments and components of the curricular aspects of both institutions, where harmonization also invited to analyze the relevance of the two educational projects. The needs that the environment had to find common points, to consider not only the convergence of these training plans, but also to see if these plans can dialogue and that they can be appreciated as similarities although they are different plans.

Interviewee No. 3 points to the revision of the plans and programs of both institutions, considering that "they are different instances, to seek beyond convergence, but rather that they be coherent with each other". According to the above, interviewee No. 4 describes the harmonization, in view of the work that was carried out between the two educational centers:

It is the continuity of studies, the study of the curriculum. The main objective that is by law that creates the 15 State CFTs, but there is nothing written and the idea was to highlight that the student who was studying in the CFT UV could continue his studies in the State CFT of Valparaíso in the same time that had been given to him when he started his studies.

A similar position is offered by interviewee No. 2, who states that "the objective was to unite study plans, to follow up in order to achieve the purpose that was the completion of these students' careers".

Finally, interviewee No. 6 explains that she understood harmonization as "the transfer of training from one institution to another and making it possible for students to continue their studies".

In general, according to those interviewed, it was a collaborative effort in which educational models were brought closer together and activities were programmed in order to achieve a harmonization where the center of the proposal was the training needs of the students.

Harmonization between CFT UV - CFT State of Valparaíso

With the elements that make up the harmonization, through the coordination of programs, the guarantee of equivalence and comparability of qualifications, an agreement of articulation and harmonization between CFT UV and State CFT is established, which implies that students who entered the CFT UV can continue their studies in the State CFT, and take harmonized programs. In fact, the work carried out was a commitment of both educational institutions and of the professionals who participated in the comparative study of plans and programs and educational models.

According to interviewee No. 2, "it was a challenge, to see the integration and planning in academic subjects, and to configure them in the academic record". For interviewee #3, participating in a harmonization process represented,

A challenge from several points of view, since it was an institution that was starting with harmonized careers, therefore the development of resources, material, procedures[...] was a function of the closing of those careers. It also led us to rethink and rethink our academic regulations in terms of validations and mechanisms for recognizing subjects.

According to interviewee No. 5, it was "a great challenge, there is no literature or research on harmonization in CSP". For interviewee #1 it meant:

An apprenticeship there was not much to look for, there were not many examples to take; I feel that a challenge, until we missed the last [...] so it was complex learning, the system, the platform and reaching agreements with the ministry.

Interviewee No. 4 further explains the state of the art with respect to harmonization in the CSP, explaining that:

It was the first experience that was made in Chile, therefore, the meaning explained as academic director in giving a future experience and see what problems we could have along the way. Although the harmonization was successful, according to us it was to gain the experience of how between two houses of study, to talk curricularly and to harmonize the careers

From a personal point of view, interviewee No. 6 says that "it meant an opportunity for the students to finish their degree as well as a job opportunity for me".

In accordance with what was expressed by the interviewees, the work carried out by the professionals who formed the harmonization committee was relevant for the educational community and the higher education institutions that participated in this agreement. Not only was the work collaborative and participatory, but it also allowed for the sharing of learning and experiences that strengthened the curricular proposal in each of the harmonized careers.

Effectiveness of Harmonization

As a result of this process, the participation of the authorities of the institutions that were part of the harmonization was relevant, resulting in a successful work for both students and the educational community. It was a transparent, conscious, collaborative and consensual work with all stakeholders. As a result of this work, interviewee N°5, expresses that:

More than 80% of the students who belonged to CFT UV decided to continue their studies in the State CFT. Both institutions have educational models based on competencies, public and state training and their curricular structure considers regional productive development.

A similar position is held by interviewee No. 6,

The harmonization process was effective to the extent that the student, as the main actor of this work, saw the academic opportunities and continuity of studies, therefore, he did not feel excluded; on the contrary, all his personal and academic needs were met in order to complete his training process in the estimated time.

Interviewee No. 4 highlights the academic indicators that showed a harmonious and positive process, emphasizing the results obtained:

It is evaluated by the graduation rate of the students. We received 120 students from the CFT UV and they had to be with us for a year and a half and they graduated 100 (timely graduation), which is a very good number. It can be presented as follows: Within the positive results, 120 students from the CFT UV were received after a year and a half at 100 students graduated, i.e. they obtained their degrees in a timely manner. (Interviewee N°4).

From the student's point of view, interviewee #10 highlights,

The effectiveness of this process can be measured on the basis of the dropout rate, which, although high during the first year, has decreased notably since the harmonization process was implemented. The quality of the curriculum and the program was strongly enriched in terms of the competencies delivered.

From the teacher's perspective, interviewee #8 argues that "this process was effective in improving the experience of students who were finally favored to access an institution that gave them greater student benefits, in terms of financing". In the same context, interviewee 9 notes that the process:

It represented a significant advance in technical education in the region. This effort not only sought to improve the quality of training, but also reflects a commitment to collaboration and integration of resources, which is essential in a constantly evolving educational context.

Finally, interviewee No. 7, in her capacity as a teacher, emphasizes that the harmonization has allowed "Generating a more inclusive and relevant technical training, aligned with the needs of students and the region, preparing graduates to contribute effectively to society and the world of work"

Harmonization Process between CFT UV and CFT State of Valparaíso

In developing the harmonization process between the two institutions, the relevant authorities defined the professionals in the academic field. They present previous experiences in the implementation of educational projects, curricular innovations and the formulation of competency-based curricula.

Once the harmonization commission was structured, a comparative work was carried out between the academic offer of the CFT UV and the training areas that the State CFT of Valparaíso must train by law, in addition to its commitment to respond to the requirements of the regional productive sector. At the same time, the authorities of both institutions convened the students of the CFT UV day and evening sessions to report on the work of harmonization with the purpose of providing an academic alternative in tune with the training demands of the Valparaíso region. It is in this sense that interviewee N^o5 describes the process that took place between the two universities:

The authorities of the State CFT talked to the students of the day and evening sessions of the CFT UV, explaining the work and how the harmonization was carried out [...]. In addition, the rector of the State CFT talked with the delegates of the CFT UV careers and answered questions and concerns about this process and the relevance of access to free access.

Interviewee No. 1 discusses the work done with the students of the CFT UV:

It was through Focus where we explained to the students what the state seal is, what they gain are opportunities because there are also details, for example in English that can enhance employability, the income for which they are eligible and another element that was important is that we integrated the issue of free education and expected benefits through harmonization.

According to interviewee No. 4, the participation of the rectors of the institutions that participated in the harmonization process stands out:

At the beginning this has to do more with the rectors than anything else with the will to make a continuity of studies, propitiated by the University of Valparaíso to be able to make this harmonization and give a continuity of studies to the students of the CFT UV.

From the student's perspective, interviewee No. 11 comments that participation was reflected "mainly at the beginning of the process, both on the part of the management teams and the teaching staff. There were also meetings in which students were able to express their legitimate doubts and concerns about this process"

Qualitative Analysis for the Category Areas of Knowledge

The analysis of this category shows the concentration of programs in their respective areas, considering similar lines of content in different training areas related to Higher Education and connected to the regional and national productive sector and to the occupational profiles arising from these sectors.

It is in this context that the interviewees define the areas that were worked on, highlighting the relevance for the educational project and the sectorial realities of the Valparaíso region. Thus, interviewee No. 5 mentions the careers "Logistics, Business Administration with mention in Financial Management, Public Management and TNS in Nursing", which are susceptible to analysis by the State CFT of Valparaíso. Interviewee No. 1 explains the work done:

This topic was worked on by the curricular area, academic area, academic registration area and also in the financial area in order to receive and receive students [...] regarding the areas of knowledge, we worked on public

management, nursing and business administration, mentioning financial management and logistics.

Interviewee No. 3 states that "work on the recognition of the graduate profiles of the grids that can be harmonized, except for Public Management and TNS in Nursing, which were organized from the beginning, but rather Financial Management and Logistics".

According to the interviewees of the State CFT, the areas of knowledge are related to the training needs of the Valparaíso region, therefore, of the 12 careers presented by the CFT UV, only 4 responded to its educational postulates.

Harmonization Process for the Areas of Knowledge Category

The implementation of this category corresponds to the formative development of CFT UV related to the areas of Administration and Commerce, and Health. These were chosen by the State CFT of Valparaíso, assimilating the offer to its academic and institutional work, considering the productive and economic development of San Antonio, Los Andes and Viña del Mar, cities where the State CFT provides technical training.

Table 2

Areas of knowledge

	CFT UV	CFT Estatal de Valparaíso
Administration and Commerce	Business Administration with mention in Financial Management Public Management Logistics	Business Management Public Management Logistics Management
Health	TNS in Nursing	TNS in Nursing

According to its postulates, CFT UV proposes a training offer linked to the productive sector, since they are the ones who validate each of the technical careers. For this purpose, a group of professionals (directors, managers, service chiefs) is selected to represent the training and orientation of the technician, whose function is to define graduation profiles and names of the technical careers, through a validation matrix, representing the productive areas where they are inserted.

For the CFT Estatal de Valparaíso, the provision of a training offer is in line with the training demands of the productive sector of the Valparaíso region. According to this analysis, the CFT UV careers, mentioned above, are in accordance with the mission they hold and are in line with their postulates.

For the design of the training offer, the proposed careers were reviewed by the academic team of the CFT Valparaiso State, in the case of this analysis, after the harmonization, submitting them to the judgment of the board of directors who "in ordinary session determines their validation and approval" (CFT Valparaiso State, 2020, p. 24). Under this premise, the institution considers it appropriate to identify its careers in view of the work they carry out in their territories and the consequent productive development of the Valparaíso region, and for this purpose they modified the name of the careers so that they represent the *management* that the technicians carry out in the work environment.

Qualitative Analysis for the Category Competencies Seal

Having defined the areas of knowledge, it is the competencies that must be incorporated in the State CFT in compliance with Law 20.910 considering that Higher Education institutions, and especially in the ESTP, the implementation of an educational model related to the development of competencies for the timely insertion into the world of work is relevant, and that they are also consistent with the mission, which are framed in the so-called *Seal Competencies*, which consider the representativeness of the institution in all its areas of training and also tend to relate to other educational institutions promoting integration and insertion into the world of work.

Guiding this work interviewee No. 5 points out that: "in the seal competitions. State CFT is required by law to develop competencies such as, innovation, entrepreneurship, English, sustainability and civic education." He deepens this argument interviewee No. 4 clarifying that:

The truth is that the disciplinary competencies were the ones that coincided and where we placed the seal that had to do with subjects such as innovation, entrepreneurship, English, sustainability, civic education, as we are mandated by law.

According to interviewee #1, the responsibility of career managers lies in that,

They have to train in innovation, entrepreneurship, technology, civic education and sustainability, and this is our hallmark; we have to square the hours of the public management and nursing careers in order not to transfer an excess of credits because we could not cut back on the hard discipline.

According to Law 20.910, the mission of the State CFTs is to provide competencies that contribute to the productive and economic development of the country. Thus, the implementation of training plans should include competencies related to employability, civic education, sustainability and equity, competitiveness and productivity, ethics, environment and English.

Harmonization Process for the Seal Competency Category

The process of harmonization of the seal competency requires the effective application of the seal, establishing a conceptualization based on competencies. It is important to determine how the institutions comply with the missionary objectives, incorporating in their postulates the seal competencies, such is the case of CFT UV that declares as Mission "To train competent Higher Level Technicians, responsible and committed to their work and social environment, actively collaborating to the productive development of the region and the country" (Centro de Formación Técnica de la Universidad de Valparaíso, 2015, p. 4) on the other hand CFT Estatal states that the institutional Mission refers to:

We are the State CFT of the Valparaíso region, a public technological institution, which trains higher level technicians, developing skills with a focus on employability, associating it with industrial and community needs, in terms of product and service, to contribute to regional sustainable development (CFT Estatal de Valparaíso, 2020, p. 4).

Both postulate the connection with the productive sector, meeting the training demands for regional economic development. Therefore, the seal competencies reflect these principles. In particular, CFT Estatal complies with the mandate of the law that

requires that all its training plans must include competencies to promote the student's timely employability.

Table 3

Competencies seal

CFT UV	CFT Estatal de Valparaíso	Subjects CFT Estatal de Valparaíso
Social responsibility	Employability	Labor legislation Employability workshop and change management
Solidarity Fraternity Respect	Civic education Ethics	Civic education, ethics and social responsibility
Troubleshooting Healthy living	Sustainability and equity Environment	Sustainability for competitive development
Innovation and entrepreneurship	Competitiveness and productivity	Innovation and entrepreneurship workshop ICT Workshop
	English	English Workshop I and II

By incorporating the competencies seal into the curriculum, they become subjects. Curricular adjustments are established that allow maintaining the number of hours stated in the careers of the CFT UV. Thus, the work developed by the harmonization commission did not establish important changes in the training plans, where areas of competence or domains were migrated, complemented with the core competences that are part of the educational project of the State CFT.

With the support of the career managers and the professionals in charge of harmonization, academic loads are defined for the achievement of learning, considering the relevant learning in each module, assigning an important and significant percentage of the total hours stated for each module.

In this way, students who migrated to the State CFT in 2020, take the subjects of the new study plan in a year and a half (3 semesters) related to the competencies stamp.

Qualitative Analysis for the Category Public Policies

Public policies are state guidelines that transcend and establish elements of support for an important sector of the population, not only in economic terms but also with the skills that ensure a timely and, if possible, successful labor market insertion. Therefore, the free education policy is focused so that students who belong to the 60% of households with lower incomes can access higher education without incurring associated costs to study a curriculum at a university, professional institute or CFT, therefore, entering higher education is a desire of many vulnerable young people, which thanks to this public policy paves the way to achieve it. "OECD countries routinely point out in their public policy documents in the field of PSHE that a central criterion of equity is equal access to this type of education and to higher education in general"(CPCE - Unesco and Vertebral, 2020, p. 2).

In accordance with the above, interviewee No. 5 states that the State CFT has a mission that is "to respond to public policy and provide continuity of studies to students who came from the CFT UV". It also points out that the institution should "give continuity to a formative process initiated in CFT UV and the possibility for students who decided to continue their studies in the State CFT to have access to free education".

Interviewee N^o1 emphasizes the responsibility as an institution to comply with public policy and its educational model:

The curricula and the descent according to the specific considerations that had to do with us taking charge of the public policy, on the other hand there was a need of the University of Valparaiso through its CFT that had the mission to harmonize itself in function of the community and for the students who needed to graduate.

In this context, interviewee No. 1 gives her vision regarding the strengthening of ESTP:

The strategic view of the harmonization has to do with the public policy of the state CFTs where the university decided to make the agreement with us is a state policy; it was not minor to continue with the legacy of the CFT UV; if all the universities deliver the careers to the public entities as the State CFTs between them both harmonizing us would be a strengthening to the public education.

Interviewee No. 11 considers relevant "the promotion of the free education policy, which made technical education more accessible to young people in the region".

The interviewees show their commitment to the authorities who appointed them to fulfill this purpose, which is to provide the educational community of CFT UV with a real option to continue their studies in a public and regional State CFT.

Harmonization Process for the Public Policy Category

The harmonization with respect to public policies whose center is free education, implies that the State, through the Ministry of Education, seeks that more and more students have access to Higher Education, providing greater economic resources through scholarships, credits and especially free education so that the economic requirement is not an impediment for students with scarce resources, but with great academic abilities, to pursue a technical or university degree.

In the harmonization work, gratuity was a determining factor, as disparate realities became evident. CFT UV has a 3-year accreditation (basic), and according to the regulations of free education, the institution must exhibit an advanced or excellence accreditation. In the case of the State CFT created by Law 20.910, institutional accreditation is not required, therefore, they can access State funds, which, among other benefits, provide free education.

Challenges and Implications of Harmonization

The purpose of the harmonization was to provide the best training offer for the Valparaíso region, therefore the team's effort was to design training plans that interpret the labor needs of the productive sector, ensuring the student's effective entry into the world of work. Therefore, this effort meant facing great challenges.

From the curricular point of view, higher level technical careers must have a minimum duration of 1,600 classes or four semesters in their curriculum, therefore, the squaring of hours in the harmonized careers meant analyzing the relevance and pertinence of each learning outcome and its contribution to the graduate profile. In addition, the incorporation of the stamp subjects, which by law must be taught by State CFTs, significantly increased the number of hours of the training plan; in view of this

problem, the modules of the CFT UV training plan, corresponding to the first year, which contained part of the stamp subjects, were considered, and through the recognition of prior learning (RAP) these subjects were not taught.

From the teaching perspective, the training model of the CFT UV is designed under the focus on labor competencies, i.e. the productive sector is part of the survey and design of the careers and the CFT Valparaíso State proposes a training model based on competencies, considering the training needs of the productive sector, but it is its board of directors who validates the academic offer. Therefore, teachers who migrated to the state school had to adapt their academic planning to the demands of this new training structure, which meant training in educational platforms, incorporating into their academic work innovative learning resources that required time and dedication for their execution, which was complex when they also had to perform work duties in other institutions. Finally, regarding the pandemic, teaching in hybrid mode was a tremendous challenge, considering that the first class of students was received in that context. Designing classes by allocating diachronic and synchronous hours led to rethinking the training process and exploring new educational environments, this time virtual, for the achievement of student learning.

The student who entered the State CFT is part of a socially and economically vulnerable community and his objective was to increase his employment and income levels, with the possibility of improving his quality of life and his family environment, therefore, he saw in the proposal of the State CFT of Valparaíso an opportunity to increase his competencies and insert himself quickly in the labor market, considering that this training offer develops competencies that the productive sector requires.

This is how timely job placement was achieved through the relationship between the educational institution and the productive sector, expanding their training with the skills required by this sector.

According to those interviewed, these programs made it possible for students to enter the labor market and for those who were employed to enhance their credentials and access better employment within the company.

Discussion and Conclusions

This research describes a work that is framed in an articulation and harmonization agreement where the institutions are committed to provide the students with the best academic offer, which makes possible a timely labor insertion and with academic tools according to the demands of the productive sector of the region.

From the beginning, the work of the harmonization committee has focused on the students as the main element, trying to meet their expectations and academic projections, maintaining a fluid communication with all the members of the community headed by its highest authorities. This strategy was undoubtedly crucial for 120 students who came from CFT UV to continue their studies at CFT Estatal. They learned first-hand about the work carried out and the scope that the harmonization means for their academic development, considering the contribution of the institution in the development of competencies that complement their initial training and project them towards better work environments, and from the economic point of view, studying free of charge was not a minor element, since it meant an important support for him and his family environment, coming from a vulnerable social and economic stratum.

The harmonization process developed between CFT Estatal de Valparaíso - CFT UV showed an innovative, creative and transparent work for the educational community of the Valparaíso region. Although this is an isolated experience within ESTP, it is necessary to promote collaborative efforts between public and private educational institutions that make it possible to exchange experiences and support in order to offer careers that make a real contribution to the productive and economic development of the region and the country

For harmonization between educational institutions to be effective, it requires a commitment from the entire educational establishment. It is not enough to demonstrate that there is an intention to harmonize the curriculum; it is also necessary to state the need for the State, through the Ministry of Education, to commit itself to support the harmonization processes, considering that there are other areas that are part of this work, such as the legal and administrative areas and the department of student affairs, which are part of the governance of the educational institutions, who must effectively monitor the students who enter through harmonization and inform the government entities about the student's curricular progress, state scholarships and agreements with the productive sector.

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