Work-based learning application - BrightStart Program: An initiative to promote digital skills in higher education

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Higher education institutions and organisations have the responsibility to work together to provide better curricula and better projects aiming the market needs. This work highlights a constructivist approach and the work-based learning perspective giving the focus on a digital competence learning program in Portugal – the BrightStart Program.

BrightStart is a Deloitte Portugal pilot program, led in collaboration with Setubal Polytechnic Institute, focused on increasing employability and professional skills of high school graduates currently enlisted in vocational training. During the program, the enrolled students combine their academic curricula with the opportunity to integrate delivery project teams (non-facing client activities).

This program is highly focused on the work-based learning approach and was inspired in a similar program that exists in North Ireland with Deloitte UK and Ulster University.

The work focuses on the already obtained results in this pilot program in Portugal and highlights the work-based learning approach and principles opening the future work phases and improvements.

Keywords: digital competencies, innovative pedagogical practices, constructivist approach, BrightStart, work-based learning

Framework

Under the Portugal INCoDe2030 Initiative, the concept of Digital Competencies is broadly embraced and includes the notion of digital literacy (i.e. the ability to access digital media and ICTs to understand and critically evaluate content as well as communicate effectively), as well as the production of new knowledge through research activities, developed on the light of subjects that include information processing, communication and interaction, and the development and production of digital content.

For each of these areas it is possible to develop competences with different levels of depth and proficiency, depending on the qualification and the objectives to be achieved. These different levels are reflected in the type of measures to be promoted in an inclusive and comprehensive manner to the whole society.

The constant change of concepts and paradigms in the social and technological means that occur daily in modern society reflects on the need of the teachers to seek an improvement of their pedagogical practices so that the teaching-learning process can follow and to be part of these changes.

A constructivist perspective

In a constructivist perspective, the integration of the Digital Competences, associated to pedagogical strategies and strategies focused on the student can contribute to the teaching process where the student is able to construct his own knowledge, valuing the significant learning and its construction, considering as starting point the intellectual and cultural potentialities that students express. In this way, the activities to be developed pass through flexible objectives, considering what the student knows and what he or she still needs to learn.

According to American psychiatrist William Glasser's theory (Glasser, 1999), students learn:

• 10% reading;

• 20% writing;

• 50% watching and listening;

• 70% arguing with others;

• 80% practicing;

• 95% teaching.

In this sense, the teaching / learning methodology focused on creating the conditions for the three fundamental success factors in terms of learning (practicing, discussing, teaching) to be important elements of the process. Learning will be meaningful if the student is the main actor of their learning, taking an active role and the teacher a student booster. Group and classroom work, several moments of evaluation, a mixture of summative and formative evaluation elements, Moodle platform, were used in the teaching / learning process, to guarantee that the proposed objectives were fulfilled. The results showed the suitability of the methodology used.

According to (Glasser, 1999), the ten Axioms of choice theory are:

1. The only person whose behaviour we can control is our own.
2. All we can give another person is information.
3. All long-lasting psychological problems are relationship problems.
4. The problem relationship is always part of our present life.
5. What happened in the past has everything to do with what we are today, but we can only satisfy our basic needs right now and plan to continue satisfying them in the future.
6. We can only satisfy our needs by satisfying the pictures in our Quality World.
7. All we do is behave.
8. All behaviour is Total Behaviour and is made up of four components: acting, thinking, feeling and physiology
9. All Total Behaviour is chosen, but we only have direct control over the acting and thinking components. We can only control our feeling and physiology indirectly through how we choose to act and think.
10. All Total Behaviour is designated by verbs and named by the part that is the most recognizable.

The BrightStart program strongly believes on these axioms and believes that the obtained results so far are a result of those believes.

Work-based learning

Work-based learning is the term being used to describe a class o university programmes that bring together universities and work organisations to create new learning opportunities in workplaces (Boud & Solomon, 2001).

According to (Boud & Solomon, 2001), some of the work-based learning principles are:

1. A partnership between organisation and university to foster learning.

2. Learners are employed/in a contractual relationship with the external organisation.

3. The programme followed derives the needs of the workplace and the learning: work is the curriculum.

4. Learners engage in a process of recognition of current competencies prior to negotiation of programme of study.

5. A significant element of the programme is through learning projects undertaken in the workplace.

6. The University assesses the learning outcomes against a trans-disciplinary framework of standards and levels.

A set of criteria for the success of WBL courses are:

1. Strong programme leadership.

2. Exclusive connections between the programme and its environment (niche market).

3. Frequent and effective communications with local employers.

4. Beliefs about programme excellence.

5. Effective school-based learning component.

6. Adequate financial support.

7. Innovative programme and pedagogical features workplace.

The BrightStart program

The BrightStart program is a pilot education program developed in partnership between Deloitte Portugal and the Setúbal Polytechnic Institute - Setúbal Higher School of Technology (IPS), which seeks to contribute to the education and employability of young people and, at the same time, complement the academic curriculum with a very practical component of work in real environment integrating project teams. It is intended for high school finalists, who will be awarded a long-term internship, which includes tuition and a scholarship to secure funding for the completion of the program. At the end of the training they will have acquired digital and technological skills that will put them at an advantage in the integration of the labour market.

The logic of progressive professional framework provides that participants begin the program with full-time classes and progressively begin their participation in professional life.

This program began on October 2, 2017, with 21 students who completed the first year on of the program. The second year began on October 2018 with 21 more students. During the two-semester period, *BrightStarters* participated in hands-on workshops of various technologies offered by Deloitte professionals.

The results

As a balance of the first year of this program, it is certainly possible to affirm that it was a success, seeing that the school failure rate was 0% (100% of the students obtained approval in all the curricular units). This was due mainly to student mentoring between Deloitte and IPS, to the commitment of all stakeholders and to the motivation the program provokes, on a personal, professional and financial level.

Conclusions and future work

In conclusion, it is possible to affirm that many of the work-based learning principles and success criteria have been applied with the BrightStart program. This program is based on a partnership between organisation (Deloitte) and university (IPS) to foster learning. Learners are in a contractual relationship with the external organisation (internship). The programme

followed derives the needs of the workplace and the learning: as they learn and practice working for projects in the organisation. The programme of study was negotiated with the organisation in order to fulfil the market needs. A significant element of the programme is through learning and applying the learning in real projects undertaken in the workplace. And the higher education institution assesses the learning outcomes against a trans-disciplinary framework of standards and levels.

Future work will be essential the continuous improvement and application of the BrightStart program, working together among organisation and higher educations in order to obtain the best outcomes for the students, the market and the institutions.

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