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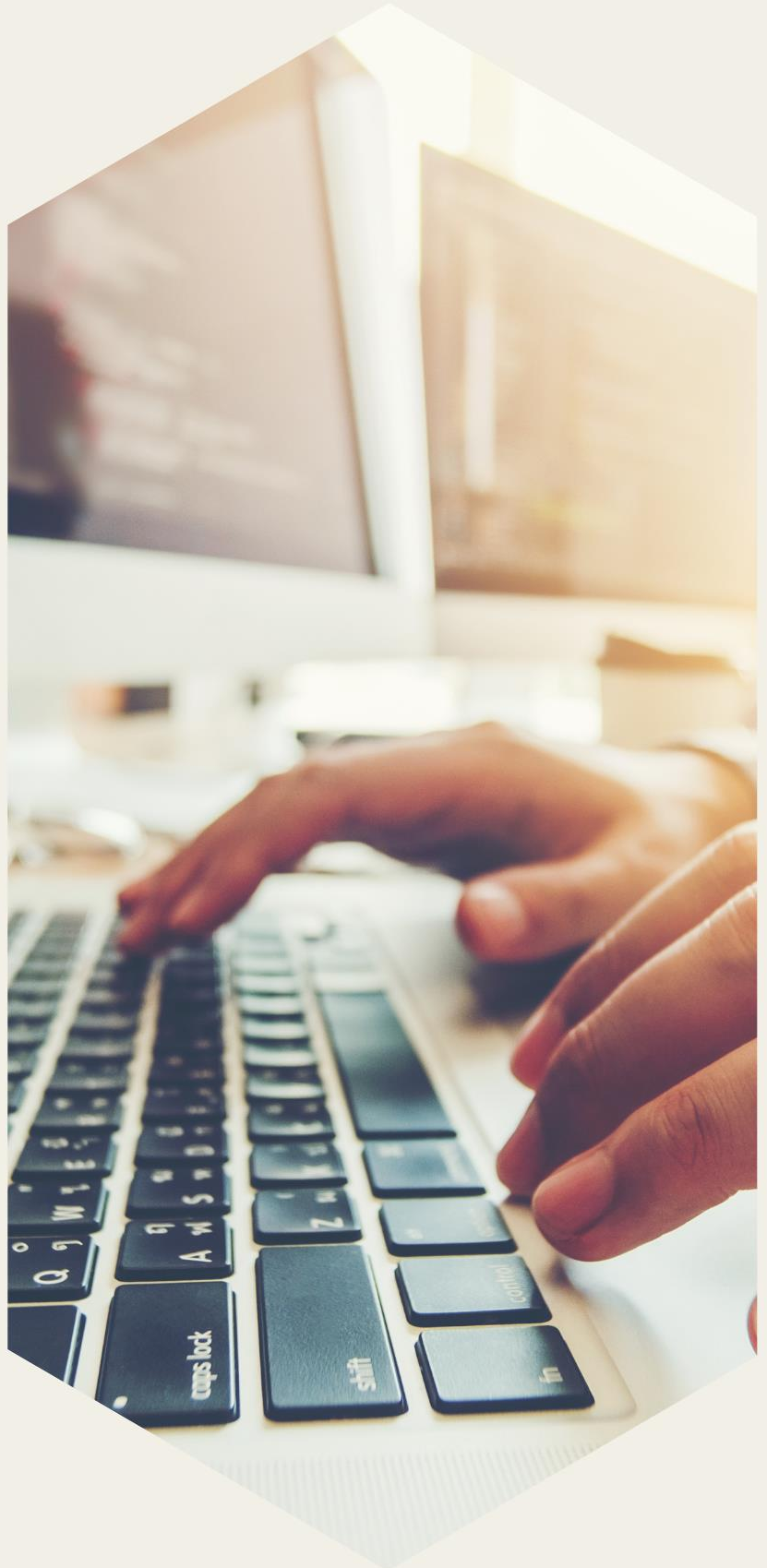
Output 5.2.1: Policymakers interviews

WP5:
Upscaling, Exploitation and
Sustainability of Code4SP
Results

Prepared by:



**Center for Social
Innovation**



Project Information

Project Acronym: Code4SP

Project Title: Coding for Social Promotion

Project Reference: 621417-EPP-1-2020-1-PT-EPPKA3-IPI-SOC-IN

Project website: www.code4sp.eu

Authoring Partner: CSI

Document Version: 4.0

Date of Preparation: 15/03/2024

Document History			
Date	Version	Author	Description
29/02/2024	1.0	Popi Aresti	First draft created
04/03/2024	2.0	Popi Aresti	Feedback from partners
11/03/2024	3.0	Constantina Stavrou	Feedback
15/03/2024	4.0	Popi Aresti	Finalization of the document

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Εκτελεστική Περίληψη

Αυτή η αναφορά είναι μέρος του έργου Code4SP, που εστιάζει στην αναβάθμιση, αξιοποίηση και βιωσιμότητα των αποτελεσμάτων του έργου, ειδικά μέσω συνεντεύξεων με φορείς χάραξης πολιτικής που πραγματοποιήθηκαν στην Πορτογαλία, την Κύπρο και την Ελλάδα. Οι συνεντεύξεις στόχευαν στην κατανόηση της δυνατότητας ενσωμάτωσης της μεθοδολογίας εκπαίδευσης προγραμματισμού του Code4SP στις τοπικές και εθνικές πολιτικές, με έμφαση στα άτομα από χαμηλά κοινωνικοοικονομικά στρώματα.

Κύρια Σημεία:

- 1. Πεδίο Συνεντεύξεων:** Συνεντεύξεις πραγματοποιήθηκαν με φορείς χάραξης πολιτικής από τους τομείς της εκπαίδευσης, της απασχόλησης και της κοινωνικής πρόνοιας σε κάθε χώρα. Οι απόψεις τους βοήθησαν στη διαμόρφωση συστάσεων για την ενσωμάτωση του Code4SP στις τοπικές ή εθνικές πολιτικές, δίνοντας έμφαση στη συνεργασία μεταξύ των παρόχων εκπαίδευσης και των εταιρειών.
- 2. Τρέχουσες Προκλήσεις:**
 - **Περιορισμένη Πρόσβαση σε Εκπαίδευση Προγραμματισμού:** Σε όλες τις χώρες, τα προγράμματα κατάρτισης για ευάλωτες ομάδες είναι είτε ανεπαρκή είτε δεν προωθούνται επαρκώς. Τα οικονομικά εμπόδια επίσης περιορίζουν την πρόσβαση.
 - **Έλλειψη Δημόσιων-Ιδιωτικών Συνεργασιών:** Χρειάζεται στενότερη συνεργασία μεταξύ παρόχων κατάρτισης και επιχειρήσεων, ώστε να ευθυγραμμιστεί η εκπαίδευση με τις ανάγκες της αγοράς εργασίας.
 - **Εξατομικευμένα Προγράμματα Κατάρτισης:** Τονίστηκε ότι τα προγράμματα κατάρτισης πρέπει να προσαρμόζονται στα επίπεδα γνώσεων και δεξιοτήτων των στοχευμένων πληθυσμών, με ιδιαίτερη προσοχή στις ήπιες δεξιότητες και στην πρακτική εμπειρία.

3. Ειδικές Παρατηρήσεις ανά Χώρα:

- **Πορτογαλία:** Οι φορείς χάραξης πολιτικής υπογράμμισαν τη σημασία της ευθυγράμμισης της κατάρτισης με τις ανάγκες των τοπικών βιομηχανιών και της στενότερης συνεργασίας μεταξύ των εταιρειών και των παρόχων κατάρτισης.
- **Κύπρος:** Δίνεται έμφαση σε προγράμματα που χρηματοδοτούνται από την ΕΕ, με την ανάγκη για πιο συστηματική εφαρμογή και αξιολόγηση πολιτικών.
- **Ελλάδα:** Τονίστηκε η σημασία της χρηματοδότησης από την ΕΕ και των επαγγελματικών προγραμμάτων, με έμφαση στις σχολές δεύτερης ευκαιρίας και στην πρακτική κατάρτιση για την προώθηση της κοινωνικής κινητικότητας.

4. Συστάσεις για Ενσωμάτωση Πολιτικών:

- **Ενίσχυση Δημόσιων-Ιδιωτικών Συνεργασιών:** Οι φορείς χάραξης πολιτικής προτείνουν την ενίσχυση των συνεργασιών μεταξύ του δημόσιου και του ιδιωτικού τομέα για την ευθυγράμμιση της κατάρτισης με τις ανάγκες της αγοράς.
- **Πρακτική Εμπειρία:** Η παροχή πρακτικής άσκησης θεωρείται ζωτικής σημασίας για τη βελτίωση της απασχολησιμότητας και την εφαρμογή των δεξιοτήτων σε πραγματικά περιβάλλοντα.
- **Δημοσιότητα και Διάδοση:** Είναι απαραίτητη η ενημέρωση των επιχειρήσεων και των κοινοτήτων για τη σημασία της εκπαίδευσης στον προγραμματισμό μέσω στοχευμένων προσπαθειών δημοσιότητας.

5. **Δυναμική του Code4SP:** Η μεθοδολογία του Code4SP θεωρείται καινοτόμα, με δυνατότητες προσαρμογής σε διαφορετικές χώρες. Προσφέρει μια ευέλικτη, πρακτική προσέγγιση στην εκπαίδευση προγραμματισμού που μπορεί να βελτιώσει σημαντικά τις ευκαιρίες απασχόλησης για άτομα χαμηλού εισοδήματος.

Συμπέρασμα:

Η αναφορά υπογραμμίζει την ανάγκη για συνεργατικές, καλοσχεδιασμένες πρωτοβουλίες εκπαίδευσης στον προγραμματισμό για να εξοπλίσουν άτομα από ευάλωτες ομάδες με πολύτιμες ψηφιακές δεξιότητες. Με την ενίσχυση των δημόσιων-ιδιωτικών συνεργασιών, την παροχή πρακτικής εμπειρίας και την προσαρμογή των προγραμμάτων στις τοπικές ανάγκες, μπορεί να δημιουργηθούν βιώσιμες διαδρομές για κοινωνική κινητικότητα και οικονομική ενδυνάμωση. Η μεθοδολογία του Code4SP παρουσιάζει ένα πολλά υποσχόμενο πλαίσιο για την επίτευξη αυτών των στόχων.

Description of the activity

Each social partner from each implementing country (SPEL – Portugal; Action Synergy – Greece; and CSI – Cyprus) interviewed three policymakers or representatives of policy-implementing institutions after the conduction and evaluation of T4.1 Pilot-Testing Activities: stage 1 implementation (nine interviews in total).

Examples of policymakers included the Ministry of Education, Aldermen/city councilors from the Municipalities in charge of the education department, the Ministry of Labour, the Ministry of Migratory Affairs, etc.

The interviews aimed to present the final version of the implementation Guide [T2.5] and collect suggestions from the interviewees concerning the integration of Code4SP within the local or national context.

From the analysis of the data collected in each country, a “Policy Recommendations Guide” [T5.2.2] was produced, presenting the problem statement, a brief description of the potential of Code4SP, and the suggestions and recommendations for integration in local/national policy in each country.

In total, the consortium conducted 9 interviews.

Abbreviations

AG: Álvaro Gomes

SM: Sérgio Morais

NA: Nuno Almeida

IEFP: Institute for Employment and Vocational Training

HRDA: Human Resource Development Authority of Cyprus

IDEP: Foundation for the Management of European Lifelong Learning Programmes

IEP: Institute of Educational Policy

Introduction

This general report aims to contribute to the ongoing discourse on inclusive economic growth by examining and comparing the policies and programs designed to uplift individuals from low socio-economic backgrounds through programming training in Portugal, Greece, and Cyprus. The insights gathered from key stakeholders and decision-makers will inform recommendations for policymakers to create an enabling environment for equitable access to programming skills, fostering a brighter and more inclusive future for all.

More specifically each country as shared above had to interview 3 policymakers. Portugal interviewed Álvaro Gomes (AG), former councilor for Education (Ovar City Hall), Sérgio Morais (SM), former president of the Cortegaça Parish Council, and Nuno Almeida (NA), president of the Anta e Guetim Parish Council.

Cyprus interviewed representatives from 3 different policy organizations. One representative was from the HRDA (Human Resource Development Authority of Cyprus), the second one from IDEP (Foundation for the Management of European Lifelong Learning Programmes), and finally a representative from the Ministry of Education, Sports and Youth. Interviewing those representatives Cyprus aimed to understand existing initiatives, evaluate training effectiveness, and offer recommendations for policy integration.

Finally, Greece interviewed representatives from the Greek Ministry of Education, the Institute of Educational Policy (IEP) and the Municipality of Megara.

Portugal

According to the AG and SM, there is a very limited offer of training programs for low socioeconomic individuals in programming in their region. The only available programs/courses are promoted by Social Security for the most deprived people, but most of them are not related to programming, and they are not accessible to individuals who cannot afford to pay for these types of courses.

IEFP, the Institute of Employment and Vocational Training (Public Body), may have a related program financed by this entity. Some companies may also offer such courses, but they are always intended for their own employees and the economic nature of their own business activities. In this sense, it is very important and relevant to the service and work that the Code4SP project is developing.

As mentioned by NA, the current policies and programs for the training and employment of low socioeconomic individuals in programming (in the region of Anta e Guetim) include training actions from IEFP and other local training entities. The VET courses provided by the Espinho VET School were also mentioned (in this case, the course on Management Informatics).

Regarding the integration of programming training for this target population into the companies in the region, AG and SM think it is necessary to relate it to the companies' activities and needs. There must be a close partnership between training entities and companies that includes closer contact between the recruitment services of companies and the social action services of municipal entities. However, this complementarity is still residual in the national perimeter.

It is necessary to raise awareness among the business community (by the sovereign authorities) to better understand the training universe of each region to reinforce the involvement between the two, thus providing increased employability and strengthening its quality. NA stated that support systems or resources are necessary for the successful integration of programming training for this target population into the region's companies. Ensuring that there is a set of companies that can absorb these trainees is crucial since the group using these specialties is currently very small.

Public-private partnerships are always welcome if they add value to the community. It is essential to disseminate this type of course through various means so that both the community and the companies can be aware of it and how useful it can be for both. Efforts to monitor training effectiveness must be made by the trainer and the company, primarily the latter, as it will be more aware of the trainee's work, the qualities demonstrated during the internship, and the demands of the job market in the sector of the activity, said SM. NA added that the level of employability should be effective in this regard. AG stated that the training must be adapted to the needs of the target population, considering their existing knowledge and skills, as well as their learning style. It is essential to use appropriate teaching methodologies and to ensure that the training is delivered in a way that is accessible and understandable to all participants, said SM. NA added that adapting the training to the specific needs and skill levels of low socioeconomic individuals involves analyzing the group of trainees, identifying their level of expertise, and adapting the training accordingly. Dividing them into small groups would help everyone benefit.

According to him, the Code4SP methodology seems innovative and adapted to the needs of the job market. While there is a theoretical part to be learned, the practical component is quite useful for the daily life of a programmer. NA added that there are a few cases of successful integration of low-income individuals into companies in the region (as a result of programming training). This success comes from a joint effort between schools and the job market. Hence, it is very important that these institutions work together since all involved people will benefit from this cooperation. In addition, the content of the training must be relevant to the current and future job market, with a focus on developing skills that are in high demand. This includes both technical skills, such as programming languages and software development tools, as well as soft skills, such as problem-solving, communication, and teamwork. In this regard, NA stated that programming skills are highly valuable in the current job market, and therefore especially important for low-income individuals seeking employment.

The job market is continually changing, using hybrid skills. Thus, having courses like these, which offer the possibility for people with low socioeconomic resources to access training that will provide them with tools to succeed in an increasingly competitive market, is commendable. When asked to provide recommendations for policy integration for low-income individuals into local or national policies, NA said that these would include informing employers of the importance of courses like these to be able to absorb workers not only from universities but also from projects like Code4SP. A forum with projection could be organized to break down any mental barriers that may exist regarding hiring professionals outside of universities.

AG and SM have reinforced this point of view by stating that the training should also provide practical experience through internships or apprenticeships, allowing participants to apply the skills they have learned in a real-world setting.

This will help to build confidence, improve job readiness, and provide opportunities for networking and career development. Finally, as said by NA, it is important to provide ongoing support to participants after the completion of the training, including job placement services, mentoring, and continuing education opportunities. This will help to ensure that they remain competitive in the job market and have opportunities for career growth and advancement. SM added that providing support systems or resources, such as mentorship or financial aid, helps trainees with career advancement and job placement. Additionally, organizing job fairs that connect trainees with potential employers is crucial to their success.

Overall, a comprehensive and tailored approach to programming training for low socioeconomic individuals in the region will require collaboration and partnership between training providers, companies, and municipal entities. By working together, it is possible to provide access to high-quality training programs that can help to improve the lives and opportunities of those who need it most.

Cyprus

In exploring current policies and programs, both HRDA and IDEP offer diverse initiatives catering to individuals from low socio-economic backgrounds. HRDA extends its reach to unemployed individuals and emphasizes a broad range of skills, including programming. On the other hand, IDEP in Cyprus outlines various programs, such as the e-literacy program and upskilling initiatives, aiming to support individuals at risk of social exclusion, particularly NEETs (Not in Education, Employment, or Training).

As for support systems, HRDA believes in the effectiveness of its programs and those co-funded by the European Union to integrate individuals into the local workforce. In contrast, the Training Expert from the Cyprus Ministry of Education highlights the need for more methodical and systematic implementation of existing programs, advocating for quality assurance mechanisms, evaluation processes, and establishing certification systems, including micro-credentials.

When addressing collaboration between the local government and the private sector for sustainable employment opportunities, HRDA refrains from providing a specific answer, while the Training Expert from Cyprus ministry of education sees a decisive role for local government. They emphasize the importance of local authorities identifying citizen needs and collaborating with private organizations to provide both educational and sustainable solutions.

In assessing the effectiveness of programming training, HRDA relies on program approval by knowledgeable individuals and the awarding of training certificates at the end of programs. The Training Expert from the Cyprus Ministry of Education suggests utilizing existing tools, such as EGAVET indicators, but highlights the lack of application of measurable indicators.

In terms of tailoring programming training to specific needs and skill levels, HRDA notes the existence of numerous actions and programs catering to people from all social backgrounds, ensuring inclusivity. The Training Expert from the Cyprus Ministry of Education emphasizes the importance of addressing factors like confidence, self-esteem, and logistical infrastructure, advocating for local government support.

Regarding the integration and potential of training using the Code4SP methodology, HRDA sees collaborative potential with Code4SP, stating that such collaboration could enhance the impact of training programs. The Training Expert in Cyprus supports a pilot implementation but emphasizes the need to consider broader parameters for a more significant effect.

On the value of programming skills in the job market, both HRDA and the Training Expert from Cyprus ministry of Education, Sports and Youth acknowledge the demand for programmers. However, the Training Expert underlines the necessity of assessing academic background and programming thinking, questioning the applicability of programming skills in various industries.

HRDA cites statistics demonstrating a high success rate for individuals trained through their programs, with many unemployed individuals securing long-term employment. In Cyprus, success stories include a holistic approach with prisoners, leading to the establishment of successful companies and the employment of asylum seekers, demonstrating the positive impact of certification and licensing.

Recommendations for policy integration vary. HRDA, drawing from its IT field experience, suggests integrating coding training into school IT curricula, leveraging existing accessible policies and programs. The Training Expert in Cyprus, while acknowledging a lack of vision and strategy, emphasizes recognizing individuals as units and the crucial role of local governance in approaching and assisting them.

In conclusion, the narrative reveals commonalities and differences between the interviewees' approaches to programming training for socio-economic inclusion. While all of them face similar challenges, nuanced variations in emphasis and recommendations underscore the need for tailored strategies. The report aims to inform policymakers and stakeholders about effective policy integration for individuals from low socio-economic backgrounds in the context of programming training.

Greece

In exploring current policies and programs aimed at training and skill-building for individuals from low socio-economic backgrounds, all the interviewees have highlighted the importance of EU funding for developing and sustaining such activities. They have presented as examples the vocational training programs that are included in the Strategic Plan “Greece 2.0” which is part of the “Next Generation EU” initiative, as well as the Social Cohesion Fund. At the local level, in Megara, the municipal organization “Irodoros,” responsible for social inclusion and sports, spearheads various training programs targeting particularly the re-skilling of Roma people. At a centralized level, second-chance schools provide opportunities for adults to complete their education. Specific training programs, such as “Improving the skills of unemployed people belonging to vulnerable groups through training leading to certification and accompanying measures to promote employment and entrepreneurship,” are organized at the regional level. Additionally, the Ministry’s policies inherently incorporate the development of skills for individuals from low socio-economic backgrounds.

In relation to the support systems, IEP is highlighting the necessity that the state should offer financial and non-financial support in order to make the training programs accessible. Financial support includes financial assistance and scholarships while non-financial support includes flexible scheduling and part-time options. Mentorship programs connecting trainees with experienced professionals were also mentioned as well as the incorporation of soft skills in the training. The Ministry of Education stresses the importance of collaboration with local businesses (including local tech communities) to create internship or apprenticeship opportunities that allow trainees to gain real-world experience and also the alignment of the curricula with the needs of the local job market. On the other hand, the Municipality of Megara explains the importance of Community Engagement through events and forums.

Regarding the cooperation between local government and private sector, IEP mentions the need for a mutually beneficial relationship especially in the field of the identification of current and future skills and of offering continuous learning opportunities. The Ministry of Education stresses the importance of financial support and incentives that the local government could offer in order to encourage private sector involvement in training and hiring individuals from low socio-economic backgrounds. Private companies could offer internships and apprenticeships as well as volunteering, workshops etc. Finally, the Municipality of Megara emphasizes the need to promote Corporate Social Responsibility programs with which private companies can contribute to the community by integrating social responsibility into their business strategies.

In relation to the assessment of the effectiveness of the programming training, IEP emphasizes the importance of alignment with the needs of the local industry and the role of companies and employers in this. The Ministry of Education has emphasized the use of surveys with program graduates in order to understand their satisfaction with the training. The Municipality of Megara expressed the view that the only reliable effectiveness indicator is the increase in the employment rates for the program graduates.

Regarding tailoring programming training to the skill levels of individuals from low socio-economic backgrounds, IEP has mentioned that it is necessary to offer flexible learning paths that allow participants to progress at their own pace and respect interculturality for non-Greek participants. The Ministry of Education mentions that for this category of beneficiaries, it is important to provide additional emphasis on soft skills as well as hands-on practical activities. The Municipality of Megara states the importance of financial assistance as it considers that the main problem for non-participation in such programs is financial.

When asked about the integration of Code4SP methodology into existing trainings, IEP has mentioned that it could become a model given the fact that it has already worked in other countries such as Germany. The Ministry of Education has mentioned that it is willing to follow the results of the pilot while the Municipality of Megara has raised the issue of funding in order to continue such projects and trainings.

In relation to the value of programming in the job market all the interviewees have agreed that it is very high. IEP has mentioned that many industries, beyond just tech companies, require professionals who can develop and maintain software applications. This opinion is shared by the Municipality of Megara which stated that “a person with good programming skills will never remain unemployed”. The Ministry of Education mentioned that learning programming can serve as a pathway for social mobility and economic empowerment since it can secure jobs in high-demand fills.

All the interviewees could provide examples of successful integration through the use of ICT skills. IEP has mentioned the cases of migrants who were able to switch careers while the Ministry of Education mentioned the cases of some individuals who, after acquiring programming skills, have chosen to start their own tech-related businesses. The Municipality of Megara has described the cases of people from the city who managed to start a career in Athens or abroad without having to leave the city of Megara.

Regarding the recommendations for policy integration, IEP has emphasized the importance of fostering collaborative partnerships between government agencies, educational institutions, non-profit organizations, and the private sector. On the other hand, the Ministry of Education has said that a recommendation for the state would be to provide financial support, scholarships, or subsidized training opportunities to make coding programs accessible to individuals with limited financial means. The Municipality of Megara is focusing on the importance of the early introduction of programming in schools (especially in the elementary school).

In conclusion, this comprehensive analysis illuminates the multifaceted efforts underway to equip individuals from low socio-economic backgrounds in Greece with programming training and skills. Through interviews with key stakeholders, including the Ministry of Education, the Institute of Educational Policy (IEP), and the Municipality of Megara, several overarching themes emerge. Foremost among these is the critical role of EU funding in bolstering these initiatives. Moreover, the emphasis on second-chance schools and regional training initiatives reflects a national commitment to providing diverse pathways for skills development and socio-economic inclusion. Addressing barriers to accessibility, such as financial constraints, flexible learning options, and industry-aligned curricula, emerges as a common priority. Notably, the potential integration of Code4SP methodology holds promise for enhancing training effectiveness, contingent upon sustained funding and stakeholder collaboration. Ultimately, the unanimous recognition of programming skills' intrinsic value in the job market underscores the transformative potential of these initiatives in fostering upward mobility and societal resilience. To ensure the sustained impact and scalability of these efforts, recommendations center on fostering collaborative partnerships, expanding financial support mechanisms, and embedding programming education within the formal schooling system from an early age.

Analysis

Common Points Across Portugal, Cyprus, and Greece:

- 1. Limited Offer of Training Programs:** All three regions highlight a scarcity of training programs for low socio-economic individuals in programming. Existing initiatives are often insufficient, and access is constrained by financial barriers.
- 2. Public-Private Collaboration:** There is a shared recognition of the importance of collaboration between training entities and private companies. The need for a close partnership to align training with the specific needs of businesses is emphasized.
- 3. Importance of Practical Experience:** Practical experience through internships or apprenticeships is seen as crucial for participants to apply learned skills in real-world settings. This approach enhances job readiness, builds confidence, and facilitates networking.
- 4. Tailoring Training to Specific Needs:** Interviewees across regions stress the importance of adapting training programs to the existing knowledge and skills of the target population. Flexibility in learning paths and consideration of soft skills are identified as essential.
- 5. Awareness and Dissemination:** There is a common understanding that awareness among the business community is vital. Efforts to disseminate information about training programs and their benefits are seen as crucial for both the community and companies.
- 6. Continuous Support:** Ongoing support after the completion of training is deemed necessary. This includes job placement services, mentoring, and continuing education opportunities to ensure sustained competitiveness in the job market.

In summary, while common themes resonate across the three countries, the specific challenges and solutions reflect the unique socio-economic contexts and policy landscapes in Portugal, Cyprus, and Greece. The commonalities highlight universal needs, and the differences underscore the importance of tailoring strategies to local conditions.

Conclusion

In conclusion, the exploration of programming training initiatives for low socio-economic individuals in Portugal, Cyprus, and Greece reveals a shared recognition of the critical need for equipping vulnerable populations with digital skills. The commonalities across these regions include a shortage of accessible training programs, the importance of public-private collaboration, a focus on practical experience, and the necessity to tailor training to specific needs. The unanimous acknowledgement of programming skills' high value in the job market underscores the transformative potential of these initiatives in fostering upward mobility and societal resilience.

Despite these commonalities, nuanced differences exist in each region's approach. Portugal grapples with limited resources, relying on social security and potential programs from public bodies and private companies. Cyprus showcases diverse initiatives with EU co-funding, emphasizing the need for systematic implementation and measurable indicators. Greece, while emphasizing EU funding and vocational programs, underscores the importance of collaboration with local businesses and sees programming skills as a pathway for social mobility.

The integration of the Code4SP methodology stands out as an innovative approach, recognized for its adaptability and potential impact across regions. Success stories highlight the tangible benefits of such initiatives, from increased employability to the establishment of successful businesses. Recommendations center on fostering collaborative partnerships, providing financial support, and embedding programming education within formal schooling systems.

In navigating the complexities of socio-economic inclusion through programming training, these regions face both shared challenges and unique circumstances. As we move forward, the emphasis should be on tailoring strategies to local needs, fostering partnerships, and ensuring sustained funding to create lasting impact. The narratives from Portugal, Cyprus, and Greece collectively contribute to the evolving discourse on inclusive digital empowerment, guiding policymakers, educators, and stakeholders towards effective and context-specific solutions.