

## PEDAGOGICAL MODEL OF THE VIANA DO CASTELO POLYTECHNIC INSTITUTE

The accelerated changes that characterize the contemporary world and the new challenges it faces – climate change, biodiversity, digital transition, social inclusion, among others – urge us to rethink the role of higher education institutions (HEIs). In this global context, the commitment to the goals of the 2030 World Agenda acquires significant importance in guiding the action of HEIs towards contributing to knowledge-based, democratic, sustainable and peaceful societies. Other issues have been also raised specifically in this sector, be it student-centered learning, internationalization or teaching-research connection, or the pedagogical and technological challenges recently experienced during the Covid19 pandemic. For all these reasons, pedagogical and curricular innovation is considered to be a growing need in higher education.

At IPVC, in recent years, very relevant innovation experiences have been developed, in specific curricular units (CU) or programs or even in extracurricular and transversal projects, some of which have acquired external visibility and deserved recognition. During the 22-23 academic year, within the scope of the “Skills4poscovid – Competences for the future of higher education” initiative, the project entitled LInEA – Lines of Innovation in Teaching and Learning - was developed, aiming to systematize and deepen those experiences, develop a vast pedagogical training plan for teachers and move towards proposing a pedagogical model for IPVC that will constitute its identity in the field of teaching-learning.

With the aim of extending pedagogical and curricular innovation to all IPVC training programs, an *extensive and bottom-up approach was adopted*, with the participation of the coordinators of all study cycles (SC), as well as the monitoring of the presidents of the pedagogical and scientific councils and directors of the six IPVC schools, who were involved in a participatory reflective process of analysis and co-creation of the guidelines of the IPVC pedagogical model.

The Pedagogical Model that resulted from this process integrates 6 guidelines: (1) Curricular Flexibility, (2) Active Pedagogical Approaches, (3) Hybrid and distance learning (4) Transversal skills (5) Immersion in work contexts (6) Internationalization.

## Guideline 1 - CURRICULAR FLEXIBILIZATION

**Objective: IPVC training programs provide opportunities for students to choose flexible learning paths**

### Rational:

*Flexible learning paths and better personalized learning environments in higher education contribute to widening participation, improving social inclusion and higher completion rates. They are a key to lifelong learning and essential to address increasing skills demand (Unger & Zaussinger, 2018).*

Higher education audiences are increasingly diverse and come from very different previous educational trajectories. It is important that HEIs create the conditions to continue these trajectories, with training offers that allow the construction of flexible learning paths (FLP), instead of uniform and rigid curricular plans.

Curricular flexibility is a pillar of student-centered teaching, allowing choices to be made about what, how, when and where to learn, in a process of authorship of one's own educational path, which promotes students' autonomy and agency.

At the same time, it allows responding to the need to build multidisciplinary knowledge and the ability to adapt to change that characterizes the contemporary world.

### Operationalization:

In degree courses, the curricular plan establishes that up to a total of 9 ECTS can be carried out, optionally and at the student's initiative, through the following alternative paths:

- completing of CU from other IPVC course plans
- obtaining microcredits through participation in extracurricular institutional projects or completing credited short-term training

The CU that can be taken through alternative paths are previously proposed by the Course Committee and do not disregard the fundamental area(s) of the course, nor the conditions for professional certification in training courses where this is required. The Scientific Councils and the Crediting Committees intervene in the process, within the scope of their competences. The principle should be student's autonomy in choosing the paths to obtain the credits in question.

In order to facilitate the transferability of credits, the bachelor's and master's curricular plans adopt a uniform number of ECTS per UC, in a metric of multiples of three.

Curricular flexibility may also take other forms favorable to the opportunity for choices and personal flexibility for students, considering their suitability to the type of each SC. In these processes, the means provided for in the current legal framework on accreditation of training and professional experience must be considered.

## Guideline 2 - ACTIVE PEDAGOGICAL APPROACHES

**Objective: IPVC training programs provide active, experiential and authentic learning opportunities, characteristics of student-centered pedagogical approaches**

### Rationale:

*A shift to student-centered learning and teaching (SCLT) requires the wider use of classroom practices that encourage active learning and deep learning. Thus, student-centered classroom activities encourage students to more actively engage in processes of understanding, reflecting and integrating new information with prior knowledge (Klemenčič, Pupinis, & Kirdulytė, 2020).*

Along with curricular flexibility, active pedagogical approaches constitute another important element of a student-centered learning environment. Despite recognizing the relevance of diversifying pedagogical approaches, from more expository to more active interventions, the latter have been associated with higher levels of meaningful and deep learning and the development of higher-level skills.

In particular, the following three characteristics of student-centered learning environments are considered:

Active learning – which integrates “any course-related activity that all students are asked to do, rather than simply listening, pay attention and taking notes” (Felder & Brent, 2009).

Authentic learning - which allows students to come into contact with real problems and real contexts, promoting the development and application of knowledge and the acquisition of other skills, such as problem solving, creativity and critical thinking, among others (Pitchford, Owen & Stevens, 2020).

Experiential learning - which occurs when active involvement in experiences practices is accompanied by reflection, critical analysis and synthesis (Kolb, 1984) and, in this way, allows the construction of knowledge, skills, values and their application to the various domains of the student's life.

### Operationalization

The aim is to guarantee active, experiential and authentic learning opportunities in all IPVC programs that encourage meaningful learning, critical thinking and problem solving, the development of a set of personal, interpersonal and technical skills and that launch the foundations of a lifelong learning process.

The course committee and course coordination assume the responsibility of facilitating the process, raising awareness and promoting active pedagogical approaches. Additionally, they are responsible for promoting the survey of pedagogical approaches proposed for the curricular units or course and for articulating them. In this process, the analysis of the student's total workload and the possibility of developing projects that articulate more than one CU must be considered, allowing an interdisciplinarity practice that counteracts the atomization of knowledge that is very present in more traditional curricular design.

At the institutional level, there must be an offer of other training projects, curricular or extracurricular, open to the participation of all students, which constitute active learning contexts (as is the case with the current Escola Inclusiva and Demola projects that adopt Service-Learning and Project-Based Learning methodologies).

### Guideline 3 - DISTANCE AND HYBRID LEARNING

**Objective: IPVC training programs can include non-face-to-face teaching modalities appropriate to the pedagogical approaches adopted and the needs of the public**

#### Rationale:

*(...) the widespread implementation of alternative models for providing and engaging in education (which the hybrid model exemplifies), provided a response to demands for more flexible ways of learning, more online resources and learning opportunities, and continuous professional development in most forms of employment (Kukulska-Hulme et al., 2022).*

The use of technological and digital learning environments is of fundamental importance in keeping up with the rapid and continuous technological and digital transformation that we are witnessing in contemporary societies. It is necessary for education to prepare students with the digital skills necessary for their full inclusion in society current and future challenges.

On the other hand, digital technologies open up new possibilities for improving the quality of teaching. They allow the development of certain innovative pedagogical approaches and favor an approach to students' learning styles and the means of communication and information available to them.

Digital technologies also have the potential to profoundly transform education systems, as a means of offering non-face-to-face training. These, whether hybrid or distance training, encourage the participation of new audiences in higher education, by allowing attendance free from the limitations of in-person learning and more personalized learning paths.

#### Operationalization:

The IPVC Distance Learning Pedagogical Model, framed by current legislation on the provision of Distance Learning (DL 133/2019) and criteria defined by A3ES (Order nº 16/2022), defines the guidelines to be adopted in distance learning proposals.

In current IPVC courses, which are accredited as to face-to-face, up to a maximum of 15% of contact hours may be taught remotely (in synchronous or asynchronous sessions), respecting the following mandatory conditions:

- a) The online teaching proposal for part of the contact hours is submitted by the course coordination to the Scientific Council for approval and subsequent publication by DGES.
- b) The following points must be highlighted in the proposal: on the part of the teaching staff, certified training in distance learning and other evidence indicated in Order No. 16/2022; justification for adapting the CU methodology to the e/b-learning modalities, specifying the methodology(ies) to be adopted for non-face-to-face teaching; advance scheduling of in-person and online sessions; description of the program contents that will be taught in the distance learning modality and their respective objectives/skills, with an explanation of the e-activities and associated resources.

For the submission of new training programs or proposals for restructuring current ones, the following criteria are defined:

- a) Professional, bachelor's and professional master's programs, which are predominantly

- attended by traditional students, are always offered in person; However, as mentioned above, UCU or modules in non-face-to-face teaching may be included, as long as 15% of the total contact hours are not exceeded, a limit defined by the institution.
- b) Academic master's programs may be offered with a maximum of hours of distance teaching permitted by current legislation.
  - c) Non-degree programs that are predominantly aimed at non-traditional students (postgraduate courses and short-term courses) may be fully taught in e/b-learning, if appropriate.

#### **Guideline 4 - TRANSVERSAL COMPETENCIES**

**Objective: IPVC training programs promote the development of a comprehensive skills profile for the graduate that integrates a set of transversal skills relevant to the construction of their identity as a citizen and professional**

##### Rationale:

*Transversal skills and competences are learned and proven abilities which are commonly seen as necessary or valuable for effective action in virtually any kind of work, learning or life activity. They are "transversal" because they are not exclusively related to any particular context (...). In a world facing rapid technological and social change, this transversality - and implied transferability - is seen as increasingly important (Hart, Noack, Plaimauer & Bjørnåvold, 2021).*

For better integration into society and labor market, in addition to the specific skills associated with a disciplinary area, transversal skills are also required. These go far beyond what graduates should know and be able to do, and include a wide range of personal attributes and characteristics, notably related to "personal literacy" (the ability to "read" and "write" oneself) and other literacies that allow us to understand and act in the world. Consequently, the integration of transversal skills into the curriculum is part of the educational mission of HEIs.

##### Operationalization:

The integration of transversal skills (TS) in IPVC training programs must be subject to a planning, monitoring and evaluation process, in which the relevant TS must be defined in each course, based on consultation processes with interested parties and analysis of the necessary resources.

In all IPVC training programs, transversal skills are defined (at least two), using one of the following approaches: a) through specific CU/programs on certain TS, with its own program, ECTS, assessment and certification (which can be shared by several study cycles); b) through existing CU in the curricular plan, with transversal skills being identified in the program's learning objectives (along with scientific and technical skills), as well as defining their evaluation and weighting in the final classification.

In transversal terms to IPVC training, TS will also be promoted through extracurricular programs/activities that focus on the integral development of students. Participation in some of these programs/activities may give rise to microcredits in which the acquired TS must be described and evaluated.

## Guideline 5 – IMMERSION IN WORK CONTEXTS

**Objective: IPVC training programs integrate immersion experiences in work contexts, in different formats**

### Rationale:

*[Work integrated learning is] an educational approach involving three parties – the student, educational institution, and an external stakeholder – consisting of authentic work-focused experiences as an intentional component of the curriculum. Students learn through active engagement in purposeful worktasks, which enable the integration of theory with meaningful practice that is relevant to the students' discipline of study and/or professional development (Zegwaard, Pretti, Rowe, & Ferns, 2023).*

Immersion experiences in work contexts, integrated into higher education training, constitute important opportunities for students to mobilize knowledge and skills to act in real contexts, allowing them to deal with complex and authentic problems that require a theory-practice link, interdisciplinary integration and knowledge of the deontological aspects of professional practice.

Experiences of immersion into work contexts can take different formats, with the internship and project being the most frequently adopted in the curricular design of higher education training (job-shadowing and mentoring by a professional are examples of other formats).

These activities should not be seen merely from the perspective of their impact on the employability of graduates, but rather for their broader contribution to the development of personal and professional identity and the acquisition of higher-level skills (problem solving, creativity, teamwork, among many others). At the same time, these activities allow a connection between educational institutions and the world of work, with opportunities for mutual enrichment, particularly in terms of knowledge transfer and innovation.

### Operationalization:

All IPVC training programs integrate experiences in work contexts into its curriculum. Academic master's and postgraduate programs are excluded, whenever this is considered not appropriate to the objectives of the study cycle.

These experiences preferably take the format of an Internship, Initiation into Professional Practice or Project CU and must have, at least, a workload corresponding to 15 ECTS in undergraduate courses, to be allocated to one or more moments throughout the study plan. In courses lasting 3 or 4 semesters, the workload in this type of CU must be at least 9 ECTS.

It must be ensured that internship or project supervisors have a profile suitable for these functions, with contact hours allocated to supervision being integrated into the teacher's teaching activity. Additionally, the plan for the internship or project must be previously defined and must be in accordance with the skills required in the curricular unit, as well as in accordance with the teaching methodologies defined for training in a work context.

To support internships, the institution creates mechanisms and tools for establishing protocols with a network of partner organizations and for managing a database of internship locations/ mentors.

## Guideline 6 - INTERNATIONALIZATION EXPERIENCES

**Objective: IPVC training programs offer opportunities for internationalization experiences of a diverse nature**

### Rationale:

*Internationalization is the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of postsecondary education institutions and systems (Knight 2021).*

In the contemporary world, local contexts are characterized by cultural diversity and, at a global level, relations between countries are intense and frequent, they occur at a planetary level and are characterized by interdependence. For these reasons, Internationalization is an unavoidable challenge for HEIs.

In teaching, internationalization experiences aim to integrate international, intercultural and global dimensions into curricula, with the aim of enriching the comprehensive training of students and favoring the development of specific skills (such as communication, linguistic or intercultural, among others) and have been developed either as experiences of “cross-border internationalization” or “domestic internationalization”.

### Operationalization

All students throughout their training are expected to have at least one internationalization experience, which can take different forms, namely face-to-face mobility, virtual mobility or activities that enrich students' international and intercultural perspectives.

It is recognized that institutional programs of international mobility have a major impact on students' training and employment opportunities. However, these programs only have the capacity to cover a small number of students.

To extend this experience to all students, all courses must provide, at least, one internationalization action that can take different formats. These initiatives are usually called *Internationalization at home* and can even constitute a sustainable alternative to physical mobility. They may include, among other activities: i) integration of international, intercultural and/or global perspectives into the curriculum and programs; ii) virtual mobility through CU in shared teaching with foreign institutions; iii) foreign teachers invited to participate in the teaching processes, particularly during the international IPVC week; iv) participation of students in international project teams; v) teaching in English or presentation of work in English in specific CU; vi) promotion of curricular or extracurricular activities of integration and cooperation between national and international students.

## References

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