

A WAKE-UP CALL FOR B-LEARNING IN PORTUGUESE HIGHER EDUCATION

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Abstract

University of Minho and other Portuguese campus based Higher Education Institutions (HEI) are creating new 2nd and 3th cycle curricula, delivering agile blended learning courses in different pedagogical models and formats. Those courses are shaping a contemporary HE sector, creating innovative ways of learning, targeting online students and attracting international students to short term studies on-campus.

The strategy benefits distant students worldwide, many of them coming from Portuguese speaking countries, which otherwise could not attend post-graduate courses in almost all Portuguese HEI. B-learning post-graduate study programs are adapted to student's lifestyles and benefit geographically disperse and/or working students, with reduced time frames to study in-campus based lectures, following a face to face traditional programs.

Universidade Aberta, the Portuguese open university, the natural born player, established bilateral agreements with traditional face to face HEI to offer joint post-graduate programs at distance. Known agreements include University of Coimbra, University of Porto and University of Lisbon.

UNorteX is the Extension School for the consortium between University of Minho, University of Porto and University of Trás-os Montes e Alto Douro in the north of Portugal. It is putting together a "Northern University Extension School" using a common framework to shape agile and articulated strategies in distance education.

Panorama e-learning 360°, a barometer of e-learning in Portugal, started a benchmarking report on e-learning in HE is focusing on post-graduate programs. Preliminary results indicate that traditional campus based HEI, like University of Minho, Nova University of Lisbon and Leiria Polytechnic Institute are putting in place consistent distance education initiatives, delivering b-learning programs for remote post-graduate students.

The e-learning panorama in Portuguese HE is changing. HEI, solo or in consortium, are developing internal policies, regulations and programs delivered to students worldwide, in a stand-alone mode, or in combinations with their traditional face to face courses. Together they are opening the way to digital education policies to come to light.

1 INTRODUCTION

Digital transformations are changing employment and several studies predicts deep changes in the labour market. Robotics, artificial intelligence and big data will change forever the workplace as we know it. The Oxford Study "The Future of Employment: How Susceptible Are Jobs to Computerization" (2013) analysed 702 professions and predicts that 47% of total US employment are at risk to disappear or to be transformed and new jobs will be created. Most workers in transportation and logistics occupations, together with the bulk of office and administrative support workers, and labour in production occupations, are at risk.

In the opposite sense, new jobs will be created related with high skilled computer educated workforce, that will have more and new jobs available. The digital divide will be more than ever a challenge to society.

The study "e-learning in Europe", released by the European Universities Association (2014), reveals that despite some newly emerging initiatives, national policies and strategies for e-learning in HE are not yet widespread and seem to enjoy only limited visibility among HEIs. Today, 4 years later, things didn't change much. HE sector is very slowly reacting to general technological revolution; no active and effective policies are implemented by European and national policy makers.

The recent Universia Conference of Rectors in Salamanca (2018) was still reflexive. The conference gathered leaders of more than 600 universities from 26 countries to reflect together on the profound changes of paradigm that will condition their future roles in society and the knowledge economy. The Salamanca Declaration point to some relevant actions for universities, such as: promote flexibility and innovative educational methods, rethinking organizational, administrative and sustainability processes; increase alliances, courses and certifications with companies from different industries; create new and alternative models of certification and integration with global platforms; implement hybrid training offers and programs in the workplace in a lifelong learning perspective; create new degrees, especially those related to computer science, artificial intelligence, data science and technology; and promote a greater emphasis on humanistic education, as well as on the transversal competences of students (Salamanca Declaration, 2018).

A more challenging position paper, Bologna Digital (2018), calls for action on Digitalization of HE, referring: "Digitalization is changing teaching, learning, credentialing processes and associated services in HE. We [the Ministers] call on the Bologna follow-up group to propose measures and guidelines on how to implement Bologna Digital for our learners and teachers and how to encourage peer learning between our policy-makers and between HEI to improve teaching, learning and credentialing and further support widening participation for all parts of society." Under this position paper there are 7 action lines & recommendations regarding: Opening-up HE to diverse population; Recognition of non-formal (Digital) learning; Digitalised Admission Processes, Teaching and Learning, Degrees and Qualifications; Internationalisation and Mobility and Quality Assurance.

In Portugal, there is no regulation for online education, there are not public policies, public agencies are slow adopters and do not promote research and development activities concerning the needed digital transformation on HE. National policies like the public administration paper-free and modernization programs, are oriented to infrastructure acquisition, ignoring the potential of e-learning to build and develop the human resources capacity so essential in managing change. From time to time, we get notice of some low-scale initiatives of using e-learning in some contexts of public administration.

For Universities, e-learning seems to be an important development area, but the "legal vacuum" that exist and the absence of a clear, common and public consensus about the perspectives of all HEI does not help to clarify the scenario.

Nevertheless, initiatives are irrupting from the HEI themselves due to demographics, open access or to internal organizational policies, like the ones implemented by University of Minho.

No doubt these initiatives benefits distant students worldwide, many of them coming from Portuguese speaking countries, which otherwise could not attend post-graduate courses in Portuguese HE due to costs of placements and in-campus learning. Besides, these initiatives expands the educational offer allowing students anywhere, anytime to access knowledge and education from a Portuguese HEI.

Such initiatives from University of Minho and other Portuguese campus based HEI are shaping a contemporary HE sector, creating new business models, innovative and flexible ways of learning, targeting online students and are attracting international students to short term studies on-campus.

B-learning post-graduate study programs are adapted to student's lifestyles, benefit geographically disperse and/or working students, with reduced time frames to study in-campus based lectures, following a face to face traditional programs.

HEI in Portugal made significant efforts to integrate digital technologies in education since the 90's Dias (2011). The e-U program in line with e-europe 2005, created HE "online" services, produce contents, increase the use of portable computers, and ensure wifi access in-campus. The initiative allowed several HEI to create their e-learning offices and virtual campus. Since 2005 HEI are using Learning Management Systems to support face to face in-campus learning.

Some Universities offer e-learning and b-learning lifelong learning courses, Dias et al. (2015) reveals. The number of students attending lifelong learning and 1st cycle courses in DE and e-learning increased (...) in lifelong learning the social impact is important when the investments in this type of education are weak.

This preliminary study on HE blended learning phenomena in Portugal, is conducted by Panorama e-learning 360° (www.panoramaelearning.pt), the barometer for e-learning in Portugal, and aims to understand the current stat of the art of online education in Portuguese HE, focusing on post-graduate

programs. The study used digital sources and started with an internet search in HEI. The preliminary results presented in this article will be further explored in the future.

2 METHODOLOGY

An Internet research approach was used to start the Benchmarking study on online education offer in Portugal. It is a snapshot of Portuguese HEI online education position, based on qualitative methods and including the analysis of selected HE public institutions.

The study used public information from digital sources using an agile instrument of qualitative nature. It was possible to further check the collected information with HEI e-learning managers in some cases.

The data collection went from January to March 2018 and analyzed 20 selected campus based HEI, searched public data on online education 2nd and 3rd study cycles offers.

Inspecting HEI public information and documentation, via websites, social networks, reports, articles, newspapers and via queries to HEI e-learning managers, it was possible to gather a significant collection of data in a short period.

To collect information from these digital sources an instrument was designed that included the following items: HEI Name, Courses description (Name, Faculty, Semesters, ECTS, link), Course coordinator (e-mail), Course Workflow and Assessment, Quality indicators (study plan, online student information guide, other).

The instrument to collect data was design, tested, refined and implemented based on previous experience of the first author with Panorama e-learning 360° procedures and instruments. The tests to the customised instrument to collect data were made with a team of teachers from the University of Minho b-learning Master in Spanish, Institute of Arts and Humanities, that helped in the definition of the main fields of items.

Preliminary results of the benchmark study on “e-learning in Portuguese HE” revealed that traditional campus based HEI, like University of Minho, Nova University of Lisbon and Leiria Polytechnic Institute are putting in place consistent distance education initiatives, delivering b-learning programs for remote post-graduate students. Thus, the study should more likely to be called a study on b-learning in HE instead of e-learning.

3 ONLINE EDUCATION IN UNIVERSITY OF MINHO

Global education, European student’s demographics and marketplace scenarios are increasingly pushing HEI and University of Minho, to develop and implement more up-to-date and flexible curricular solutions.

The assimilation of this reality by University of Minho, originated innovative online education initiatives. In the 2009/2010 academic year, the Institute of Education offered the 1st b-learning Master Course and by 2014 the Rectorate created the University of Minho Distance Education Project (2014) offering short courses (3 to 5 ECTS) in mainstream subjects targeting lifelong learning students. In many cases, these short courses can be assembled in order to accomplish the some learning content and learning results that existing Curricular Units of 1st, 2nd or 3rd cycle curriculum. This is an strategy to facilitated the recognition of the courses for future studies.

Table 1 shows University of Minho 2nd cycle Masters in blended learning mode. The courses are oriented to geographically disperse students delivering agile blended learning courses in different pedagogical models and formats to global target students. The Institute of Education and the Institute of Arts and Humanities are the pioneers. Due to easy access to data and to its relevance, it was possible to deepening the study at University of Minho and underlining several singularities.

Table 1. b-learning courses UMinho.

HEI b-learning Course	Course delivery & Student's assessment	Quality indicators
University of Minho Master in Spanish Institute of Arts and Humanities 3 semesters 90 ECTS	b-learning: educational contents and tasks online, teacher oriented, in-campus face to face part during 3 week in the beginning and end of the course.	Study plan Students course guide within Blackboard The course has an Inquiry of Student and Teachers Satisfaction with the Teaching and Learning Process and Conditions promoted by the Internal System of Management and Quality Evaluation
University of Minho Master in Lexicology Institute of Arts and Humanities 4 semesters 120 ECTS	International Master in collaboration with 7 European HEI. 2 e-learning Curricular Units (5+10 ECTS) and an Erasmus mobility Semester (6 ECTS)	Study plan The course has an Inquiry of Student and Teachers Satisfaction with the Teaching and Learning Process and Conditions promoted by the Internal System of Management and Quality Evaluation
University of Minho Master in Education Sciences (5 specializations at distance) Institute of Education 4 semesters 120 ECTS	b-learning: in-campus face to face weekly classroom lectures with students attending at distance via videoconferences from their homes or from organized classrooms in other partner organizations. Educational contents and tasks online, Teacher oriented. e-learning: students attending at distance via videoconferences from their homes or from organized classrooms in other partner organizations. Educational contents and tasks online, Teacher oriented.	Study plan The course has an Inquiry of Student and Teachers Satisfaction with the Teaching and Learning Process and Conditions promoted by the Internal System of Management and Quality Evaluation

Besides University of Minho is actively participating in the UNorteX Extension School, an initiative to boost common distance education policies and practices in the 3 Universities from the North of Portugal. University of Minho, together with University of Porto and University of Trás-os-Montes e Alto Douro are putting in place the “Northern University Extension School”, developing a common framework, sharing knowledge derived from their expertise in Distance Education delivery, reinforcing infrastructures, including the creation of new online certified exams classrooms, aiming to shape agile and articulated strategies and to attract students worldwide.

3.1 b-learning Master in Spanish

University of Minho’s B-learning Master in Spanish emerged from the Spanish and Hispanic-American Studies, Institute of Arts and Humanities, back in 2010. Started as a Specialization Training Course in Spanish as a Foreign Language, b-learning modality (60 ECTS, 3 editions, 2010-2013), and is currently, the b-learning Master’s Degree in Spanish Second Language / Foreign Language (90 ECTS, see www.melsle.ilch.uminho.pt).

The Master is implemented during 3 semesters, uses Blackboard as the online learning environment attracting students to the University of Minho Campus for 3 face-to-face weeks of study (in two moments), in the beginning and middle of the course.

Núñez & Cea (2011) report on the Masters pedagogical strategy based in student’s autonomy, that emerges from interaction. In this way, social presence helps the development of cognitive complexity and independence and isolation are replaced by interdependence and collaborative work. In relation to the role of materials in e-learning, a model document was drawn up describing each of the activities that were to be carried out, always following a fixed structure so that the student clearly identified the objectives, the bibliographic resources, the procedure, the extension of the work and the delivery date.

Concerning the curriculum organization there are 5 compulsory Curricular Units (UC's), one optional and one Practicum. The first is in b-learning, with a face-to-face and an e-learning part. The criterion that explains the adoption of a mixed system for three of UCs, lies in its core contents: the theoretical bases of the specific didactics in Spanish Foreign Language (ELE), the specific competences defined by the CEFR (2001), (communicative competences of the language) and the socio-cultural, cultural and intercultural competence, defined by the own CEFR and the Curriculum Plan of the Cervantes Institute (2006/7), as constitutive of the communicative and transversal competence to its learning. In addition, the grouping of the face-to-face part of the UC's in a week allows intensive and concentrated work that enables the cooperative work between the students and between them and the teacher, enabling the learning of their human side (more difficult to obtain in distance learning) and allowing to share the achievements made in theory and practice. For the rest, the pedagogical design of the five compulsory UCs follows the same logic, once the teacher defines a series of tasks that adjust the student's progress from a guided learning, which affects their previous experience and through readings aimed at achieving greater autonomy, which will involve the completion of tasks with more complexity and that will be specified in the final tasks defined for this purpose. This implies establishing achievable, coherent and patterned links that enable the progression of the learner and correspond to the workload initially defined in the UC, avoiding hypertrophied or scarcely relevant modules that compromise the credibility and recognition of the course.

Pazos et al. (2015), highlight the importance of innovation in various fields of academia, such as programming the educational offer, according the needs of society. The b-learning work [on the Master] is based on the conviction that University modernization also passes (not only, it is true) by the emergence of new technological tools as a space of wide possibilities and, nevertheless, of constant uncertainties. Only rigorous proposals, well supported scientifically and academically, can problematize and innovate in teaching.

3.2 UM Master in Education Sciences – from face to face to distance learning

The University of Minho's Master's degree in Educational Sciences, on a b-learning modality, emerged at the Institute of Education, back in 2009. The Education Technology speciality area of the Master Course in Educational Sciences in b-learning (120 ECTS, 2009-2018) is offered, in Portuguese, to teachers, trainers and other educational and media professionals.

Machado & Gomes (2011) and Machado (2012) report that the course had its first edition running in the 2009/10 academic year in the b-learning modality, thus combining classroom and distance education. It emerged in the light of new Educational Technology perspectives launched by IT developments, according to the Bologna framework guidelines for HE and following the lines of action established in the Action Plan 'The Schools of Tomorrow' of the national and European initiatives adopted in the Lisbon European Council in 2000, and reinforced in the "i2010 - European Information Society" (Dossier DGES TE, 2008). The b-Learning structure adopted in the course has been supported by a web platform, Blackboard, acting as a learning management system. This platform is being available to University of Minho students since the beginning of the 2006/2007 academic year (Coutinho and Bottentuit Junior, 2007).

Currently the Master in Educational Sciences has 6 areas of expertise (specialization areas) with different target groups, (Educational Administration; Curricular Development and Evaluation, Educational Supervision in Sciences and in Languages, Math Education and Education Technology). The specialization in Educational Administration is being taught face-to-face in campus. Curricular Development and Evaluation and Educational Technology are offered to distant students in a b-learning mode and Educational Supervision in Sciences and in Languages and Math Education, are offered through e-learning with synchronous (via videoconference and chat) and asynchronous sessions. These different approaches reveal, at the same time, a flexible perspective of how teaching and learning in HE can be promoted, but also different internal perspectives about this same reality.

The b-learning Master has a significant number of students from Portuguese speaking countries, being most of them from Brazil. It's implemented during 4 semesters, the first two with the 10 Curricular Units (60 ECTS) and the other two being the dissertation (60 ECTS). It uses Blackboard as the online learning environment and attracts students to the University of Minho Campus once a week.

These b-learning courses also admit the participation of students via videoconference, in most of the face-to-face sessions. Brazilian and other foreigner students can be “in-campus” via videoconference (synchronous communication) at the same time as face-to-face students. Teachers manage the class in both environments at the same time (face-to-face and videoconference). All tasks, contents and communications are convened, mediated and facilitated by the teachers via Blackboard. In face-to-face sessions students can interact among them and with the teacher, independently of being present in the campus or by videoconference.

4 RESULTS: B-LEARNING PANORAMA IN PORTUGUESE HE

The study on online education in Portuguese HE, researched public HEI courses offered online (e-learning or b-learning) at the levels of 1st, 2nd and 3rd University cycles. The research was mainly conducted using digital sources.

Preliminary results indicate that traditional campus based HEI, like University of Minho, University of Porto, Nova University of Lisbon and Leiria Polytechnic are putting in place consistent distance education initiatives, delivering b-learning programs for remote post-graduate students. In those cases, information is clear, courses reveal a degree of maturity and level of b-learning offer with years of experience by teachers and educational staff.

The research on HEI online education catalogue via the institution Portals, reveals that Nova University Portal is very strait forward with centralised information, including e-learning and b-learning courses, lifelong learning courses and master courses. Other Portals like the ones of University of Minho and University of Porto should be improved to avoid existing silos, by School or Faculty.

University of Aveiro offers a distance education 1st cycle degree (180 ECTS) in Accounting, led by the Higher Institute for Accountancy and Administration.

University of Porto digital information about distance or b-learning courses, 1st, 2nd and 3rd cycles, is not centralised and it's spread in Faculties silos, thus information is not so easy to find. Nevertheless, it was possible to contact the UPorto e-learning office coordinator to gather the needed information. The University of Porto has two Masters Courses (2nd cycle) - the Master in Clinical Education from the Faculty of Medicine and the Master in Nutrition and Food Consumption from the Faculty of Nutrition and Food Sciences - and one Doctoral course (3rd cycle) in b-learning mode - the Doctoral Program in Computer Graphics, born from the partnership between the University of Porto Engineering Faculty and Universidade Aberta (the Open University of Portugal - UAb). The training follows the principles of the Bologna Declaration, regarding the structure and credit and is taught adopting the Virtual Pedagogical Model of UAb, in a mixed e-learning scheme, using a virtual class e-learning platform and face-to-face classes during periods of intensive learning in the form of a seminar and / or workshop. The teaching / learning methodologies of all curricular units (UC), with respect to the distance learning mode (DE), focus on the student and follow a theoretical collaborative online learning approach in virtual class, which is based on individual and group practical work, while the teacher assumes the role of facilitator of the knowledge acquisition process. The hours of contact with the teacher will happen primarily through the e-learning platform or less frequently via other online means. In addition, in-campus seminars and face-to-face thematic workshops will be organized focusing on up to 3 weeks, to reinforce knowledge consolidation or practical assessment. The evaluation regime is negotiated between the teacher and the students. The personal computer of the student constitutes its primary laboratory space of experimentation and development of the learning activities, besides of functioning as channel of communication and sharing in context of the virtual class.

University of Coimbra has several short courses offered to lifelong learning students in e-learning. At the same time and under the agreement with Universidade Aberta (UAb), offers a 3rd cycle Doctoral program in Computational Algebra (DAC). The join PhD course is based on online Distance Learning (DE), using UAb e-learning platform and its virtual pedagogical model. During the three years of preparation of the doctoral thesis a weekly contact with the counsellor is planned. This contact agenda should be given to the coordinator at the beginning of the orientation, and on the 1st of each month the counsellor and the student should inform the coordination of the fulfilment of the program established for the previous month. The DAC will take place on a distance learning basis in an online asynchronous collaborative online learning regime; the hours of contact with teachers occur primarily through the e-learning platform. The course contains 2 e-learning semesters (curricular part), which consists of 6 compulsory curricular units and 6 semesters dedicated to writing the doctoral thesis. Approval in the curricular part of the course requires approval in all curricular units, with a grade of 10

or higher (in a 0 to 20 scale). In the thesis, the student must present an original work of high quality carried out under the guidance of one or two teachers who are part of the DAC Faculty. The work developed must have an advanced level, suitable for publication in an international journal with arbitration. After finishing writing the student must publicly defend the thesis, thus completing, through approval, the requirements for obtaining the Doctor degree. The diploma conferring this degree will be issued jointly by the two HEIs.

The University of Lisbon as a Master degree program led by the Institute of Education and another Master led by Técnico Lisboa jointly with UAb. The Education and Digital Technology Master works on distance learning and aims to train trainers and other education technicians in the field of the use of information and communication technologies (ICT) in distance learning, focusing on the modalities of e-learning and blended-learning. The assessment of learning is carried out systematically through the development of activities (individual and group) and by the production of specific products in each of the curricular units. These products are reflective texts, evaluation reports and web tools, multimedia objects as well as course plans developed for online education. The Master's Degree in Information and Business Systems of UAb and the Instituto Superior Técnico Lisboa aims to train professionals with solid background and skills in technologies and business systems, targeting candidates who wish to deepen their knowledge and skills or prepare a PhD, benefiting from the advantages of distance learning online. The Master works using the UAb platform and virtual model, mainly in online regime, virtual class, and compulsive face-to-face intensive sessions concentrated in 1 or 2 weeks per year, in the form of seminar and / or workshop.

The Polytechnic of Leiria (IPLeiria) is the case study to follow, the IPLeiria Portal information on e-learning programs is available in one single place, in Portuguese and English, up-to-date and containing in-depth information about their 1st and 2nd cycle distance education courses. It's possible to see all programs available for the academic year 2018/2019. IPLeiria as a total of 8 distance education courses (DE), most of them from the School of Education and Social Sciences (6). Four Master degree courses online (2nd cycle) and two undergraduate courses (1st cycle), all coming from the School of Education and Social Sciences. Besides IPLeiria offers two more DE programs, one Master in Sustainable Tourism Management from the School of Tourism and Maritime Technology, and an undergraduate course on Marketing from the School of Management and Technology. All information about the courses is well accessible in the main IPLeiria Portal and there is a connection to the Facebook page of each of the courses. For instance, in the case of the MSc on Accessible Communication it's possible to read in their Facebook page "The MSc in Accessible Communication operates in a b-learning mode, that is, most of the UCs are distance learning, the UC Laboratory of Augmented Communication, is totally on-campus due to the need to produce an accessible artefact that need in-site Laboratory equipment. This UC happens at the end of the first year, mid-June, being concentrated in about two weeks, so that the students can organize their professional and personal life to be present. The remaining UCs are operated on a distance basis, with the support of the Moodle platform, with some live sessions being transmitted by videoconference to students who are more distant geographically.

UNOVA has b-learning Masters in three different Schools, Medical, Information Management and Social Sciences and Humanities. The courses are well explained in the central Portal and students can decide on their course enrolment with critical information in-hand.

Table 2. b-learning courses UNova.

HEI b-learning Course	Course delivery & Student's assessment	Quality indicators
<p>Nova University 2nd cycle Master in Geographical Information Systems Information Management School 3 semestres 95 ECTS</p>	<p>1st and 2nd semester the Curricular Units are delivered via e-learning, meaning that in-campus classroom lectures can be followed by distant students in a synchronous way via videoconference. Students can choose to attend face to face or online (same-time classes). Tasks, educational contents and exams can be followed online. Dissertation face-to-face.</p>	<p>Study plan UNova uses MOODLE. online learning quality indicators not found.</p>
<p>Nova University 2nd cycle International Master in Mental Health Policy and Services (6 edition) Medical School 4 semesters 120 ECTS</p>	<p>English language course. The course starts in October with 2 weeks' residential sessions during which students will attend lectures, seminars and workshops. A second 2-week residential session will take place in Lisbon in April. Between the 2 residential sessions the students will participate in e-learning teaching activities (lectures, work exercises, essays) under the orientation of a supervisor. The 2nd year of the course will be dedicated to the development of a project and the elaboration of the dissertation, under the orientation of a supervisor.</p>	<p>Study plan and course leaflet UNova uses MOODLE. online learning quality indicators not found.</p>
<p>Nova University 2nd cycle Master in History of the Portuguese Empire School of Social Sciences and Humanities 4 semesters 120 ECTS Mestrado História do Império Português (1.^a edição)</p>	<p>Asynchronous e-learning, virtual classes with the teacher explains the contents throughout short videos, other contents like PowerPoints, paper based books, texts, maps, references and exercises. Online Forums for teacher-student interaction. Forums include questions started by teachers that are developed and debated by students. Virtual video-classes were the teacher explains contents, points out the compulsory and optional readings. For each Curricular Unit, there are 5 videos - content virtual classes, with 40 minutes each. Additionally, there are 2 more videos, an introductory one and another one dedicated to the final work of each curricular unit. Assessment methods are supported by continuous evaluations and by a final paper to be developed by each student on a topic choose with the respective teacher.</p>	<p>Study plan UNova uses MOODLE. online learning quality indicators not found.</p>
<p>Nova University 2nd cycle Master in Space and Geographical Information Systems School of Social Sciences and Humanities 4 semesters 120 ECTS</p>	<p>Teaching is based on the learning management system of the School. In the platform students, can find all materials and recommendations. For each Curricular Unit, there is the program, bibliography and evaluation criteria, together with the calendar of activities and assessment. A weekly chat is also scheduled to allow students to interact with teacher in same-time situation</p>	<p>Study plan UNova uses MOODLE. online learning quality indicators not found</p>

Data analysis reveals the lack of consistency on the use of terms like online education, distance education, hybrid, mix, blended education, dual, among HEI in Portugal.

In some cases, blended learning is considered a mode of same-time education delivery. In the same-time situation there are face-to-face students and distance students attending via videoconference to the campus-based classroom lecture. Those cases include the University of Porto Medical School, Nova University Medical School and University of Minho - Institute of Education.

UAb, the single Portuguese Open University was established in 1988 and is the single public distance education University in Portugal. In 2014 UAb reached 8590 distant students. In recent years, 2015 to 2017, UAb established bilateral agreements with traditional face to face HEI to offer joint post-graduate programs at distance. Known agreements include University of Coimbra, University of Porto and University of Lisbon.

Campus based HEI are offering e-learning and b-learning programs, either bundled in 1st, 2nd or 3rd cycle courses, or unbundled in smaller e-learning courses (UCs) that can be later recognized by HEIs. Curricular flexibility and courses shaped to student's needs are the base for those organizational policies. Pushing this policy inside each campus-based HEI is a way forward to modernise and transform HE sector.

5 CONCLUSIONS

In Salamanca at the Universia conference of Rectors the University of Porto Rector, Feye de Azevedo, described the 2030 students: "The incorporation of voice communication functions in most equipment had made cell phones obsolete and traditional glasses had been replaced with augmented reality lenses, the digital assistants kept up-to-date all the information received by its users - whether through study, reading, conversations, lessons, meetings or the simple everyday experience -, so the preparation of reports and documents or the suggestion of where to obtain additional data and information also fell about the efficient digital assistant. And as for meetings, classes, conferences or even romantic conversations, they could be kept in virtual rooms, with each of their speakers comfortably installed in the most disparate places".

This degree of connectivity - which allows real-time participation in dialogues at a distance - and the environment described, are "far from being a utopia," said professor and dean Feye de Azevedo. So-called virtual and immersive environments are not possible yet because of "the lack of integration between existing solutions," he said, "and the inertia with which the university community (including students) opposes this change already announced." "One thing, however, is certain: it will happen and higher education institutions need to prepare quickly," he concluded. Therefore, the academic argues that the academic model should reflect a dual reality - with "integrated provision of on-campus and online training" - that "the training of teachers requires continuous interaction, but also material means and incentives" and that "The design of the spaces, the architecture of the campuses, must reflect the new reality" (<https://www.dinheirovivo.pt/campus-santander-universidades-2018/alunos-do-seculo-xxi-professores-do-seculo-xx/>, Dinheiro Vivo, 2018).

The scenario described by University of Porto Rector for 2030 students, are 12 years away , will imply great number of educational contents available for students, allowing them to study from home or in-campus, according to their needs or preferences. The questions are:

- ✓ Are 12 years enough time to policy makers and HEI to wake-up and come to action, changing their business as usual way of life?
- ✓ Is the HE sector in Portugal getting ready to jump into the online education pool, ready to change in its administration procedures to a Digital University, more flexible, disaggregated, unbundled and moving in dynamic grounds?
- ✓ Are Policy makers and government led regulatory agencies and their personnel ready to make the needed administration changes, allowing more flexible and disaggregated curricula?

The study initiated is very preliminary and allow us to understand better the need for further studies at the level of consistency of terms and concepts used by HEI in Portugal, as well at the level of quality criteria and indicators, that we couldn't find in the researched HEI.

Some HEI are moving to cooperation's, sharing resources and procedures, or offering 2nd or 3rd cycle courses in partnership, that is the case of the consortium UNorteX and the case of the bilateral agreements between Universidade Aberta, UCoimbra, UPorto and ULisboa.

The e-learning panorama in Portuguese campus based HE is changing. Solo or in consortium HEI are developing internal policies and programs delivered to students worldwide, in a stand-alone mode, or in combinations with their traditional face to face courses. Together they are opening the way to digital education policies to come to light.

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