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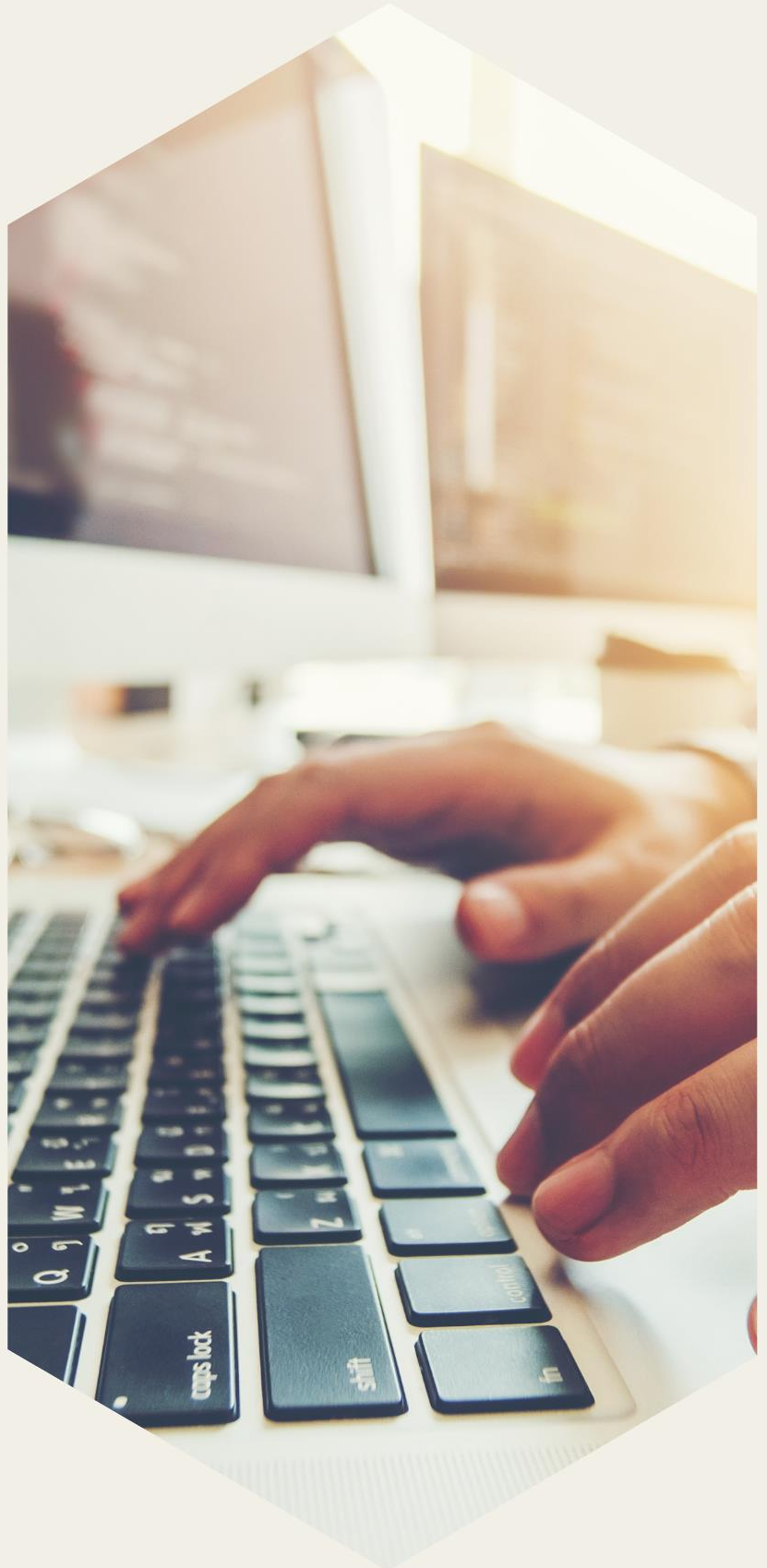
## Output 2.3.2: Initial Transferability Plan of original CodeDoor best practice

WP2:  
Knowledge Exchange and  
Transferability Plans

Prepared by:



Center for Social  
**Innovation**



## Project Information

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## Introduction

The present document titled 'Initial Transferability Plan of original CodeDoor best practice' concerns the Methodological Framework for the implementation of T2.3.2 'Initial Transferability Plan of original CodeDoor best practice of Work Package 2: "Knowledge Exchange and Transferability Plans", led by CSI with the contribution of all partners, and agreed upon by all partners. The present documents aims at discussing the aspects of the adaption of the CodeDoor best practice so as to be in consistency with local target groups' needs and peculiarities, on the process of incorporating elements of improvement based on partners' previous experiences, as well as on the delineation of the transferability process.

## About the Project

### Summary

The project Code4SP aims at transferring the "CodeDoor Best Practice" to the partner countries in order to facilitate the 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 labour market; the new "Coding experts" join the labour 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.

### Goals

The project aims at achieving the following main goals:

- Generate socio-economic promotion, by providing job-market-oriented training on computer programming;

- Fostering digital skills and competencies of digitally excluded groups (including older people, migrants and young people from disadvantaged backgrounds) through partnerships between schools, business and the non-formal sector, including public libraries;
- Transfer currently established good practices on non-formal education, on computer programming, to the Southern European countries, that are, simultaneously, deemed more economically vulnerable and subjected to an unprecedented exposure to migratory waves, of people with a low socio-economic condition;
- Providing tailored education and training to digitally excluded groups, including migrants and young people from disadvantaged backgrounds, while in parallel, taking into consideration the labour market needs;
- Enhance employers' motivation and predisposition for potential employment of individuals that belong to disadvantaged populations, thus breaking any negative stereotypes on this issue.

## Work Package 2

The purpose of WP2 is to support partners in understanding, identifying, and responding to the needs of the project. This stage of the project is intended to provide partners with the necessary knowledge and awareness regarding the state-of-the-art in each participating country with respect to the policies and best practices that exist regarding the provision of coding opportunities in non-formal education contexts. The resulting analysis will offer compiled information that will form a starting point for the Work Packages that will follow.

A key aim of the research conducted for WP2 is firstly to provide a thorough analysis of the **CodeDoor best practice**, and secondly to indicate **existing good practices** and, when possible, reinforce them. At the same time, however, research is also aimed towards **identifying relevant policies** in the partner countries related to the economic integration of disadvantaged or marginalized populations, and more specifically through coding methodology initiatives. In this context, WP2's role in the overall project is to set

up the scientific foundations for the **development of innovative solutions** (such as the training program and education resources that will follow), which will address and hopefully fill existing gaps.

More specifically, WP2 aims at investigating the original CodeDoor best practice by delimiting the extent to which the multiple phases of the latter will be exploited by the Code4SP methodology, considering the needs analysis, policy gaps and peculiarities of each of the pilot testing national contexts. Concurrently, the original CodeDoor best practice will be contrasted and likened with regional best practices which have embraced an identical rationale as a means of economic integration of disadvantaged or marginalized populations, whilst being referred to concrete methodologies along with their limitations and strong aspects, enabling factors/environment and engaged actors (e.g. local authorities) and impact at a policy level. As such, this activity will operate as a knowledge basis while being used for the determination of specific needs and interests, by giving emphasis on detected gaps in terms of local/regional/ national policy considerations that could potentially be tackled by Code4SP. The envisaged results include, amongst others, the following.

## Results of Work Package 2

- A Guide for the implementation of the original CodeDoor.
- Good Practices on coding in non-formal education contexts.
- The Coach Training, a 3-day Mobility through at which the participating organizations will be trained on the original CodeDoor platform and integrated materials.
- An Initial Transferability Plan of original CodeDoor best practice.
- National Seminars and Round Tables to debate the challenges of CodeDoor transferability as a fine-tuning action at local levels along with Analytical Reports on the Conclusions of the National Seminars and Round Tables.
- A Code4SP implementation Guide.



## The CodeDoor Best Practice

CodeDoor started as a private initiative with one person, supported by two people with big ideas in 2015. Over the last years, it has evolved from a learning provider for IT skills to an infrastructure that can support all non-profit organisations and educational institutions in their work and scaling.

Multilingual, user-oriented and independent of specific sources, the CodeDoor infrastructure can be adapted by organisations worldwide to the needs of their learners. The software solution enables a customised learning experience and can be handled by employees of organisations even if they do not have IT skills themselves.

Currently, students from 15 countries work with the platform – more than 2000 people at the same time. The CodeDoor infrastructure helps users learn to learn – because once you have learned how to learn, the world is open to you. This way, learners can become excellent programmers in under one year, while closing the gap between qualification and career entry. The platform is a project-based, AI-supported learning tool that enables its users to learn to think like coders through methodology, transfer skills and understanding of problems.

The CodeDoor best practice is self-sustainable for two motives:

- 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 online coding expert support to the current CodeDoor trainees. This support is usually provided through the use of specialized support forums/platforms.
- 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.

## The Coach Training

### Summary

The Coach Training was conducted on the 23<sup>rd</sup>, 24<sup>th</sup> and 25<sup>th</sup> of June 2021 as part of WP2 Output 2.3.1. The Coach Training was a 3-day training activity on the original CodeDoor methodological approach and content (curriculum), delivered by CodeDoor (P4), with the participation of 2 participants per partner organization of the implementation countries (P1,P2,P3,P6,P7,P8).

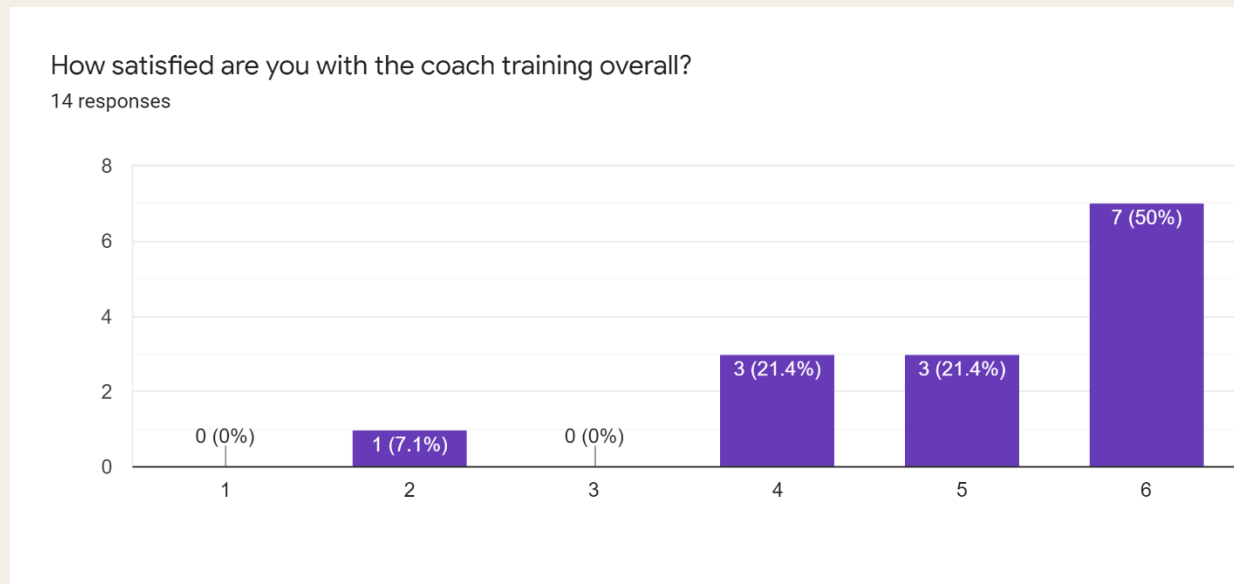
The 12 participants acted as Coaches responsible to train the coaches in the second stage of the pilot testing activities described within WP3. The participants were divided into 2 groups of coding experts and coding beginners and each group was tasked with designing a website using coding. Each day was comprised of a 5-hour non-formal laboratory plus a 3-hour discussion with the aim to decide on the initial transferability plan.

The participants moreover had the chance to access the CodeDoor learning platform, create an account and take part in the CodeDoor basic training on coding.

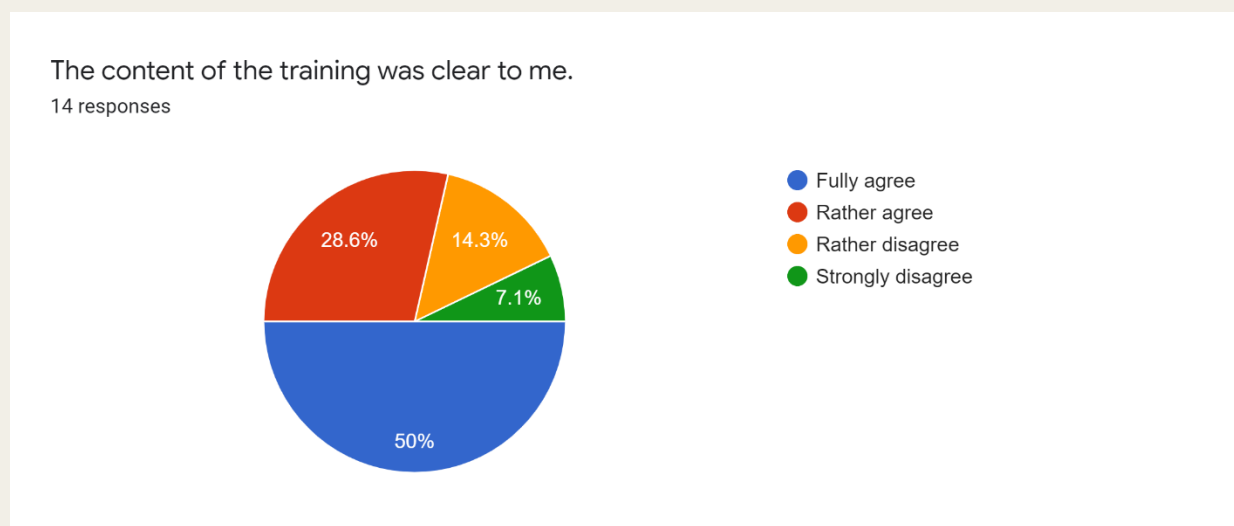


## Results of the Coach Training

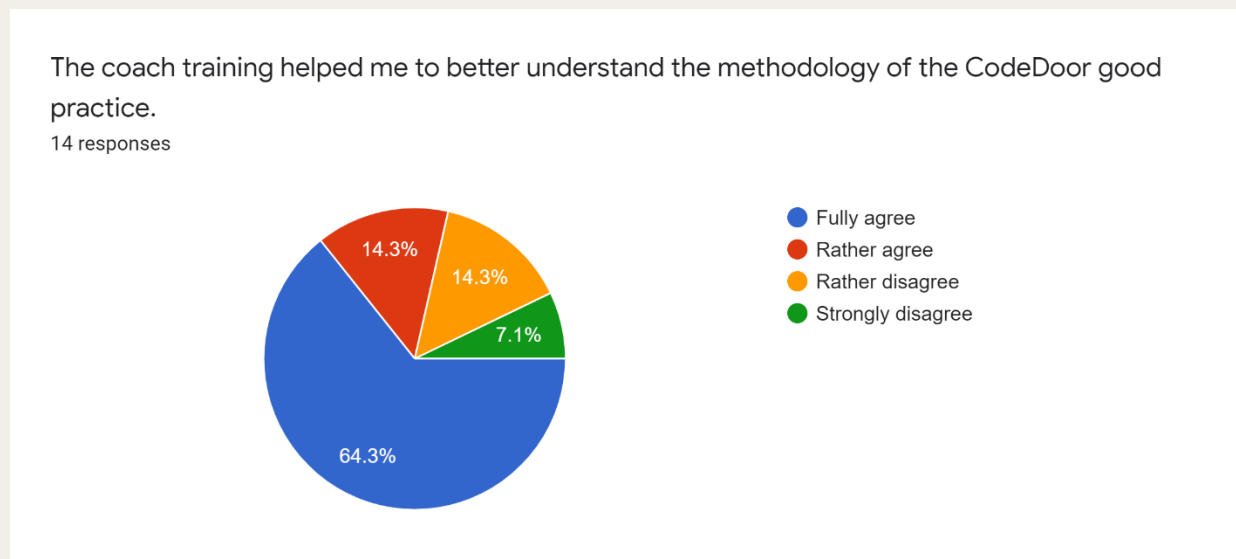
Upon completion of the Coach Training, participants were asked to complete an online questionnaire to ascertain the success of the training, as well as offer their input and recommendations.



Half of the participants stated that they were very satisfied with the training, voting for the highest rating. Also, 6 out of 14 participants were overall satisfied with the Coach Training and only 1 was not very satisfied. Consequently, it can be concluded that the coach training was an overall success.



In a likewise manner, half of the participants stated that they fully agreed that the content of the training was clear to them while only 2 participants rather disagreed and only 1 strongly disagreed. Again, this is a very good result for the Coach Training.



Lastly, it is also concluded that the Coach Training was successful since 64.3% of participants fully agreed that the Coach Training achieved its purpose of letting the participants understand the methodology of the CodeDoor Best Practice.

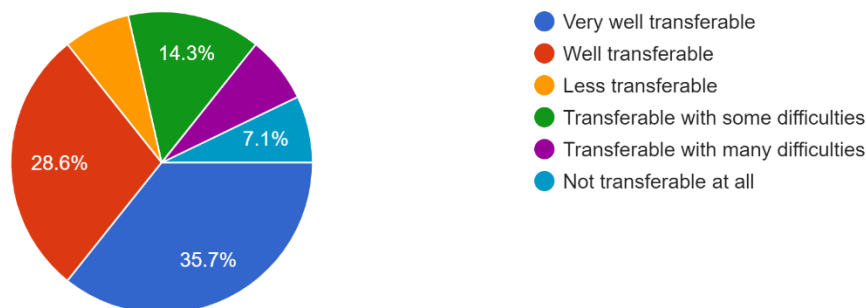
## Evaluation: Transferability of the CodeDoor Best Practice

### Overview of Initial Transferability

Based on the Coach Training, participants were asked to assess the transferability of the CodeDoor Best Practice in the partner countries.

Based on your previous experience, how do you assess the transferability of the CodeDoor good practice to your national context?

14 responses

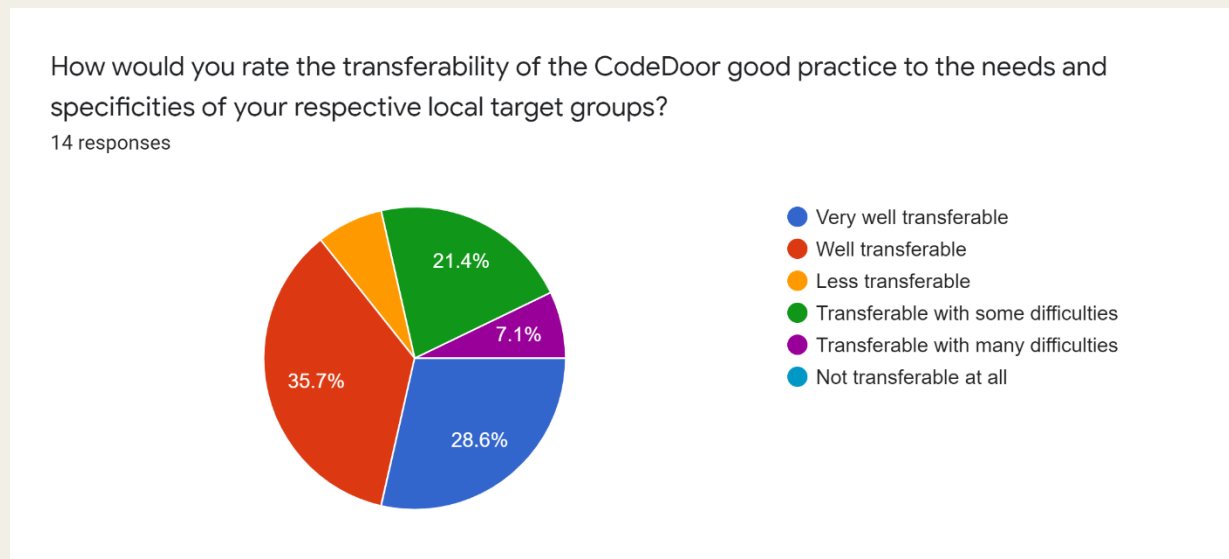


35.7% of participants in the Coach Training stated that the CodeDoor Best Practice is very well transferable on their respective national context and 28.6% stated that is well transferable. On the contrary, only 7.1% stated that the CodeDoor Best Practice is not transferable at all.

Participants also stated that in their opinion, the CodeDoor Best Practice could be transferable in their national context since it is easy for unskilled individuals to learn through the platform and because CodeDoor's good practice helps people from all backgrounds to get into coding and learn quickly, methodically and efficiently. Similarly, participants in the Coach Training stated that the CodeDoor Best Practice can be transferable since Codedoor is easy for students or teachers to work on and because coding is universal so that the CodeDoor good practice works fine in any national context.

Other participants of the Coach Training stated that the CodeDoor Best Practice could potentially be transferable in the national context of the partner countries, however some difficulties may arise, for example, it was pointed out that the Best Practice requires a lot of self-commitment from the trainees, who may drop out after the first few contacts with the platform. So we will have to deal with motivational issues to really keep them going. In a likewise manner, another participant agreed that some difficulties with the

engagement may be faced in the national context. Also, it was also pointed out that getting participants to work in groups on an ongoing basis may be difficult. Moreover, it might also be difficult to find suitable staff for the professional supervision of the participants.



In general, participants agreed that the CodeDoor Best Practice can be very well or well transferable to the needs of local target groups. It was pointed out by several participants that in their respective countries there is a general increased demand in coding jobs thus a lot of people will be interested in participating in the training. Similarly, the local target groups need Codedoor because there is no other high-level website that can be used.

Also, participants also agree that the platform and communication methods are easy to understand and use by local target groups.

On the contrary, some participants expressed their concerns that some local target groups from vulnerable or lower socio-economic groups may face issues like not owning a computer, have access to the internet or may not even know what coding is.

Lastly, a common concern issued by many participants is the fact that the platform and CodeDoor training are in English and many local stakeholders may have a very limited understanding of English.

## Initial Transferability Methodology

Based on the above, some key points can be concluded in order to draft the Initial Transferability Methodology for the CodeDoor Best Practice. Overall, there was an almost unanimous understanding that the CodeDoor Best Practice is very easy to use and that a coding training will prove to be very useful and indeed increase employability of trainees in the long term. However, in order to achieve the successful transferability of the CodeDoor Best Practice, some aspects may need to be improved or amended in order to achieve the aims of the project

To begin with, it is important to include a short introductory course on what coding is, what coding does and what people can do with coding. This can be in the form of a short video where a tutor or trainer will explain to trainees the basics of coding. This is essential in transferring the CodeDoor Best Practice in the national context because as mentioned by several participants, vulnerable individuals from lower socio-economic backgrounds (for example uneducated refugees) who have minimum to no education may not even be aware of what coding is, what it is used for, or even what the benefits of knowing how to code are. Having a short introductory course on coding will also help to avoid the troubles of tutors may spending more time explaining the basic concepts of coding to trainees not familiar with certain vocabulary or practiced. In addition, adding a glossary of coding terms for the people who are not very familiar with programming language which will be accessible throughout the training may also prove helpful. It is also important to include subtitles in this introductory course or video due to the language barriers that trainees may face.

In a likewise manner, it is also important to be aware of language barriers in the general CodeDoor training. As was pointed out by several participants in the Coach Training, many uneducated participants may have a very limited or no knowledge of the English language, which is the language that the best practice is offered. A good idea would be to translate the CodeDoor best practice instructions and most materials (where possible) in the national languages in order to make the training available to more individuals from the target group.

In addition, in order to successfully transfer the CodeDoor Best Practice in the national context and achieve the aims of the Code4SP project, it is very important to keep trainees motivated in order to ensure that they finish the training. It was pointed out by several participants that the training was too long and it would be hard to keep trainees engaged. Similarly, individuals who have full day jobs may find it very difficult to adhere to the long hours of the training. In this regard, e-learning for example can be implemented in order to cope with this need. Also, it was suggested that the feedback system needs to be updated to give trainees little achievements to feel safe and stay motivated. Also, ensuring that trainees receive good feedback and a certificate may also keep participants engaged and motivated. Another idea to keep trainees engaged would be to have them work on a real life project given by an IT company.

Another issue that needs to be taken into consideration in order to successfully transfer the CodeDoor Best Practice in the national context is the fact that many vulnerable individuals from lower socio-economic backgrounds may not have access to a computer or even to an internet connection in order to follow the CodeDoor training. Similarly, lack of educational background may also be troubling, as the target-group may struggle with using technologies overall. Consequently, in transferring the CodeDoor Best Practice, a good idea would be to make the training accessible through a smartphone and any other electronic device or arrange a cooperation between schools and/or educational centers and CodeDoor where trainees can go and access computers and the internet. Achieving



cooperation with local schools or centers will not only allow individuals with no internet or computer access to have a place where they can undertake the training, but also this will provide the CodeDoor training with more publicity to be more known by a larger group of people.

In a likewise manner, in successfully transferring the CodeDoor Best Practice in the national context in order to achieve the aims of the project, it is also important to consider that people with limited educational backgrounds may not be as familiar with independent learning. Having a tutor every now and then explaining the main concepts would be more appealing for beginners (even in a video format, with subtitles). This will not only increase the motivation of students (as mentioned above) but also create a solid support system for trainees.

## Conclusions

Overall, having in mind the Initial Transferability Methodology of the CodeDoor Best Practice in partner countries, it is believed that undertaking the training will indeed help achieve the aims of the Code4SP project. More specifically, participants who undertook the Coach Training suggested that the programming and coding skills of trainees will indeed be improved after the training.

In regards to labour market opportunities and employability skills, participants believed that after undertaking the CodeDoor training the target groups in the national context will indeed have more employability opportunities in the IT sector. This is because, in such a growing labour market, this training course will enable the participants to acquire basic and intermediate programming skills, at least for them to start a portfolio and begin to search for opportunities. Similarly, Codedoor can connect trainees with companies in the IT field and give the opportunity to the users to share their CV. Moreover, having skills validated and linked to LinkedIn or other employment websites could be helpful (for example digital badges and certificates when completing the

training) and a forum where IT recruiters and trainees could chat and get to know each other directly in the CodeDoor's platform.

Lastly, advertising CodeDoor to a transnational and European Level, will not only ensure more participation in the training, but also general recognition and reputation of the training, so that participants can use this to find a job anywhere in Europe.