



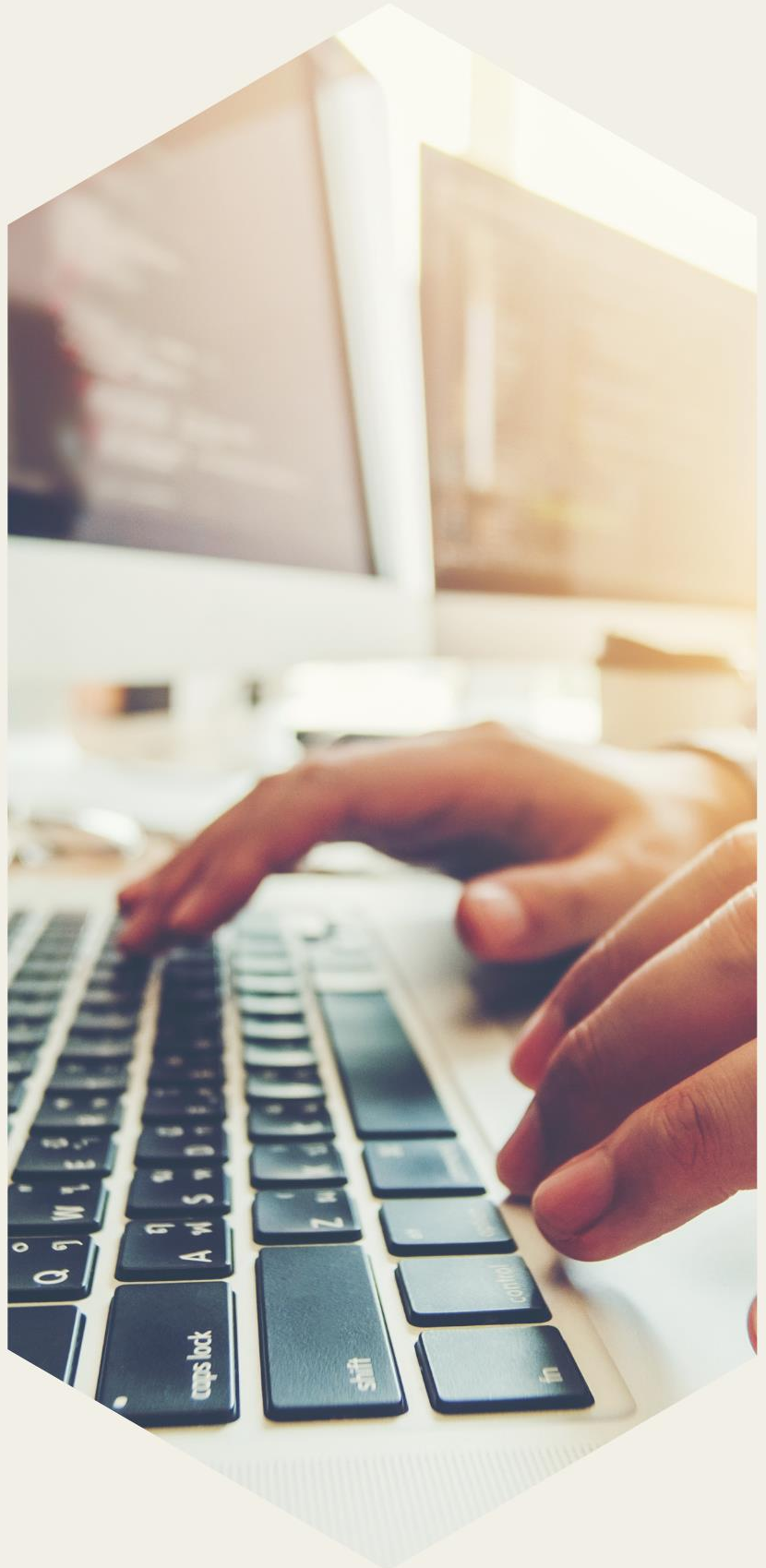
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1. Introduction

Short overview of the project

Code4SP aims at transferring the "CodeDoor Best Practice" – transfer of computer programming (coding) skills to people from vulnerable socio-economic groups. Coding is a hard skill that is currently limited and highly paid on the labor market; the new "Coding experts" join the labor market with high success: Over 90% of the CodeDoor's alumni have been able to find a job or an apprenticeship in the last four years or have set up their own start-ups, and many CodeDoor alumni act as mentors for the new generation.

This good-practice is self-sustainable for two motives:

1. The benefit that the alumni bring to the coding talent seekers is so high that the enterprises are interested in supporting the perpetuation of this good practice by allocating resources or funds. The alumni suddenly find themselves in such a higher socio-economic position that many feel the moral need to support the perpetuation of the good-practice by volunteering to provide on-line coding expert support to the current CodeDoor trainees. This support is usually provided through the use of specialized support forums/platforms.
2. This CodeDoor Best Practice has been implemented locally in different towns in Germany and constantly evolving for improvement. In this project, this good-practice will be adapted and transferred to Mediterranean countries. The countries under focus (Greece, Portugal, and Cyprus) were chosen due to their high youth unemployment rate (above 20%) and the lowest ICT experts' rates in the national job markets – thus suggesting an increased need for ICT experts. Code4SP project is expected to impact the socio-economic promotion of the participants and their communities and create role models on socio-economic

promotion through VET and the economic valorization of the local enterprises due to the recruitment of Coding experts.

Methodology of inviting participants and recruiting stakeholders

The event was organized in an F2F format, since Covid-19 pandemic measures are less severe in Portugal at this point, allowing the attendance of 35 participants. Their invitation was sent by email and some phone calls were also made. The event was also published on host's social media and an agenda promoting the event was printed and posted in the venue (Espinho VET School).

2. Key findings from National Dissemination Seminars

Demographics of Participants

Of the 35 participants in this event, their profile combines with what was expected in the guidelines received for this occasion, as regional stakeholders on education, training and social support were present. Most of the participants were VET teachers, even though the event was also attended by pedagogical directors, SME representatives, public bodies' representatives and training centres' staff. 100% of the attendees are Portuguese, 25.7% being men and 74.3% women. All of them live in the districts of Aveiro and Porto (North of Portugal). 40% belong to the 18-35 age group, 54.3% to 36-55 and 5.7% to 56+ years old.

Findings based on discussion

At the beginning of the discussion, after the general presentation of the project, the audience was asked how clear the structure and content of CodeDoor's Good Practice training is. The majority responded that it is "very clear" and "well structured".

Then they were asked, based on their knowledge and experience, if there were other similar opportunities for informal programming training in Portugal. It was noticeable that the participants more involved in the field of Programming and Computer Science were more aware, so a couple of answers were "yes", although a reference for "few and outdated opportunities" was made. The majority of the participants were not aware about these offers/opportunities.

Regarding the overall situation of coding training in Portugal, the participants said that it is "scarce and not well publicised", "loss-making", "very dependent on basic ICT subjects", "educational institutions cannot keep up with the rapid changes in the industry" and that "there is a mismatch between supply and demand".

Then, participants were asked to tell, based on their experience, if they believe that by transferring CodeDoor's Good Practice to Portugal, the employability of vulnerable individuals would increase and the vast majority of responses were positive, saying that "we would be giving opportunities to these people", it would foster employability, but that, due to the "lack of prior knowledge", it could become a hard mission. It was also added that it remains to be seen whether the implementation of this practice will respond to real needs, or whether it will be seen as *just another training course* to "occupy the unemployed". It was also mentioned that "there has to be a will to change, regardless of the potential to". Participants state that it is necessary to understand the nuances of migrant groups and their composition to be able to project any levels of impact. Another participant also added that "if they were given a degree, yes, the Good Practice will act as an employability gamechanger. On the other hand, a simple certificate, for example, would be insufficient, since in many companies they ask for experience and/or training/degree in the field."

Regarding the question "can, in your opinion, people with minimum or no education background follow a training like CodeDoor Best Practice?", the auditorium was almost equally divided between "yes" and "no" answers. A large proportion of the negative

responses added that this question would be dependent on the participants' knowledge of computer science, algorithmic and other programming-related fields.

Finally, participants were asked whether CodeDoor's training will increase the skills of vulnerable individuals from lower socio-economic classes. They all answered yes, although with some constrictions. The success of future participants in this type of initiative would always depend on their motivations, previous education, etc.

3. Key findings from Round Tables

Demographics of Participants

Regarding the 6 participants in the Portuguese Round Table, they are all Portuguese, one of them belongs to the 18-35 age group and the rest belongs to the 36-55 age group. Their organisations are all located in the Aveiro district. 4 men and 2 women composed this group of experts.

Their occupations followed the guidelines for this activity, so, representatives from the following fields were invited:

- SMEs (co-owner);
- Social institution (founder);
- VET School (trainer);
- Policy maker (City Hall councillor and current candidate for president);
- Career counsellor (psychologist).

Findings based on discussion

About the discussion, and differing from what happened in the National Seminar, no "rigid" structure was followed, so the conclusions were drawn from a two-hour conversation that flowed naturally.

Regarding training in programming in Portugal, it referred that "teaching does not move as fast as the market", so there are some deep gaps in training. There is a need to update curricula, as they are outdated, and trainees in this area are not always prepared for the job market, as programming is a demanding professional area. Subjects such as Algorithmics are essential to the curriculum, as they stimulate logical reasoning, seen as key for being a competent professional in the area. At this point, participants' autonomy in various courses is very low (around 30%, according to one of our experts), which could be counterproductive in a format with a high autonomous workload.

The representatives of SMEs and IT were unanimous in admitting that one of the main objectives must be following a simple language in all the contents taught. However, given that the target is migrants/refugees, many of them come from socio-economic classes with academic qualifications very favourable to succeed in this type of course. Experts also referred that these social groups always look for something more practical.

The dissemination of the course may be eased by public authorities, social associations, and employment and professional training bodies (IEFP, "Qualifica" Centres). Nonetheless, the role of institutions such as The High Commission for Migration will be key, as these institutions are usually the first to reach migrants/refugees once they arrive.

Experts agreed that 1500 hours might be too much, and this can result in many dropouts. However, if agreements and protocols are signed between the institutions and the companies, the process may become easier and possibly more in line with what is needed by the labour market.

The course should be structured in general basic modules, which will be complemented with specializations in more specific areas, in which companies will have a fundamental role by addressing their needs. The fact that there are several types of programming and coding in the market is the main reason for coming out with this idea.

A "reduced version" of the course should be structured, with several synchronous classes (e.g. every 10 hours of training, the trainer would prepare a class with all the enrolled students).

Finally, it was said that the computer should be the privileged equipment for giving and receiving lessons during the course.

4. Conclusions and Recommendations

Key results of National Seminars (short summary)

The National Seminar audience referred that:

- the structure and content of CodeDoor's Good Practice training is "very clear" and "well structured";
- there are opportunities for informal programming training in Portugal, although they are "few and outdated";
- the programming training in Portugal is "scarce and not well-publicised", "very dependent on basic ICT subjects" and unable to get along with the fast evolution of the industry;
- the CodeDoor's Good Practice would increase the amount of opportunities given to these groups and foster the employability, even though there are some "ifs and buts";
- they are divided between those who think that people with low qualifications will follow a training like CodeDoor Best Practice and those who do not. This would depend on the participants' knowledge of computer science, algorithmics and other programming-related fields;

- they agree CodeDoor Best Practice will increase the skills of vulnerable people from lower socio-economic classes, although it depends on their motivations, education, etc.

Recommendations for future action

- Programming curricula in Portugal is outdated and needs the labour market's feedback for a reliable update;
- The level of autonomy required is too high for what these groups are used to in similar courses;
- The course should be practical and divided in two parts: the first level (with the basic knowledge of programming) and the second level, more specialized in a given function/programming language.
- The role of the enterprises in defining the curriculum is crucial and protocols should be signed with them in order to ensure internships and their collaboration in defining the curriculum;
- 1500 hours of duration could be too much. Stakeholders suggested to create a short version of the course, issuing a certificate within its completion referring what skills were acquired by the participant;
- The dissemination of the course may be eased by public bodies and by social and labour-market linked associations. However, the role of institutions as The High Commission for Migration is key, as these are frequently one of the first to reach migrants/refugees.