DISTANCE CAREER INTERVENTION WITH PORTUGUESE HIGHER EDUCATION STUDENTS: PROGRAMME OVERVIEW

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Abstract

The labour market has been facing significant changes over the last few years, fostered not only by technological advances but also by more competitive markets and new communication and interaction models within organizations and in the global society. Such trends are the basis for job perspectives that are becoming more flexible, but also less defined, uncertain, and unpredictable. In the future, employable graduates will be those who are able to integrate scientific subject knowledge with transversal and career competencies, acting as agents in shaping their careers. This issue raises awareness of the graduates' need to continuously learn and develop personal resources to facilitate their labour market integration and empower them for eventual job transitions.

This paper aims to present a new distance intervention programme that seeks to promote the enrichment of the career resources of Higher Education (HE) students with different individual and socio-cultural characteristics, giving them the opportunity to engage in a development experience that can be valuable during HE studies and may have a positive impact afterwards, to meet the challenges of assuming a professional role.

Given the flexibility concerning time and space of learning, this type of programme, supported by eLearning, can contribute to student engagement, including among non-traditional publics, such as workers, cultural minorities, older students, or students with disabilities.

Keywords: Career intervention, career programme, career resources, distance education, eLearning, higher education.

1 INTRODUCTION

Technological, societal, and organizational transformations have motivated a continuous change in the job market needs and supply and the skills needed [1]. Such evolutions, marked by uncertainty, but also raising new possibilities as there is a growing demand for new tasks and employers' profiles, make the (re)integration of HE students in the job market challenges, requesting them to adapt to the circumstances and prepare for an increasingly competitive job market. In this line of thought, academic-field-related knowledge is no longer sufficient to succeed both personally and professionally, nor is it a reliable indicator of ability or mastery per se [2]. Employers are now looking for job applicants not only with scientific and technical skills within their area of knowledge but also with a more versatile profile of transversal competencies that will prepare them to face the challenges in the workplace [3]. Alternative credentials in job recruiting, retaining, and placement are, therefore, being considered and recognized [2]. For these reasons, students need to foster their career resources, including their competencies and the knowledge of the professional context they aim to integrate and get involved in learning experiences to develop their competencies in a lifelong learning and employability perspective [2] [4], so they become fulfilled professionals and citizens [4].

Taking the concepts of capital, Hirschi and colleagues [5] [6] propose a comprehensive framework to assess key predictors of career success based on meta-analytic research. Thirteen dimensions were identified in the career resources model applied to Higher Education students: Occupational Expertise; Job Market Knowledge; Soft Skills; Organizational Career Support; Study Challenge; Social Career Support; Career Involvement; Career Confidence; Career Clarity; Networking; Career Exploration; and Learning.

The intervention in different career resources through new technologies and eLearning, and the effect of such intervention are still open for debate. However, even though the effectiveness of such actions

represents an open issue in the scientific domain [7], especially among diversified groups of individuals (e.g. [5], [8], [9]), distance career interventions using eLearning can contribute to student engagement, including among non-traditional publics, such as workers, cultural minorities, older students or students with disabilities [10] [11], since time and space of learning can be adjusted to their needs and possibilities.

The virtual pedagogical model from the Universidade Aberta [12] emphasises student-centred learning, flexibility, and digital inclusion. The students are viewed as active builders of their knowledge, committed to their learning process, and integrated into a learning community. This model goes beyond the traditional instructional objectives and aims to foster a learning experience where independent learning opportunities are fostered, as well as collaborative and peer-to-peer interactions. The organisation of working groups is used as evidence that knowledge construction is socially contextualised and as a strategy to combat feelings of isolation and demotivation. Flexibility is imperative in this model, concerning the possibility provided to students to perform the activities at a time and place that suits them better. This principle grounds the learning experiences carried out at distance, facilitated by information and communication technologies (ICT), in an asynchronous format. Besides flexible time and place management, asynchronous activities allow students to analyse the available information and reflect on the solution before interacting with the teacher or their peers. Another foundation of this model is the promotion of digital inclusion by providing opportunities and training for students to develop digital literacy, even before enrolling in the courses. This is done through an Online Acclimatation Module, where students engage in metacognition about learning and interacting in online environments, while immersed in such an environment.

The Virtual Pedagogical Model of the Universidade Aberta [12] is greatly influenced by the Community of Inquiry Model [13] which places the educational experience in the confluence of three pillars: teaching presence, cognitive presence, and social presence. All three pillars were considered in the development of the present programme, aiming at developing a motivating learning environment.

Considering the high risk of drop-out in intervention programmes that require students' participation and involvement over several weeks, and the inherent physical distance between students and the group moderator in online interventions, attention must be paid to motivational and self-determination issues from the participants. According to the self-determination theory [14], self-determination refers to one's ability to make choices and manage his/her own life path, with an impact on motivation. When people perceive that their actions may contribute to an outcome, they are more likely to feel motivated and engaged to take action. The authors [14] suggest that people are motivated to grow and change when their needs for competence, relatedness, and autonomy are supported. People need to feel in control of their behaviours and goals (autonomy); experience a sense of belonging to something bigger and related to other people (connectedness), and; learn different skills and feel they have what it takes to be successful, which motivates them to pursue their goals (competence).

The students' motivation and willingness to participate in the whole programme may also depend on the proposed activities. Bloom's Taxonomy of Educational Objectives [15] [16] provides a framework for determining and clarifying learning objectives and a representation of a continuum of increasing cognitive complexity that goes from lower-order thinking skills to higher-order thinking skills, organised into six categories: (1) to remember; (2) to understand; (3) to apply; (4) to analyse; (5) to evaluate, and; (6) to create. These categories are ordered from simple to complex and from concrete to abstract. This continuum constitutes a guide to designing learning activities that may involve different levels of complexity.

In the present study, the outline of a distance intervention to foster employability among HE students is presented. After the presentation of the methodology, the results section will summarize the characteristics of the programme and how the literature review guided its construction.

2 METHODOLOGY

The construction of the programme was informed by the literature review previously presented, which focused on the career resources, the guidelines to foster such resources in HE students, and best practices to promote distance intervention. Additionally, its construction was oriented by an initial diagnostics assessment of HE students' career resources, since this programme aims to promote HE students' career resources according to their characteristics and needs.

The needs diagnosis was performed in a sample of 1898 students from two Portuguese public universities, one of which is an open university (providing exclusively distance education), attending

different academic years and degrees: 45.2% were in the 1st year of the bachelors' degree or integrated master's degree; 31.6% were in the 3rd year of the bachelors' degree or integrated masters' degree; 16% were enrolled in the first year of the master's degree; 7.2% of students were dispersed along the remaining academic years and degrees. Most students were female (67.7%), their age ranged from 17 to 74 years old (M = 23.33, SD = 8.52) and 24.5% of students were engaged in a paid professional activity. The percentage of students who reported special educational needs was 1.8%.

Career resources' needs were identified through the Career Resources Questionnaire [17], which surveyed the following career resources: occupational expertise, job market knowledge, soft skills, organizational career support, job challenge, social career support, career involvement, career confidence, career clarity, networking, career exploration, and learning.

3 RESULTS

3.1 Diagnosis of needs

The results of the assessment of HE students' needs concerning the career resources showed that higher mean results were found for the career resources Social Support (M = 3.71; SD = 0.81), Study Challenge (M = 3.56; SD = 0.82), Career Clarity (M = 3.45; SD = 1.01), and Course Involvement (M = 3.41; SD = 0.95). Lower mean results were found in the following career resources: Job Market Knowledge (M = 2.72; SD = 0.89), Career Exploration (M = 2.77; SD = 1.01) and Institutional Support (M = 2.96; SD = 0.93). This diagnostic was fundamental for the programme organization that is presented hereafter.

3.2 Programme overview

3.2.1 Description

This programme B4C – Boost for Career – aims to promote the enrichment of career resources of HE students with different individual and socio-cultural characteristics, according to the needs identified through the Questionnaire of Career Resources, especially those resources that are more related to the future career and less associated only with their student's role. Thus, the career resources of particular interest in this programme were the following: Job Market Knowledge, Career Exploration, Occupational Expertise, Soft Skills, Learning, Organizational Career Support, Networking, Career Clarity, and Career Confidence.

3.2.2 Implementation context

The B4C programme will be implemented in a distance modality, mostly in an asynchronous format. It will be delivered through the Moodle Learning Management System, with the integration of two fundamental plugins: H5P, to facilitate the proposal of different activities' formats, including interactive ones, so they become more appealing and contribute to motivating students throughout their participation in the programme, and; Level Up, due to its potential to engage students in their learning experiences by enabling them to gain experience points and level up in the programme, creating a gamification experience. It is expected that the programme can be accessed and the activities performed on different devices (pc, tablet, cell phone). The first and the final sessions will be implemented synchronously.

A trained moderator from the field of Educational Psychology will be responsible for monitoring students' performance, asynchronously, on a daily basis, giving them feedback on their activities, and providing guidance whenever necessary. More specifically, her role will be: (a) to manage the activities released on the e-platform; (b) to provide the necessary reminders for students to submit the activities on the scheduled time; (c) to generate and sustain engaging and constructive discussion in the forums for group discussions [18]; (d) to support the clarification of issues that may arise concerning particular instructions and/or activities, and; (e) to provide technical support. It is expected that the moderator's presence will give students a sense of trust and support that fosters their motivation to commit to the programme for the whole period of its implementation.

3.2.3 Theory into practice

The construction of the B4C programme started with the analysis of the relevant theories and their implications (introduced in the first section of this paper).

The Career Resources Model and the framework of the key predictors of career success [5] [6] were the basis for the definition of the programme. These frameworks, together with the Career Resources Workbook [6], provided the necessary background for the construction of activities aimed at developing career resources.

Considering the format of the programme, the virtual pedagogical model from the Universidade Aberta [12] plays a central role, in supporting the design of the B4C programme. Every activity has been planned for students to develop their competencies and career resources and to meet their needs and availability. Flexible time management is adopted for students to perform the activities at their own pace and schedule within a prescheduled and agreed-upon timeline. Students have an active role in their time management to perform the requested activities, which, in turn, is expected to appeal to their autonomy, creativity, and monitoring skills, as well as planning skills for learning throughout life. In addition to the individual activities, group interactions are also suggested for students to have the opportunity to share experiences and perspectives based on common goals and build a sense of belonging, which is key to ensuring their sustained motivation [14], as well as for collaborative learning [13].

Independent learning is carried out autonomously by students with the support of activities, materials, bibliography, and guidance facilitated by the moderator, the person facilitating the learning experiences, helping students develop their resources, organizing the expected collaborative activities, and stimulating communication and interaction within the working groups. The moderator is also expected to pay attention to student's needs and difficulties and help them find a solution, model the interactions in the discussion groups, and provide specific feedback on their activities.

To foster digital literacy and facilitate students' experience of integrating an online intervention programme, students will initially participate in an introductory module that will be centred on knowledge transfer regarding the online learning process and interaction, in an asynchronous format. Topics such as "how to get involved in a group discussion", "how to perform collaborative activities", and "how can I contact the moderator of the programme" will be addressed right in the beginning. Other inclusive practices are also being arranged to meet students' needs, such as providing resources and activities in different modalities (e.g., including subtitles in the videos and audio instructions for the activities in addition to the written format).

Using the Self-Determination Theory as a framework [14], optional activities, in addition to the mandatory ones, will be integrated into the programme to give students control over some of the intervention proposals. Also, along with individual tasks, collaborative activities will be arranged for students to feel that they belong to a group and are connected to others. This sense of connectedness will be also incentivized by the programme's moderator who will maintain regular contact with students and try to motivate students to keep participation throughout the programme. Feedback of students' performance throughout the activities will also be provided, both by the moderator and by each activity, at the end of each one, to support students' learning and development and reinforce their knowledge.

The analysis of Bloom's learning taxonomy [15] [16], guided the decision to include activities from three levels of complexity: (1) activities requiring students to remember and understand the provided information; (2) activities demanding students to apply and analyse it, and; (3) activities asking students to evaluate and create new knowledge and information. Additionally, this taxonomy helped to formulate, in more concrete ways, the objectives to be attained with each activity, considering the complexity levels.

3.2.4 Structure

An overview of the programme's structure is presented in Fig. 1.

The career resources where intervention was identified as necessary were nine: occupational expertise, job market knowledge, soft skills, organizational career support (from the HE institution), career confidence and career clarity, career exploration, networking, and continuous learning. Some similarities were found between them, suggesting the relevance of aggregating some of the resources in the same training module, contributing to reducing the number of necessary intervention modules. Also, prior to the resources' promotion activities and after the programme's work on career resources, some conditions need to be ensured.

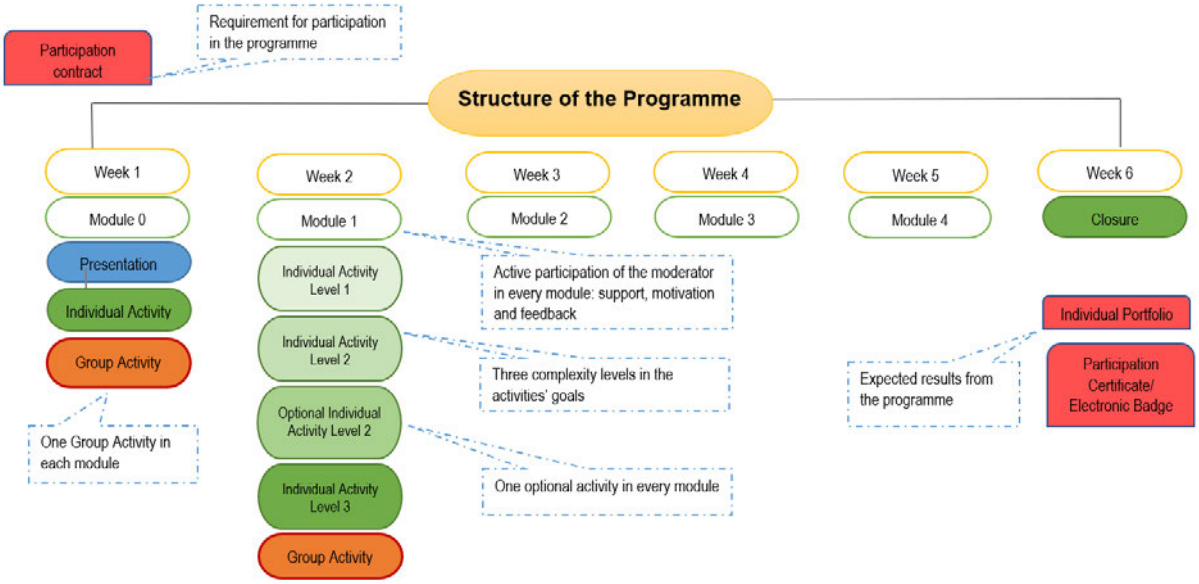

Figure 1. Overview of the programme's structure.

In view of the identified needs and motivational aspects that could interfere with students' adherence to the programme, a total of six modules (one per week), will be implemented, with a total amount of expected time of 60 minutes to complete the activities of each module. Table 1 summarizes the objectives and the contents of each module.

Table 1: Summary of the objectives for each module.

Session	Module	Objectives
1	0	- Pre-test assessment - Presentation of the programme and its relevance - Participation contract negotiation - Familiarization with the eLearning platform and with participants and moderator
2	1	- Promotion of the resources – career exploration and job market knowledge: - to enhance students' ability to identify and evaluate career information and resources
3	2	- Promotion of the resources – occupational expertise, soft skills and continuous learning: - to enhance students' knowledge about the fundamental skills and the means to develop competencies in need
4	3	- Promotion of the resources – organizational career support and networking: - to enhance students' ability to identify and expand their network and gain knowledge of resources to improve their learning inside the academia
5	4	- Promotion of the resources – career clarity and career confidence: - to enhance students' ability to project their career and expand their knowledge on how to reach their career goals
6	5	- Post-test assessment - Access to the digital portfolio - Certificate/badge

In module 0, a participation contract will be presented and negotiated with students. This instrument is a fundamental tool for clarifying the conditions for the programme's implementation, fostering an enriching self-directed learning experience, and establishing the guidelines for the expected relationships between the moderator and the students, among students, and between them and the provided activities/resources/materials. The aspects entailed in this contract will include, among other aspects, information about what students will learn, the structure of the programme, the level of responsibility and autonomy expected from students to engage in the proposed activities, the organisation of the individual and group activities, the expected role of the moderator, and the dynamics of the interaction moments. For students to enrol in the programme's activities, they will need to explicitly state that they agree with the contract.

The intervention on career resources will take place in four modules as previously stated. Each module comprises (a) individual activities; (b) one optional individual activity; (c) a collaborative activity. There is a concern with providing a response model or a way of organising students' thoughts [19]. This way, an example or a structure to be followed in students' task-solving is to be provided in every activity. The construction of personal digital portfolios will be a result of the student's work on their activities. This way, by the time the programme ends, they will be able to analyse their learning experience as a whole and revisit their research and reflections in each intervention module when they wish, which may help them better prepare for the transition to the marketplace and the pursuit of a career.

The programme's effectiveness assessment will be based on the pre-and post-test assessment of the experimental group (data collected in modules 0 and 5). Additionally, a sample of participants will be selected as the control group.

4 CONCLUSIONS

In a constantly evolving world, the job market and professions are also changing, demanding HE students to prepare for the challenges facing ahead. The B4C – Boost for Career – programme aims to help HE students with diverse characteristics to: (a) explore the working contexts where they may wish to enter, and the competencies they will need to succeed at their job and throughout their career; (b) to inform them about the opportunities their HE institutions and the surrounding environment have at their disposal to provide them with knowledge and foster competencies' development, and; (c) to reflect on their experiences and their competencies, their needs, and mostly, the career trajectory they want to pursue.

Being developed in a mostly asynchronous eLearning format, the programme intends to be accessible to a variety of students, including non-traditional students such as working students or students with disabilities. This programme is intended to be a socially and scientifically relevant contribution for academics, practitioners and policymakers, as well as for the graduates who will be enrolled in it.

ACKNOWLEDGEMENTS

This research is financially supported by national funds through the Portuguese Foundation for Science and Technology (FCT), within the scope of the project PTDC/CED-EDG/0122/2020 and the projects UIDB/01661/2020, UIDP/01661/2020, UIDB/04372/2020 and UIDP/04372/2020.

REFERENCES

[1] H. Bakshi, J. Downing, M. Osborne, and P. Schneider, *The Future of Skills: Employment in 2030*. London: Pearson and Nesta, 2017.

[2] B. Davies, C. Diemand-Yauman, and N. van Dam, "Competitive advantage with a human dimension: From lifelong learning to lifelong employability", *McKinsey Quarterly*, 2019.

[3] J. E. Aoun, *Robot-proof: Higher Education in the Age of Artificial Intelligence*. Cambridge/MA: The MIT Press, 2017.

[4] European Commission, *Key Competences for Lifelong Learning*. Luxemburg: European Union, 2019. https://publications.europa.eu/en/publication-detail/-/publication/297a33c8-a1f3-11e9-9d01-01aa75ed71a1/language-en

[5] A. Hirschi, N. Nagy, F. Baumeler, C.S. Johnston, and D. Spurk, “Assessing key predictors of career success: Development and validation of the career resources questionnaire”, *Journal of Career Assessment*, vol. 26, no. 2, pp. 338-358, 2018.

[6] A. Hirschi, *Your career resources workbook for in-depth knowledge on the Career Resources Questionnaire Student version*, 2017. http://www.cresogo.com/s/CRQ_workbook_student.pdf

[7] J. Kettunen and J.P. Sampson, “Challenges in implementing ICT in career services: perspectives from career development experts”, *International Journal for Educational and Vocational Guidance*, vol. 19, no. 1, 2019.

[8] C.W. Rudolph, H. Zacher, and A. Hirschi, “Empirical developments in career construction theory”, Journal of Vocational Behaviour, vol. 111, pp. 1-6, Apr. 2019.

[9] A.D. Silva, P. Coelho, and M.C. Taveira, “Effectiveness of a career intervention for empowerment of institutionalized youth”, *Vulnerable Children and Youth Studies*, vol. 12, no. 2, pp. 171–181, Apr. 2017.

[10] F. Seabra, S. Henriques, T. Cardoso, D. Barros, and M.F. Goulão, “E-learning in higher education: Academic factors for student permanence”, in *Climate Literacy and Innovations in Climate Change Education* (U.M. Azeiteiro, W. Leal Filho, and L. Aires, eds), pp. 359–373, Cham: Springer International Publishing, 2018.

[11] F. Seabra, “Permanência dos estudantes no ensino superior a distância: Perfil académico dos estudantes da Licenciatura em Educação da Universidade Aberta”, in *Currículo, Formação e Internacionalização: Desafios Contemporâneos* (J. Sousa, A.F. Moreira, and A. Vieira, eds), pp. 182–196, Braga: Centro de Investigação em Educação (CIEd), 2018.

[12] A. Pereira, A.Q. Mendes, L. Morgado, L. Amante, and J. Bidarra, Modelo Pedagógico Virtual da Universidade Aberta. Para uma universidade de futuro [Virtual Pedagogical Model from Universidade Aberta. Towards a University of the Future]. Universidade Aberta, 2007.

[13] D.R. Garrison, T. Anderson, and W. Archer, “Critical inquiry in a text-based environment: Computer conferencing in higher education”, *The Internet and Higher Education*, vol. 2, no. 2-3, pp. 87-105, 1999.

[14] R.M. Ryan and E.L. Deci, *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness.* London: The Guilford Press, 2017.

[15] L.W. Anderson, D.R. Krathwohl, P.W. Airasian, K.A. Cruikshank, R.E. Mayer, P.R. Pintrich, J. Raths, and M.C. Wittrock, *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives (Complete edition)*. New York: Longman, 2001.

[16] D.R. Krathwohl, “A revision of Bloom's taxonomy: An overview”, *Theory into Practice*, vol. 41, no. 4, pp. 212-218, 2002.

[17] S. Monteiro and L. Almeida, “Adaptation and initial validation of the Career Resources Questionnaire for Portuguese – HE Students form”, *Análise Psicológica,* vol. 39, no. 2, pp. 287-298, 2021.

[18] J. Kettunen, M. Lindberg, E. Nygaard, and J. Kárdal, “Enhancing Career Practitioners’ Understanding and Use of ICT in Guidance and Counselling, in *Career and Career Guidance in the Nordic Countries* (E.H. Haug, T. Hooley, J. Kettunen and R. Thomsen, eds.), pp. 163-175. Leiden: Brill, 2020.

[19] S.D. Brown, N.E. Ryan Krane, J. Brecheisen, P. Castelino, I. Budisin, M. Miller, and L. Edens, “Critical ingredients of career choice interventions: More analyses and new hypotheses”, *Journal of Vocational Behavior,* vol. 62, no. 3, pp. 41-428, 2003.