

EVALUATIVE METHODOLOGY OF COMPLIANCE WITH THE COMPETENCES OF STUDENTS ORIENTED TOWARDS THE GRADUATE PROFILE

METODOLOGIA DE AVALIAÇÃO DE RESULTADOS DAS COMPETÊNCIAS OBTIDAS PELOS ESTUDANTES ORIENTADAS PARA O PERFIL DE EGRESSOS

METODOLOGÍA DE LA EVALUACIÓN DE LOGRO DE LAS COMPETENCIAS DE LOS ESTUDIANTES ORIENTADAS HACIA EL PERFIL DE EGRESO

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ABSTRACT: Evaluating the achievement of profiles is part of the constant management of tertiary level institutions, this must be constantly socialized and communicated in the organic structure of the institution. Carrying out evaluations of student competencies implies creating evaluative milestones, which must be constantly advised, accompanied and supervised, the milestones help to obtain feedback that is born from constant evaluation, nurtured, oriented and complemented by monitoring graduates. This allows us to generate future adjustments to the graduate profile.

KEYWORDS: Evaluation. Competences. Graduate profile. Pedagogy. Higher education.

RESUMO: *Avaliar os resultados obtidos por perfis de egressos faz parte do gerenciamento constante das instituições de nível superior, que deve ser constantemente socializado e comunicado na estrutura orgânica da instituição. A realização de avaliações das competências dos alunos implica na criação de marcos avaliativos, que devem ser constantemente orientados, acompanhados e supervisionados; os marcos ajudam a obter um feedback que advém da avaliação constante, nutrida, orientada e complementada pelo monitoramento de graduados. Isso nos permite gerar ajustes futuros no perfil de egresso.*

PALAVRAS-CHAVE: *Avaliação. Competências. Perfil de egresso. Pedagogia. Ensino superior.*

RESUMEN: *La evaluación de logro de perfiles se enmarca en el constante aseguramiento de la calidad de las instituciones de nivel superior, esto debe ser constantemente socializado y*

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comunicado en la estructura orgánica de la institución. Realizar evaluaciones de las competencias de los estudiantes, implica crear hitos evaluativos, los cuales deben ser orientados, acompañados y supervigilados constantemente, los hitos ayudan a una retroalimentación que nace de la evaluación constante, nutrida, orientada y complementada desde el seguimiento a los egresados, esto nos permite generar futuras adecuaciones en el perfil de egreso.

PALABRAS CLAVE: *Evaluación. Competencias. Perfil de egreso. Pedagogía. Educación Superior.*

Introduction

The evaluation of obtaining of results of profiles of undergraduate and graduate students is a necessary mechanism required by the accreditation agencies (CNA, 2018), several countries carry out this process to certify the achievement of students' skills. Because of this, relying on self-regulation strategies or methodologies that are installed in a teaching organization, according to Gairín (2016), are instances that are not easy to plan, let alone carry out, and must have a large number of people to make it happen.

In this work, it will be understood as a graduate profile what the National Accreditation Commission (CNA) describes in which is highlighted that: “it is the set of knowledge, skills and attitudes that the student of a course or program internalizes at the moment of their degree or graduation” (CNA, 2015, p. 7, our translation).

On the other hand, the evaluation of obtaining the egress profile that is defined in this proposal as the process developed during the implementation of the curriculum, composed of different milestones and cuts, through which are validated the competences and/or learning results that the students develop in their curricular trajectory for future professional performance in different educational establishments, or other centers where they will be inserted professionally, which must answer to the demands of society in general.

The evaluation of the egress profiles of the courses is a transcendental act to feed back to the entire educational community and, therefore, to the student, an essential agent of this learning process: in addition, this evaluation should allow monitoring and evaluating the consistency of the study plan and curricular hypothesis due to obtaining the graduate profile (MATEO; VLACHOPOULOS, 2013). On the other hand, it meets the specific criteria for following up on obtaining the graduate profile (CNA, 2015), that is, this profile evaluation will allow to fully feedback all the dimensions of an educational model.

Regarding the experience of evaluating the egress profile in Chile, there are universities that implement, in the vast majority, the evaluation of intermediate practices and advance during the execution of this process; in other cases, such as the Pontifical Catholic University, in the Basic Education pedagogy course, an integrated test is applied in the fourth year of study. Other teaching institutions implement integrated tests between subjects per semester, in addition to assessing practices, an essential activity to observe student performance in educational establishments.

Likewise, it is worth mentioning that the level of achievement of an egress profile is evident when students who have completed a degree are incorporated into the labor market, when they have just graduated, with the formation or specialization that the university has given them. In this context, an assessment called “follow-up of graduates” is generally carried out, which considers assessing not only the specific skills specific to each career; in addition, aspects of curriculum planning, infrastructure, teachers, etc. are evaluated as well, which facilitate valuable informational organization to feed back into the course. Because of its scope, this study focuses on the evaluation of egress profiles during the development of a professional career.

The following are experiences of evaluating the egress profile, therefore, a methodology will be detailed for each evaluation framework, which includes the instruments, moments and instances of application, intentionality and participating agents to consolidate the evaluation of the egress profile achievements and to obtain a tiered analysis in order to improve the curriculum comprehensively, according to a public university case.

Evaluation experiences of obtaining a Graduate Profile

The evaluation of the graduate profiles is part of the transformations that society demands in higher education institutions. Given the growth of supply and demand in the last thirty years - profiling new careers, knowledge, challenges - occurred in Chile and worldwide, such as:

The transformations in higher education that emerged in Europe during the last decade of the 20th century have revealed the need for higher education institutions to assume the effects of the globalization of the economy and the emergence of the knowledge society, having to face the challenge of having to adapt and change their objectives and strategies (CINDA, 2015, p. 13, our translation).

One of the tools to respond to these challenges is to prove the effectiveness of the teaching processes planned, executed and evaluated in each course, for example, showing consistency and relevance with their graduates' profiles and with the strategic definitions that sustain them in a fundamental way. This is the context in which the evaluation of the egress profiles fits.

Likewise, it is the responsibility of society and its institutions to define strategies, methodologies and instruments that allow the assessment of not only the specific competences specific to each professional knowledge, but also those that realize that:

Society requires not only capable and efficient people in the skills of a certain profession, but they must also have the ability to adapt to new professional and work contexts (CINDA, 2015, p. 13, our translation)

Therefore, the process of evaluating the graduate profile is relevant in any instance for a Higher Education Institution (HEI) that seeks to evaluate the teaching process that it performs, since it provides valuable information that allows feedback from the professional areas, functions, competences, curriculum execution, its evaluation until the students egress stage.

In other words, it allows us to show how the final product materializes at work.

Thus understood the graduate profile (as a definition of identity and as a formation commitment), it is conceived as an instrument that gives meaning to formative programs, so it is essential that the profiles include mechanisms to evaluate their compliance (MÖLLER; GÓMEZ, 2014, p. 24, our translation).

In addition, one of the difficulties that is evident in the evaluation of an egress profile is that the competences declared therein are not reflected in a concrete and evident way in the instruments of evaluation and correction of the disciplines that make up the study plan of the different programs, remaining the profiles still in the declarative plan and not in the concrete and evident. As, for example, in the evaluation schedules in the evaluation indicators of the correction instruments (MÖLLER; GÓMEZ, 2014).

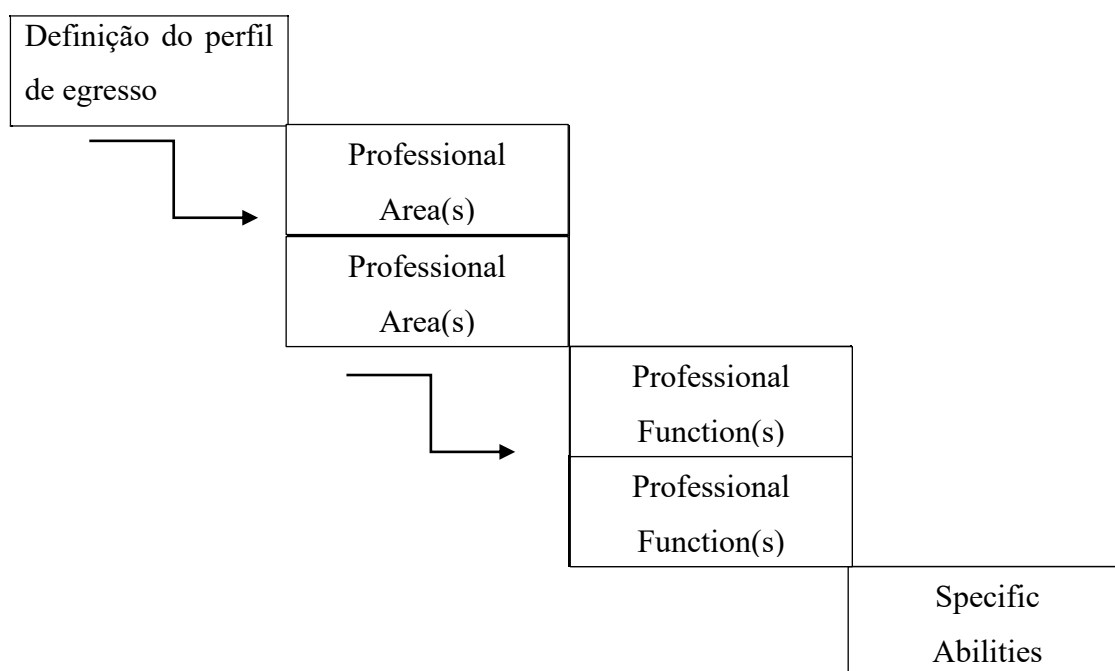
In this context, there are different cases that account for this assessment in universities or HEIs. We will present the case of a HEI in the military sphere that carried out a profound curriculum modernization, rethinking and evaluating each of the associated processes, one of which being the evaluation of the graduate profile. In addition, it concludes with the requirements that the CNA imposes for such an assessment and which is required in all institutional accreditation processes.

The War Academy (Acague) has been an HEI since its foundation in 1886 and for more than a century it was in charge of the professional formation of the students who ran the institution, that is, it carries out the specialization course which culminates in the career of an officer of the army: those who will constitute the institutional high command.

In the case of Acague, this formation constitutes the requisite course that defines the specialty and the relevance that the professional performance of its graduates have in the organization, it is fundamental, given that the areas are of leadership and advice. In a similar way, it allows us to verify the professional formation achieved by them and the real performance, facilitates us to make improvements that allow us to assess the coherence, relevance and congruence of the teaching work carried out in all stages, that is, from the egress profile, through materialization of curriculum planning until the graduation of our egress students.

In pursuit of continuous improvement, in 2010 a fundamental change was made to the course, from an objective to a competence based curriculum, given the importance it has as “a way of establishing more active learning centered on the student and fundamentally oriented to professional practice” (CINDA, 2008, p. 10, our translation); to accomplish this, the first task was to define the egress profile, considering the following scheme:

Figure 1 – Structure to define the graduate profile



Source: Devised by the authors

In this curricular design that emphasizes the evident and measurable competences in the scope of being, knowing, doing and knowing how to share, there was a need to evaluate the profile of graduates to know the impact that formation by competences had on the teaching process - students, teachers, organization, curriculum development and others.

As the course lasts for three years, it was evaluated progressively on an annual basis through trends such as *focus groups* with students, teachers, forum with academic authorities to analyze the results of different techniques and decision making, allowing “curriculum revision and updating processes aimed at making decisions about teaching and learning, which has had important implications in several areas, including the organization of the work of the institutions themselves” (CINDA, 2008, p. 58, our translation).

Since in competency-based curriculum design, once competencies are defined - except for redundancy - they are atomized into tasks, requirements and indicators, which give a complete description of what is expected of the students' domain, keeping in mind the professional work competence expected of them. In order to evaluate the profile, a methodology was developed, which is presented below:

Table 1 – Methodology for evaluating the graduate profile

1	2	3	4	5	6	7
Group course indicators	Select the agents that will participate in such an assessment	Develop an indicator validation tool. Submit it to expert judgment.	Apply to all agents (12 people).	Tabulate / analyze and plan the definitive instruments: concentration of results.	Analysis and design of the evaluation.	Level of decision making.
	Submit for technical channel review.				Product: instrument.	Approval / application

Source: Devised by the authors

From its implementation, the evaluation of egress profile was carried out periodically, and the scope of such evaluation allowed improvements in the course's curriculum design to be applied. Likewise, from the

didactic perspective, working from the formulation of competences with their corresponding achievement indicators allows the teacher to better plan their teaching task and the student to be clear about what knowledge and know-how is expected of him (CINDA, 2008, p. 361, our translation)

Regarding the other experience of evaluating egress profiles, in addition to referring to a particular institution, we want to pay attention to the requirements determined by the CNA for its evaluation.

This is an aspect that has not been sufficiently addressed by careers in Chile and that, according to the new accreditation criteria, the achievement of the declared graduate profile must be demonstrated through concrete evidence (CINDA, 2017, p. 128, our translation).

So it is essential that in order to highlight the egress profile, one must have the following characteristics (CINDA, 2017).

- Consistency, all elements of the project and its structure must be assessed fairly.
- Relevance, appropriate to discipline and profession.
- Sufficiency, must retain and explain the skills that discipline and professional performance require.
- Evaluable, the profile components must be verifiable, repeatable and achievable.

Finally, it is the graduate profile - its design, implementation, evaluation, feedback - that constitutes the most relevant aspect in an HEI internal reflection process (DOONER *et al.*, 2016) and one of the crucial aspects of the self process institutional evaluation.

Methodology of a Chilean case

Below, we detail the methodology implemented according to the three evaluative frameworks of the graduate profile (Beginner - Intermediate and Advanced) of the pedagogy courses; they are:

Table 2 – Evaluation frameworks of the graduate profile

CHARACTERISTICS	FRAMEWORKS OF THE METHODOLOGY		
	BEGINNER	INTERMEDIATE	ADVANCED
Definition	Theoretical knowledge	New knowledge and skills and development	Final terminal competence of the formation process
Instrument	Written Test	Rubric	Rubric
Application instance	Final of the semester	Performance observation	Performance observation
Intentionality	Formative	Formative	Formative
Agents	Teachers from the first three semesters	Intermediate practice teachers	Professional practice teachers

Source: Devised by the authors

The identified frameworks are explained below:

- **Beginner Framework.** Refers to the theoretical and conceptual knowledge reached at an initial level by the student, according to a real context and close to the situation in which he or she will work in the future.
 - a. Instrument: Written test based on real cases with a lower level of complexity, disciplines that include the development of one or more skills will be integrated. It will focus on the disciplinary and pedagogical dimension.
 - b. Instance or application phase: Level 201, at the end of the semester.
 - c. Intentionality: Formative
 - d. Participating agents: the professors involved who taught classes in the subjects that are in the first three academic semesters.
- **Intermediate Framework.** Understands the application of knowledge and skills in new situations, where the student must demonstrate greater autonomy in the development of competence.
 - a. Instrument. Rubric that contemplates the competences and levels of execution to evaluate the development of practices at intermediate level.
 - b. Instance or moment of application: Level 302, during class observation.
 - c. Intentionality: Process/Formative
 - d. Participating agents: Doctors observing intermediate practice.
- **Advanced Framework.** Terminal competence that highlights the student at the end of the formative process, where the student integrates all knowledge and skills in both the pedagogical and disciplinary fields.
 - a. Instrument. Rubric that includes the skills and levels of execution to assess the development of practices at a professional level.
 - b. Instance or moment of application: Level 402, during class observation.
 - c. Intentionality: Process/Formative
 - d. Participating agents: Exhibition of professors observing professional practice.

Validation process: once the preparation of the instruments is finished, they must be submitted to internal and external validation, in order to avoid bias and errors in their construction.

Analysis of the results. Each analysis is carried out by each evaluation mark, per course, in order to be feedback both students and teachers who are part of the formation

process. Likewise, these results should be triangulated with other diagnoses and reports that contribute to the analysis of the integral formation of the graduate profile.

Final consideration

To establish a culture of evaluating the profiles of obtaining a higher education institution, first, it is necessary to socialize the proposal with the authorities of the university or study place, for example, the *Decana de la Facultad de Educación* (Dean of the Faculty of Education), then with the Directors and commissions of each course, so that there is participatory management (ALFONSO; MIRANDA; DA COSTA, 2018; SERVAT, 2005, BERNASCONI; RODRÍGUEZ, 2018), with the purpose of reflecting to generate changes within the university on the implemented evaluation.

We would like to draw your attention, as we saw in the analysis, to the requirements that the CNA determines for the assessment of institutions that this aspect has not yet been sufficiently addressed by higher education institutions in Chile.

Another aspect to be considered by teachers is this new methodology, with respect to framework 1, beginner, of building cases, which must use real situations and problems that arise from educational establishments.

In the case of frameworks 2 and 3, intermediate and advanced, it seems evident from this research that there is a need to raise with the workshop participants the criteria that arise from the competencies and the evaluation indicators that will be observed in intermediate and advanced practice.

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